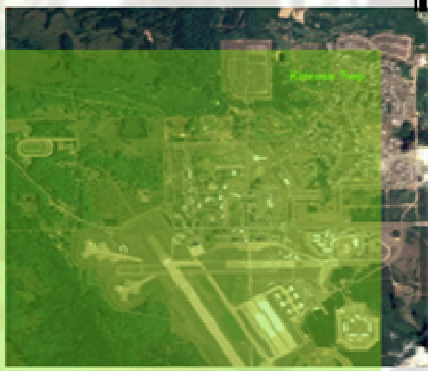
Kinross Charter Township

Master Plan

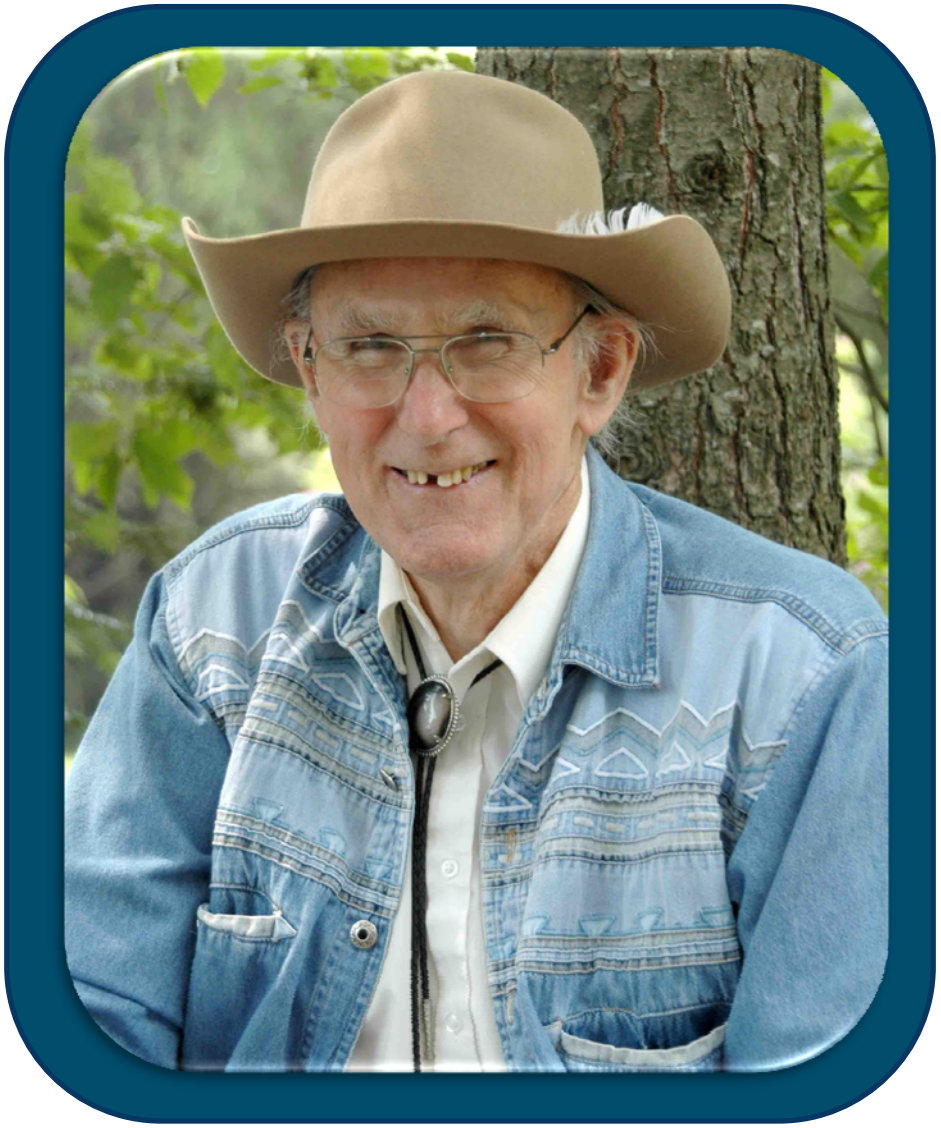
2009



For all of his hard work
as a member of the
Kinross Township Planning
Commission,
we dedicate this Master Plan
with great appreciation to

LeRoy Schell

1935 - 2009



Kinross Charter Township
County of Chippewa, Michigan
Resolution No. 09-15

PLANNING COMMISSION RESOLUTION TO ADOPT MASTER PLAN

WHEREAS, the Michigan Planning Enabling Act (MPEA) authorizes the Planning Commission to prepare a Master Plan for the use, development and preservation of all lands in the Township; and
WHEREAS, the Planning Commission prepared a proposed new Master Plan and submitted the plan to the Township Board for review and comment; and
WHEREAS, on July 20th, 2009, the Kinross Charter Township Board received and reviewed the proposed Master Plan prepared by the Planning Commission and authorized distribution of the Master Plan to the Notice Group entities identified in the MPEA; and
WHEREAS, notice was provided to the Notice Group entities as provided in the Michigan Planning Enabling Act; and
WHEREAS, the Planning Commission held a public hearing on November 9th 2009 to consider public comment on the proposed new Master Plan, and to further review and comment on the proposed new Master Plan; and
WHEREAS, the Planning Commission finds that the proposed new Master Plan is desirable and proper and furthers the use, preservation, and development goals and strategies of the Township;

THEREFORE BE IT HEREBY RESOLVED AS FOLLOWS:

1. ***Adoption of 2009 Master Plan.*** The Planning Commission hereby approves and adopts the proposed 2009 Master Plan, including all of the chapters, figures, maps and tables contained therein.

2. ***Distribution to Township Board and Notice Group.*** Pursuant to MCL 125.3843 the Township Board has not asserted by resolution its right to approve or reject the proposed Master Plan and therefore the approval granted herein is the final step for adoption of the plan as provided in MCL 125.3843 and therefore the plan is effective as of November 23rd 2009. In addition, the Planning Commission approves distribution of the adopted amendments to the Township Board and Notice Group.

3. ***Findings of Fact***. The Planning Commission has made the foregoing determination based on a review of existing land uses in the Township, a review of the existing Master Plan provisions and maps, input received from the Township Board and public hearing, and with the assistance of a professional planning group, and finds that the new Master Plan will accurately reflect and implement the Township's goals and strategies for the use, preservation, and development of lands in Kinross Charter Township.

4. ***Effective Date.*** The Master Plan shall be effective as of the date of adoption of this resolution.

The foregoing resolution offered by Planning Commissioner Bernhardt.
Second by Planning Commissioner Calkins.
Upon roll call vote the following voted: "Aye":Munro, Calkins, Bernhardt, Gains, Wiley, Case.
"Nay":N/A.

The Chair declared the resolution adopted.

Leo Wiley, Secretary

Acknowledgements

Kinross Charter Township, Planning Commission, 2009

Richard Bernhardt
Herman Calkins
Brenda Case, Township Representative
Dave Gaines
Mark Howland
Ron Munro, Chair
Leo Wiley

Kinross Charter Township, Staff, 2009

Lawrence Palma, Supervisor
Dorothy Johnson, Deputy Supervisor
Marvin Besteman Jr., Clerk
Sheila Gaines, Chief Deputy Clerk
Julie Munro, Treasurer
Kerry Fountain, Deputy Treasurer
Cindy Oliver, Assessor of Record and Zoning Administrator
Richard Oliver, Assessor and Zoning Administrator
Norm Perkins, Public Works Superintendent

Kinross Charter Township, Board, 2009

Lawrence Palma, Supervisor
Marvin Besteman Jr., Clerk
Julie Munro, Treasurer
Edwin DeWitt, Trustee
David Kauer, Trustee
Brenda Case, Trustee
Harvey O'Brien, Trustee

Eastern Upper Peninsula Regional Planning & Development (EUPRPDC)

Jeff Hagan

Chippewa County

Kelly Beaune, Administrator
Sharon Kennedy, Equalization Director

Chippewa County Economic Development Corporation

Kathy Noel

Kinross and Chippewa Correctional Facilities

Mike Civil
Tracy Schroeder

Sault Ste. Marie Tribe of Chippewa Indians

Joni Talentino, Housing Director
Veronica Hickman, Chair Housing Board of Commissioners
Brenda Jeffries, Real Estate Manager
Joanne Umbrasas, Project Specialist
Renee Robinson

Chippewa County Road Commission

Dirk Heckman, P.E.

Eastern Upper Peninsula Transportation Authority

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Executive Summary

A local unit of government engages in planning to assist in decision-making while anticipating and responding to change. Planning is the foundation for the community's "house"—if you don't have a good foundation, there is no guarantee that the house will hold together over time. A good master plan lays a solid legal foundation for implementation tools.

To this end, this master plan addresses issues relating to land use and infrastructure projecting 20 years or more into the future. It is based on an analysis of existing conditions and relationships between the natural environment, built environment, and social environment as well as community vision. This plan is intended to further a vision for a sustainable future for Kinross Charter Township while satisfying the requirements of the Michigan Planning Enabling Act, P.A. 33 of 2008, and the Michigan Zoning Enabling Act, P.A. 110 of 2006.

The Kinross Charter Township Master Plan contains an introduction, township profile, analysis of community infrastructure, current land use patterns, community visioning, future land use plan, and strategic plan, including zoning plan. The most important findings from these chapters are presented in this summary.

Kinross Charter Township is part of the Eastern Upper Peninsula Planning Region Number 11, a region in which eighty percent of land surface is forested, six percent is in agricultural use, and less than one percent is urbanized. Almost one-half of the land in the region is under public ownership.

Currently, over ninety percent of the Township is maintained in some kind of forest/natural resource use (national forest, state forest, commercial forest reserve, private wooded areas with residential or recreation facilities, and school district-owned forests). Approximately four percent of the Township contains agricultural/open space uses with scattered residential, and four percent is development-ready property or built environment. Around seventy percent of the land in the Township is in public ownership. Compared to the State of Michigan, this is a much greater percent of forested land (+43 percent), much smaller percent of agricultural land (-21 percent) and less built area. The large amount of land in public ownership limits the tax base, but provides extraordinary recreational opportunities.

Kincheloe is one of two concentrated areas of population (over 350 people per square mile) in Chippewa County. The largest population center is Sault Ste. Marie. The population of Kinross Charter Township was estimated to be around 8,700 in 2007. Chippewa County's 2007 population estimate was almost 39,000: 2010 estimate is 44,600; 2015 estimate is 47,700; and 2020 estimate is 51,000 according to the State demographer. This qualifies the township for the MDOT Small Urban Program. Kinross Charter Township is not listed as a Michigan Low and Moderate Income Community as defined by the U.S. Department of Housing and Urban Development (HUD) for purposes of CDBG funding opportunities in 2009 (where at least 51 percent of the population is composed of low and moderate-income people). The township also does not contain "eligible distressed areas" as defined by the Michigan State Housing Development Authority (MSHDA) for personal property tax relief, although some eligible businesses may receive approval because Chippewa County is listed as a border county. The township is a Non-Core Community in terms of brownfield funding.

Kinross Township represents a younger age population in comparison with the Congressional District and the State, and most notably, a young American Indian population group. The Kincheloe area is one of the lowest median age groups in the County.

The non-prison population has grown since 1990, as well as the number of households (including the number of female headed households). Average household size and average family size are declining but the number of single person households is increasing. While school enrollment is in decline (less 169 people from 1990 to 2000), education attainment in the township is rising.

Median household income in Kinross Charter Township rose by 48 percent from 1990 to 2000, but is still almost nine percent lower than the state level. Median per capita income in the township experienced a dramatic 107 percent increase from 1990 to 2000 (measured in 1999 dollars), but is still about $8,000 lower than the state level. There has been a 63 percent increase in the number of families below the poverty level, and this issue is especially pronounced among females with children with no husband present (81 families).

The size of the labor force (especially females) is growing in Kinross Charter Township, and a larger percentage of the labor force is employed. An increasing number of families with children have both parents in the labor force, which has implications on child care and service provision. Mean travel time to work was 21 minutes, which indicates that many people who live in Kinross Charter Township do not work there. In fact, 68 percent of those living in Kinross Charter Township worked outside the township, which could have serious implications should rising gas prices make these daily commutes less sustainable. In a labor shed analysis encompassing a 30 mile radius from central Kincheloe, 36 percent of the labor force lived in Sault Ste. Marie, and only 7 percent in Kinross Township, with the remainder in other county subdivisions.

Service occupations are the most prevalent in the Township, followed by sales and office occupations, and management, professional, and related occupations. Only 1 percent of those employed in the township are in farming, fishing, and forestry. Selected top occupational groups in Chippewa County are office and administrative support, sales and related occupations, food preparation and serving, protective service, management, education, training, and library. High demand occupations for Chippewa, Luce, and Mackinac Counties are projected to include electronic and mechanical engineers; public relations specialists; accountants, auditors, and business operations specialists; social workers and social services assistants; computer programmers, engineers, analysts, and systems administrators; carpenters, electricians, plumbers, pipefitters, and steamfitters; teachers; various health care and health care support occupations; aircraft, automotive, and heat/air/refrigeration mechanics; paralegals and legal assistants; environmental scientists and specialists; managers; machine tool operators, correctional and public safety officers, and truck drivers.

In Kinross Charter Township, two industries tie for top employers, including first the arts, entertainment, recreation, accommodation, and food services industry, and secondly the educational, health and social services industry. Public Administration is the next largest industry

followed by retail trade. The correctional facilities in Kinross Charter Township provide over 1,200 stable jobs to the community. Employees drive as far as 60 miles a day for employment.

Chippewa County has a strong services/government sector employment base and a growing manufacturing base. From a regional outlook, job declines were experienced in manufacturing, construction, retail, leisure and hospitality, and other services, contributing to the region's higher-than-average unemployment situation. Soaring gas prices in the summer of 2008 exacerbated this trend, discouraging travel to more remote regions, although some area residents may have vacationed within the Upper Peninsula instead of traveling elsewhere. Job gains in the area were realized only in educational and health services.

The County fortunately experienced increases in several sectors involved in the knowledge economy, including information; professional, scientific, and technical services; and educational services.

Persons employed in the Eastern U.P. primarily earn their income in three major industry sectors, including government, leisure and hospitality services, and retail trade. Government jobs accounted for approximately 43.5 percent of the total regional employment in the Eastern U.P. (nearly three times the statewide level of 15 percent), although if tribal employment was not included, other governmental personnel would make up 31 percent of the payroll jobs. Retail trade far surpassed manufacturing in the percentage of employment provided, while statewide, the opposite was true. Between 2002 and 2005, construction employment fell by 7.4 percent, and manufacturing employment fell by 16.5 percent.

The largest single employer in the Eastern Upper Peninsula is the Sault Ste. Marie Tribe of Chippewa Indians. The Bay Mills Indian Community has also expanded their labor force with increased gaming and resort employment. These tribal employers are classified as governmental, even though many of the jobs for which they are responsible are in the service sector, highly dependent on recreation and tourism. The Michigan Department of Corrections is also a significant employer in the Eastern U.P. with five large correctional facilities and one camp located within Chippewa and Luce Counties (most in Kinross Township). The steady pay and benefits enjoyed by nearly 1600 correctional employees have had a major impact on local communities. Although an expanded tourist season and Native American gambling casinos have created more 12-month employment openings, they are not generally sufficient to support a family without an additional source of income. The area needs the support of more manufacturing jobs which require more skills but offer higher wages and benefits.

Quality of life for township residents could be improved by the development of local clusters and sub-clusters in close proximity to population centers, connected by pedestrian and non-motorized trails or infrastructure. This improves the local, long-term sustainability and self-sufficiency of the community, and increases the target market for potential residents. Most needed clusters address basic amenities that should be conveniently available within the community, such as local food and beverage processing and distribution, local personal

services (non-medical), local health services, and local convenience services. Prime location for these clusters is along the main corridors and within the urban center of Kincheloe.

Additionally, Kinross Charter Township can improve the sustainability and diversity of the economy by focusing on the development of select traded clusters and sub-clusters built around existing industries and area competencies. Examples may include aerospace engines; analytical instruments; building fixtures, equipment, and services; forest products; leather products; lighting and electrical equipment; metal manufacturing; motor driven products; plastics; power generation and transmission; and prefabricated enclosures.

In Michigan State University's County-Level assessment of Michigan's knowledge economy, Chippewa County is ranked as a "Follower" in overall knowledge economy index, which is the simple, unweighted average of a county's rank for the sixteen individual indicators. Chippewa County's overall rank is 60th of 83 counties. The county is classified as a "Contender" in knowledge jobs, exceeding the statewide average for percent of the workforce in information technology jobs, but lags slightly in workforce education and percent of workforce in management and professional jobs.

Chippewa County is classified as a "Follower" in Innovation Capacity, lacking venture capital and bioscience firms, but ranking close to the statewide average in patents and number of engineers in the workforce. It lags in number of high tech jobs. The new SmartZone in Sault Ste. Marie will improve this indicator. Chippewa County is also classified as a "Follower" in economic dynamism, which predicts progress toward a knowledge economy. The County is slow to progress from a manufacturing to service economy, but had better progress toward entrepreneurial activity.

Chippewa County is classified as a "Laggard" in the digital and global economy, indicating a need to address communication technologies in private sector and government use, and to recruit foreign firms and export opportunities to the County.

The proximity of Lake Superior State University gives a boost to this potential in Chippewa County and the surrounding municipalities. This is particularly true since Lake Superior State has been awarded and will create a new SmartZone in Sault Ste. Marie, which is a technology center designated to promote resource collaborations between universities, industry, research organizations, government, and other community institutions to create technology-based business and jobs. This is supported by the new Prototype Development Center at LSSU, which will assist in moving potential new enterprises from idea conception, invention, and prototype phases into commercialization. This SmartZone will focus on injection-molded plastics, precision-machined surgical tools, precision bearings, electronic manufacturing, and robotics.

Potential bio-fuel technology industry start-ups in the area will also mean progress toward a knowledge- and technology-based economy. Jobs are created in communities having the desired infrastructure, labor pool, amenities, quality of life and other factors that facilitate the location of high-skilled, high-wage jobs in the knowledge economy. This is why it is important for Kinross Charter Township to focus on

increasing the knowledge and skills of the workforce, updating technology infrastructure, and improving public amenities within the population center. Kinross Charter Township needs to take steps to prepare citizens for knowledge jobs to capitalize on this opportunity.

Place-based strategies are also important for economic development within the Township, since studies have shown that youth tend to choose places where they want to live and then find jobs in that location. Natural resource amenities in the region are spectacular, but urban amenities would benefit from enhancement. It is important to create pedestrian and non-motorized connections between the residential area of Kincheloe, the Kinross Community Park, and a more complete, aesthetically-enhanced commercial center. This will improve mobility options for residents, supporting a more diverse population. Streetscaping with street trees, natural landscaping, and downcast, small scale lighting is important to create a sense of place and increased safety for pedestrians, and to better manage stormwater runoff. This will also soften the impact of the correctional institution infrastructure. Infill development in the urban core must be prioritized before new development in outlying areas to ensure efficiency and sustainability of public service provision. This will also encourage essential services located close to the residential clusters.

Most of the housing in Kinross Charter Township is located in the urban cluster of Kincheloe and was built between 1950 and 1979 during the Air Force operation. Total vacancies have declined since 1990. The Township has a higher percentage of the population in renter-occupied housing, tending to have larger and younger households than owner-occupied housing. Median home value increased by 44 percent from 1990 to 2000.

Almost all housing in the Township is single family detached or duplex structures, although there are a few multiple unit structures along with 137 mobile homes. There were 46 vacant mobile homes in 2000. Housing is generally perceived to be of good quality and acceptable repair in Kinross Charter Township, although residents suggest a need for ordinances to control junk, trash, and noise in the neighborhood. There are issues with parking problems in the shared driveways that straddle property lines.

The Recreation Center is centrally located in the heart of the housing area. This housing is in close proximity to Dukes Lake, R. V. Park East, The Oaks golf course, and the commercial center of Kincheloe, but better year round pedestrian links are needed to facilitate non-

Current view along Meehan in urbanized Kincheloe

Representative small town streetscape.

motorized travel by residents to needed services and convenience products. The neighborhood would benefit from the addition of small parks and gathering areas for young children and senior citizens.

The *Housing Needs Assessment for the Sault Ste. Marie Tribe of Chippewa Indians (August 26, 3008)* suggests a saturated rental market, and states that the only market segment with stable occupancy trends is the subsidizied market segment. The senior housing market was found to have high occupancy and lengthy waiting lists at most existing properties. A need was identified for rentals for low- and very low-income households. There was also an enthusiastic market response for the senior quad units offered at the Odenaag site, indicating the need for more senior-designated units. The report suggests clustering these types of units in order to foster community interaction and socializing. This would also facilitate service delivery by home health care professionals, meals on wheels, and other groups.

Kinross Charter Township lacks a clearly identifiable commercial district or downtown, in part because the correctional facilities with their strong boundaries dominate the landscape. Industrial infrastructure and development is currently contained mostly in the urban cluster of Kincheloe except for quarry and small-scale sawmill operations. Most of the industrial activity is contained within the industrial park owned and operated by the Chippewa County Economic Development Corporation. Because there is a great deal of land available for redevelopment within the urbanized area of Kincheloe, it would be beneficial to implement best practices in stormwater management at the time of redevelopment, such as low impact development techniques. This will reduce the strain on the existing system as more development occurs, and will enhance water quality. The Township has excess capacity in its water system to support new development in currently served areas, and needs to continue monitoring water quality and implementing the wellhead protection plan. That plan should be updated regularly. Water mains are in good condition.

Presently, sanitary sewer systems are operating at 70 percent capacity, so increased capacity may be needed for new development. Because of soil conditions, care should be taken in locating and inspecting septic systems within the township to ensure water quality protection.

Recreation improvements include a need for two additional playgrounds, with one close to the residential center of Kincheloe. Adding shuffleboard to one playground may provide

Representative small-town park amenities.

elders an activity while supervising younger children. The community may choose to evaluate the local demand for a soccer field, outdoor swimming pool, outdoor tennis court, roller skating, and boat launch with parking. There is already a recognized need for walking trails and better pedestrian access within the core, although hiking opportunities are abundant in Kinross Charter Township. There are no designated horseback riding trails in Kinross Charter Township, although this is allowed. However, the fairgrounds provide an opportunity to board horses for equestrian tourists, and marked trails would invite use.

Recreational activities are abundant in Kinross Charter Township. Passive recreational opportunities include camping, fishing, hunting, hiking, swimming, snowshoeing, bird watching, and cross-country skiing. National Forests are managed for outdoor recreation, timber, watershed, wildlife, and fish purposes. Primitive camping is allowed for free nearly anywhere, and there are also some developed and handicapped-accessible facilities such as the Three Lakes Campground. State Forests are mandated to provide an integrated forest recreation system while remaining working, multiple-use forests providing for wood, habitat, energy, recreational, and environmental needs. They offer dispersed recreational activities such as hunting, fishing, wildlife viewing, dispersed camping, and picking wild edibles as well as moderately developed recreational activities such as hiking, cross-country skiing, snowmobiling, off-road vehicle riding, campgrounds, mountain biking, and equestrian use. Facilities tend to be rustic. Commercial Forest Reserve properties are required to be available to the public for non-motorized purposes such as fishing and hunting. Snowmobile, motorcycle, ORV, cross-country ski, and hiking trails are abundant. However, the Township can improve community character by implementing urban forestry practices, including the addition of edible landscaping such as fruit and nut trees and shrubs as the opportunity arises.

Community members wish to support policies to improve utilization and maintenance of current recreational facilities and amenities, including Kinross Community Park, the Recreation Center, both R.V. parks, Kinross Lake, and Dukes Lake. The Township will look for opportunities to utilize grants and other funding programs to facilitate this goal as outlined in the strategic plan. Future opportunities should address flexibility and multiple-use, Universal Access, the incorporation of green technology, and wetland conservation and recreation. Regional collaboration is encouraged for a networked system approach for recreational improvements.

The Kinross area is linked by the I-75 highway corridor to Canada and lower Michigan. Freight rail service is currently available. The M-80 corridor and Gaines Highway provide opportunity for further industrial and commercial development in the urban services area of Kincheloe. M-129 provides an alternate route to Sault Ste. Marie and other southern locations. Aesthetic enhancement projects are planned along M-80 and at I-75 and Gaines Highway to address poor environmental conditions, visually poor settings, and to blend the built environment with the natural one. The Township is advised to pursue asset management techniques, streetscaping opportunities, creation of a traffic information database, and wireless infrastructure improvements. Pedestrian and bicycle accommodations should be addressed in all roadway improvements and new developments. Agreements must be made with the County for policies for subdivision roadway dedications.

Township soils present challenges for development, with many poorly suited to septic tank absorption fields and sewage lagoons because of poor filtering capacity. Some are fairly well suited to buildings without basements, particularly in the northern Kincheloe area. They are poorly suited to onsite waste disposal systems because of the high water table and a poor filtering capacity, however. Every area of Kinross Charter Township falls under severe soil limitations in regard to certain development. The limitations are considered severe if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. Basically, all these less than optimal conditions exist in abundance in the Township, requiring care in installation of septic tank absorption fields, and limiting development in areas of the Township without public sewer systems.

Although soils may be suitable for development in portions of western Kinross Charter Township, the area is almost entirely under the ownership of the Hiawatha National Forest system, or currently in the Commercial Forest Reserve program. Additionally, much of the area is in the Betchler Marsh. The Hiawatha National Forest management plan should be supported in land use policies for this area, which is mainly for timber production. It is a roaded natural recreation opportunity spectrum, with diverse recreation opportunities, including the Three Lakes Campground area. It is bisected by the East Branch Tahquamenon River, classified as a wild, scenic river with recreation. The Betchler Marsh area is managed for timber production, wildlife habitat, and semi-primitive, motorized recreation. Portions are an ecological preserve for research and education with no recreation. Tamaracks are featured in the Tamarack flats.

At the eastern edge of the Hiawatha National Forest is a designated wilderness area called Delirium. It is managed for remote, undisturbed study, solitude, and education, with semi-primitive, non-motorized recreation. This area is designed to prevent loss of wilderness and sensitive species. It is a semi-primitive, non-motorized recreation area.

Much of the area of central Kinross Charter Township is in the Lake Superior State Forest system, or contains hydric soils or wetlands. However, the remainder is somewhat suitable for development and crop or pasture production with the appropriate drainage and attention to proper septic systems. Rural development is currently scattered along the main county roads, interspersed with crop and forest lands. Some food producing farms still remain in operation. Some areas are most suited for wildlife, including the finger areas along the streams in the northern sections, and one area within wetlands in the area near Kinross. These areas should not be disturbed except for passive recreation.

The eastern portion of Kinross Charter Township contains the majority of the urbanized environment within the former military base area, and contains all of the public water, sewer, and stormwater systems. Major highways converge in the area of Kinross/Kincheloe. This area also contains almost all the commercial and industrial uses of the Township, and is a transportation hub for snowmobile, air, rail, and public transit opportunities. Wetlands also dominate the landscape along with woodlands and the Lake Superior State Forest. Kinross and Dukes Lake are in this section of the Township. Public recreation opportunities include the Kinross Community Park (Fairgrounds), Oaks Golf Course, Recreation Center, Kinross Heritage and Military Museum, RV parks, etc.

Runway protections zones, (RPZ) have been established to preclude obstructions potentially hazardous to aircraft and to control building construction as a protection from aircraft nuisance and hazards to people on the ground. RPZs are to be kept free of structures and development that would create a public place of assembly. If these RPZs are not owned by the aviation facility, aviation easements are recommended to control height and land use issues. Kinross Charter Township has a defined Aviation District to prevent incompatible land uses on or near airport property, and no further density is advised for development within the Aviation restriction zones.

Various methods were employed to incorporate public participation in the process, including surveys and public discussions. In general, residents of Kinross Charter Township value the rural character of the township, and feel development should proceed according to carefully considered standards assuring compatibility. There are concerns that land splits will lead to sprawl and difficulty in service provision.

The Kincheloe area is challenged by issues of identity and aesthetics while historically being dominated by distinctive uses; first the Airforce Base, then the correctional system. The commercial core lacks cohesiveness and a sense of place, and the security concerns of the Correctional Facilities can be daunting to the pedestrian. More pedestrian connections are needed between the residential areas and the recreation center and the commercial core. Safe routes off the streets are needed, especially in the winter. However, there is great opportunity in the amount of publicly-owned land ready for redevelopment. A greater diversity of housing is needed, and additional residents in Kincheloe would also support new businesses.

Community members express concern regarding the appearance of their neighborhoods and the general community, citing blight, deteriorating buildings, abandoned or junk cars, and overgrown vacant lots as concerns. There is awareness that a lack of property maintenance and enforcement negatively impacts visible community pride. Residents would like to see better maintenance and utilization of facilities. There are some issues of incompatible uses within the residential areas, and also concerns associated with shared driveways and duplexes.

Residents are also concerned about job quality and stability, and rising prices in a challenged economy. They support the need for more local commercial and industrial development, recycling programs, tourism development, beautification, and youth programs, which would keep more money in the Township rather than exporting to the Sault. It was suggested that a local Economic Development Corporation is needed to coordinate activities. Residents direct attention to improving quality of life within the Township.

The following is the Kinross Charter Township vision statement, which will drive all future policy:
In 2020, Kinross Charter Township will have a sustainable future: Residents, property owners, and visitors will experience a community in which economic, social, and environmental policies are aligned to preserve and protect natural and historic resources; create new housing, economic, and leisure opportunity for all; nurture a strong sense of place; and ensure the

efficient provision of important community services, systems, and facilities so as not to overburden future generations or the environment.

Future land use strategy is designed to support Smart Growth principles. The future land use plan proposes that no new land uses be established, or land rezoned, unless adequate public facilities and services can be efficiently provided, and it is preferred that new development remain concentrated in the area of Kincheloe where adequate roads and public services exist. The optimal strategy involves the reuse of currently vacant land and buildings to add increasing density and critical mass of activity.

Future land use strategies address preservation of some land in proximity to population centers for production of food. Land divisions of 10 acres result in increasing fragmentation of these lands, resulting in decreased viability for food production. This plan proposes land divisions from 1-5 acres, and over 20 acres. It is understood that division of land into larger parcels can increase the opportunity for sprawl. However, in this case, land uses have been arranged in nodes and along established transportation corridors to avoid this issue. Conservation and Cluster development has been suggested. The large amount of protected, publicly-owned lands also diminishes the potential for sprawl.

Privately-owned parcels surrounded by public land uses lack adequate public and emergency access, undermining public safety and welfare. For this reason, these parcels are planned as resource protection areas. This plan supports the continued development of industrial uses in near proximity to Kincheloe provided adequate public services and facilities are provided. Priority is given to projects located within already established industrial areas near transportation resources.

Mixed-Use development and a variety of residential densities are incorporated into this plan to encourage housing diversity and affordability and provide 24 hour vitality in the commercial core. This increase in density will support public transit and the development of new businesses and services. Appropriate screening and buffering is suggested to assure compatibility between uses.

Land within central Kinross Charter Township is generally apportioned to reduce land fragmentation, cluster more intense residential uses along primary county roads, preserve areas for agricultural production that will also protect water resources, and maintain rural character of the Township with controlled growth. Future residential uses will accommodate and encourage more clustering of development with engineered waste systems and common open spaces. This area will be preserved as one with the most potential for agriculture and local food production within close proximity to the urban center of the township. Land within eastern Kinross Charter Township contains a full range of future land use descriptions within and adjacent to the urban core of the township. The future land use plan for eastern Kinross Charter Township will allow for development of a mix of uses within various nodes, including Kinross (along Mackinac Trail), I-75 and Gaines Highway, western to eastern Kincheloe along M-80, M-80 directly east of Gaines Highway, and central Kincheloe. In the future, multi-story structures will be encouraged in Kincheloe where compatible with the airport zones to achieve diversity of housing types,

increase density within the urban service area, and add design variety. This will also help to buffer the predominance of the institutional uses.

The future land use plan calls for protection for the wetland areas northwest of Kincheloe for interpretive recreation areas. The primary Kincheloe residential area will be extended to Gaines Highway if an agreement can be reached with the State. New low-density residential development is planned around the small lake on the eastern edge of the township and in the area west of the golf course. Primary Rural Residential is planned along the southern end of Kinross Road and along Thompson Road. New development is not meant to further exacerbate any inconsistency with the recommendations of the airport plan, nor is expansion of the airport planned at this time.

The Kinross Charter Township zoning ordinance must be amended immediately to implement the policies of this master plan and to comply with the new Michigan Zoning Enabling Act. This is a high priority activity for the Township. Necessary changes are outlined in the Zoning Plan of this document.

The strategic plan contains goals and objectives relating to a general plan for housing, commercial and industrial infrastructure, sustainable service provision, and recreation. Also included is an economic plan, infrastructure plan, and environment/natural features plan. Strategies are prioritized and linked to funding resources contained in the Appendix.

The Kinross Charter Township Master Plan is meant to take a long-term view of issues facing the Township, however, it is important to revisit this plan every five years and make appropriate adjustments. This will ensure a solid policy foundation for a sustainable future for Kinross Charter Township.

Chapter 1: Introduction

Purpose of the Plan

Most people individually or collectively plan for their future, dealing with issues from the simple and immediate (what to have for dinner tonight) to the complex and long-term (how to manage money for their retirement while paying for their child's education). Corporations find it essential to plan for efficient delivery of their product or service, taking into account all the inputs, processes, constraints, and requirements to achieve customer satisfaction.

A local unit of government engages in planning to assist in decision-making while anticipating and responding to change. Planning is the foundation for the community's "house"—if you don't have a good foundation, there is no guarantee that the house will hold together over time. A good master plan lays a solid legal foundation for implementation tools.

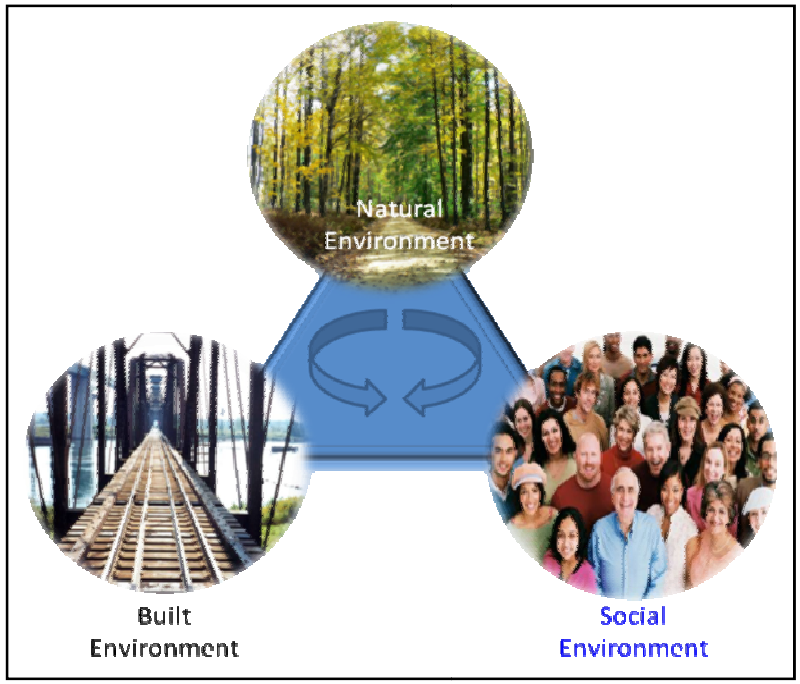


Figure 1-1: Plan context, understanding conditions and relationships

The Michigan Planning Enabling Act states that the purpose of the Master Plan is to guide and accomplish development that satisfies all of the following criteria:

1. Is coordinated, adjusted, harmonious, efficient, and economical
2. Considers the character of the planning jurisdiction and its suitability for particular uses
3. Best promotes public health, safety, morals, order, convenience, prosperity, and general welfare

The Master Plan is also meant to promote or adequately provide for the following:

1. A system of transportation to lessen congestion on streets
2. Safety from fire and other dangers
3. Light and air
4. Healthful and convenient distribution of population
5. Good civic design and arrangement, and wise and efficient expenditure of public funds
6. Public utilities and improvements such as sewage disposal and water supply
7. Recreation
8. The use of resources in accordance with their character and adaptability

To this end, master plans address issues relating to land use and infrastructure projecting 20 years or more into the future. Land use plans classify and allocate land for such uses as agriculture, residences, commerce, industry, recreation, public buildings, schools, and natural resource utilization or conservation, etc. To do this, it is important to understand existing conditions and relationships between the natural environment (soils, wetlands, topography, forests, waterways, open spaces), built environment (transportation infrastructure, housing, waste and water supply systems, public utilities), and social environment (population, employment, activity centers, governance, sources of wealth).

However, community planning is not simply a technical, academic process that turns data inputs into obvious recommendations. A Master Plan is a living document that rests upon the foundation of community vision—what the people of a community envision for their collective future.

Master Plans also set the stage for zoning and other public policies which serve to enforce the community vision. Community goals relating to growth, economic development, recreation, environment, education, historic preservation, and water resource management provide criteria by which to evaluate recommendations. All viable communities meet some minimum level of public service provision; however, the most desirable communities display a strong sense of identity and pride of place, stimulating private investment through attention to a sustainable future.

Master Plan Design & Process

The Kinross Charter Township Planning Commission commissioned an update of their 1997 Comprehensive Plan in 2008 in order to address changing conditions and anticipated development. The Planning Commission began efforts to secure community input in 2005, utilizing a self-administered Master Plan survey. Results of this survey are presented in Chapter 3: Community and Recreation Facilities, and Chapter 5: Community Visioning. Community input was also compiled at a public open house held May 14, 2008, and through several meetings with the Planning Commission. A community profile was prepared to assess current conditions and trends and illustrate important concepts with graphs, tables, and maps. From the information developed through this analysis and the community participation sessions, draft goals and objectives were formulated and discussed in planning commission work sessions. Consensus was obtained on future land use alternatives, based on various considerations including soils, natural features, road condition, availability of public services, and community vision. The draft plan was then created and made available for public comment on a project website, and was presented in a public forum. Changes were considered and incorporated, and the final version of the Plan was approved by the Planning Commission on _____, 2009. The Plan was then distributed to surrounding jurisdictions for review and comment, and presented to the Township Board for final adoption on _____, 2009.

This Plan is prepared under authority of the Michigan Planning Enabling Act, P.A. 33 of 2008. It is not a regulatory document, but a policy plan which serves as a foundation upon which the Township will adopt regulations to implement the recommendations of the Plan.

The Michigan Zoning Enabling Act, P.A. 110 of 2006, stipulates that the zoning ordinance shall be based upon a plan designed to promote the public health, safety, and general welfare; to encourage the use of lands in accordance with their character and adaptability; to limit the improper use of land; to conserve natural resources and energy; to meet the needs of the state's residents for food, fiber, and other natural resources, places of residence, recreation, industry, trade, service, and other uses of land; to insure that uses of the land shall be situated in appropriate locations and relationships; to avoid the overcrowding of population; to provide adequate light and air; to lessen congestion on the public roads and streets; to reduce hazards to life and property; to facilitate adequate provision for a system of transportation, sewage disposal, safe and adequate water supply, education, recreation, and other public requirements; and to conserve the expenditure of funds for public improvement and services to conform with the most advantageous uses of land, resources, and properties. This plan provides the basis for zoning under the Michigan Zoning Enabling Act.

It is required that a newly adopted or revised plan incorporate any airport layout or approach plan that has previously been filed with the local unit of government. These documents are identified below. The master plan is also the basis for subdivision regulations, local land use regulations, and the capital improvements plan. This helps to ensure that these regulations are consistent with the community goals and policies expressed in the master plan.

Similarly, it is wise to incorporate the essential parts of other planning documents that relate to the contents and goals of the Master Plan. Elements of the following documents have been incorporated into this Master Plan:

- *I-75 Corridor Study: St. Ignace to Sault Ste. Marie*, prepared by the Eastern U.P. Regional Planning & Development Commission, 2003.
- *Eastern Upper Peninsula Comprehensive Economic Development Strategy*, prepared by the Eastern U.P. Regional Planning & Development Commission, 2006 and 2007-2008.
- *Chippewa County International Airport Feasibility Study for the Proposed Development of: Polar Air Cargo Facility, General Aviation Terminal Facility*, prepared by Mead & Hunt, 2006.
- *Chippewa County International Airport Master Plan*, prepared by Mead & Hunt, 2007.
- *Hiawatha National Forest 2006 Forest Plan*, prepared by the USDA Forest Service, 2006.
- *Recreation Plan for Kinross Charter Township, Chippewa County, Michigan*, prepared by U. P. Engineers & Architects, 2007.
- *Biological and chemical assessment of Kinross and Dukes Lakes, Chippewa County, MI*, prepared by Michael Jones, Lake Superior State University.
- *Community Assessment of Kinross Charter Township*, prepared by Lake Superior State University Senior Nursing Class of 2008.
- *Feasibility Evaluation for Extension of Sanitary Sewer Service to Fairgrounds/Kinross Lake Area*, prepared by Wade-Trim, Inc., 1998.
- *Wellhead Protection Plan Former Kincheloe Air Force Base*, prepared by Parsons Engineering Science, Inc,.
- *Wellhead Protection Plan*, Wilcox.
- *Kinross Charter Township Master Plan Survey*, 2005. (See copy in Appendix A)

The Kinross Charter Township Master Land Use Plan is organized into seven chapters:

- Chapter 1: Introduction—Purpose, Process, Next Steps
- Chapter 2: Township Profile—Regional Context, Area Background, Kinross Background, Population and Economic Base
- Chapter 3: Infrastructure—Historic, Housing, Commercial/Industrial, Utility, Public Services, Community and Recreational Facilities, Transportation and Communications
- Chapter 4: Current Land Use and Development Patterns—Current Land Use, Environment and Natural Features, Built Environment
- Chapter 5: Community Visioning—Public Participation Process, Summary of Community Challenges, and Vision Statement
- Chapter 6: Future Land Use Plan—Future Land Use Descriptions and Maps, Comparison of Current and Future Land Use Descriptions, and a Comparison of Future Land Use to Current Zoning
- Chapter 7: Strategic Plan—Community Vision Statement, Goals, Objectives, Policies, and Strategies, including a General Plan, Economic Plan, Infrastructure Plan, and Environment/Natural Features Plan; Zoning Plan

Use of the Master Plan

The Kinross Charter Township Master Plan will be utilized in the administration of the Township in the following ways:

1. *Advisory Guidelines for Development:* The visioning section of the master plan serves to document public interests and to declare public intentions, allowing private sector landowners and developers to make decisions that are consistent with public goals.
2. *Foundation for Implementation:* The Master Plan provides a rational, foresighted, comprehensive, long-term oriented foundation for zoning, rezoning requests, subdivision and land division regulations, special initiatives, and the capital improvement program.
3. *Coordinated Planning:* Provides the mechanism by which to coordinate and communicate with neighboring jurisdictions based on common conditions, goals, vision, and interests.

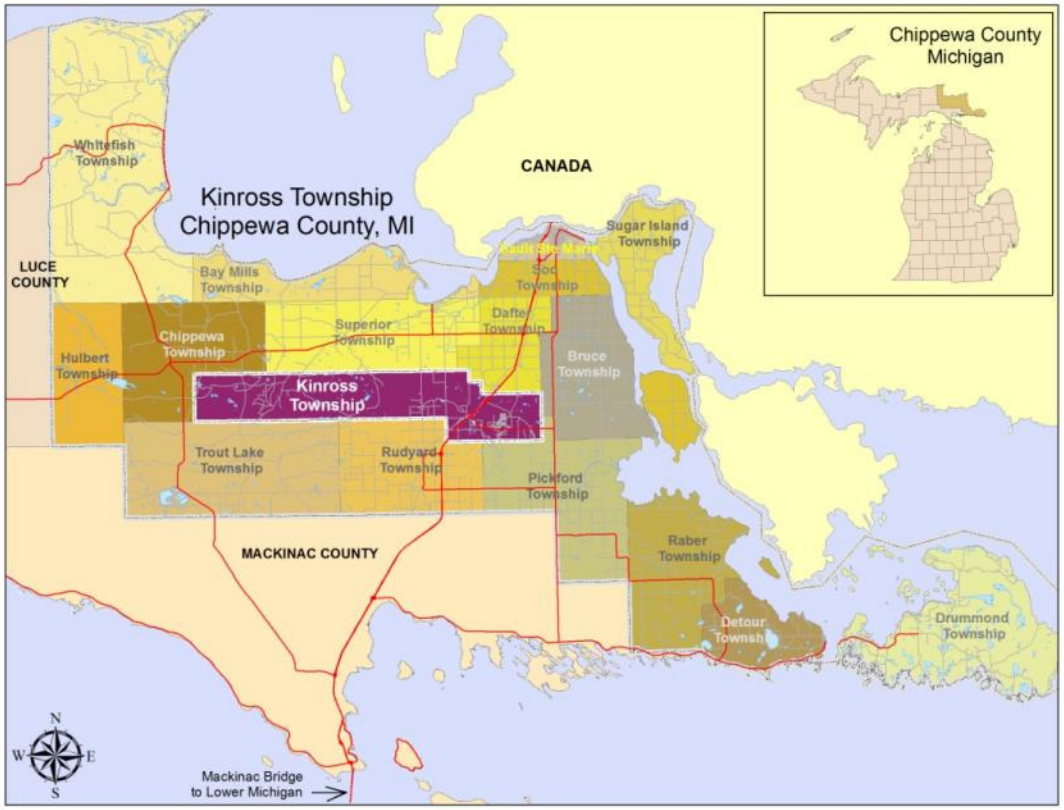
Next Steps

Implementation of the plan is an ongoing process, requiring continuous monitoring of changing conditions and progress toward achieving plan goals and strategies. At the very least, the plan shall be reviewed every 5 years after adoption, and the review findings shall be recorded in the meeting minutes. In addition, after adoption of a Master Plan, the Planning Commission shall prepare a capital improvements program of public structures and improvements that will be needed or desired and can be undertaken within the ensuing six year period. These will be arranged in order of priority. In accordance with the Michigan Planning Enabling Act of 2008, the capital improvement program is required of all townships that own or operate a water supply or sewage disposal system.

Chapter 2: Township Profile

The purpose of Chapter 2, Chapter 3, and Chapter 4 is to provide a profile of the township as it exists today, including the assets and resources that will impact future development and policies as sources of strengths, weaknesses, opportunities or threats. Historic, current, and future trends are examined in order to serve as a framework for decision-making. This section is not intended as an exhaustive inventory, but rather serves as a current snapshot of the data most relevant to the future land use plan, and is based on existing research and trusted demographic sources. Topics include regional context, background information, and a look at existing conditions relating to the following areas: population; economic base (employment and industry); infrastructure (historic, housing, commercial, industrial, civic, and transportation); natural features and the environment; and current land use and development patterns.

Figure 2-1: Regional context of Kinross Charter Township, Chippewa County, MI



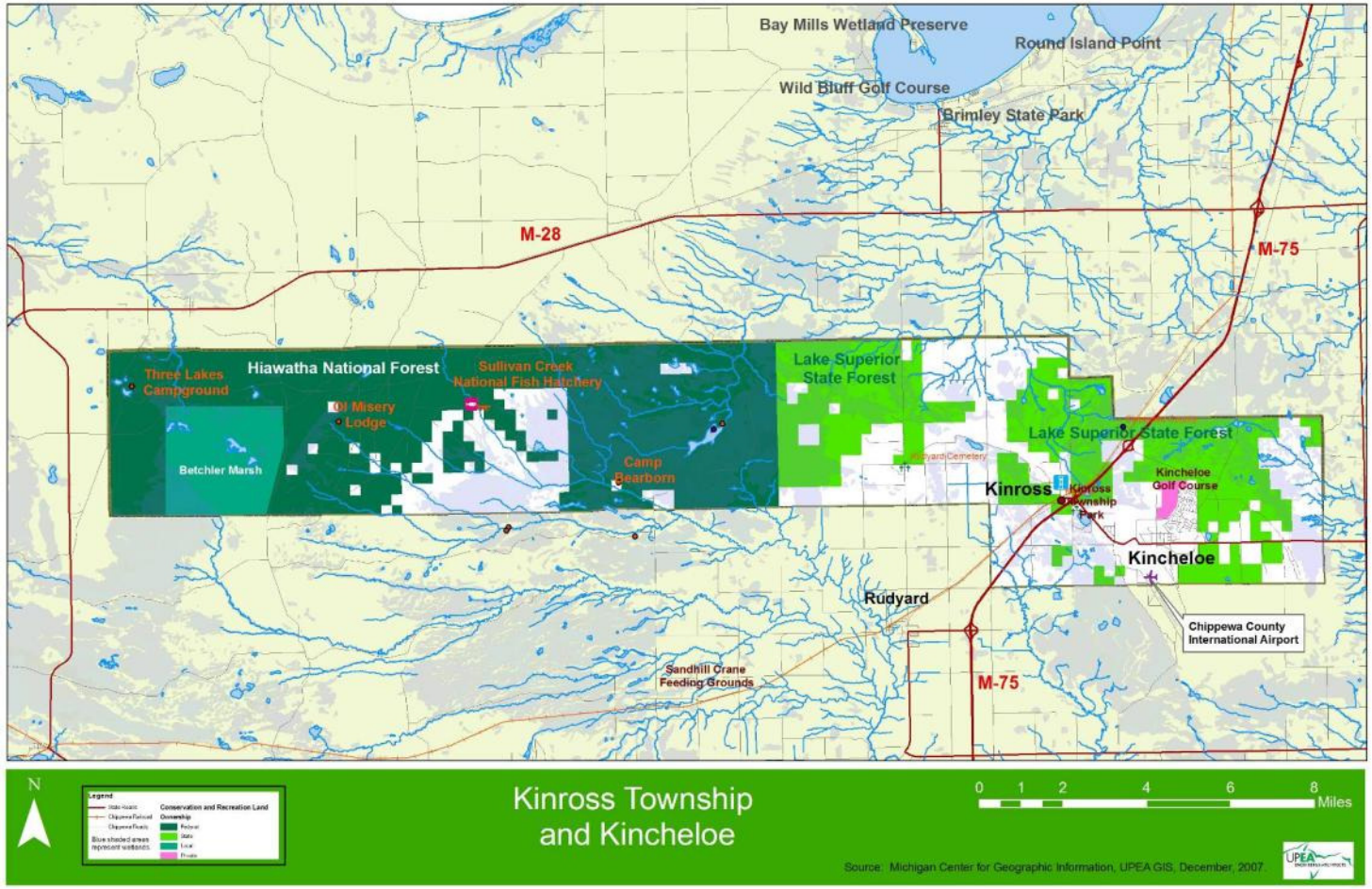
Regional Context

Kinross Township is located in the eastern Upper Peninsula of Michigan in Chippewa County. Chippewa County is bordered by the Canadian Province of Ontario and the Great Lakes of Superior and Huron. It is also adjacent to Mackinac and Luce Counties, Michigan. Drummond Island, Sault Ste. Marie, the Hiawatha National Forest, and Whitefish Point are a few of Chippewa County's destinations for sportsmen and tourists.

The three Counties of Chippewa, Luce, and Mackinac make up the Eastern Upper Peninsula Planning Region Number 11. This region covers an area of 4,763 square miles in which 80 percent of land surface is forested, 6 percent is in agricultural use, and less than 1 percent is urbanized. Almost one-half (47 percent) of the land in the region is under public ownership, with 30 percent owned by the State, 16 percent by the Federal, and the balance by local

government. The region is sparsely populated with roughly 12 persons per square mile. Tourism and services are the major industry clusters in the region, while government is a major employer.

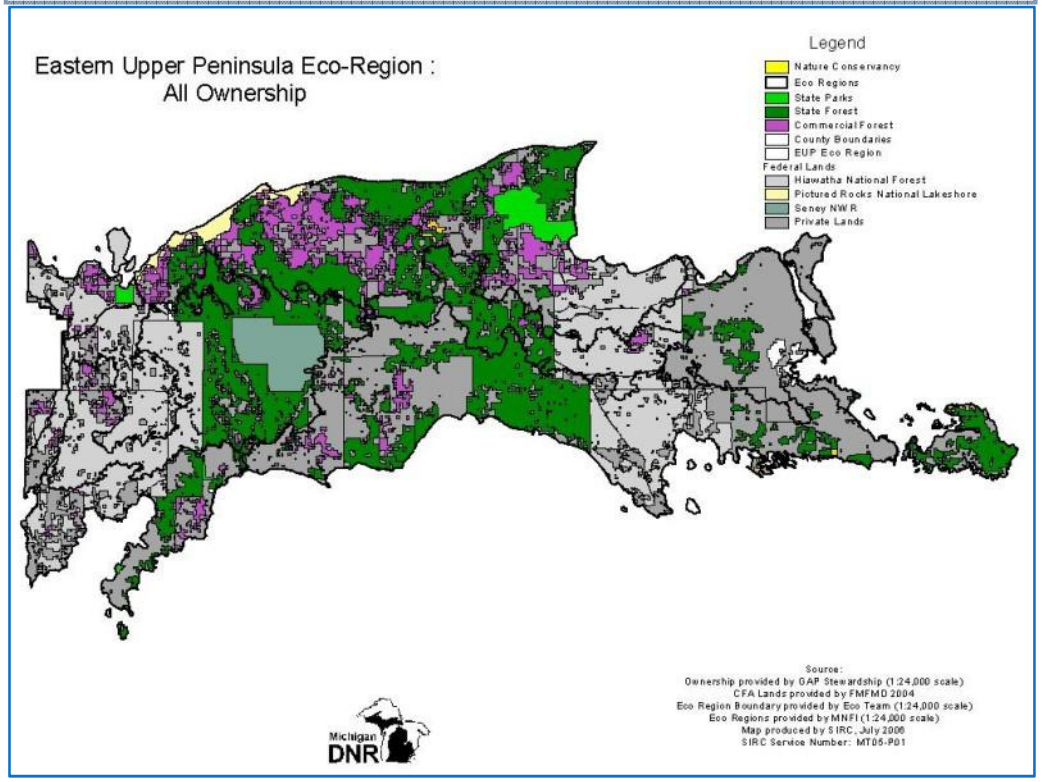
Figure 2-2: Conservation, recreation, and forest lands in Kinross Charter Township



Kinross Charter Township is a very long and narrow municipality, nearly 30 miles long and only four miles wide for the majority of the area. Total land area of the Township is 121 square miles, including not quite one square mile of water area. The Township contains 4.5 percent of the total area of Chippewa County. The majority of Kinross Township is open and forested lands, with most of the urban development contained in the vicinity of Kinross surrounding the former Kincheloe Air Force Base.

Much of the land area of Kinross Township is contained within the Hiawatha National Forest and the Lake Superior State Forest, as shown above. Other than the urban development in the area of Kincheloe and Kinross, most of the township is rural in character.

Figure 2-3: Eastern Upper Peninsula Eco-Region



Chippewa County is contained within the Eastern Upper Peninsula Eco-Region, as shown at right, which encompasses 3,898,728 acres or 6,091 square miles rich in natural resources. Within this area, there are seven State Parks, one Fisheries Hatchery, two State Forests, one National Forest, one National Wildlife Reserve, one National Lakeshore, two State Wildlife Management areas, and one State Wildlife Research Area. Much of the land is also contained in Commercial Forest Reserve.

Total Tribal ownership in the EUP Eco-Region is 3,494 acres. The Federal government owns 1,035,328 acres, and the State government owns 1,121,077 acres.

The area is characterized by a relatively flat topography, with large expanses of open peatlands and forested lowland swamps. Today, the majority of the landscape is still forested, except for productive agricultural or pastoral lands in the eastern most part of the peninsula. Lake effect snow and rain are characteristic near the Great Lakes shorelines, which results in more evenly distributed rainfall in the area.

Significant landforms in the region include the Niagara escarpment, the Munising formations of the Pictured Rocks National Lakeshore and Tahquamenon Falls, and the Mackinac breccias formation of Castle Rock. The EUP is the only region in the state that is bordered by three of the Great Lakes, including Huron, Michigan, and Superior.

Portions of Kinross Township are contained within the Hiawatha National Forest system, which consists of nearly 1.3 million acres total in its western and eastern boundaries. The Hiawatha National Forest touches three of the five Great Lakes (Huron, Michigan, and Superior), and contains portions of the North Country National Scenic Trail.

Area Background

Chippewa County is among the oldest settled areas in the United States. Native Americans settled near the area's abundant water and fish resources as many as 2,000 years before Europeans migrated to the area. The Sault Ste. Marie tribe of Chippewa Indians is a modern expression of the Anishinabeg people who made their homes near the rapids of the St. Mary's River which later became the City of Sault Ste. Marie. These people greeted French fur traders in 1665. The first European settlement in Michigan was established by the French Jesuit missionary, Father Jacques Marquette in 1668. The British took possession of the area in 1792 and continued to occupy the area until after the War of 1812. The British expanded their presence in 1815 with the establishment of a fort on Drummond Island. This fort was abandoned in 1822 when the area was brought under American control. Fort Brady was constructed by the U.S. Army in 1823 at Sault Ste. Marie.

Logging, fishing, and farming resulted in economic expansion in the County from the mid-1880's to the early 1900's. Large scale logging activities began in the 1870's on virgin white pine stands, and many of the towns in the county began as logging centers. Farming increased slowly until 1925, when the number of farms peaked at 1,730. Both agriculture and the lumber industry declined as the virgin forest was cut over, but a second growth forest still provides an important resource.

Commercial shipping on the Great Lakes created a need for a canal between Lake Superior and the St. Mary's River system, which leads to Lake Huron. A canal and lock system was operational by 1855, called the Soo Locks. Later enlarged and improved by the U.S. Amy Corps of Engineers, it is now the busiest such system in the world with plans for near future renovation.

Kinross Background

The township of Kinross was created by action of the State Legislature effective March 29, 1899 by detaching territory from the Townships of Dafter, Rudyard, and Pickford. Originally, townships were planned to be square, but because of the way it was created, Kinross is far from square. It is 29 miles long and four miles wide except for two sections where it is six miles wide, and one section where it is five miles wide. The Township extends almost to M-123 on the west, and to within one mile of M-129 on the east. It contains 62,275 acres. The former Air Force Base occupied about six thousand acres in the south central section.[1]

An airport was first formally designated at Kinross in 1941, when the Kinross Auxiliary Air Field was envisioned as a refueling stop for aircraft headed for Alaska and as a base of defense for the Locks at Sault Ste. Marie. The base was inactive during the last year of World

[1] Thompson, Rena T. *A History of Kinross Township.*

War II. The air field then served as a hub for private and commercial aviation from 1945 to 1952. With the outbreak of the Cold War and hostilities in Korea, the Kinross Auxiliary Airfield was reactivated in 1952, and was closed to private, noncommercial aviation in 1953 when the base became operational as an Air Force facility.

In the years to follow, the Air Force invested a great deal of money in area installations, benefitting the local economy. Amenities such as recreation facilities, shops, youth center, golf course, schools, dorms, and a hospital were built throughout the period throughout the late 1950s and early 1960s. Both Michigan Technological University and Northern Michigan University offered on-base curriculum. In 1958, the massive 12,000 ft runway was built to accommodate fifteen B-52 bombers and ten KC-135 tankers. A shortage of housing for assigned personnel led to the construction of housing for families. The majority of the housing units were built in the early 1960s by Capehart Housing, along with the Ivan C. Kincheloe Elementary School.
The base was officially renamed as the Kincheloe Air Force Base in 1959, following the death of namesake Captain Ivan C. Kincheloe, Jr. who flew the Bell X-2 rocket-powered research craft to a world's altitude record. Kincheloe became the first pilot to climb above 100,000 ft, rocketing to a peak altitude of 126,200 ft, and earning the nickname "America's Number 1 Spaceman". Kincheloe was later killed in the crash of an F-104 when his parachute failed to open in a low-altitude ejection.

Above: Massive hangar buildings remain as a reminder of the past as they are transitioned to new uses. Below: Captain Ivan C. Kincheloe.

In 1971, the Department of Defense announced its decision to close Kincheloe by October, however the decision was reversed in May. The reversal was only a short reprieve as the base became officially inactivated on September 30, 1977, thereby impacting area residents and businesses dramatically. It was estimated that 3,679 employed personnel and 6,138 dependents were displaced.

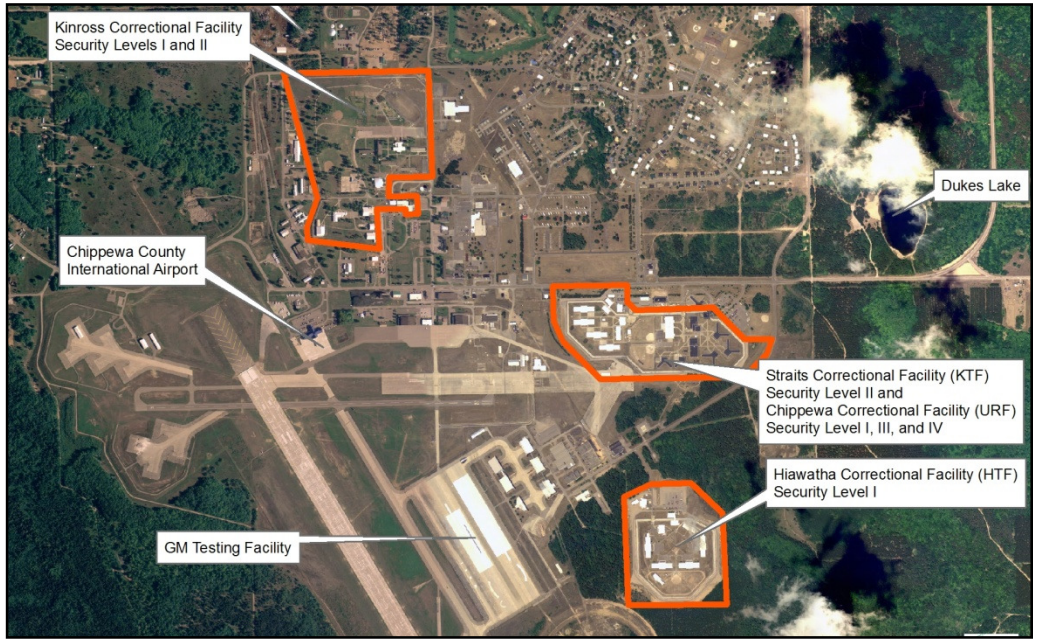
The closure of Kincheloe AFB removed 10,000 military personnel and dependents (around 25% of the County population), 700 civilian jobs and a total payroll of $28 million at a time when the Upper Peninsula's resource extractive industries, mining and logging, were in decline. The base was the major employer in the County. Population and employment decline continued for two years after the closure, and it

took 15 years for employment to reach the same level as prior to the base closure. Unemployment levels ranged from 17 to 19 percent in the late 1970's. The following sections on population and economic trends will explore this impact in more detail.

Today, the former airbase is utilized for commercial air service, with service to domestic and international destinations via Detroit Metro Airport.

Some of today's residents recall when entrance gates to the Air Force Base were set up across what is now I-80, at a time when security and defense was of foremost concern. They accept the winding, convoluted, and confusing residential road network design because they understand that it was an intentional security measure (see photo at right).

Much of the effects from the closure of the Air Force base were mitigated by the opening of four correctional facilities in Kincheloe since 1978. The Kinross Correctional Facility (KCF) opened in 1978 as a level I and level II security prison with the largest fenced area (113 enclosed acres) of any state prison in Michigan.



Below Right: Residential road network in Kincheloe. Below left: Prison (orange) and airport locations.

In 1988, the Straits Correctional Facility (KTF) opened as a level II security prison on I-80. Finally, in 1989, the Chippewa Correctional Facility (URF) and Hiawatha Correctional Facility (HTF) opened in Kincheloe. The URF is security level I, III and IV, while the HTF is security level I. These facilities provide regional employment opportunities and fuel the economy in a way similar to the former Air Force base, with dependents sometimes settling in Kincheloe for the duration of the prisoner's sentence. It is widely recognized in Kincheloe that the livelihoods of many depend on the employment of the prisons, with employees commuting as far as 60 miles for work. See section on economic base and

employment for more information.

Not until the 1990's did the County's economy fully make up the economic loss from the base closure. At this time, the retail trade sector recovered with the opening of the casino on the Bay Mills Indian Reservation. In addition to the prisons, one work camp, 12 industrial companies and 15 retail businesses eventually opened on the former base in Kincheloe. In all, the local tax base doubled, and the civilian payroll created by the new ventures reached $110 million. Today, the Chippewa County Air Industrial Park constitutes 1,850 acres of the former base including the 852-acre Chippewa County International Airport. The remaining 2,371 acres contain the retail and service activities along with the housing units, utilities, and recreational facilities such as the golf course.

Environmental remediation issues associated with the Air Force Base are still being addressed in Kincheloe. The base had originally been leased in 1941 from the State government by the Department of Defense. The lease agreement required that the land, when returned to the State, be restored to its original condition. In lieu of restoration, the site was returned to the State with all the buildings and nonmilitary equipment, such as trucks, cars, fire equipment, and office furniture free.

In 1996, the Environmental Protection Agency (EPA) selected Chippewa County/Kinross Township for a Brownfields Pilot project with an award of $200,000. At that time, numerous buildings and potentially contaminated areas existed including landfills, a fire training area, and an aircraft maintenance area. Trichloroethylene was found in the local well water. Businesses expressed concerns regarding potential development because of potential liability associated with the uncertainty about the level of site contamination. Because the base closure predated current base closure regulations, Department of Defense funding for Kincheloe was limited. The intent of Chippewa County's Brownfields program effort was to investigate, remediate, market, and reuse the brownfields at Kincheloe by coordinating public and private resources. The U.S. Army Corps of Engineers completed 43 Phase I assessments and Phase II and III assessments were planned. A community task force of public and private stakeholders convened to plan a redevelopment strategy for each parcel in compliance with Indian trust land agreements, and to coordinate the environmental/economic redevelopment strategy. Legal documentation related to land ownership, liability, due care requirements, zoning, and financing were prepared as a part of brownfields land-use planning. A community task force was convened to provide input for redevelopment efforts. A summary of ensuing efforts are included in Chapter 4, Environment & Natural Resources.

Today the Tribe maintains a strong presence within Kincheloe, with many members residing in the former base area. The Original Bands of Chippewa Indians were granted federal sovereign status in 1972, becoming the Sault Ste. Marie Tribe of Chippewa Indians. Land was taken into trust in 1974, and today the tribe consists of 40,000 enrolled members living throughout Michigan and the United States. The Tribe operates housing, education, and health programs as well as courts and police departments. The Tribe has become a large regional employer with 22 businesses employing nearly 2,500 people, including DeMawating Development in Kincheloe. Some revenues from the Tribe's casino and non-gaming businesses are channeled back into the community. The Tribe holds annual Powwows to celebrate their culture and history, including one in Kinross.

Population

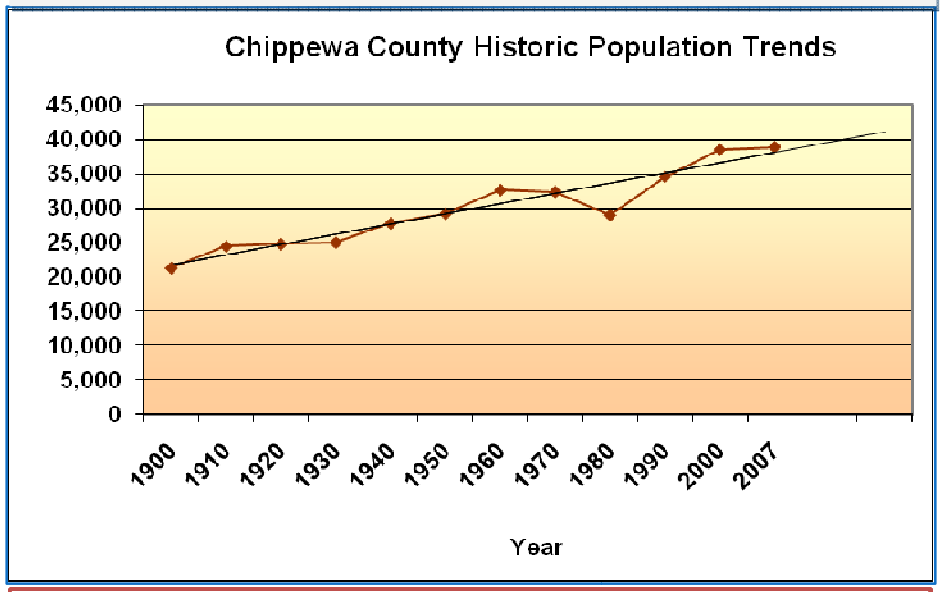
Specific Population Trends

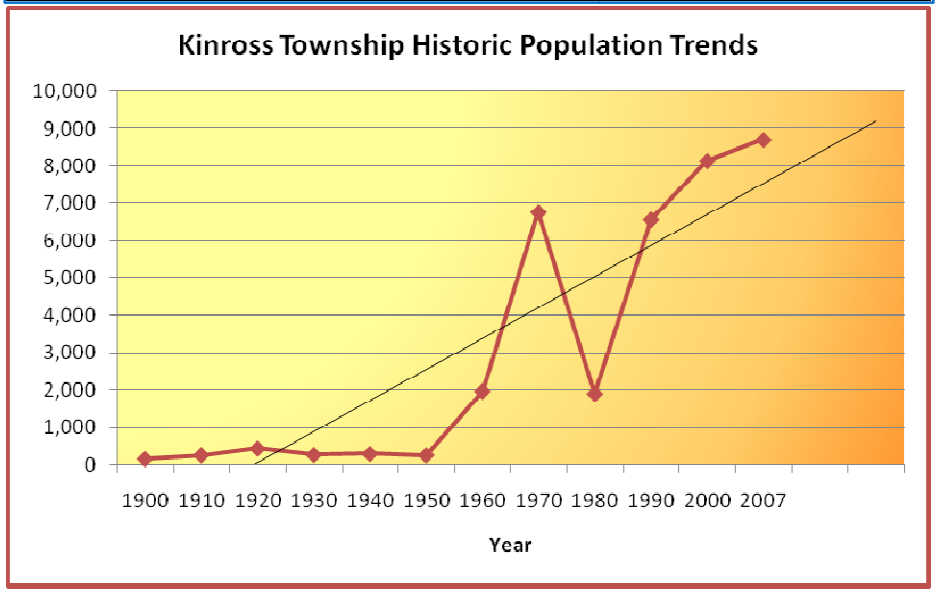
Historic population trends for both the County and Kinross Charter Township show a general upward trend, however, Township population trends show dramatic variation with the closure of the Air Force Base and the opening of the prisons.

The County population in 1900 was 21,338 people, and population grew only slightly through 1930. However, between the years 1930 and 1940 there was an 11% increase, followed by a 5% increase from 1940 to 1950, and a nearly 12% increase from 1950 to 1960. Population declined by around 10.5% from 1970 to 1980, then rebounded by 19% from 1980 to 1990. Another strong increase of 11.5% followed from 1990 to the year 2000. Since that year, population is estimated to have remained stable with only a 1% increase, bringing the population to a current level of around 39,000 people. Total population change in the County from 1990 to the year 2007 estimate is an increase of 17,584 people. A linear trend line projects County population will be almost 41,000 by the year 2009.

Kinross Township population was only 144 people in the year 1900, and remained stable through 1910. A 73% increase from 1910 to 1920 was followed by an almost 40% decrease from 1920 to 1930, leaving population at a stabilized level through 1950. However, after 1950, Kinross Township population jumped to almost 2,000 people in 1960, to attain a high of 6,763 people in 1970, 6,331 of whom lived in Kincheloe. Following the closure of the Air Force Base,

Figure 2-4: Population trends, County & Township



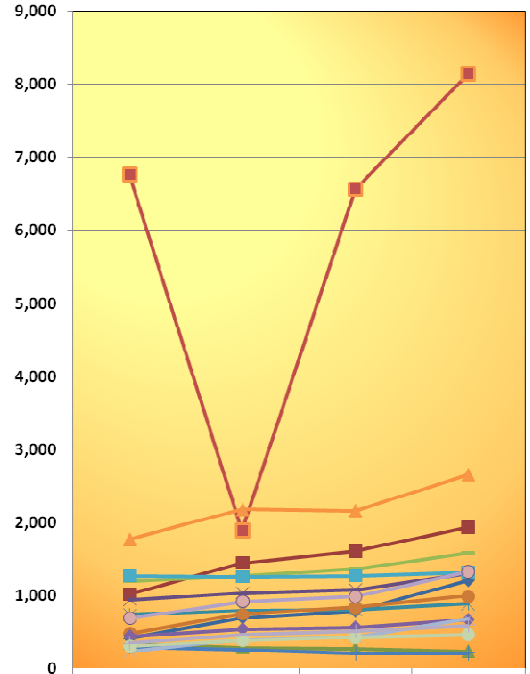


population declined rapidly back to around 1,900 people by 1980. With the opening of the prisons, population increased dramatically again to a level of 6,566 people in 1990. The year 2000 Township population count was originally reported to be 5,922, however, the count for both Kinross Charter Township and the City of Sault Ste. Marie were adjusted to reflect a change in the group quarters (mostly prison) population shortly thereafter. While Kinross Charter Township was shown to have an additional 2,218 people in group quarters population, Sault Ste. Marie was shown to have the same number fewer in the group quarters population, leaving the County count unchanged. This brought the year 2000 total population count in Kinross Charter Township to 8,140, with 4,736 (58%) of them living in group quarters. This represents an increase of 750 people living in group quarters (1990 group quarters population was 3,986, representing 61% of the total population).

The Township population was estimated to be 8,709 in the year 2007. This reflects an increase of 8,565 people from the year 1900 to 2007. A linear trend line based on this historic data back to the year 1900 projects Township population will be almost 9,200 by the year 2009.

A forecast using population estimates from the year 2000 to 2007 (since 1990 population figures reflected a transitioning trend after the opening of the prisons) projects a potential 2009 population of 8,607. Projecting further, using this same method, results in a forecast that Township population will be 9,331 in 2020, and 9,990 in 2030. However, population projections are limited in that many factors can influence actual trends, which, as Kinross Township's history shows, can dramatically change with economic conditions or job base. For example, the closing or reduction of the prison system, or the addition of a significant new industry, would greatly impact future trends. Another potential impact is a dramatic rise in gas prices, which might encourage more commuters to live closer to the regional employment destinations within the Township.

Recent Population Trends within Chippewa County



	1970	1980	1990	2000
Bay Mills Township	418	695	787	1,214
Bruce Township	1,019	1,449	1,610	1,940
Chippewa Township	344	291	279	238
Dafter Township	942	1,037	1,083	1,304
Detour Township	735	794	806	894
Drummond Township	479	746	835	992
Hulbert Township	289	251	208	211
Kinross Charter Township	6,763	1,891	6,566	8,140
Pickford Township	1,198	1,264	1,360	1,584
Raber Township	450	543	569	670
Rudyard Township	1,273	1,260	1,270	1,315
Soo Township	1,775	2,179	2,165	2,652
Sugar Island Township	237	400	441	683
Superior Township	694	923	990	1,329
Trout Lake Township	306	386	429	465
Whitefish Township	354	472	517	588

As can be seen in the chart on the previous page, most of the municipalities within Chippewa County (not including villages or Cities) have trended upward in population, or remained stable, since 1970. Overall greatest gains in population since 1970 were in Kinross Charter Township (increase of 1,377 people, using the corrected Census 2000 figures), Bruce Township (increase of 921 people), Soo Township (increase of 877 people), Bay Mills Township (increase of 796 people), and Superior Township (increase of 635 people). Other increases range from 42 to 513 people. The two Townships showing population declines since 1970 are Chippewa Township (less 106 people) and Hulbert Township (less 78 people). During this time, the City of Sault Ste. Marie lost 812 people.

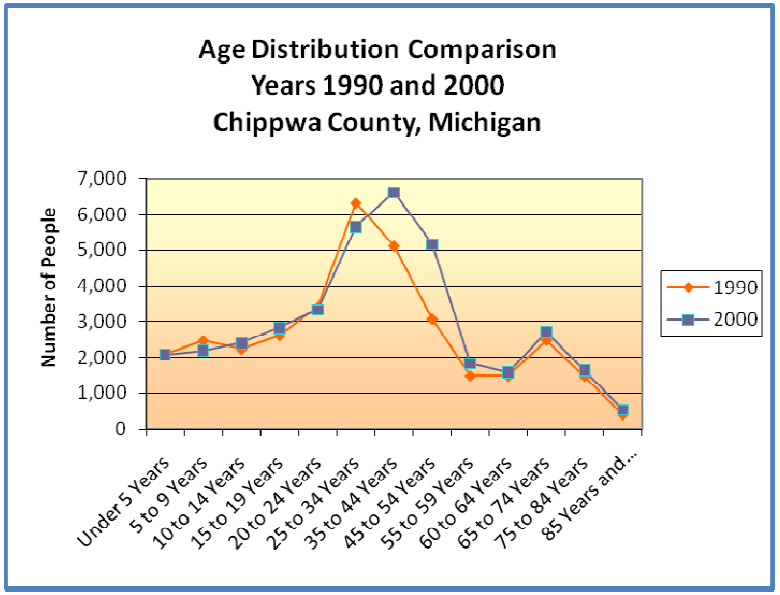
While Kinross Charter Township is not experiencing population declines like other municipalities in the region, population figures are somewhat deceiving because of the high percentage of prison based population included in the figures. Trends of concern impacting future population levels are a current lack of economic diversity, although the Township has the potential to diversify its economic base into the bio-fuels industry. These factors will be explored more in the section on economic base.

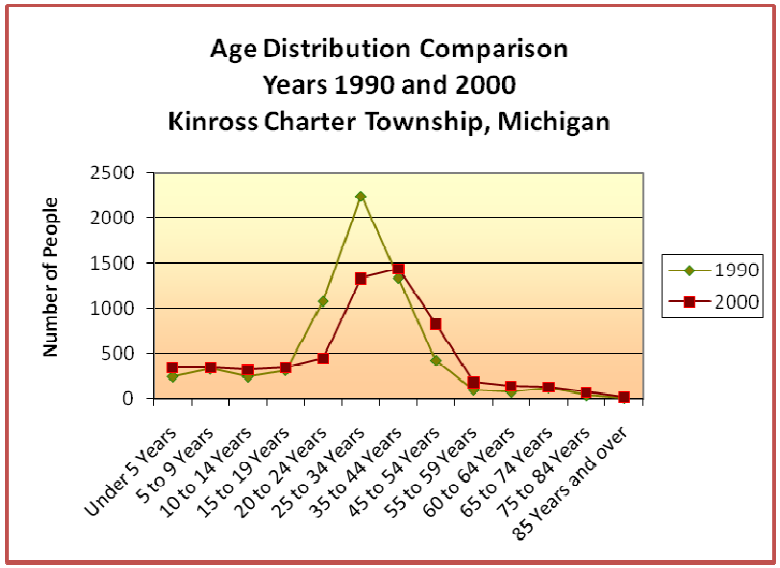
Age Composition

The two charts at right illustrate the age distribution for Chippewa County and Kinross Charter Township for years 1990 and 2000. Comparing the two charts, we can notice a difference in trends between the County and Township. County population numbers steadily rise up to age 24, while township population numbers remain relatively flat through age 19, then rise precipitously. While township numbers level or decline after age 55, county numbers decline and hold from age 55 to 64, then show a small spiked increase for ages 65 to 74, thereafter declining more steeply.

It is important to note that the census 2000 age figures for Kinross Charter Township represent the unadjusted population count, not the

Figure 2-5: Age Distribution, County & Township

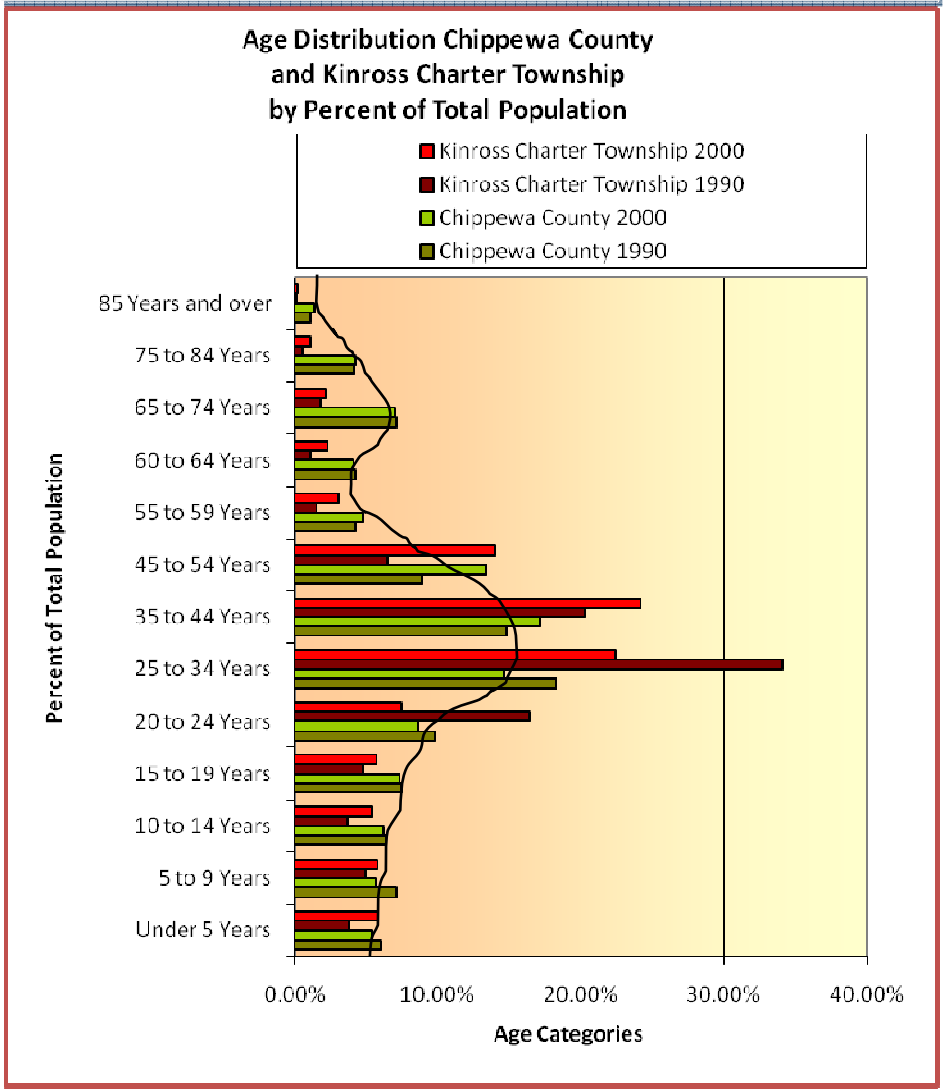




revised count reflecting the additional 2,200+ group quarters population, so the decrease of 600+ people in the 20 to 24 year age bracket, and decrease of 900+ people in the 25 to 34 year age bracket from 1990 to 2000 probably is not accurate. These populations may actually have increased from the year 1990 to 2000. Additionally, there may actually be even greater increases in other age groups age 18 and over.

The census only details the original group quarters count in two age groups, which are 18 to 64, and 65 and older. The 2000 Kinross group quarters count consisted of 2,482 males age 18 to 64, 24 males age 65 and over, 8 females age 18 to 64, and 2 females age 65 and over. Therefore, we do not know exactly which specific age cohorts reflect the true prison population. In addition, we must keep in mind that the adjusted population count means an additional 2,218 group quarters population not reflected in the chart. Using the original group quarters numbers as precedent, we might project that the 2,218 would be made up of 2,188 males age 18 to 64 (97% of group quarters total additional population), 21 males age 65 and over, 7 females age 18 to 64, and 2 females age 65 and over. These additional figures would push the year 2000 curve up in any age cohorts age 18 and over, but would be most prevalent in the 20 to 24, 25 to 34, and perhaps even 35 to 44 age groups. This would cause the 2000 curve to more closely resemble the 1990 curve, but with potentially higher peaks for some age groups. This cannot be precisely determined from available data.

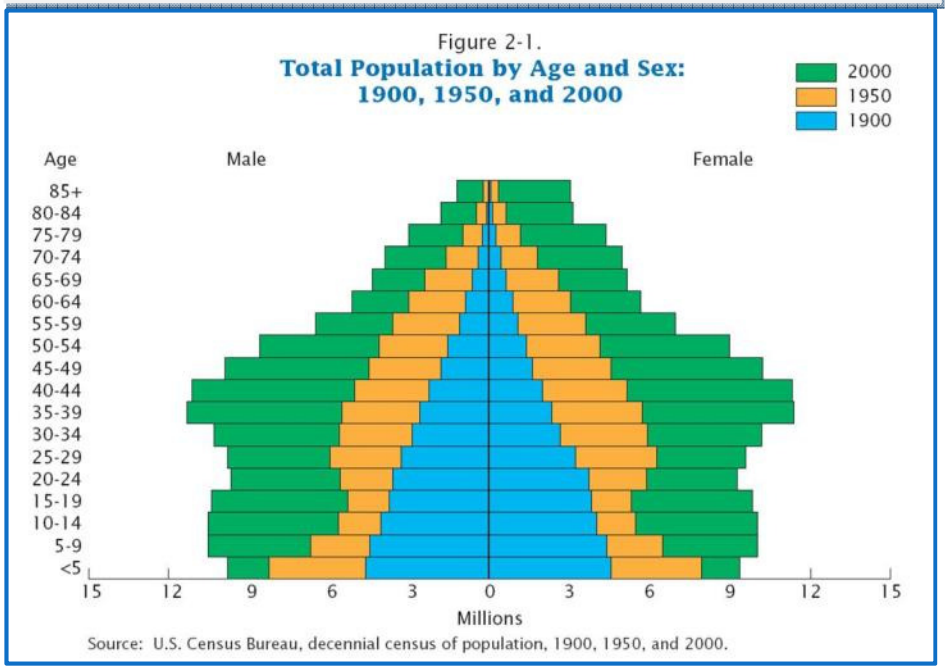
Figure 2-6: Age Distribution, County & Township



The County's largest age cohorts are the 25 to 54 year old groups, while the township's largest age cohorts are the 20 to 44 year old groups. Following the black line in the chart at right (which follows the County proportions per age group, it is evident that Kinross Township age cohort percentages are similar to the county percentages for ages 14 and under. Kinross Township

has proportionately less 15 to 19 year olds and 60+ year olds than the county, reflecting a younger overall population. Even without the additional 2,218 group quarters population, the township shows great gains in the 35 to 54 year age groups from 1990 to 2000. There were also small gains in the under 5, 10 to 14, and 55 to 64 age groups. County numbers also show gains for the 35 to 54 year age cohorts from 1990 to 2000.

Figure 2-7: Population Pyramid Trends, US Census Bureau



Another way of evaluating population distribution by age and sex is through Population Pyramids, an example of which is shown at right as found in the U.S. Census Bureau publication, *Demographic Trends in the 20th Century: Census 2000 Special Reports.* The bars at any given age group level on the pyramid show the percentages of the total population that are female (on the right side), or male (on the left) in that age group. In this way, we can compare the male and female components of any age group as well as the relative size of an age group with any other age group.

Traditionally, a population pyramid representing an internally sustainable population would resemble a typical pyramid shape, as in the blue pyramid at right. This represents a young, relatively high fertility population with a large base of children and young adults and a much smaller number of elderly persons. In 1900, for example, each successive age group was smaller than the preceding age group, with the largest age group being those age 5 and under. This creates the pyramid shape.

In the U.S. in 1950 (shown in the orange shape), as a result of the post-World War II baby boom (1946 to 1964), the group under age 5 was again the largest. The low fertility of the Depression years is evidenced by the "pinch" in the age structure, as people born during the 1930s were 10 to 19 years old.

Since 1950, the largest age cohort has fallen in the range of ages that included the baby boomers. For example, in 2000, the largest age groups in the U.S. were the 35 to 39 and 40 to 44 year age groups (born from 1960 to 1964 and 1955 to 1959, respectively).[2] These age cohorts show the greatest increases over the years. The aging of the U.S. population in the second half of the 20th century is shown by the

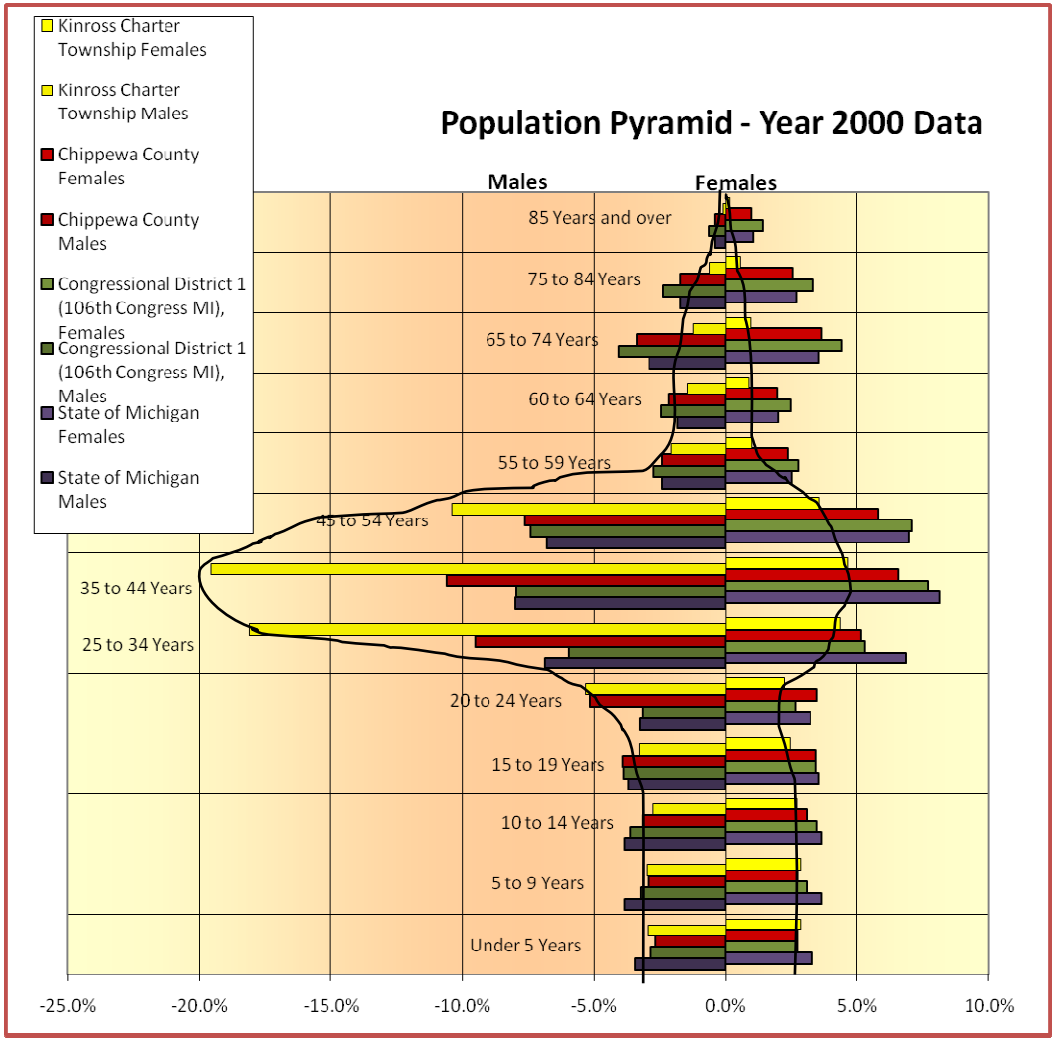
[2] Hobbs, Frank and Stoops, Nicole. *Demographic Trends in the 20th Century: Census 2000 Special Reports.* U.S. Census Bureau: November, 2002.

more rectangular shape of the Census 2000 (green) age-sex pyramid. The proportions do not begin to decline with each successive age group until after ages 35 to 39 years, with the slight pinch resulting from a relatively low number of births during the 1970s. The baby-boom bulge appears in the 35 to 54 age range.[3] In some areas, as a greater percentage of people reach old age and lesser percentage are born, the upper pyramid is becoming flat topped. Reductions in the number of children born tend to give the pyramid a constricted, or vase shaped base. Overall, thirteen of the fifteen counties of the Upper Peninsula reflect an older age structure.

The population pyramid at right compares year 2000 age distribution percentages for the State of Michigan, 106th Congress Congressional District #1, Chippewa County, and Kinross Charter Township. (Ignore the negative axis labels-this is strictly for chart formatting, and these percentages should be understood as positive numbers.)

By no stretch of the imagination can Kinross Township's age distribution be considered a pyramid. The black lines highlight the yellow bars for Kinross Charter Township. The shape follows the previous illustration in that the 35 to 44 year age group is the largest, but the proportion of males is abnormally large, probably due mainly to the prison population. The shape for the Township male age cohorts remains rectangular up to age 19, bulges from age 25 to 54, and does not begin to decline

Figure 2-8: Age Distribution Congressional District, County & Township



[3] Hobbs, Frank and Stoops, Nicole. *Demographic Trends in the 20th Century: Census 2000 Special Reports.* U.S. Census Bureau: November, 2002.

until age 55, probably also representing differences from the prison population. The female curve resembles the rectangular shape and bulge in similar age cohorts, however, proportions begin to decline after age 44, more in line with the U.S. illustration. Unlike many population pyramids for the Upper Peninsula, there is no flat top indicating a large elderly population.

Kinross Township has proportionately fewer females in every age cohort in comparison with the State of Michigan; however, proportions for the female age groups 14 and under are relatively consistent with the Congressional District and Chippewa County. Male age cohorts age 19 and under and 55 to 64 are generally consistent with the other areas of comparison. This might indicate the prison population is mostly age 20 to 54, although we must keep in mind that this pyramid does not reflect the additional 2,218 group quarters population, which would skew the shape even further.

The chart at right illustrates the population pyramid for the American Indian population in Kinross Charter Township. This population group exhibits a younger profile overall, with no males or females over age 84. The largest male age cohort is age 25 to 34, a bit younger than the largest population group for the Township as a whole. However, the largest female age cohort is age 5 to 9 years of age, followed closely by the under 5 age group. This is not typical of the Township as a whole. There is a pinch in the group proportions at age 20 to 24 (males and females) and 15 to 19 (females). Females age 55 to 59 are noticeably few in number.

Median age, both sexes, in the Township in 2000 is almost 34 years of age, compared to 36 years in the County. The median age for males in 2000 was 35 years, and for females was 29

Figure 2-9: Native American Population Pyramid

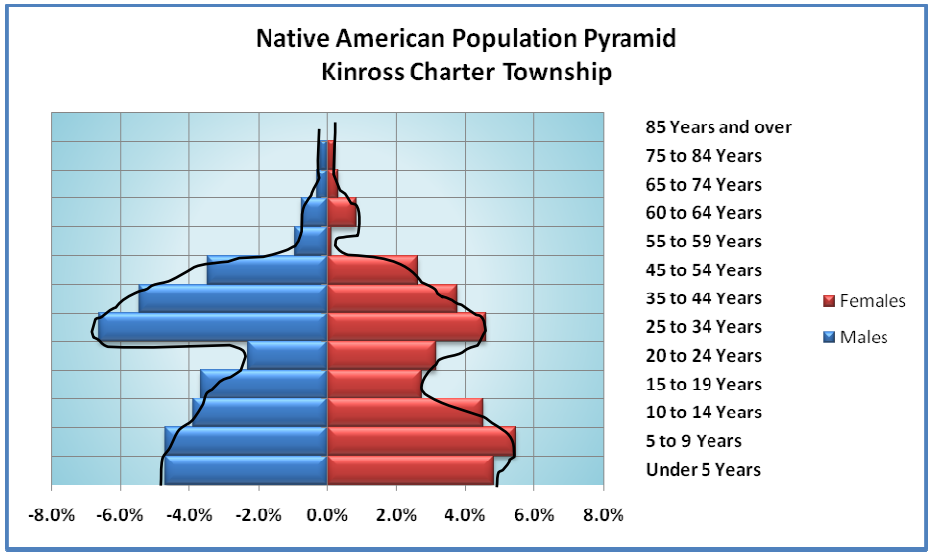


Figure 2-10: Detail Population Change-County

Detailed Components of Population Change-Chippewa County					
Year	Births	Deaths	International Migration	Domestic Migration	Net Population Change
2000	119	-79	6	-19	27
2001	388	-309	26	-120	-15
2002	393	-315	22	165	265
2003	373	-294	9	-52	36
2004	391	-315	24	-144	-44
2005	399	-318	20	64	165
2006	349	-313	23	-233	-174

years.

The U.S. Census Bureau Detailed Components of Population Change tables estimate the levels of natural population increase (difference between the number of births and the number of deaths), and total net migration (the sum of net international migration and net domestic migration) for Michigan Counties between the years 2000 to 2006. For the time period of April, 2000 to July, 2006, Chippewa County estimates show a net gain of 260 people. The natural component change shows a net gain of 469 people (meaning there were more births than deaths). Births continue to exceed deaths, but at half the rate in 2006 as in previous several years. Total net migration is a loss of 209 people (meaning more people migrated out than into the County). There was a positive international migration of 130 people, but a loss of 339 people to domestic migration. Included in migration is the movement of prisoners into and out of the facilities. There was a positive net migration in years 2002 (187 people) and 2005 (84 people).

Racial Breakdown

The original year 2000 population count (including only 2,518 of the corrected total 4,736 total group quarters population) includes the following racial breakdown:

- 3,825 White alone (down from 4,050 in 1990)
- 1,021 Black or African American alone (down from 2,100 in 1990)
- 669 American Indian alone (up from 267 in 1990)
- 36 Asian alone (down from 89 in 1990)
- 16 of White and Black or African American races
- 185 of White and American Indian races
- 11 of White and Asian races
- 3 of White and Native Hawaiian races
- 17 of White and some other race
- 11 of Black or African American and American Indian races
- 19 of Black or African American and Asian races
- 32 of Black of African American and some other race
- 4 of American Indian and Asian races
- 1 of Asian and Native Hawaiian races
- 4 of Asian and some other race

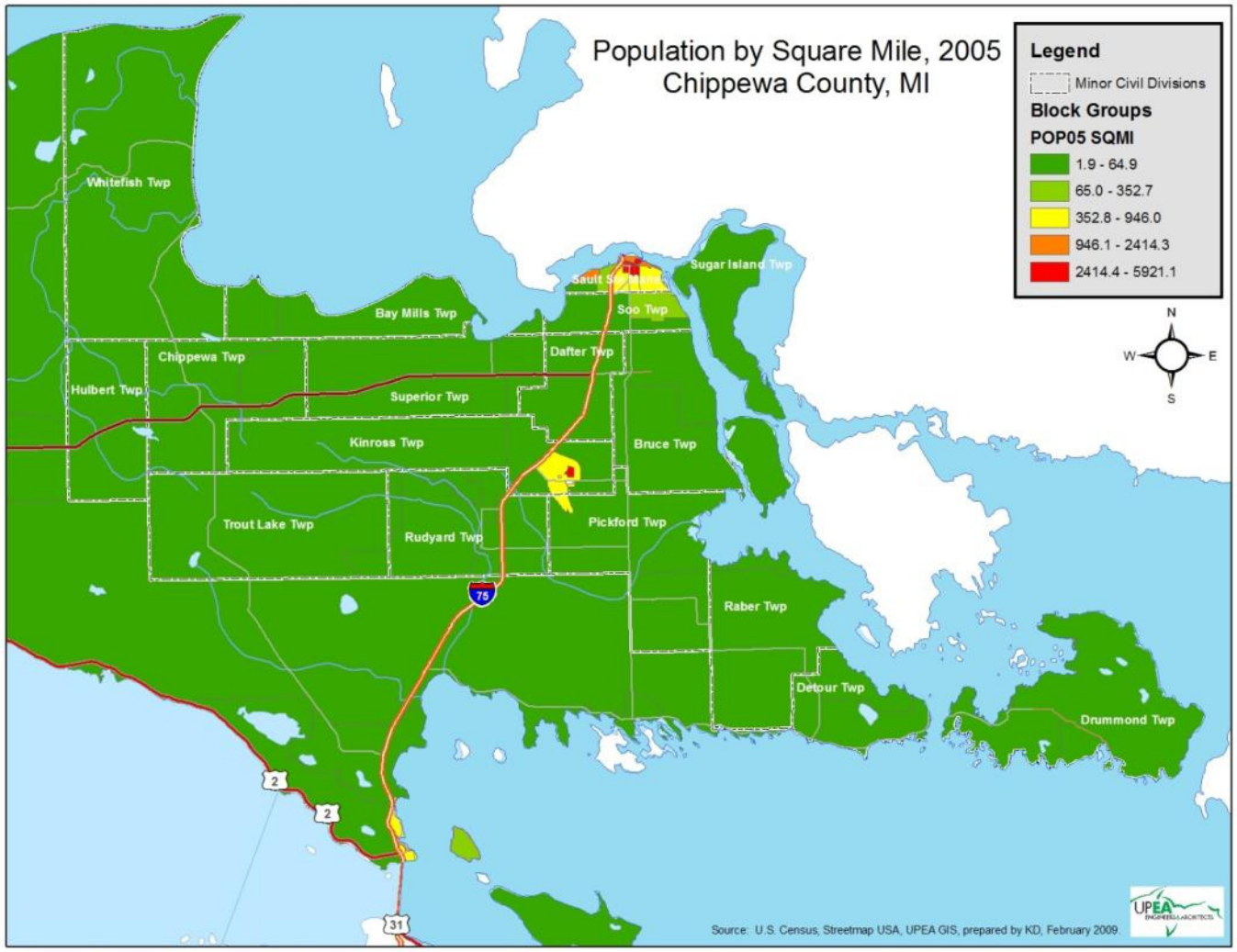
Several others were listed as a combination of three races, mostly White, Black, and American Indian.

A November 3, 2006 article on the Sault Tribe website reports nearly 1,000 tribal members in the area of Kinross Charter Township. The Original Bands of Chippewa Indians were granted federal sovereign status in 1972, becoming the Sault Ste. Marie Tribe of Chippewa

Indians. Land was taken into trust in 1974, and today the tribe consists of 40,000 enrolled members living throughout Michigan and the United States.

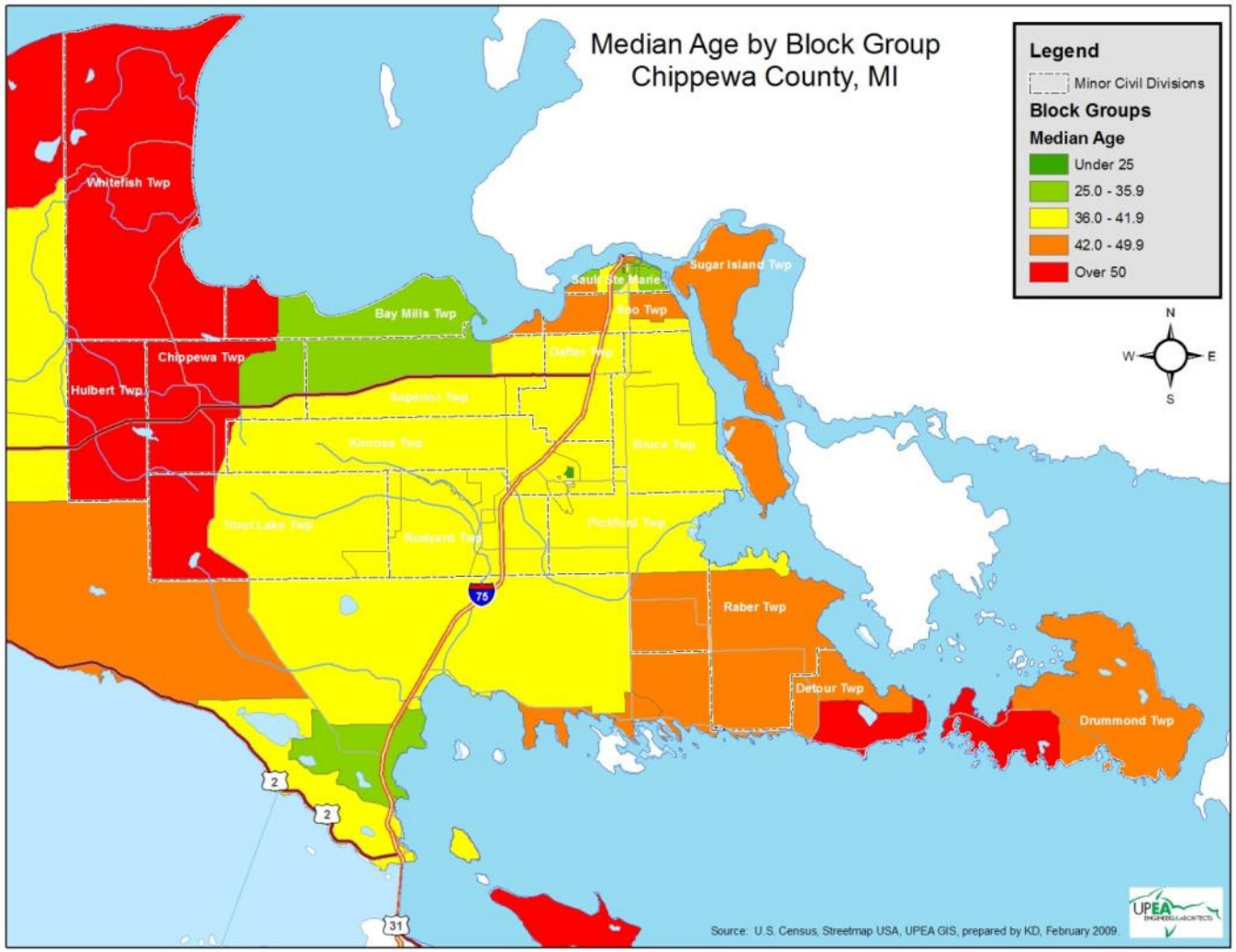
As can be seen in the map at right, Chippewa County's population is concentrated in the Sault Ste. Marie and Kincheloe areas.

Figure 2-11: Chippewa County Population Density



As illustrated in the map at right, younger median age populations in Chippewa County are concentrated in areas with higher native American populations, such as in Kincheloe (Kinross Charter Township), Bay Mills Township, and areas of Sault Ste. Marie. Conversely, areas with older median age categories are often located in areas with lake frontage.

Figure 2-12: Chippewa County Median Age



Households

Population living in households in 2000 was 3,404, representing 42% of the total population. This compares to only 2,580 people living in households in 1990, (39% of the total population), or a 32% increase. There was also a 37% increase in the number of householders from 845 in 1990 to 1,156 in 2000. Number of children in households increased 39% from 956 in 1990 to 1,324 in 2000. There were also large percentage increases in other relatives and nonrelatives living in households. As noted previously, the group quarters population increased from 3,986 in 1990 to 4,736 in 2000, a 19% increase.

Family households represent 77% (888) of the total households by type in 2000. There was a 15% increase in the number of married-couple families, from 540 in 1990 to 623 in 2000, but an only 2% increase in the number of married couple families with children. Most married couple families (55%) had own children under 18 years of age.

In other family households (265 total), 63 were male householders with no wife present, 81% of these with children present. There were 202 female householders with no husband present, 85% with children. This represents a large (146%) increase in the number of female householders, up from 82 in 1990.

Within the 268 nonfamily households, 207 are householders living alone, 53% male and 47% female. Also, of the single person households, 47 are age 65 years and older (17% of total nonfamily households). Of the remaining 61 "2-or-more-person nonfamily" households, 35 are headed by male householders, and 26 are headed by female householders.

The trend toward more single households results in a decline in the average household size within the Township. In 2000 the average household size was 2.94, a 3.7% decrease from the 1990 average household size which was 3. Additionally, average family size declined by 3.2%, from 3.41 down to 3.3.

42% of the population lived in households in the year 2000. This was an increase of 824 people since 1990, meaning a growth in the non-prison population.

There was an increase of 311 more householders, 83 more spouses, 368 more children, 53 other relatives, and 81 nonrelatives in households since 1990.

Most households are families of married couples with children. However, the number of married couple families increased by 83 since 1990 (15%), but the number of married couple families with children increased by only 7 (2%).

There was a large increase in the number of female householders since 1990. There are over 200 family households headed by females with no husbands present, most of which include children.

Average household size is in decline as is average family size.

Of the population age 15 years and over, 35% have never been married, 41% are now married, 3% are separated, 2% are widowed and 18% are divorced.

These statistics are relevant to an analysis of available housing and housing types to fit the demographic structure of the Township. It is also relevant to social service provision.

Educational Attainment

School enrollment within Kinross Charter Township declined by 169 people from 1990 to 2000. Of the 1,354 people enrolled in school in 2000, 45 were in preschool, 87 were in kindergarten, 551 were in elementary school grades 1-8, 454 were in high school grades 9-12, and 217 were in college or graduate school.

The percent of high school graduates or higher increased from 75% in 1990 to 83% in 2000. The percent attaining a bachelor's degree or higher increased from 5.5% in 1990 to 11% in 2000. In the year 2000, of the population age 25 years and older, the following levels of education were obtained:

- 3.3% less than 9th grade
- 13.4% 9th to 12th grade, no diploma
- 34.6% high school graduate (includes equivalency)
- 31.4% some college, no degree
- 6.2% Associates degree
- 8.4% Bachelor's degree
- 2.7% Graduate or professional degree

Figure 2-13: Educational Attainment Comparison

	Michigan	Congressional District 1 106th Congress) MI	Chippewa County, Michigan	Kinross Charter Township
Total:	**6,415,941**	**433,858**	**25,683**	**4,134**
Male:	**47.9%**	**49.4%**	**56.9%**	**76.9%**
Less than 9th grade	2.3%	2.4%	3.0%	1.8%
9th to 12th grade, no diploma	5.9%	5.3%	7.6%	11.6%
High school graduate (includes equivalency)	14.4%	17.6%	20.0%	27.4%
Some college, less than 1 year	3.8%	4.0%	5.8%	11.6%
Some college, 1 or more years, no degree	7.4%	7.3%	9.7%	12.4%
Associate degree	3.0%	3.1%	3.0%	5.0%
Bachelor's degree	6.9%	6.1%	5.0%	4.8%
Master's degree	2.8%	2.3%	1.8%	1.8%
Professional school degree	1.0%	0.9%	0.3%	0.0%
Doctorate degree	0.5%	0.5%	0.6%	0.5%
Female:	**52.1%**	**50.6%**	**43.1%**	**23.1%**
Less than 9th grade	2.3%	2.1%	2.0%	1.5%
9th to 12th grade, no diploma	6.1%	5.0%	5.0%	1.7%
High school graduate (includes equivalency)	17.0%	19.0%	16.0%	7.2%
Some college, less than 1 year	4.6%	4.3%	3.8%	2.3%
Some college, 1 or more years, no degree	7.6%	7.1%	6.6%	5.1%
Associate degree	4.0%	4.2%	2.6%	1.2%
Bachelor's degree	6.8%	6.1%	5.2%	3.6%
Master's degree	2.9%	2.1%	1.5%	0.4%
Professional school degree	0.6%	0.5%	0.3%	0.0%
Doctorate degree	0.2%	0.2%	0.2%	0.0%

U.S. Census Bureau

These figures represent an 8% increase in the number getting some college with no degree, 90% increase in those with bachelor's degrees, and a 97% increase in those with graduate degrees since 1990. It also represents a decline of 34% in those obtaining associate's degrees.

The chart above shows a comparison of educational attainment by sex and by State, Congressional District #1 (106th Congress), County, and Township. One important note is that Kinross Charter Township, almost 77% of the population is male (because prison population is included). For this reason, a separate analysis of females has been provided, detailing educational attainment only among females in the comparison areas. That comparison will follow in the next paragraph, while this paragraph evaluates only the male attainment in the chart above. Kinross Township has lower percentages of males who have achieved only less than 9th grade educational attainment than the areas of comparison. There are higher percentages of males in Kinross Charter Township who have attained levels 9th to 12th no diploma, high school graduate, or some college (less than 1 year or no degree) than the areas of comparison. Kinross Charter Township has higher percentages of males attaining an Associate's degree than all areas of comparison. Attainment of Bachelor's degrees by males is generally comparable to percentages in the County, one percent lower than attainment in the Congressional District, and two percent lower than State attainment. Attainment of Master's degrees in Kinross Charter Township males is comparable to the County, but less than other areas of comparison.

Figure 2-14: Female Educational Attainment Comparison

	Michigan	Congressional District 1, 106th Congress MI	Chippewa County, Michigan	Kinross Charter Township
Total:	6,415,941	433,858	25,683	4,134
Female:	52.1%	50.6%	43.1%	23.1%
Less than 9th grade	4.5%	4.2%	4.7%	6.5%
9th to 12th grade, no diploma	11.6%	9.9%	11.5%	7.5%
High school graduate (includes equivalency)	32.6%	37.6%	37.0%	31.3%
Some college, less than 1 year	8.7%	8.5%	8.8%	10.2%
Some college, 1 or more years, no degree	14.7%	14.1%	15.3%	21.9%
Associate degree	7.7%	8.3%	6.1%	5.4%
Bachelor's degree	13.1%	12.0%	12.0%	15.5%
Master's degree	5.5%	4.2%	3.4%	1.7%
Professional school degree	1.1%	1.0%	0.7%	0.1%
Doctorate degree	0.5%	0.3%	0.6%	0.0%
U.S. Census Bureau				

Comparing female-only education attainment in the same areas, there are higher percentages of females in Kinross Charter Township with less than 9th grade and 9th to 12th grade (no diploma) education levels than the areas of comparison. High school graduate percentages among Township females are comparable to state percentages, but are lower than the Congressional District or County. Kinross Charter Township has higher percentages of females who have had some college (no degree) than other areas of comparison, and has lower percentages of females with Associate's degree attainment than other areas. However, there are higher percentages of females in Kinross Charter Township who have attained Bachelor's degrees than all other areas of comparison, but much lower percentages who have attained higher graduate level degrees.

Since there is a large Native American population living in Kinross Charter Township, it is applicable to research levels of educational attainment within that population. In comparing levels of educational attainment for Native Americans only across the same areas of comparison, Kinross Charter Township had much lower percentages of males and females who have less than 9th grade or 9th to 12th grade (no diploma) than other areas of comparison. Kinross Township males show a higher percentage of high school graduates at 20% than other areas of comparison which range from 15-19%. However, Kinross Township females show a much lower percentage of high school graduates at 8% than the areas of comparison which are between 16% and 18%. At the same time, Kinross Township shows greater percentages of both males and females who have obtained some college (no degree) than other areas of comparison, so this means that more of them are going on to further education after high school. There are higher percentages of males, and lower percentages of females attaining Associate's degrees than the areas of comparison. On the positive side, 6.4% of Kinross Township Native American males attain Bachelor's degrees compared to 2-3.5% of males in areas of comparison. Kinross Township Native American female Bachelor's degree attainment is in line with the State and Congressional District. Graduate degree attainment for males is comparable to other areas, but is lower for females.

Figure 2-15: Native American Educational Attainment Comparison

	Michigan	Congressional District 1 106th Congress) MI	Chippewa County, Michigan	Kinross Charter Township	Kinross Twp Native Americans
Total:	**6,415,941**	**433,858**	**25,683**	**4,134**	**313**
Male:	**47.9%**	**49.4%**	**56.9%**	**76.9%**	**58.1%**
Less than 9th grade	2.3%	2.4%	3.0%	1.8%	0.0%
9th to 12th grade, no diploma	5.9%	5.3%	7.6%	11.6%	7.7%
High school graduate (includes equivalency)	14.4%	17.6%	20.0%	27.4%	19.8%
Some college, no degree	11.1%	11.3%	15.5%	24.0%	18.8%
Associate degree	3.0%	3.1%	3.0%	5.0%	3.8%
Bachelor's degree	6.9%	6.1%	5.0%	4.8%	6.4%
Graduate or professional degree	4.4%	3.7%	2.8%	2.3%	1.6%
Female:	**52.1%**	**50.6%**	**43.1%**	**23.1%**	**41.9%**
Less than 9th grade	2.3%	2.1%	2.0%	1.5%	2.2%
9th to 12th grade, no diploma	6.1%	5.0%	5.0%	1.7%	5.8%
High school graduate (includes equivalency)	17.0%	19.0%	16.0%	7.2%	8.3%
Some college, no degree	12.2%	11.4%	10.4%	7.4%	18.8%
Associate degree	4.0%	4.2%	2.6%	1.2%	3.2%
Bachelor's degree	6.8%	6.1%	5.2%	3.6%	3.5%
Graduate or professional degree	3.7%	2.7%	2.0%	0.4%	0.0%

U.S. Census Bureau

The chart at right compares Kinross Township Native American educational attainment to the overall populations in areas of comparison. There are higher percentages of both male and female Native Americans who have gone beyond high school graduation to attain some college education. Almost 19% of Native American females in Kinross Charter Township obtain some college (no degree) compared to only 7% in Kinross Township as a whole, and 10-12% in other areas. It is evident that males compare favorably in both Associate's and Bachelor's degree attainment across all areas of comparison, although females show lower percentages. Lower percentages of Native

Americans achieve graduate degrees than overall populations in areas of comparison. The Native American population evidently takes advantage of opportunities at Bay Mills or other area educational institutions.

Further information on education is presented in the section on Economic Base: Knowledge Economy Index.

Broad Population Trends

It is beneficial to have some broad understanding of national trends in population, as these trends may help anticipate and identify local or regional conditions, or at least serve as a valuable comparison. Some broad demographic trends have particularly redrawn America's demographic portrait over the course of the 20th century. As the U.S. entered the 20th century, most of the population lived in the Northeast or the Midwest, in nonmetropolitan areas, was male, under 23 years old, white, and rented a home; nearly half lived in a household with five or more other people. One hundred years later, as the U.S. entered the 21st century, most of the population lived in the South or the West, in metropolitan areas, was female, at least 35 years old, white (but much less so), owned a home, and lived alone or in a household with one or two other people.[4] These trends have had profound implications in relation to land use and development issues.

For example, the U.S. population grew increasingly metropolitan with each decade of the century, from 28 percent in 1910 to 80 percent in 2000, with most of the metropolitan growth occurring in the suburbs.[5] Specifically, the Midwest region population declined from about 35 percent of total U.S. population in 1900 to only 23 percent in 2000. This has meant a decline in the population and viability of rural areas, and a rise in suburban sprawl across the landscape. It has meant that more funding support has followed the population away from rural areas and into opportunities within suburban or urban areas.

The U.S. has also experienced change in household composition. In 1900, the most common household contained seven or more people; from 1940 to 2000, it contained two people. At the same time, the average home size has increased dramatically. While married couple households declined from more than three-fourths of all households to just over one-half of households from 1950 to 2000, one-person households rose from 1 of every 10 households in 1950 to 1 of every 4 households in 2000. Twenty-seven percent of these one-person households are women age 65 and over, although they represent only 5-8 percent of the total population.[6] The decline in household size and associated rise in the number of households, along with the increase in home size, has also led to a rate of land consumption that exceeds the rate of population growth.

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[4] Hobbs, Frank and Stoops, Nicole. *Demographic Trends in the 20th Century: Census 2000 Special Reports.* U.S. Census Bureau: November, 2002.
[5] Ibid.
[6] Ibid.

Changes in age and sex composition have changed the economic and social landscape. At the beginning of the century, half the U.S. population was less than about 23 years old, but at century's end, half the population was more than 35 years old, which is the country's highest median age ever. From 1900 to 1950, the largest 5-year age group was children under age 5. After 1950, the baby-boom generation began to impact age cohorts, and by 2000, the largest 5-year age groups were ages 35 to 29 years and 40 to 44 years. During the century, the population age 65 and over increased tenfold, although low birth rates in the late 1920's and early 1930's led to a decline in those 65 and over for the first time in the 1990s. However, rapid growth of the population age 65 and over will begin again in 2011, when the first of the baby-boom generation reaches age 65, and will continue for many years. The gender composition of the U.S. shifted from a majority male population to a majority female population around midcentury.[7]

[7] Hobbs, Frank and Stoops, Nicole. *Demographic Trends in the 20th Century: Census 2000 Special Reports.* U.S. Census Bureau: November, 2002.

Economic Base

Income

Median household income in Kinross Charter Township in 2000 was $36,525, compared to $24,756 in 1990 (measured in 1999 dollars). This represents an almost 48 percent increase since 1990, but is low compared to a State level of $45,512. It is better than the County median of $34,537 in 2000. The State level dropped to $44,409 in 2004, and the County level dropped slightly as well. As you can see in the chart at right, Chippewa County's median household income is much more variable than the state median, taking a precipitous fall in 1999, and rising quickly in 2000. County median levels have increased by $792 since 2000, while state median income levels have increased by $560 for the same period.

Figure 2-17: Chippewa County Median Income Trends

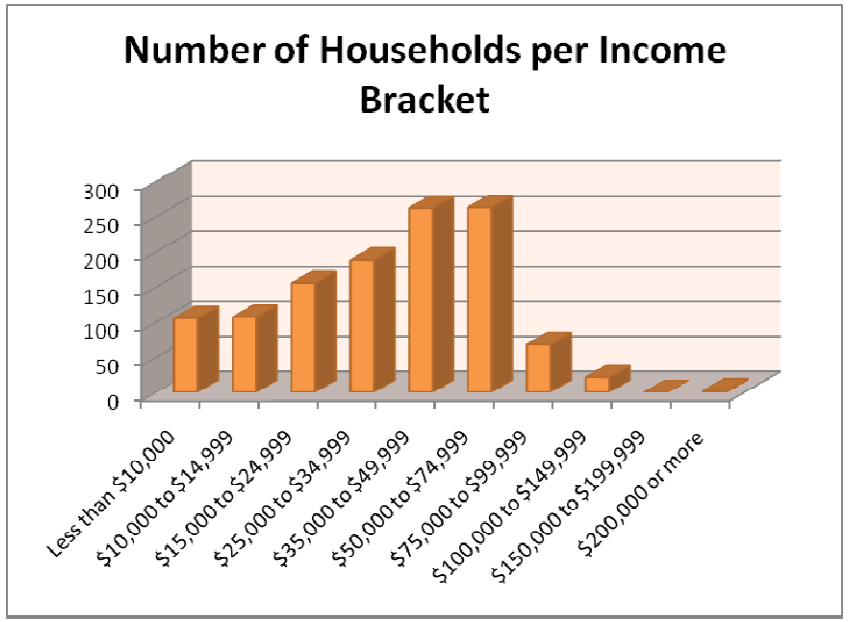


Figure 2-16: Chippewa County Median Income Trends

Median Household Income Trends					
	Michigan	Chippewa County	Cty as % of State	MI % change	Chippewa % Change
1989	$29,472	$21,237	72%		
1990	$29,937	$21,449	72%	1.6%	1.0%
1993	$32,662	$25,531	78%	9.1%	19.0%
1995	$36,426	$28,957	79%	11.5%	13.4%
1997	$38,742	$30,477	79%	6.4%	5.2%
1998	$41,821	$31,564	75%	7.9%	3.6%
1999	$46,089	$21,449	47%	10.2%	-32.0%
2000	$45,512	$34,537	76%	-1.3%	61.0%
2001	$45,047	$33,226	74%	-1.0%	-3.8%
2002	$42,715	$32,989	77%	-5.2%	-0.7%
2003	$45,022	$33,593	75%	5.4%	1.8%
2004	$42,256	$34,378	81%	-6.1%	2.3%
2005	$46,072	$35,329	77%	9.0%	2.8%
Source: Michigan Labor Market Information-US Census Data					

Nineteen percent of the population was listed with social security income, an increase of 7 percent over 1990. Mean social security income was $9,605, compared to $7,280 in 1990. Percentage with supplemental security income was 5.4 percent, with a mean supplemental security income of $6,198. Mean public assistance income dollars was $3,561, which exceeds the County figure of $2,093. Fifteen percent had retirement income, representing a 62 percent increase over 1990. Mean retirement income was $10,673, a 63 percent increase over 1999 (or 26 percent increase when compared in 1999 dollars).

Most Chippewa County residents were in the $35,000 to $75,000 median income brackets, with very few over the $75,000 range.

Median family income in Kinross Charter Township in 2000 was $38,468, which represents a 16 percent increase over 1990 when measured in 1999 dollars. Median per capita income in the township was $14,003, compared to $15,858 in the County, and $22,168 in the State. This was a dramatic increase of 107 percent over the 1990 level (which in 1999 dollars was $6,766). Median earnings for male full-time, year-round workers was $27,250, with females lagging at $23,980.

There were 13.6 percent of families in Kinross Charter Township below the poverty level in 1999 (122 families). This is a 63 percent increase since 1990, when 75 families were below poverty level. Chippewa County had 9 percent of families below poverty level in 1999. The poverty rate was greater among families with related children under 18 years (almost 20 percent, compared to 16 percent in 1990, and 15 percent in Chippewa County in 1999). Figures are even more striking for families with a female householder and no husband present. Within these households, 37.5 percent are below poverty level (81 families), with the percentage rising to 45 percent below poverty level with related children under 18 years (also 81 families, meaning all families with female households and no husbands present had children under age 18). Median family income for female householders with no husband present was $18,571 in 2000 in Kinross Charter Township.

Of individuals 18 years and over, 12 percent (263 people) were below the poverty level, almost equaling the County level. Of those 65 years and over, 3.4 percent were below poverty level (7 individuals) in Kinross Charter Township, compared to 10 percent at the County level and 8 percent at the State level.

Employment

Labor Force and Employment Trends

The civilian labor force of Chippewa County rose by 3,675 from 1991 to 2001, while employment rose by 4,225. Unemployment declined by 550 for the same period.

Median household income in Kinross Charter Township rose by 48 percent from 1990 to 200, but is still almost 9 percent lower than the state level.

Median per capita income in the township experienced a dramatic 107 percent increase from 1990 to 2000 (measured in 1999 dollars), but is still about $8,000 lower than the state level.

There has been a 63 percent increase in the number of families below the poverty level, and this issue is especially pronounced among females with children with no husband present (81 families).

The size of the labor force (especially females) is growing in Kinross Charter Township, and a growing percent are employed.

An increasing number of families with children have both parents in the labor force.

In Kinross Charter Township in 2000, there were 4,837 people listed as age 16 years and over, and of these, 1,621 were in the labor force (33.5 percent). There were 3,216 people counted as not in the labor force, or 66.5 percent of the population. Many of these, of course, are members of the prison population. This is a sizeable improvement over 1990, when only 1,105 of a total of 5,676 people were in the labor force (19.5 percent). These figures, however, do not reflect the adjusted population count numbers, which added 2,218 people to the group quarters population. Assuming all the 2,218 additional people in the adjusted count are over age 16 (since they are in the prison population), the total population age 16 years and over in the year 2000 is probably around 7,055 people, meaning that a labor force of 1,621 is 23 percent of the total population age 16 and over (not 33.5 percent), which is still an improvement over the 1990 figures of 19.5 percent. However, knowing that 4,736 of the total population over age 16 are in the group quarters population in 2000, and are therefore not eligible to be in the labor force, we can infer the total labor force of 1,621 people is more accurately described as 70 percent of the total population age 16 and over not in group quarters population (7,055 less 4,736, or 2,319 people).

In 2000, 30 percent of those age 16 and over were employed (1,450 of 4,837) compared to 17 percent in 1990. However, using the adjusted count for 2000 (1,450 of 7,055), almost 21 percent (not 30 percent) of the labor force was employed, compared to 17 percent in 1990.

Of the 1,180 females age 16 and over in 2000, 768 (65 percent) were counted as in the labor force, with a total of almost 60 percent of all females over age 16 employed (91 percent of females in the labor force are employed). This is an almost 70 percent increase in the size of the female labor force since 1990, and a 78 percent increase in the number of employed females since 1990 with only a 42 percent increase in the number of females over age 16. Assuming all group quarters population (4,736 in 2000) are males over age 16, and using the adjusted population count (total of 7,055 population age 16 and over), we can infer that there are 1,139 males age 16 and over in Kinross Charter Township (but not in the prison population) in the year 2000. With 853 males in the labor force, the percentage of non-prison population males in the labor force is 75%. Total employed population age 16 and over is 1,450, with 702 employed females. That leaves 748 employed males, representing 88 percent of the male labor force of 853 (or 66 percent of the total males age 16 and over but not in the prison population).

Of the workers age 16 years and over in Kinross Charter Township, 77 percent drove a car, truck, or van to work alone (56 percent increase since 1990). Eighteen percent carpooled in a car, truck, or van (50 percent increase since 1990), while 1.3 percent took public transportation (375 percent increase since 1990). The percent of workers walking to work was only 0.7 percent (a decrease of 66 percent since 1990), while almost 3 percent worked at home (increase of 79 percent since 1990). Mean travel time to work was 21 minutes in Kinross Charter Township, 18 minutes for Chippewa County, and 24 minutes for Michigan. This indicates that many people who live in Kinross Charter Township do not work there.

Of the families with own children under 6 years living with them, 63 percent had all parents in the family in the labor force, which is an 85 percent increase over 1990.

Almost 64 percent of the workers in Kinross Charter Township in 2000 were private wage and salary workers (a 115 percent increase since 1990) with almost 33 percent as government workers (representing a 9 percent decrease since 1990). Self-employed workers in their own business (not incorporated) represented 3.5 percent (a 76 percent increase over 1990, for a total of 51 self-employed workers). All but seven Kinross Charter Township workers age 16 years and over in 2000 worked in Michigan, and all but 109 worked in Chippewa County. However, 68 percent of those living in Kinross Charter Township worked outside the township.

Unemployment rates have been erratic in Chippewa County, rising and falling from year to year with great variation. As seen in the chart at right, from 1991 to 1992, unemployment rose by 32 percent, only to decline by almost 11 percent the next year. Chippewa County unemployment rates have always far exceeded the State unemployment rates, with the gap narrowing somewhat by 2001.

The Eastern Upper Peninsula region experiences high seasonal unemployment rates due to dependence on the tourism and service sector jobs. Chippewa County's highest monthly unemployment rate is in February at almost 11 percent, and lowest is in October at almost 6 percent, with an average annual rate of 8.4 percent.[8]

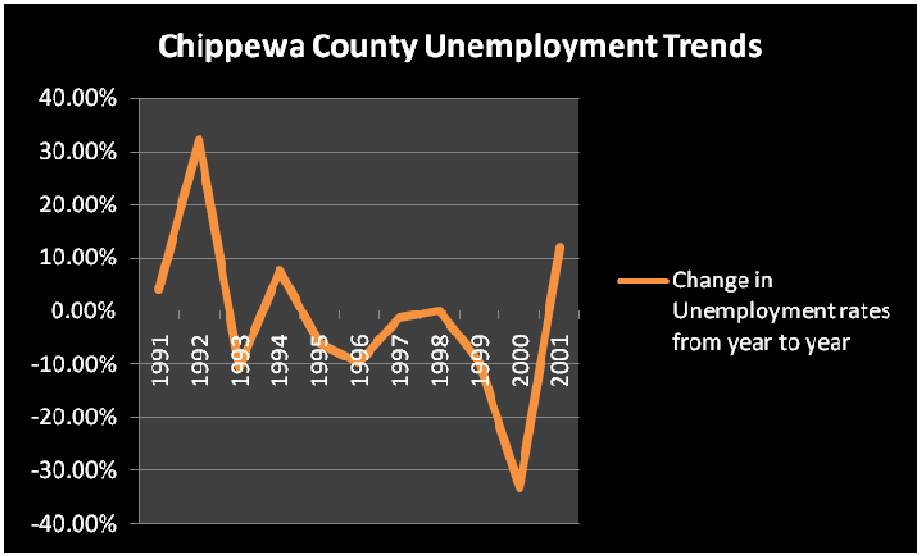
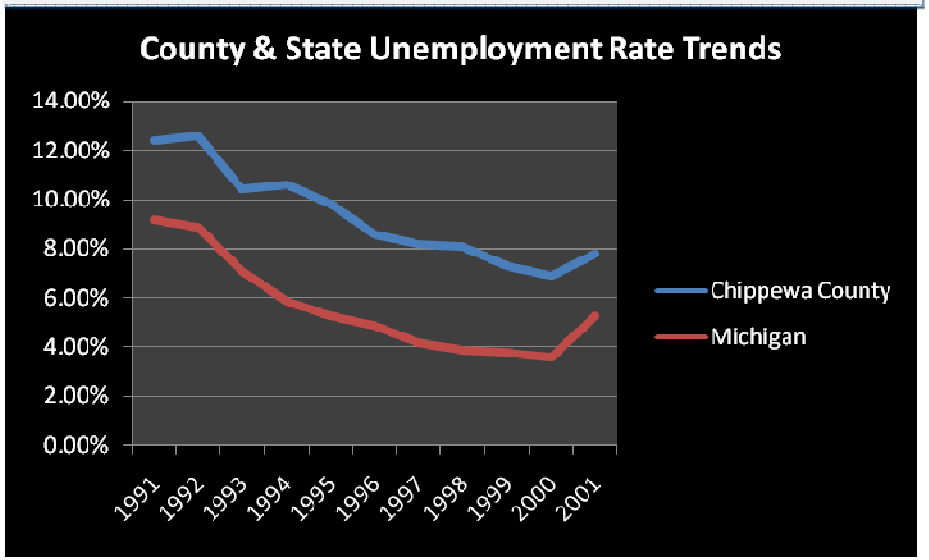


Figure 2-18: Unemployment Trends Chippewa County

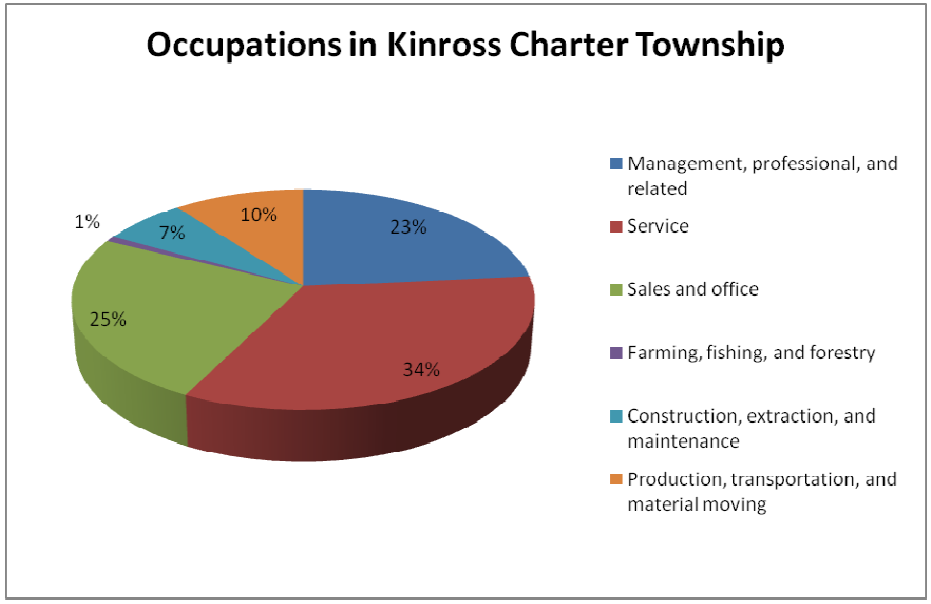


[8] Michigan Labor Market Information LAUS Data as reported by EUPRPDC in a 2008 presentation.

Occupational Outlook

The chart at right illustrates the major occupational categories for Kinross Charter Township. It is clear that service occupations are the most prevalent in the Township, at 34 percent of all employed civilian population 16 years and older. Sales and office occupations are 25 percent; and management, professional, and related occupations are 23 percent. Production, transportation, and material moving occupations are 10 percent, followed by construction, extraction, and maintenance occupations at 7 percent. Only 1 percent of those employed are in farming, fishing, and forestry.

Figure 2-19: Occupations in 2000, Kinross Township



Service occupations are also the most prevalent in Chippewa County at 28 percent of employment, followed by executive, administrative, managerial at 26 percent, and sales, office at 25 percent. Production, transportation, and material moving occupations are 11 percent of employment; and construction, extraction, and maintenance occupations are 9 percent of the employment in Chippewa County.

Selected top occupations (by number of employed) in Chippewa County by occupation group are office and administrative support (2,203), sales and related occupations (1,545), food preparation and serving (1,209), protective service (1,128), management (1,077), education, training, and library (914), transportation and material moving (865), construction and extraction (849), and building and grounds cleaning and maintenance (779).

Michigan has a Green Jobs Initiative, targeting the emerging sectors of alternative energy production and efficiency, green building construction and retrofitting, and agriculture and natural resource conservation. Green jobs are defined as all occupations necessary to sustain and grow these emerging sectors. Examples of jobs within each sector follow:

- **Alternative Energy Production and Efficiency**
  - Automotive Industry
    - Automotive Engineers
    - Automotive Technologist

        - Diesel Technologist
    - Energy Production Industry
        - Photovoltaic Installer
        - Geologists
        - Welders
    - Research and Design Industry
        - Chemical Engineer
        - Electrical Engineer
        - Mechanical and Industrial Technologists
        - Mechanical Engineers
- **Green Building Construction and Retrofitting**
    - Building Industry
        - Heating and Cooling Technologist
        - Electrician
        - Architects
        - Energy Audit Certification Professionals
    - Lighting Industry
        - Electrical Technologists
- **Agriculture and Natural Resource Conservation**
    - Agricultural Industry
        - Irrigation Technician
        - Soil Technologists
        - Botanist
        - Farm Manager
    - Resource Conservation Industry
        - Civil Engineer
        - Forester
        - Wildlife and Fisheries Technologist

Green job training programs in the Upper Peninsula region were listed by this program as including:

- **Lake Superior State University**
    - Electrical Engineering, Bachelor's Degree
    - Mechanical Engineering, Bachelor's Degree

- **Bay de Noc Community College**
  - Engineering Technologies/Technicians
  - Water Resource Management, Associate's Degree
  - Automotive Technology, Associate's Degree
  - Welding Technology, Certificate
- **Gogebic Community College**
  - Construction Trades, Utility Technician, Certificate
  - Computer-Aided Design Technology, Associate's Degree
  - Automotive Technology, Associate's Degree
  - Automotive Technology, Certificate
- **Michigan Technological University**
  - Chemical Engineering, Bachelor's Degree
  - General Forestry, Bachelor's Degree
- **Northern Michigan University**
  - Construction Trades, Lineworker, diploma
  - Electrical and Electronic Engineering-related Technology Technician, Associate's Degree
  - Electrical and Electronic Engineering Technologies/Technician, License
  - Aircraft Mechanic/technician-Airframe, Associates Degree
  - Heating, Air Conditioning And Refrigeration Mechanic And Repair, Associates Degree
  - Heating, Air Conditioning And Refrigeration Mechanic And Repair, Certificate

This list is not exhaustive of all programs or opportunities, but gives an idea of focal areas for the future as well as area opportunities. The Michigan governmental website lists high demand occupations for Chippewa, Luce, and Mackinac Counties as being the following;

- **Architecture and Engineering Occupations**
  - Electronics engineers, except computer
  - Mechanical engineers
- **Arts, Design, Entertainment, Sports, and Media Occupations**
  - Public relations specialists
- **Business and Financial Operations Occupations**
  - Accountants and auditors
  - Business operations specialists
  - Personal financial advisors

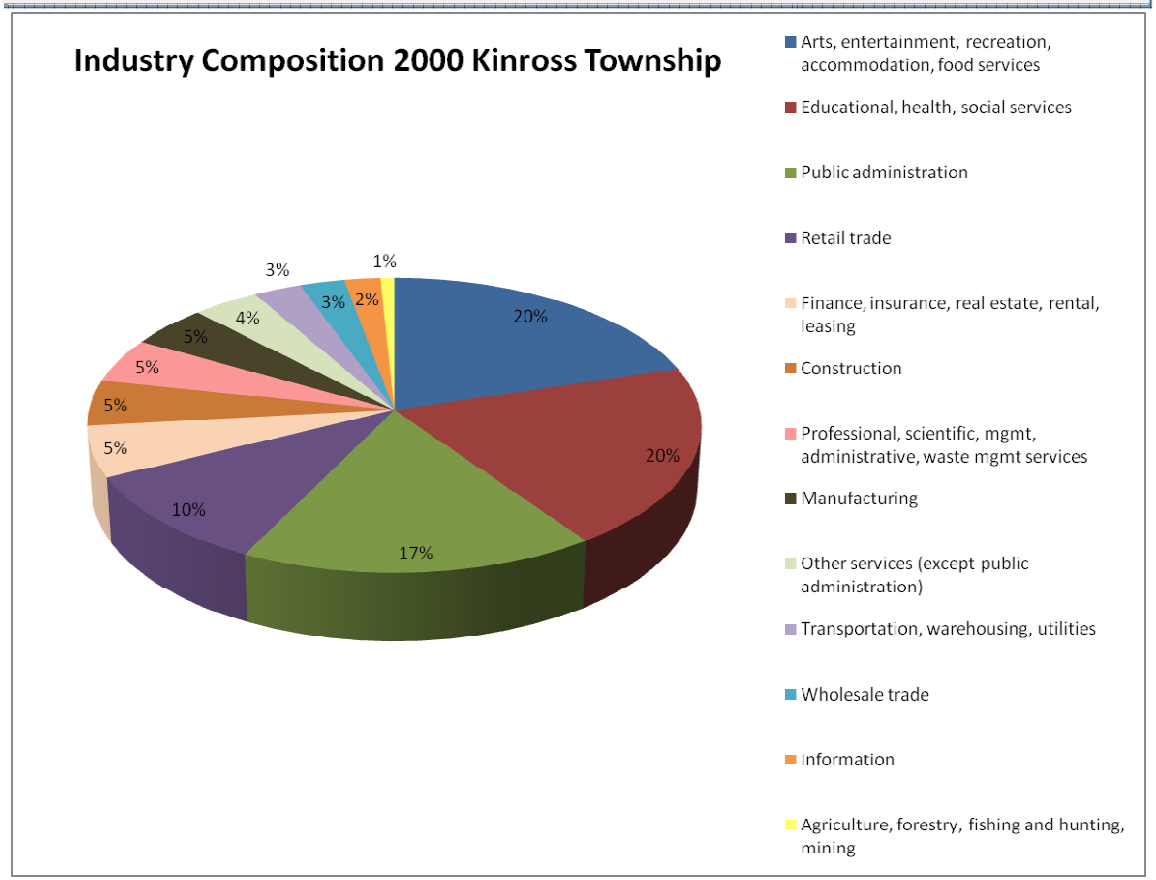
- **Community and Social Services Occupations**
  - Child, family, and school social workers
  - Medical and public health social workers
  - Mental health and substance abuse social workers
  - Social and human service assistants
- **Computer and Mathematical Occupations**
  - Computer programmers
  - Computer software engineers, applications
  - Computer systems analysts
  - Network and computer systems administrators
  - Network systems and data communications analysts
- **Construction and Extraction Occupations**
  - Carpenters
  - Electricians
  - Plumbers, pipefitters, and steamfitters
- **Education, Training, and Library Occupations**
  - Elementary school teachers, except special education
  - Middle school teachers, except special and vocational education
  - Preschool teachers, except special education
  - Secondary school teachers, except special and vocational education
  - Special education teachers, preschool, kindergarten, and elementary school
- **Healthcare Practitioner and Technical Occupations**
  - Cardiovascular technologists and technicians
  - Dental hygienists
  - Emergency medical technicians and paramedics
  - Licensed practical and licensed vocational nurses
  - Medical and clinical laboratory technologists
  - Medical records and health information technicians
  - Occupational therapists
  - Pharmacists
  - Pharmacy technicians
  - Physician assistants
  - Radiologic technologists and technicians

  - Registered nurses
  - Respiratory therapists
- **Healthcare Support Occupations**
  - Home health aides
  - Medical assistants
  - Medical transcriptionists
  - Nursing aides, orderlies, and attendants
  - Physical therapist assistants
- **Installation, Maintenance, and Repair Occupations**
  - Aircraft Mechanics and Service Technicians, FAA Certified
  - Automotive service technicians and mechanics
  - Heating, air conditioning, and refrigeration mechanics and installers
- **Legal Occupations**
  - Paralegals and legal assistants
- **Life, Physical, and Social Science Occupations**
  - Environmental scientists and specialists, including health
- **Management Occupations**
  - Computer and information systems managers
  - General and operations managers
  - Medical and health services managers
  - Sales managers
- **Production Occupations**
  - Computer-controlled machine tool operators, metal and plastic
  - Multiple machine tool setters, operators, and tenders, metal and plastic
- **Protective Service Occupations**
  - Correctional Officers and Jailers
  - Police and sheriff's patrol officers
- **Transportation and Material Moving Occupations**
  - Truck drivers, heavy and tractor-trailer

Industry

The chart at right shows the industry composition for Kinross Charter Township in 2000. Two industries tie for top employers, including first the arts, entertainment, recreation, accommodation, and food services industry, and secondly the educational, health and social services industry. Public Administration is the next largest industry in Kinross Charter Township, followed by retail trade.

Figure 2-20: Industry in 2000, Kinross Charter Township



Chippewa County has a strong services/government sector employment base and a growing manufacturing base. Service producing industries accounted for 6,225 jobs in Chippewa County in 2001 (40 percent of total wage and salary employment). This represents an increase of 50 jobs since 1991. Government employment accounted for 7,900 jobs in 2001, representing 51 percent of total wage and salary employment. This figure rose by 41 percent in 1994, resulting in an increase of 2,975 jobs since 1991.

In Chippewa County, goods producing industries accounted for 1,400 jobs in 2001, which constituted 9 percent of the total wage and salary employment. This represents an increase of 275 jobs since 1991, but the number dipped in 2000 by 13.5 percent from the previous year. Fortunately, the number rose by 24 percent in 2001 to create the net increase.

According to 2004 County Business Patterns, top industry employers in Chippewa County, by 4-digit NAICS code are traveler accommodation (1,445 employees), full-service restaurants (522 employees), grocery stores (386 employees), gasoline stations (218 employees), depository credit intermediation (214 employees), offices of physicians (159 employees), building equipment contractors (112

employees), religious organizations (92 employees), automotive repair and maintenance (84 employees), clothing stores (82 employees), health and personal care stores (76 employees), nonresidential building construction (69 employees), automotive parts, accessories, and tire stores (66 employees), offices of dentists (64 employees), business, professional, labor, political, and similar organizations (62 employees), accounting, tax preparation, bookkeeping, and payroll services (56 employees), and personal care services (55 employees).

A close look at County Business Pattern data from 1998 through 2006 reveals trends in employment per NAICS category (North American Industry Classification System). Total employment in Chippewa County declined by 5.4 percent from 1998 to 2006. A detailed look at the trends per NAICS classification follows:

- Utilities (-21%)
- Construction (-21%)
- Manufacturing (-22%)
    - Wood product manufacturing (-25%)
- Wholesale Trade (-17%)
- Retail Trade (-9%)
    - Motor vehicle and parts dealers (+ 32%)
    - Furniture and home furnishings stores (-11%)
    - Electronics and appliance stores, increase
    - Building material and garden equipment etc (-27%)
    - Food and beverage stores (-7%)
    - Health and personal care stores (+23%)
    - Gasoline stations (-13%)
    - Clothing and accessories (-53%)
    - Sporting goods, hobby, book, and music stores, increase
    - General merchandise stores, increase
- Transportation and Warehousing (-33%)
- Information (+13%)
- Finance and Insurance (+14%)
- Real Estate and Leasing (+16%)
- Professional, Scientific, and Technical Services (+23%)
- Administrative and Support and Waste Management (-34%)
- Educational Services (+215%)
- Health Care and Social Assistance (+51%)

- Arts, Entertainment, and Recreation, increase
- Accommodation and Food Services (+62%)
- Other Services (except public administration) (-19%)

The County fortunately experienced increases in several sectors involved in the knowledge economy, including information; professional, scientific, and technical services; and educational services.

Regional Employment Outlook

According to the Michigan Department of Labor and Economic Growth, Chippewa County experienced the fastest rate of employment growth (3.5 percent) of the three counties in the Eastern Upper Peninsula region for the period between 2003 and 2007. However, between 2006 and 2007 the number of unemployed individuals in the region increased at a rate faster than statewide (4.8 percent compared to 2.8 percent statewide). The Eastern Upper Peninsula MWA reported an annual average jobless rate of 9 percent in 2007, which was higher than the 7 percent recorded statewide and the 4.6 percent recorded nationally. In January 2009, however, Michigan's unemployment rate (seasonally adjusted) was 11.6 percent, which represented a 4.3 percent change over a year.

Job declines were experienced in manufacturing, construction, retail, leisure and hospitality, and other services, contributing to the region's higher-than-average unemployment situation. Soaring gas prices in the summer of 2008 exacerbated this trend, discouraging travel to more remote regions, although some area residents may have vacationed within the Upper Peninsula instead of traveling elsewhere.

Private sector payroll jobs fell by 6.3 percent between 2004 and 207 in the Eastern Upper Peninsula MWA. Over the same period, statewide private jobs dropped by 3.2 percent. Job gains in the area were realized only in educational and health services, which rose by 10.3 percent over the period. Gains were primarily in social assistance and educational services. Manufacturing declined by 33 percent, information by 13 percent, other services by 11 percent, natural resources and construction by 9 percent, and leisure and hospitality by 6 percent.

The top ten industries by job growth from 2004 to 2007 in the Eastern Upper Peninsula region include social assistance (22% growth, or 63 jobs), professional and technical services (18% growth, or 42 jobs), educational services (55% growth, or 32 jobs), forestry and logging (50% growth, or 27 jobs), mining except oil and gas (20% growth, or 24 jobs), merchant wholesalers of durable goods (12% growth, or 16 jobs), telecommunications (29% growth, or 13 jobs), and health and personal care stores (10% growth, or 12 jobs).

Declining industries between 2004 and 2007 include construction of buildings (26% decline, or 94 jobs), plastics and rubber products manufacturing (34% decline, or 70 jobs), furniture and home furnishings stores (41% decline, or 33 jobs), personal and laundry services

(24% decline, or 33 jobs), clothing and clothing accessories stores (30% decline, or 32 jobs), nursing and residential care facilities (11% decline, or 24 jobs), water transportation (17% decline, or 21 jobs), and repair and maintenance (14% decline, or 21 jobs).

The following information was taken from the Comprehensive 5-year Local Plan Modification for the Eastern Upper Peninsula, E.U.P. Employment and Training Consortium, July 1, 2007 to June 30, 2009. The annual unemployment rate for the Eastern U.P. in 2006 was 8.5 percent, substantially higher than the statewide rate of 6.8 percent, and representing a 29 percent increase over 2000. Manufacturing losses and a weaker tourism industry contributed to the higher than average unemployment situation. The national unemployment rate for 2006 was 4.6 percent.

Persons employed in the Eastern U.P. primarily earn their income in three major industry sectors, including government, leisure and hospitality services (restaurants/hotels), and retail trade. Government jobs accounted for approximately 43.5 percent of the total industry employment in the Eastern U.P. This is nearly three times the statewide level of 15 percent. It should be noted, however, that the Sault Tribe of Chippewa Indians and Bay Mills Indian Community are classified as local government, and their employees account for roughly 28 percent of the total governmental workforce. If tribal employment was not included, other governmental personnel would make up 31 percent of the payroll jobs.

Retail trade far surpassed manufacturing in the percentage of employment provided, while statewide, the opposite was true, with manufacturing sector employment greater than that provided by retail trade. Between 2002 and 2005, construction employment fell by 7.4 percent, and manufacturing employment fell by 16.5 percent.

The largest single employer in the Eastern Upper Peninsula is the Sault Ste. Marie Tribe of Chippewa Indians, having expanded gaming operations and increased governmental and health services, along with a host of other diverse enterprises. The Bay Mills Indian Community has also expanded their labor force with increased gaming and resort employment. These tribal employers are classified as governmental, even though many of the jobs for which they are responsible are in the service sector, highly dependent on recreation and tourism. This provides some contrast to traditional governmental employment, which includes federal, state, county, and city jobs as well as employment by public educational institutions. The Michigan Department of Corrections is also a significant employer in the Eastern U.P. with five large correctional facilities located within Chippewa and Luce Counties (although the State has recently announced the impending closure of the Hiawatha Correctional Facility). The steady pay and benefits enjoyed by nearly 1600 correctional employees have had a major impact on local communities.

There is a predominance of small firms in the area and a scarcity of firms with more than 100 employees. Leisure and hospitality have the largest number of individual firms, followed by retail trade, while agriculture has the fewest. Across the Upper Peninsula, the increase in health care primarily reflects expected gains in *registered nurse* (570 jobs), *nursing aide* (275 jobs), and *home health aide* (230 jobs) occupations. Even though the other occupational categories in the Upper Peninsula will record modest rates of job growth, they will generate job

openings due to the need to replace existing workers. All occupational sectors are expected to add jobs over the decade with the exception of farming which is expected to decline by 3.2 percent.

Occupational forecast data can be somewhat misleading in the Eastern U.P. First, much of the data available encompasses the entire Upper Peninsula, which includes the larger labor market areas around Marquette and Escanaba. Second, the growth rates can be deceivingly high, simply because the base number of jobs is low enough that moderate numerical increases translate into high growth. For example, *network systems and data communications analysts* (56.4 percent) and *computer software engineers* (52 percent) top the list of occupations with the fastest growth rates. However, the annual average number of new jobs for each occupation is expected to be only five, with replacement jobs being only two and one, respectively. And that is for the entire Upper Peninsula.

Conversely, the growth rate for *registered nurses* over the period of 2002-2012 is 21.6 percent, yet the annual number of new jobs is expected to be 57, with 55 replacement jobs. At less than half the growth rate of the computer related jobs above, there will be more than ten times as many opportunities to become employed as a registered nurse.

Following registered nurses, there are several occupations which are expected to add a large number of jobs before 2012. They include the higher skilled positions of *correctional officers and jailers* (310), and *carpenter*s (215), and the more moderately skilled jobs such as *retail salespersons* (345)*, food preparation workers* (120)*, janitors* (300), *home care aide*s (230), and *tractor-trailer truck drivers* (220). Plentiful jobs that do not require training beyond high school are expected to include *waiters and waitresses* (455), and *maids and housekeeping cleaners* (345).

Between 2002 and 2012, substantial job losses are expected to occur in the following occupations: *secretaries (except legal/medical/executive)* (-275), *word processors and typists* (-105), *administrative assistants* (-115), *freight and stock laborers* (-130), and *farmers* (-50).

Discussions held with employers indicate that a strong work ethic and motivation are the qualities desired most by employers. Although technical skills are required for many positions, the majority of employers insist that they can often provide the training if the new employee exhibits the willingness to work and learn new skills.

The tourism related and service oriented economy demands good communications skills, appropriate personal appearance, and the ability to accommodate normal employer expectations. Employers continue to express the need for training and educational programs to emphasize work values and ethics.

Strong technical skills are required in the business and computer fields, and health occupations. Lake Superior State University, Bay Mills Community College, and the Sault Area Career Center all have training programs which provide various levels of education in these fields. Recruitment of individuals into allied health careers, particularly nursing, is needed as regional, state and national shortages are expected to grow.

As previously mentioned, data shows that the share of manufacturing in the Eastern U.P. remains significantly below the state's percentage of manufacturing jobs (4 percent versus 15.5 percent). The region clearly does not enjoy the benefits shared by more industrialized areas in Michigan, i.e., a higher tax base and more stable year-round employment. The numerous jobs in tourism, services and retail trade are frequently seasonal in nature and provide little in the way of employee benefits. Although an expanded tourist season and Native American gambling casinos have created more 12-month employment openings, they are not generally sufficient to support a family without an additional source of income. Manufacturing jobs demand more skills but offer more in wages and benefits.

The average weekly wage for workers in the Eastern Upper Peninsula, $449, is 43.2% below the state average weekly wage of $791. In 2004, the per capita income in each county (Chippewa, $20,776; Luce, $19,605; and Mackinac, $27,182) was significantly less than the State's average of $32,079.

Demographics currently suggest a growing older population, which could raise employers' concerns about the availability of workers. Data shows that the number of high school and community college graduates in the region fell by 6.3 percent in the most recent school year, with 561 persons graduating. This is an indicator of potential new entrants to the labor force. Continuous encouragement to hire older workers will help employers to tap resources that may have been previously overlooked. Young people who emerge from high school will have greater opportunities to enter the workforce earlier. Articulation agreements afford Sault Area Career Center students the ability to earn advanced placement credits at Lake Superior State University and Bay Mills Community College in Business Services and Technology. Completers of other Career Center programs may be granted college credit at LSSU, BMCC, Ferris State University, Bay de Noc Community College, the Universal Technical Institute, and the University of Northwestern Ohio. Assistance with transportation problems has enabled many welfare recipients to enter the workforce. Ex-offenders, specifically medium to high risk parolees, are encouraged into the labor force through the Michigan Prisoner ReEntry Initiative.

The seasonal demand for workers in the Straits Area continues to be a major problem for local employers. There is not enough temporary housing available to support the importing of workers from other areas, and most people are reluctant to move for seasonal employment. Unfortunately, it appears that private-sector solutions may be the only workable approach to this problem (investment in affordable housing, higher wage rates, etc.), and government will only be in a position to support such initiatives.

Local Employment Dynamics

The U. S. Census Bureau provides local employment dynamics analysis for defined areas. This analysis was performed for a 30 mile radius from the heart of the Kincheloe commercial/residential center, and includes the Sault Ste. Marie, St. Ignace, and Brimley areas, among others.

The area profile analysis includes the Home Area Profile Analysis, which displays the locations and distribution of workers living in the selection area; and the Work Area Profile Analysis, which displays the locations and distribution of workers employed in the selection area. Please see Appendix B for these detailed reports.

The Home Area Profile Analysis shows that most workers living in the 30 mile radius study area work in the area proximate to Sault Ste. Marie, although Kincheloe is the next largest cluster, followed by the Brimley area and St. Ignace. Among those living in the study area, twenty-three (23) percent of jobs in 2006 were in public administration, 12 percent in health care and social assistance, 12 percent in retail trade, 10 percent in accommodation and food services, and 10 percent in educational services. Seven percent were in arts, entertainment and recreation. About four percent were in construction and manufacturing (each). About three percent were in wholesale trade and finance and insurance (each). Only two percent were in professional, scientific, and technical services. Management of companies and enterprises, Waste administration and support, and Health care and social assistance have increased in number of jobs from 2004 to 2006. Others have decreased or stabilized.

Of the workers who are employed in the study area, almost all work in tightly clustered areas around Sault Ste. Marie, Kincheloe, Brimley, and St. Ignace. Slightly more of them worked in public administration and arts, entertainment, and recreation than among those who lived in the area, meaning that more workers are imported from outside the study area in these industries.

A labor shed analysis displays where workers employed in the study area live. These findings mimic those of the home area profile analysis above, with most of the population living in the area north and east of Kincheloe, with most concentrations in Sault Ste. Marie and Kincheloe. Within the study area, 76 percent of the workers lived in Chippewa County, ten percent in Mackinac County, two percent in Schoolcraft County, and 8 percent in other locations. By County subdivision, 36 percent lived in Sault Ste. Marie, 8 percent in Soo Township, 7 percent in Kinross Township, 4 percent each in Bruce, Superior, and Bay Mills Townships as well as St. Ignace. Three percent lived in Dafter, Clark, and Pickford Townships (each). Twenty-five (25) percent lived in other county subdivisions. Forty-nine (49) percent of workers lived in the zip code 49783.

The Commute Shed Analysis shows where workers who live within the selected area are employed. Of those who live in the study area, 73 percent are employed in Chippewa County, and 9 percent in Mackinac County. Having about 1 to 2 percent employment each are Schoolcraft, Ingham, Marquette, Luce, Emmet, Grand Traverse, Dickinson, and Cheboygan counties. Almost 9 percent are employed in other counties. Of County subdivisions, 34 percent work in Sault Ste. Marie, 17 percent in Soo Township, 8 percent each in Superior and Kinross Townships, 4 percent in St. Ignace, 3 percent in Clark Township, and 1 to 3 percent each in Pickford Township, Manistique, Mackinac Island, and Lansing, Michigan. Almost 20 percent work in other locations not specified. Almost 52 percent work in zip code 48783.

Area Businesses

It is important to look at employment on an area basis, as many Kinross Charter Township residents do not work within the township. There are also expanded markets for product and service provision.

Listed below are key employers in Chippewa County. The largest employer is the Sault Ste. Marie Tribe of Chippewa Indians. The Tribe has become northern Michigan's largest employer with 22 businesses employing nearly 2,500 people, including DeMawating Development in Kincheloe. Some revenues from the Tribe's casino and non-gaming businesses are channeled back into the community.

Actual employment numbers come from multiple sources, and may not be current, and should be considered approximate.
Key manufacturing employers in Chippewa County include:

- **Key Plastics**-automotive and high-tech injection molded parts, Sault Ste Marie (245)
- **Precision Edge Surgical Products**-surgical instruments, Sault Ste Marie (135)
- **Tech Optics**-printer cartridge recycler, Sault Ste Marie (115)
- **PCC Superior Fabrication**-steel fabrication, Kincheloe (76)
- **R & B Electronics**-aerospace electromechanical assembly, Sault Ste Marie (53)
- **Northern Transitions, Inc.**-community rehab, product packaging and assembly, recycling, Sault Ste Marie (50)
- **Hoover Precision Products**-precision balls, Sault Ste Marie (45)
- **MCM Marine**-marine construction, Sault Ste Marie (50)
- **Cushman Fabrications**-steel fabrication, Kincheloe (24)
- **JAS Veneer**-hardwood veneer, Sault Ste Marie (20)
- **Bunker Manufacturing**-dies and tool, Sault Ste Marie (15)
- **Great Lakes Composites**-composite plastics research and development, Brimley (12)
- **Kretz Lumber Company**-lumber processing, Kincheloe (12)
- **Innovative Composites**-reinforced composite plastics, Sault Ste Marie (10)

Other major employers include:

- **Sault Tribe of Chippewa Indians** (2,100+)
- **State of Michigan offices** (1,343)
- **Bay Mills Indian Community** (Government and Resort) (800)
- **War Memorial Hospital** (664)

- **Kinross Prisons** (553)
- **Sault Area Public Schools** (310)
- **Lake Superior State University** (320)
- **Wal-Mart** (200)
- **U.S. Coast Guard** (195)
- **C.L.M. Community Action** (190)
- **Rudyard Area Schools** (177)
- **Chippewa County** (155)
- **Inter-Tribal Council of Michigan**-Sault Ste Marie (100)
- **City of Sault Ste. Marie** (125)
- **Hiawatha Behavioral Health**-Sault Ste Marie (120)
- **Tendercare Nursing Homes** (119)
- **Glen's Market**-Sault Ste Marie (110)
- **Graham Trucking**-Brimley (108)
- **Chippewa County Health Department**-Sault Ste Marie (100)
- **US Army Corp of Engineers**-Soo Locks (96)
- **K-Mart**-Sault Ste Marie (79)
- **Central Savings Bank**-Sault Ste Marie (72)
- **The Evening News**-Sault Ste Marie (70)
- **Bay Mills Community College** (70)
- **Soo Co-op Credit Union**-Sault Ste Marie (60)
- **Edison Soo Electric**-Sault Ste Marie (60)

Kinross Correctional Facilities	Number of Employees
Administrative Staff	183
Custodial Staff(including corrections officers)	
1st Shift	339
2nd shift	306
3rd shift	200
Support Staff(including nursing, warehouse, etc.)	
1st Shift	211
2nd shift	26
3rd shift	8
Source: Kinross Township staff, 3/18/09	**1273**

Retail sales per capita in 2002 for Chippewa County were $7,662 compared to $10,889 at the State level.

The correctional facilities in Kinross Charter Township provide over 1,200 stable jobs to the community. Employees drive as far as 60 miles a day for employment. Previously, families and friends of inmates relocated to the area for the duration of the inmate's sentence, but visitation time was reduced, discouraging this trend. Inmates participate in public works programs, helping to maintain public facilities.

Relevant information on the corrections facilities follows:

- The Kinross Correctional Facility (388 employees, 1837 beds, level I and II security, males 17 and older)—located on Watertower Drive, opened in 1978, with the largest fenced area (113 enclosed acres) of any state prison in Michigan.
    - Programs include GED completion, vocational training (auto mechanics, auto body repair, building trades, welding, custodial maintenance, business education technology, horticulture). Offers State certification in auto mechanics. Inmates help build homes for Habitat for Humanity, and recently built a playhouse as a raffle prize to help raise funds for Habitat for Humanity.
    - Other programs include substance-abuse treatment, psychological services, hobby craft, music program, master gardener program.
    - Organizations include Vietnam Veterans of America and Jaycees.

Below: Kinross Correctional Facility

- The Straits Correctional Facility (around 316 employees including the garment and laundry factory, and regional healthcare office, 1122 capacity, level II security, males all ages)—located on M-80, opened in 1988.
    - Facilities include an administration building, health services unit, maintenance and warehouse, food service unit, program/school building, and a Michigan State Industries laundry and garment factory employing prisoners.
    - Programs include academic and vocational instruction, work assignments, general and law library services, group counseling, substance-abuse treatment, hobby craft, recreational and religious programs, and cognitive behavior restructuring programming.
- Hiawatha Correctional Facility (around 212 employees, 1200 capacity, level I security, males 17 and over not diagnosed as mentally ill)—located on Industrial park Drive, opened in 1989. **Note: The State has designated this facility for closure in 2009.
    - Facilities include an administration building, food service units and warehouse.
    - Programs include special education, adult basic education, general education development, vocational trade programs (institutional maintenance and building trades), business and office occupations (basic business skills and use of computers), substance-abuse treatment, religious services, prisoner self-help and service groups, law and general libraries, hobby craft.

- Chippewa Correctional Facility (around 328 employees, 1150 capacity, level I, III, and IV security, males all ages)—located on M-80, opened in 1989.
    - Facilities include an administration building, health services unit, maintenance and warehouse, food service unit and program/school building.
    - Programs include academic and vocational instruction, work assignments, general and law library services, group counseling, substance abuse treatment, horticulture, recreational and religious programs, and cognitive behavior restructuring programming.

Further information on Industrial and Commercial Infrastructure, including the industrial park, will be presented in Chapter 3.

Economic Development

Net spending by Michiganians for travel outside Michigan exceeds spending for travel within the State, creating a $2.8 billion deficit in balance of trade for Michigan tourism in 2004. Michigan tends to be a regional destination with 72% of Michigan travel by Michigan residents, 18% by residents of other Great Lakes states, and 10% from all other origins. Most Michigan tourism is natural resource or recreation related with world-class tourism assets including the Great Lakes, forests, inland lakes and rivers, trails, campgrounds, and parks linked by an impressive transportation system. Tourism promotion, however, lags compared to other Great Lakes states and provinces.

Michigan has the fifth largest number of hunters of any state, and is also fifth in the nation for number of anglers. Hunting was the most common dispersed use of state forest lands in all three state forests, with adjacent private landowners and their guests accounting for up to half the dispersed use of the public forest land. Sales of snowmobile trail permits have been in a steady decline since 1999, while boat registrations have been static. State park use has been moderately declining.

Chippewa County has 456 miles of Great Lakes shoreline, 34 inland lakes over 50 acres in size, and nearly 458,000 acres of public recreation land. There are eleven marinas and seven first class golf courses in this outdoor enthusiast's paradise.

Chippewa County is 490 miles from Chicago, 510 miles from Cleveland, 340 miles from Detroit, and 280 miles from Lansing, MI. However, it is directly linked into vital transportation networks in Canada and the US via highways (I-75, M-134, M-221, M-48, M-28, M-129), rail lines (Canadian National), ports (Sault Ste Marie/Soo Locks, Port Drummond/Lake Huron, Reiss Coal Dock/Sault Ste Marie, Carbide Dock/Sault Ste Marie), airports (Chippewa County International Airport in Kinross, Sault Ste Marie Municipal Airport/Sanderson Field), bus lines (Indian Trails, EUPTA public transit), and truck lines (Graham Trucking, FedEX, UP Special Delivery, PMF, UPS, DHL).

Kinross Charter Township could improve quality of life of residents by encouraging the development of local clusters and subclusters in close proximity to population centers, connected by pedestrian and non-motorized trails or infrastructure. This improves the local, long-

term sustainability and self-sufficiency of the community, and increases the potential target market for residents. Most needed clusters address basic amenities that should be conveniently available within the community. Examples of these clusters include:

- Local Food and Beverage Processing and Distribution
  - This includes wholesaling and retailing of food, tobacco, beer, wine, liquor, bottled and canned soft drinks, vending, and direct selling. The township could expand opportunities around the Coke distribution center, and tie this cluster in with the Co-op.
- Local Personal Services (Non-Medical)
  - This includes cleaning, hair care, photographic, photofinishing, repair, and child care services as well as personal products retailing.
- Local Health Services
  - This includes healthcare provider offices, hospitals, medical laboratories, home and residential care, funeral service and crematories, medical equipment distribution and rental, drug stores, ophthalmic goods wholesaling and optical goods retailing. This could be expanded around the current medical clinic and health care businesses.
- Local Convenience Services
  - This includes landscape and horticultural services; miscellaneous repair services; hardware wholesaling and retailing; gardening products and supplies; advertising, office supply, and printing services; laundry and linen services; building support services; security services; and financial services (deposits, pensions and other funds, tax return preparation, and credit services) Prime location is along the main corridors and within the urban center of Kincheloe.

Additionally, Kinross Charter Township can improve the sustainability and diversity of the economy by focusing on the development of select traded clusters and subclusters, built around existing industries and area competencies. Examples may include the following, as defined by the Harvard Cluster Mapping Project:

- Aerospace Engines
  - Includes aircraft engines, precision metal products, and defense equipment
- Analytical Instruments
  - Includes laboratory, optical, medical, and process instruments, search and navigation equipment, and electronic components
- Building Fixtures, Equipment, and Services
  - Includes plumbing products, drapery hardware, fabricated materials, heating and lighting, furniture and fittings, clay and vitreous products, floor coverings, steam and air-conditioning, stone and tile work, wood cabinets and fixtures, concrete and gypsum building products. This is an area with special opportunity in green or environmentally friendly products that are not yet widely available in this market, but are in increasing demand. Unique design considerations would help create a market niche and expand export opportunities.

- Forest Products
  - Includes paper products, paper mills, paper industries machinery, and prefabricated wood buildings
- Leather Products
  - Includes leather products, fur goods, coated fabrics, accessories
- Lighting and Electrical Equipment
  - Includes lighting fixtures, electric lamps, batteries, switchgear, electrical parts, and metal parts. Again, a process or product that is more energy efficient or environmentally friendly would be especially desired.
- Metal Manufacturing
  - Includes fabricated metal products, metal alloys, primary metal products, precision metal products, fasteners, wire and springs, metal processing, iron and steel mills and foundries, nonferrous mills and foundries, metal furniture, environmental controls, pumps, saw blades and handsaws, general industrial machinery, laundry and cleaning equipment, and metal armaments
- Motor Driven Products
  - Includes motors and generators, batteries, motorized equipment, refrigeration and heating equipment, appliances, specialized pumps, specialized machinery, and tires or inner tubes
- Plastics
  - Includes plastic materials and resins, plastic products, paints and allied products, and synthetic rubber
- Power Generation and Transmission
  - Includes electric services; turbines and turbine generators; transformers; porcelain, carbon and graphite components; and electronic capacitors
- Prefabricated Enclosures
  - Includes recreational vehicles and parts, mobile homes, trailers, caskets, elevators and moving stairways, office furniture, household refrigerators and freezers, and aluminum processing

Knowledge Economy Index

Michigan State University created a County-Level assessment of Michigan's knowledge economy, which was intended to assist communities in identifying their position in the knowledge economy in order to facilitate the development of effective economic development strategies. The knowledge economy was defined as "the application of new methods or new technologies to the production or distribution of goods and services".[9] This is important because the role of knowledge is an increasingly important element of a healthy, globally competitive economy. Additionally, technology is strongly linked to the creation of higher-skilled, higher-paying jobs. For

[9] LaMore, Melcher, Supanich-Goldner, Wilkes. *Michigan Knowledge Economy Index: A County-Level Assessment of Michigan's Knowledge Economy, 2nd Edition.* Michigan State University, May, 2007.

example, in Michigan, the average knowledge economy wage (for selected occupations of education/training, computers, life and social science, architects, engineers, and management) is approximately $61,000 per year, while the average wage in Michigan for all jobs is just over $37,000 per year.[10]

The report utilizes various indicators combined to reflect an overall knowledge economy index. They classify each county as either "Leaders", "Contenders", "Followers", or "Laggards". Chippewa County is ranked as a "Follower" in overall knowledge economy index, which is the simple, unweighted average of a county's rank for the sixteen individual indicators. Chippewa County's overall rank is 60th of 83 counties. Results for the sixteen indicators are as follow:

- **Knowledge Jobs Category**—the average of a county's rank for information technology jobs, workforce education, and management and professional jobs. Chippewa is listed as a "Contender" in this category with a ranking of 29 of 83 counties.
    - *Information Technology Jobs*—percentage of the workforce employed in four information technology related industry categories, including cable networks and program distribution; telecommunications; information and data processing services; and computer systems design and related services. Chippewa County is classified with 0.75 to 1.5 percent of the workforce in these industries, which exceeds the statewide percentage of about 0.5 percent.
    - *Workforce Education*—the percentage of people over age 25 who have completed a bachelor's degree or higher. Chippewa is classified with 15 to 20 percent of people age 25+ having completed a bachelor's degree or higher, compared to a Michigan average of 21.8 percent, and Midwest regional average of 22.9 percent. The national average is 23.9 percent. This reflects a ranking of 37 of 83 counties.
    - *Management and Professional jobs*—percentage of the workforce aged 16 and over employed in managerial, professional, and related occupation categories. Chippewa is classified in the 25 to 30 percent range (ranking of 35 of 83

Chippewa County is classified as a Contender in knowledge jobs, exceeding the statewide average for percent of the workforce in information technology jobs. The County lags slightly in workforce education and percent of workforce in management and professional jobs.

Chippewa County is classified as a Follower in Innovation Capacity, lacking venture capital and bioscience firms, but ranking close to the statewide average in patents and number of engineers in the workforce. It lags in number of high tech jobs. The new SmartZone in Sault Ste. Marie will improve this indicator.

Chippewa County is classified as a "Laggard" in the digital economy, although cable modem availability and internet use has increased since the study. The county is favorably ranked in digital government websites.

The County is also classified as a "Laggard" in the global economy, with few firms with foreign parents or exports.

Chippewa County is classified as a "Follower" in economic dynamism, which predicts progress toward a knowledge economy. The County is slow to progress from a manufacturing to service economy, but had better progress toward entrepreneurial activity.

[10] LaMore, Melcher, Supanich-Goldner, Wilkes. *Michigan Knowledge Economy Index: A County-Level Assessment of Michigan's Knowledge Economy, 2nd Edition.* Michigan State University, May, 2007.

counties), compared to a statewide percentage of 31.5 percent, Midwest average of 32.1 percent, and nationwide average of 33.6 percent.

- **Innovation Capacity Category**—the simple average of a county's rank for five indicators, including high technology jobs, venture capital firms, patents, engineers, and bioscience jobs. Chippewa is listed as a "Follower" in this category with an overall ranking of 61 of 83 counties.
    - *High Technology Jobs*—the percentage of the workforce employed in one of seven industry categories representing high technology firms, including computer and electronic product manufacturing; software publishers; cable networks and program distribution; telecommunications; information services and data processing services; computer systems design and related services; and scientific research and development. Chippewa is classified with 0.75 to 1.5 percent of the workforce in high technology jobs compared to a statewide level of 2.8 percent. This represents a ranking of 42 of 83 counties.
    - *Venture Capital Firms*—represents the number of venture capital firms in the county. Chippewa is listed with none, which is not surprising because venture capital firms in Michigan are highly concentrated in a few counties, mostly in southeast Michigan.
    - *Patents*—the number of patents registered per 100,000 population. Chippewa is classified with 0.1 to 10 patents per 100,000 population, representing a ranking of 48 of 83 counties. The statewide average was 4.1 patents.
    - *Engineers in the Workforce*—number of licensed, professional engineers as a share of the total workforce (per 10,000 workers). Chippewa is classified with 1.5 to 3 engineers per 1,000 workers (a ranking of 50 of 83 counties). This compares to a statewide average share of 2.7.
    - *Bioscience Jobs*—the total number of employees in bioscience firms with headquarters in Michigan. These firms include medicinals/botanicals, pharmaceuticals, diagnostic substances, biological products except diagnostic, and research and development in the life sciences. Chippewa is classified with none. Most firms were clustered in southeast and southwest Michigan.
- **Digital Economy Category**—the average of a county's rank for three indicators, including internet use, digital government, and cable modem access. Chippewa is ranked as a "Laggard" in this category with an overall ranking of 66 of 83 counties.
    - *Internet Use*—the percent of residents who use the Internet at least three times per week, based on a 2002 survey of Michigan residents. Chippewa is classified with less than 57 percent (the same ranking as the entire Upper Peninsula and northern lower Michigan) compared to a statewide rate of 58 percent. This is a rank of 49 of 83 counties.
    - *Digital Government*—the percentage of local governments that have a website. Chippewa is classified with 10 to 20 percent, comparing favorably with a statewide rate of 21 percent. This represents a rank of 35 of 83 counties.
    - *Cable Modem Access*—the geographic extent of cable modem access within each county. Chippewa is classified with none as of January 2000 for a ranking of 71 of 83 counties, although this is no longer accurate.
- **Globalization Category**—the average of a county's rank for two indicators, including firms with foreign parents, and exporting firms. Chippewa is classified as a "Laggard" in this category, with an overall ranking of 65 of 83 counties.

- *Firms with Foreign Parents*—the number of firms registered with the State of Michigan as having foreign parents. This is significant in helping to create a global market presence. Chippewa is listed with zero firms with foreign parents.
- *Exporting firms*—the number of firms engaging in production for export. Chippewa is listed with 2 to 9 firms in this category, with an overall ranking of 63 of 83 counties. Nearly all Michigan counties have at least one firm engaged in exporting.

- **Economic Dynamism Category**—the average of a county's rank for three indicators, including manufacturing employment change, service sector employment change, and sole proprietorship employment change. Chippewa is listed as a "Follower" in this category with an overall ranking of 62 of 83 counties.
  - *Manufacturing Employment Change*—the absolute percentage change in jobs in the manufacturing sector between 1997 and 2000. Rapid change in the employment mix is evident with a knowledge economy. Chippewa is listed with a less than 5 percent change, representing a rank of 72 of 83 counties.
  - *Service Sector Employment Change*—the absolute percentage change in jobs in the service sector between 1997 and 2000. One characteristic of the knowledge economy is a shift from a manufacturing to a service economy. Chippewa is listed with less than 5 percent change for a rank of 56 of 83 counties.
  - *Sole Proprietorship Employment Change*—the absolute percentage change in jobs in firms classified as sole proprietorships between 1997 and 2000. In a knowledge economy, innovation and entrepreneurial activity are viewed as increasingly significant. Chippewa has 5 to 10 percent absolute change in jobs for a rank of 37 of 83 counties.

Communities that have creative and talented people, modern information technology infrastructure, and the foresight to plan for the new economy have greater wealth generation potential through technology based economic development. The proximity of Lake Superior State University gives a boost to this potential in Chippewa County and the surrounding municipalities. This is particularly true since Lake Superior State has been awarded and will create a new SmartZone in Sault Ste. Marie, which is a technology center designated to promote resource collaborations between universities, industry, research organizations, government, and other community institutions to create technology-based business and jobs. This is supported by the new Prototype Development Center at LSSU, which will assist in moving potential new enterprises from idea conception, invention, and prototype phases into commercialization. There are now 15 SmartZone technology clusters in Michigan, including one in Houghton. This SmartZone will focus on injection-molded plastics, precision-machined surgical tools, precision bearings, electronic manufacturing, and robotics.

Potential bio-fuel technology industry start ups in the area will also mean progress toward a knowledge and technology based economy. When enterprises move into the commercialization phase, jobs are created in communities having the desired infrastructure, labor pool, amenities, quality of life and other factors that facilitate the location of high-skilled, high-wage jobs in the knowledge economy. This is why it is important for Kinross Charter Township to focus on increasing the knowledge and skills of the workforce, updating technology infrastructure, and improving public amenities within the population center.

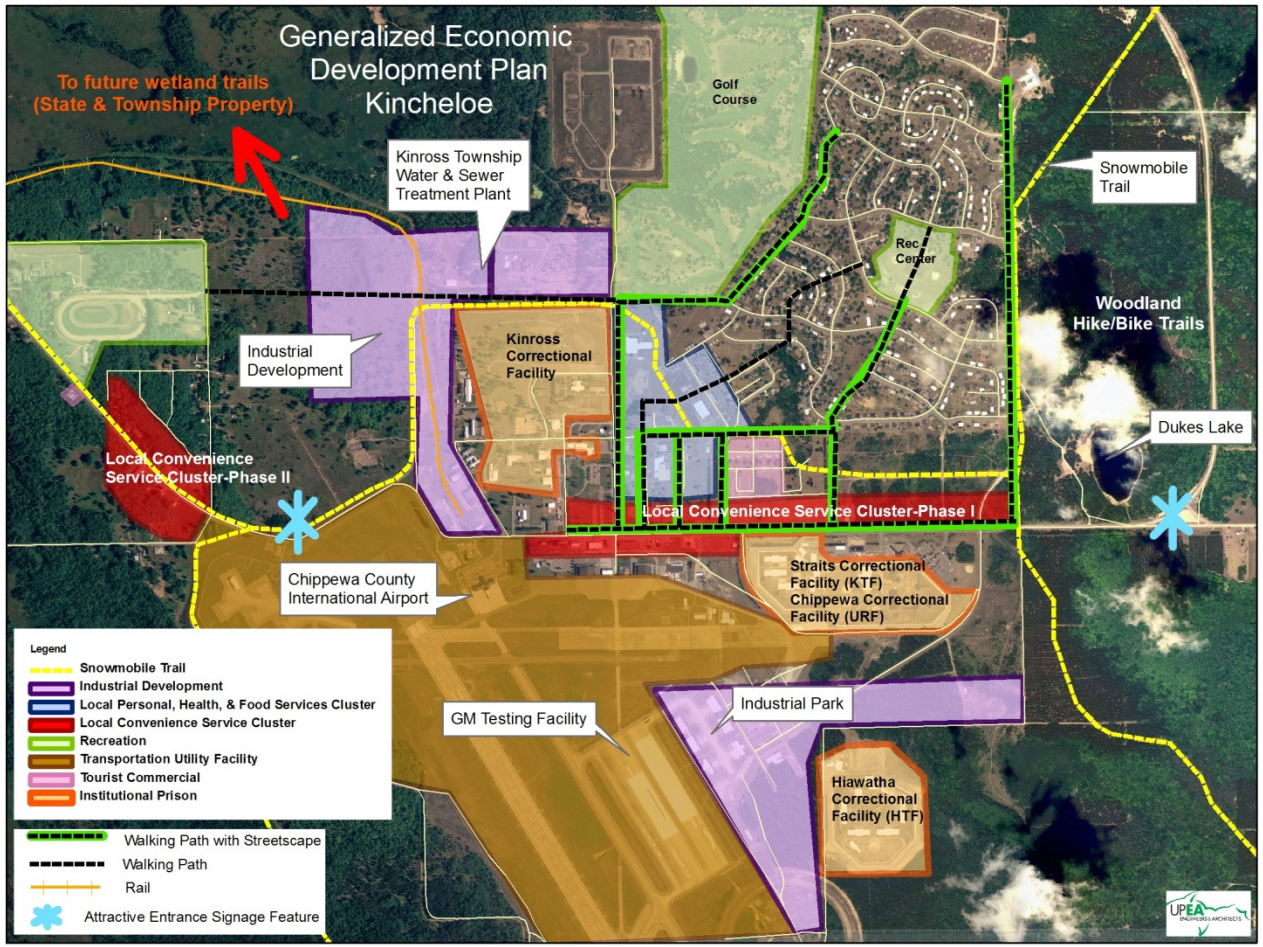
Lake Superior State University will be the area focal point for direct innovation and implementation. However, Kinross Charter Township can take steps to prepare citizens for knowledge jobs, and can plan and prepare for the digital economy and globalization. The following strategies relate to progress toward a knowledge economy for Kinross Charter Township:

1. Emphasize education within the community, with educational opportunities across the life-span of the workforce.
2. Assign community workforce champions to work with Lake Superior State University, Michigan Works!, the Eastern U.P. Employment and Training Consortium, and participate in the Regional Skills Alliance to create greater opportunity for residents of Kinross Charter Township and its youth who are the future workforce.
3. Look for mentoring opportunities between retired seniors and young entrepreneurs. This will require identifying talents and skills within the area permanent and even seasonal population.
4. Recapture high school graduates that leave the area for higher education through strategies such as forgiving student loans, promoting local alumni networks, and hosting welcome home events.
5. Collaborate with other economic development agencies including the Chippewa County EDC, Chippewa County International Airport, Sault Ste. Marie EDC, Eastern U.P. Regional Planning and Development Commission, Upper Peninsula Economic Development Alliance, Michigan Economic Development Corporation, and the Michigan Economic Developers Association. Send representatives to meet with these organizations on a regular basis. Also collaborate with energy and utility companies for economic development opportunity.
    a. Work on ways to provide a broad set of financial resources for start-up firms and new economic enterprises, perhaps by collaborating with Northern Initiatives of Marquette.
    b. Facilitate export trade and global markets for existing products and services within the community (don't forget Canada)
    c. Work to attract foreign-based firms in strategic and complementary industries appropriate for the local conditions and economy
    d. Work with area businesses to tie in to the global transportation capacity, including road, air, and rail transportation opportunities
    e. Organize and train key industry personnel and entrepreneurs on maneuvering within the international trade environment and within culturally diverse economies
    f. Undertake business expansion and retention activities in collaboration with other organizations
6. Ask one of the local economic development agencies to help create a "technical assistance network" providing low or no cost preliminary consultation to area businesses on incorporating technology within their enterprise.
7. Take steps to link as many homes and businesses to the global internet and to each other.
8. Increase wireless internet access as much as possible.
9. Require "open capacity" on any fiber optic infrastructure that is constructed, which may be used in the future to expand E-commerce activity

10. Suggested updates to the Township website:
    a. Provide links to global business networking opportunities and organizations for your specific area businesses and organizations. This can be created by interviewing area businesses and citizens to determine existing global connections, and by talking with area economic development agencies for a listing of their contacts.
    b. Provide non-formal education programs and technical and financial assistance to aid people in learning how to access the global communications network and improve and expand their access to the digital economy.
    c. Create a community profile with photos of area events and favorite places.
    d. Create detailed business profiles with a link to mapped location, giving each business a page to briefly introduce their goods or services.
    e. Feature new businesses in articles on the Township website and in the area newspaper.

The map to the right illustrates how these economic development concepts can be implemented. It is important to create pedestrian and non-motorized connections between the residential area of Kincheloe and a more fully developed, aesthetically enhanced community commercial center as well as the Kinross Community Park. Streetscaping with street trees, natural landscaping, and downcast, small scale lighting is important to create a sense of place and increased safety for pedestrians and to better manage stormwater runoff. This will also soften the impact of the correctional institution infrastructure. Smaller trees with a more airy canopy can be used so as not to negatively impact surveillance, and it should be understood that the streetscape adjacent to the correctional facilities will only be on the opposite side of the road from the prison property. Attractive, well-landscaped entrance signage should be created at approximately the marked locations.

Figure 2-21: Economic Development Concepts for Kincheloe



This concept drawing suggests an area of focus for local personal, health, and food services clusters (in blue), and for local convenience services (in red, phase I and phase II). The phasing reflects the goal of prioritizing infill development in the urban core before moving onto the corridor. This will ensure needed services close to the neighborhoods.

Economic development in the Township can be facilitated by policies including the establishment of a Downtown Development Authority to manage change within the urban core, and an Energy Renaissance Zone to facilitate the location of the emerging bio-fuel industry to Kinross. Rezoning may be needed to permit the creation and expansion of this industry in the area adjacent to the urban core of Kinross.

Chapter 3: Infrastructure

Historic Infrastructure

Kinross Heritage Park and Military Museum

These historic, cultural amenities are located across from the Kinross Community Park. The site is maintained by the Township.

Heritage Park exhibits feature pioneer farming, logging, and household artifacts along with shoe repair, barbershop, and blacksmith shop displays. The Heritage Park includes a one room schoolhouse built in 1902, a log cabin dating from 1882, and a half-mile nature trail.

The Military Museum contains an extensive collection of military items and highlights the former Kincheloe Air Force base personnel.

Kinross Heritage Park

Interpreting Historic Resources

Kinross Charter Township has remnants of several important periods in history, beginning with the Native American history and subsequent European settlements. The story of the Tribe's early way of life, their efforts to obtain sovereign status, and their rise to economic prominence in the regional economy provides an interpretive opportunity. The Tribe holds annual Powwows to celebrate their culture and history, including one in Kinross.

Natural resources extraction provides another interpretive opportunity. Kinross Charter Township has some working Maple syrup farms that could be utilized for education and community building purposes along with other more wild natural resources.

Kinross Charter Township's military history provides colorful experiences and a view into a previous way of life. The story of those serving in the military is fascinating, but equally intriguing is the stories of their families who lived in the Capehart housing and on the base during the 1960's. This was the government's first large scale effort to provide comprehensive military family housing. Of interest are the housing development layouts, floor plans, and construction materials, as well as how it felt to live in these neighborhoods. Stories of military personnel as well as their families and children who grew up there particularly lend themselves to interpretation in a digital format, bringing the base housing back to life as it used to be in 3D visualizations, and with comparisons to today. It is important to preserve the oral histories of folks who experienced these times. Kinross Charter Township is fortunate to have preserved not only housing but other military community buildings and hangars that can serve as a backdrop and lend character to the town. An expanded web presence communicating this history in new formats would also be a valuable community resource.

A mural representing the various cultures and time periods such as those above would be a beautiful backdrop for community activities in the recreation center. This mural could be created from a collage of multi-generational participants, some of whom could hear and record stories, others of whom could provide illustrations of those stories. The community could also invite potential artists to a community workshop to explore concepts for the design, and then designs could be submitted for a community vote.

The National Endowment for the Humanities offers grants to plan and implement interpretation of America's historic places, especially those places that serve an important role in American history.

Housing Infrastructure

Census Profile

The 2000 U.S. Census count for total housing units in Kinross Charter Township is 1,519 units, which is an increase of 54 units since 1990. Of these, 65 percent (986) of these units are located within an urban cluster (as defined by the U.S. Census Bureau), and the remaining 53 percent (533) in rural areas. This is the reverse of the trend in Chippewa County, with 37 percent of housing units located within urban clusters, and in the Congressional District, with 30 percent located within urban clusters. However, the State of Michgian has 72 percent of housing units located inside urban clusters. Kinross Charter Township has the most housing units of any township in Chippewa County.

Kinross Charter Township had a higher percentage of occuped units than the County or Congressional District in 2000, but the Township lagged behind the State occupancy rate. Seventy-six (76) percent, (1,156 units) of total housing units were occupied in Kinross Charter Township in 2000, compared to 58 percent (845 units) in 1990. Occupancy rates for other areas were as follows; State of Michigan 89 percent; Congressional District 1 (106th Congress) 71 percent; and Chippewa County 69 percent.

Of the occupied housing units in Kinross Charter Township in 2000, 53 percent were owner occupied, and 47 percent were renter occupied. All other units of comparison have higher owner-occupancy rates (Michigan 74 percent, Chippewa County 74 percent, Congressional District 79 percent). Among householders who are American Indian (alone) in the Township, 73 percent live in renter occupied units (American Indian householder renter percentage in other areas of comparison varies from 34 to 38 percent).

Total population in Kinross Charter Township in renter occupied housing units is 50 percent, which is significantly higher than the 23 percent in Michigan, 24 percent in the County, and 18 percent in the Congressional District.

Most owner occupied units are 2-person households (34 percent, or 207). Eighteen (18) percent (109) are 1-person households, 19 percent (116) are 3-person households, 16 percent (100) are 4-person households, 9 percent (53) are 5-person households, and the remainder

Most of the housing in Kinross Charter Township is located in the urban cluster of Kincheloe.

Total vacancies have declined by 42% since 1990. In 2000, 76% of total housing units were occupied, compared to 58% in 1990. Of these, 53% were owner-occupied, which is a low percentage when compared to the County, Congressional District, and State.

Kinross Charter Township has higher percentages of the population in renter-occupied housing. Renter households tend to have more people living in them than owner-occupied households.

Householders in renter-occupied housing in the Township tend to be younger than those in owner-occupied housing.

Kinross Charter Township has a higher percentage of rental and for-sale housing vacancies than other areas of comparison, but has a lower percentage of seasonal, recreational, or occasional occupancy vacancies.

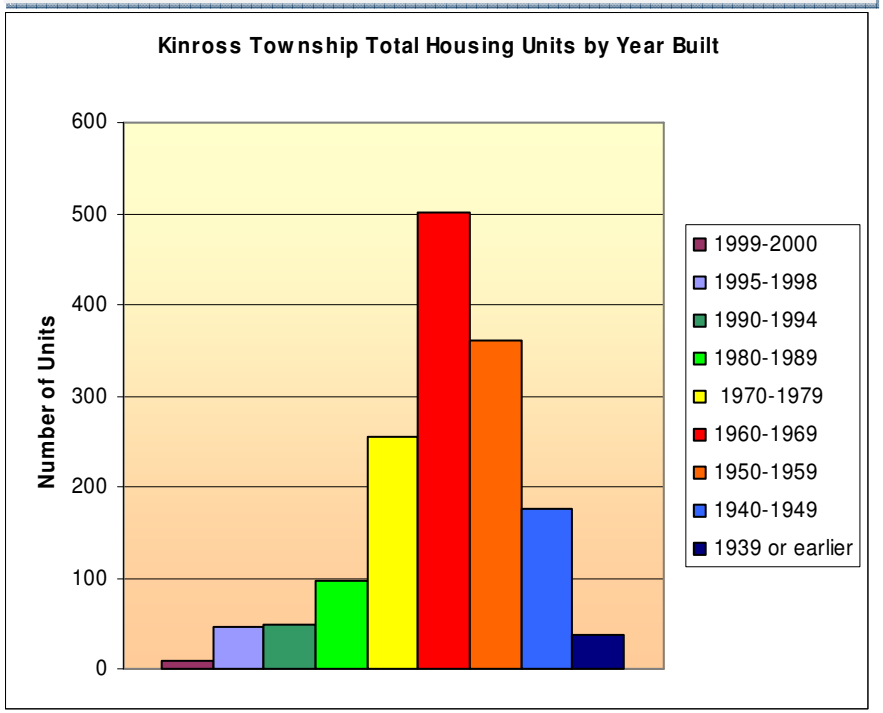
Most of the housing in Kinross Charter Township was built between 1950 and 1979 during the years the Air Force base was in operation. (Especially from 1960 to 1969) Most housing built before 1950 are rentals, while those built after 1979 are owner occupied.

(27) have 6-or-more-people per household. Renter occupied households are almost evenly divided between 2-person, 3-person, and 4-person households (21-22 percent each, or 120, 112, and 122). Eighteen (18) percent (98) of renter occupied units are 1-person households, 9 percent (49) are 5-person, and the remaining 43 are 6-or-more-person households.

Most householders in owner-occupied housing in Kinross Charter Township range from 35 to 54 years, while most householders in renter-occuped housing are between 25 to 44 years of age. This mirrors trends in other areas of comparison.

Number of vacant units declined by 42 percent from 1990 to 2000 (620 units in 1990, 363 units in 2000). An analysis of the vacant units in Kinross Charter Township in 2000 shows that a higher percentage of the vacant units were for rent than other areas of comparison. Thirty percent of the vacant units in the township were for rent, compared to 16 percent in Michigan, 6 percent in Chippewa County, and 5 percent in the Congressional District. Slightly more of the vacant units (12 percent) were for sale in Kinross Charter Township than the other areas of comparison (Michigan 10 percent, County 4 percent, Congressional District 4 percent).

Figure 3-1: Housing Age, Kinross Charter Township



Kinross Charter Township has much lower percentages of vacant housing units available for seasonal, recreational, or occasional use (only 25 percent) than the other three areas of comparison (Michigan 52 percent, County 80 percent, Congressional District 80 percent). This would indicate a lower rate of seasonal tourism in general for Kinross Charter Township. This is, however, an increase over the 1990 rate of 10 percent vacancies for seasonal, recreational, or occasional use.

Kinross Charter Township has higher percentages of other vacant housing units (27 percent) than the other three areas of comparison (Michigan 15 percent, County 7 percent, Congressional District 8 percent). These properties (98 units) are vacant but not on the market, perhaps because they are being held for occupancy by a caretaker, or are held for personal reasons by the owner. It is unclear whether the tribally owned housing falls into this category, or is included in the other figures. There were 197 units in 1990 listed as "other vacant", so this number has decreased greatly.

In Kinross Charter Township in 2000, of 1,156 occupied housing units, 954 units were occupied by householders of White (alone) race, 153 by American Indian or Native American (alone) race, 41 by householders of two or more races, and others by various races. A total of 189 occupied households reported householders of the American Indian race, alone or with one or more other races.

The chart on the previous page illustrates that most housing in Kinross Charter Township was built between 1950 and 1979 during the years the Air Force Base was in operation. (1952 to 1977) A higher percentage of the housing built before 1950 is now renter occupied, whereas a higher percentage of housing built after 1979 is owner-occupied.

Almost all housing in the Township is single family detached or duplex structures, although there are a few multiple unit structures along with 137 mobile homes (compared to 111 in 1990). There were 46 vacant mobile homes in 2000. Most householders in 2000 had moved in to their units as recently as 1995 or later. Only 73 people had moved in before 1979.

Most homes were heated with gas (993) while only 32 were heated with electricity, 77 with fuel oil or kerosene, and 58 with wood.

Sixty-one (61) percent of homes in 2000 were valued between $50,000 and $99,999 (around the same percent as in 1990). Almost all others were valued less than $50,000. Only 54 homes in 2000 were valued over $100,000, but this represents a huge increase from only 3 homes in 1990. Median home value in 2000 dollars increased by 44 percent from 1990 to 2000. Median home value was $50,339 in 1990 and $72,600 in 2000 (2000 dollars).

The number of homes with mortgages increased by 51 percent from 1990 to 2000. The median selected owner costs for those with mortgages in 2000 was $713, compared to $627 in 1990 (figured in 2000 dollars). This represents a 14 percent increase in selected owner costs. Selected owner costs for those without mortgages in 2000 was $222, representing a 7 percent decrease from 1990 (in 2000 dollars).

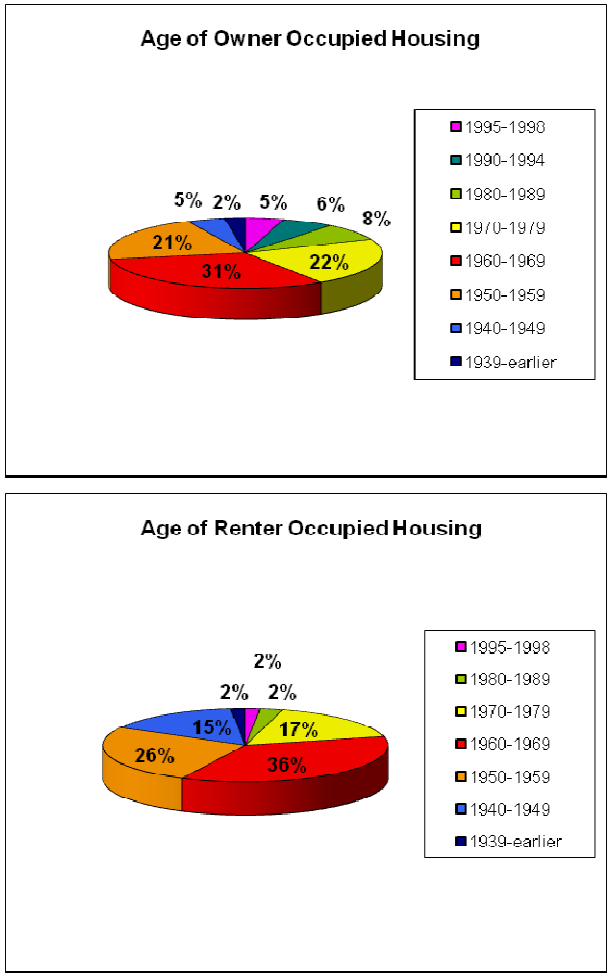


Figure 3-2: Housing Age, Owner- and Renter-Occupied Housing

Forty-five (45) percent of specified renter-occupied housing units paid gross rent between $500 and $749 in 2000. Another 38 percent paid between $300 and $499. Only 46 units paid less than $300 per month, and only 23 units paid over $750 per month. Median gross rent (rental units) was $503 in 2000, representing a decrease of 3 percent since 1990 (in 2000 dollars). This is higher than the County median of $426, but lower than the State median of $546. There was an almost equal percentage of people for whom gross rent represented less than 15 percent of household income in 1999 as people for whom gross rent represented 35 percent or more of household income in 1999. Most of the rest has gross rents that were 15 to 25 percent of household income.

Housing is generally perceived to be of good quality and acceptable repair in Kinross Charter Township, although residents suggest a need for ordinances to control junk, trash, and noise in the neighborhood. There are issues with parking problems in the shared driveways that straddle property lines.

Most of the housing in Kinross Township is located in the area of the former military base in Kincheloe, shown top right. Many of the units are duplexes, and units range from two to four bedrooms. The Recreation Center is centrally located in the heart of the housing area. This housing is in close proximity to Dukes Lake, R. V. Park East, The Oaks golf course, and the commercial center of Kincheloe, but better year round pedestrian links are needed to facilitate non-motorized travel by residents to needed services and convenience products. The neighborhood would benefit from the addition of small parks and gathering areas for young children and senior citizens.

The aerial photo, bottom right, is of the Arbor Ridge Estates subdivision, which is located just east of Kincheloe off M-80.

Above: Aerial of former base housing. Below: Aerial of new wooded subdivision along M-80

Residents enjoy beautifully wooded building sites with improved roadways.

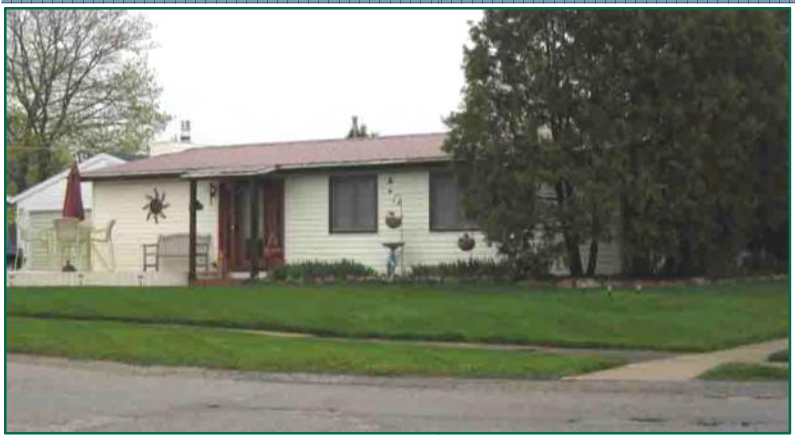
Figure 3-3: Tribal Housing Units

Tribal Housing Units in Kincheloe

Number of Bedrooms	# of Units	Type of Unit	Rental	Square Footage
2	8	Duplex	X	970
3	4	Single-Family	X	1,056
3	76	Duplex	X	1,088
3	2	Single-Family		1,749
4	6	Duplex	X	1,504
4	2	Single-Family		3,008
4	10	Single-Family		2,212
5	2	Single-Family		2,662
Total	**110**			

Source: *Housing Needs Assessment for the Sault Ste. Marie Tribe of Chippewa Indians,* August 26, 2008, Community Research Services, LLC

Below: Examples of housing types in Kincheloe



Tribal Housing

The Sault Ste. Marie Tribe of Chippewa Indians acquired some of the military housing left behind after the base closure in Kincheloe, and now this housing is a mixture of Housing Authority units, market rate rental units, and homeowner units.

Of the 108 units managed by the Authority, 94 are rental units, ranging from two to four bedrooms. There have been difficulties in maintaining full occupancy of these units, especially the three-bedroom units. According to the *Housing Needs Assessment for the Sault Ste. Marie Tribe of Chippewa Indians, August 26, 2008*, one factor contributing to the vacancies is that potential residents need to travel for employment to Sault Ste. Marie or St. Ignace, and find fuel costs to be prohibitive for travel to Kincheloe (this report specifically studied the conditions relating to the Housing Authority low-income properties).

The units managed by the Housing Authority with a lease-to-own program were all occupied with a waiting list for future available units. The study suggested converting some of the rental units to lease-to-purchase units given the apparent demand.

All Tribal Housing duplex units are utilized as rentals. Duplex rental unit types include two-bedrooms with 970 square feet, three-bedrooms with 1,088 square feet, and four-bedrooms with 1,504 square feet. Single-Family rental units are three-bedroom units of 1,056 square feet.

The sixteen single-family non-rental properties range from 3 to 5 bedrooms and have between 1,749 and 3,008 square feet.

The Housing Authority manages subsidized rental and homeownership housing programs that offer low-income tribal families affordable, safe, and sanitary housing. The Housing Authority partners with Anishnabek Community and Family Services to provide emergency housing assistance to prevent homelessness. They also offer modernization rehabilitation programs and repair service for existing low rental homes. The rental assistance voucher program allows working families the option to secure housing off the existing housing sites while having a portion of their rent paid (the families pay 25 percent of their adjusted gross income for rent and the Tribe pays the remaining balance up to fair market rent for the County). Homeownership is encouraged through education and down payment assistance.

The *Housing Needs Assessment for the Sault Ste. Marie Tribe of Chippewa Indians (August 26, 3008)* evaluated demand for housing in Chippewa County. The report sites a saturated rental market, and states that the only market segment with stable occupancy trends was the subsidizied market segment. Another finding was that the senior market had a high occupancy and lengthy waiting lists at most existing properties.

Rentals for low and very low income households is needed. The report reflects that while the market rate rental sector was doing poorly, the subsidized rental market had high occupancy rates and waiting lists.

There was also an enthusiastic market response for the senior quad units offered at the Odenaag site, indicating the need for more senior-designated units. The report suggests clustering these types of units in order to foster community interaction and socializing. This would also facilitate service delivery by home health care professionals, meals on wheels, and other groups.

Below: Small, offset single family condominium units with shared multi-unit garage structure located nearby

It is important to note that the Housing Authority provides financial assistance to each county or township in which units are located to offset the costs of services such as police, fire protection, ambulance service, road maintenance, and snow removal. For example, in 2007, Kinross Charter Township received $16,500 in lieu of taxes from the Housing Authority.

Recommendations

1. **Housing Market Study**—It is recommended that Kinross Charter Township undertake a housing market study with the goal of gauging the sustainability of the housing market in Kincheloe considering the impact of potential rising fuel costs in the near future and beyond. In order to create an impact model, detailed information regarding the travel habits of residents and people who are employed in Kinross Charter Township is needed, along with their ability to pay for various levels of travel costs relative to their cost of living. The 2000 Census reports that of workers age 16 years and over in Kinross Charter Township, only 32 percent (464 people) work within the Township, leaving 995 to travel some distance to work. There were 778 people who traveled more than 20 minutes to work. Only 281 people were reported to carpool or take public transportation. If it is is determined that rising fuel costs would likely compel a certain percentage of current residents to move out of the area and closer to employment, that would have serious implications for the property market in the Township. Anticipating this possibility, the Township could take steps to subsidize or provide appropriate public transit, or facilitate travel cooperatives to keep residents in the area. Alternately, there may be many people who work in Kincheloe but who live outside a comfortable radius of travel (depending on fuel costs) who might be enticed to move to Kincheloe in the future provided that appropriate housing and community services/amenities are available. The study could survey residents and people who are employed in Kinross Charter Township to determine needs and preferences, current attitudes regarding available housing and services in Kincheloe, and their ability to pay for travel in relation to various fuel cost levels. Additionally, the study should determine if there is a need or demand for alternate housing types not currently supplied in the area that could create additional revenue streams for Kinross Charter Township if supplied in the local market. This study could be done in partnership with potential developers or industry partners should they anticipate increased housing demand. The study should include profiling of potential target markets for housing in Kincheloe.
2. **Housing Energy Efficiency**—The Township should assist residents in pursuing improvements to housing energy efficiency in order to preserve affordability in the future. This may include partnering with Northern Options or other service providers to conduct energy audits, create mortgages that factor in energy cost savings, and take advantage of incentives for rehabilitation. Incentives can be created in partnership with local energy suppliers and other governmental or non-profit agencies for property owners who wish to upgrade structures for energy efficiency. This should be a high priority in order to safeguard the health and well-being of residents in anticipation of rising costs for home heating, and to respond to the need to reduce dependence on foreign energy sources. The decreasing availability and rising costs of oil in the future will adversely impact the cost of home heating and transportation, therefore renewable energy sources must be pursued and conservation measures must be implemented with as much haste as possible.

3. **Cluster Development**—In evaluating future housing development in Kinross Charter Township, it is desirable to prioritize future infill development that is located within current public services districts, and to carefully manage future development outside of water and sewer districts. This ensures the most efficient cost of service provision, and protects the environment in the case of soil limitations. This may mean the approval of additional density in the form of mixed-use, multi-family, multi-story units in areas outside the limits of the airport height regulations. Rural development should be clustered in order to preserve rural character and open space. This will also ensure the lowest possible costs for services such as snow removal, mail deliveries, and school transportation. To implement this policy, increased user costs should be assessed for large lot development outside public service districts.
4. **Building Construction Regulations**—Mandatory provisions should be enstated to ensure that new development meets minimum energy efficiency standards and is of sufficient quality to represent a long-term value added investment to the neighborhood and the larger community, utilizing land most efficiently and productively. New development should also meet minimum accessibility standards within the Fair Housing Act. Housing that is accessible and adaptable increases housing opportunities for physically disabled and frail elderly persons, while offering convenience to non-impaired persons. This should be implemented for both rental and ownership properties.
5. **Smart Growth Principles**—Residential construction should be consistent with the principals of Smart Growth.
    a. Create a range of housing opportunities and choices
    b. Create walkable neighborhoods
    c. Encourage community and stakeholder collaboration
    d. Foster distinctive, attractive communities with a strong sense of place
    e. Make development decisions predictable, fair, and cost-effective
    f. Mix land uses
    g. Preserve open space, farmland, natural beauty, and critical environmental areas
    h. Provide a variety of transportation choices
    i. Strengthen and direct development towards existing communities
    j. Take advantage of compact design
6. **Nontraditional Homeownership Models**—Traditional as well as non-traditional homeownership models should be implemented to meet the needs of residents with diverse economic conditions, family composition, and lifecycle. This would include limited equity cooperatives, mutual housing, community land trusts, and mixed-use or mixed-tenure development models. Other beneficial housing types include accessory apartments, elder cottages, manufactured housing, mixed-income housing, shared residences, and single room occupancy developments. These initiatives will help protect housing affordability and diversity, and will facilitate family care for elders.
7. **Maintenance Standards**—Ensure that maintenance standards are enforced in neighborhoods, and work with the Tribe for consistency. These standards, enforced in the zoning ordinance, will protect property values and neighborhood stability.

Top Left: Development cluster in Kinross west of I-75. Top Right: Housing and farm cluster along Tilson Road. Bottom Left: Mobile homes along M-80 between I-75 and Kincheloe. Bottom Right: The beautifully wooded Arbor Ridge Subdivision along M-80 near Kincheloe.

Commercial/Industrial Infrastructure

Commercial Infrastructure

Kinross Charter Township lacks a clearly identifiable commercial district or downtown, in part because the correctional facilities with their strong boundaries dominate the landscape. The commercial area was developed during the time of the Air Force Base, and reflects military base patterns of land use. Scattered commercial uses have developed along the M-80 corridor between I-75 and the urban cluster of Kincheloe, and also in the area of Gaines Highway and M-80.

As shown in the chart at the end of this section, currently, commercial businesses include, but are not limited to, restaurants; convenience stores; gas stations; personal services (hair care); car rentals; plumbing/heating and repair services; business, insurance, and financial services (accounting, credit unions, insurance agencies, catering); health and community services; real estate services (Tribal housing, DeMawating Development, Trailer park, Woodside rentals); and retail (Co-Op, RV center).

Industrial Infrastructure

Industrial infrastructure and development is currently contained mostly in the urban cluster of Kincheloe except for quarry and small-scale sawmill operations. Most of the industrial activity is contained within the industrial park owned and operated by the Chippewa County Economic Development Corporation. The Corporation retains ownership of all lands within the park, but may sell or lease buildings. The area associated with the industrial park is approximately 200 acres, excluding the airport facilities.

Some featured industrial businesses include A & L Metal, which is a scrap metal recycling facility. Cushman Fab & Machine, Inc is a manufacturer of material handling equipment and spouts. This is a fabricating and machining operation. Superior Fabrication fabricates items for the defense, medical, and material handling industries.

Recommendations for Commercial and Industrial Infrastructure

1. **Basic Streetscaping** is needed to help define the commercial district and create a unique identity. Public investment in pedestrian-oriented public amenities such as sidewalks, bike/walking trails, street furniture, lighting and banners, street trees, and green infrastructure (landscape buffers, rain gardens, bioretention areas) have many benefits. These include increasing property values and rents, increased private investment, improved stormwater management, enhanced sense of place, additional wildlife habitat, and urban heat reduction. Improvements should implement energy efficient, dark sky compliant, pedestrian-scale lighting; permeable or recycled pavement material; and native landscaping whenever possible. Edible landscaping such as berry bushes or

nut trees can provide a community food source and encourage socialization. New development should be required to incorporate these amenities.

2. **Landscaping Incentives and Site Plan Review Standards** are needed to encourage property owners in the commercial/industrial area to buffer large or unornamented structures and reduce the impact of paved surfaces with foundation plantings and landscaped islands or buffer strips. Raised berms can be created as buffers between the large industrial structures such as the hangar buildings and the other commercial buildings. These berms should require a minimum of 50 percent opacity of plantings and include some evergreen plants to brighten the winter landscape. These landscaped buffers will also provide increased protection for pedestrians from wind during winter months. New parking areas should implement appropriate landscaping requirements in relation to the number of parking spaces provided, avoiding large expanses of impermeable concrete.
3. **Shared Parking and Access Connections**—Surface parking can be reduced by utilizing shared parking standards for adjacent compatible uses. Adjacent parking lots should be connected when possible to facilitate easy access without returning to the highway corridor.
4. **Sign Regulations**—Kinross Charter Township should implement sign regulations to ensure compatibility in size, placement, and materials. This will create a safer and more aesthetically pleasing commercial center. Additionally, coordinated wayfinding signage should be created to direct travelers to medical services, recreational opportunities, Township government, and the Co-Op.
5. **Home Occupations**—support home occupations within residential areas provided conditional standards regarding traffic, noise, signage, and visual impact are met.
6. **Impact Mitigation**—ensure through Site Plan Review Standards and Impact Studies that future industrial or large commercial development does not negatively impact the environment or overburden existing infrastructure or public services. Require appropriate buffers from adjacent land uses, whether through appropriate landscaping or newly created park, trail, or open space.
7. **Siting and Location Standards**—whenever possible, maximize existing infrastructure by encouraging new industrial development to locate within the existing industrial park or area adjacent to the existing rail line. If not possible, require new industrial development to provide the necessary new infrastructure to ensure adequate provision of sewage disposal, stormwater management, potable water, and other critical public health and welfare concerns including the appropriate buffers. Limit land division and access along major roads to prevent industrial strip development. Utilize frontage or other alternate access roads when possible.

Figure 3-4: Kinross Township businesses

Employer	# Employees	Employer	# Employees	Employer	# Employees
Kinross Co Op Mall	49	Lynn Auto Parts	4	Patch Productions	1
Oloffson/Superior Fabrication	49	Pet Parlor	4	Besteman Sawmill	
Cushman Fab and Machine, Inc	15	Central Savings Bank	3	Chippewa County Credit Union	
A&L Metal	14	Malumute Saloon	3	Coca Cola Bottling Company	
Anderson Tackman Accounting	11	Pipe & Piling Supplies, USA, Ltd	3	Great Lakes Electric	
Northern Urgent Care	10	S & J Total	3	H & R Block	
Reed and Associates Builders	10	Avis Rent-a-Car	2	Jack Pine Tavern	
Great Lakes Services	8	Barnes & Memmic/Woodside Sales and Rentals/Reed & Associates	2	Kinross Office Complex	
Tone Road Travel & Convention	8			Local Express (BP Gas Station)	
Demawating Rentals	7	Clip Joint	2	Mesaba Aviation	
Pizza Patch	7	Deli Queen	2	Remax Eagle Properties & Dickinson Homes	
Broken Toys	6	Hertz Rent-a-Car	2		
Frank & Jim's Restaurant	6	Ryan's Towing	2	RMG (Sugar Shack)	
Soo Co Op Credit Union	6	Thompson's Junkyard	2	Sault Tribe Housing	
Family Dollar Store	5	Weiss Auto	2	Shady Oaks Trailer Park	
Kinross Dental Center	5	Home Center	1	The Bunker	
After the Fact RV Center	4	Kerry's Catering	1	Tri-County Plumbing & Heating	
Hair Different	4	Kinross Quality Car Care	1	United Express Airlines	
		North Arrow Log Homes	1	Watertower Laundromat	

Utility Infrastructure

Utilities and community facilities provide the support and foundation for community activity and economic growth. Utilities include the storm water systems, public water supply, sanitary sewer system, and solid waste management system. The efficient operation of these facilities affects the health, safety, and welfare of the residents of Kinross Charter Township. They also affect the quality of the natural environment and land use decisions, which in turn impacts the economy. Figure 3.5 at the end of this section illustrates the extent of the existing public water and sanitary infrastructure.

Storm Water Management Systems

The Kinross Township area is serviced by three storm drainage areas. The first drainage area services the developed residential neighborhood located in the northern part of the former Kincheloe Air Force Base (KAFB). The area is serviced by concrete storm drains with catch basin inlets at the street edge. The storm drain outlets are north of the residential area, discharging into a mixed forest. The two terminal outlets for the storm drain are 24 inch diameter storm sewer pipe. The Windermere condominium area has experienced minor road flooding, and it is believed that parts of this area may be serviced with filtration type drains without a surface outlet.

The second drainage area services the industrial area south of M-80. The area is serviced by concrete storm drain with catch basin inlets at street edge. The storm drain system outlet is southwest of the airport and discharges into a ravine which then traverses to low wetland area. The terminal outlet for the storm drain is a 48 inch diameter storm sewer pipe.

The third storm drainage area is located in the commercial and residential area north of M-80. The area is serviced by concrete storm drain with catch basin inlets at street edge. The storm drain outlet is east of the Country Club Road and then traverses by way of open ditch and culvert to the south of M-80 and the prison complex and discharges into a ravine and a low wetland area. This terminal outlet is 54 inch diameter.

This system has gone 30 years with minimal maintenance, although the Township does utilize street sweeping and vacuuming of storm drains catch basins periodically. The Chippewa County Road Commission does not currently acknowledge ownership for the storm drains located under the roadways, and therefore the designation of responsibility for the road storm drains must be finalized.

The state highway system and rural county roadways are developed in many areas with a roadside ditch drainage system. The roadside ditch system is not designed to carry large volumes of flow, but to balance drainage flows to surrounding property and drainage courses with equalization culverts.

Low impact development best management practices may provide an environmentally responsible way for the Township to manage stormwater runoff with future development, used alone or in combination with existing stormwater systems as conditions merit. Stormwater runoff is rainfall or snowmelt that runs off the land and is released into rivers and lakes. In a natural woodland or meadow, most of the annual rainfall soaks into the soil, and then much of it is released back into the atmosphere through plants. Water that continues to percolate downward through the soil reaches the water table and moves slowly down gradient, ultimately providing baseflow for streams and rivers, lakes, and wetlands. However, impervious surfaces (such as roads, buildings, and parking areas) and land compaction associated with land development prevent water absorption and create much higher runoff than in natural conditions. As plants are removed, less moisture is released into the atmosphere, and there is greater runoff and less groundwater recharge. These changes in the water cycle dramatically affect water resources. There may be:

- Increased flooding and property damage
- Degradation of stream channels and habitat
- Less groundwater recharge and dry weather flow
- Impaired water quality
- Increased water temperature
- Decreased water recreational opportunities

Impervious surfaces cause pollutants such as hydrocarbons and trace metals from vehicles, chlorides from road salt, and nutrients from fertilizer and grass clippings left on streets and sidewalks to negatively impact lakes and streams. Runoff from warmed surfaces adversely impacts aquatic life that requires cold water conditions (e.g. trout).

Above: Bio-retention cell

Low impact development is a technique that uses a basic principle modeled after nature in managing rainfall by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source. This is accomplished not through large, costly facilities located at the bottom of drainage areas, but through small, cost-effective landscape features located at the lot level. Almost all components of the urban environment have the potential to provide better management of stormwater—this includes not only open space, but also rooftops, streetscapes, parking lots, sidewalks, and medians. These techniques can be incorporated along transportation corridors, at time of urban redevelopment, and in new development. The goal is to filter stormwater runoff with vegetation before it moves into water bodies. Care must be taken to appropriately design and maintain these systems so that they work in an appropriate manner, and cold climate conditions must also be managed so that proper filtration occurs.

It should be cautioned that these techniques are not always appropriate if there is any risk that contaminants in runoff will not be filtered, and will, instead, penetrate directly to the water table. Injection well and subsurface fluid distribution systems, in particular, require

caution and, in most cases, an EPA permit, especially with the presence of soils with poor percolation rates. Pretreatment may be necessary with higher risk land uses, and special care must be taken in the wellhead protection zones.

Above-ground or shallow infiltration systems, such as vegetated swales, rain gardens, filter strips, bio-retention areas, oil/water separators, and constructed wetlands, allow more time for contaminates to be filtered through the soil. Many of these systems, planted with salt-resistant vegetation, can serve as snow retention areas in the winter, although salt should be minimized near wetlands.

Public Water Supply

Supply

Potable water is available in the residential, commercial, and industrial sections of the developed area of the former KAFB, covering approximately four square miles and serving approximately 6,568 people, including approximately 5,300 prison inmates. The township water supply is ground water. There are five wells supplying the Township's public water system. Two of the original wells were shut down and capped. Three wells are located near the intersection of Country Club Drive and Forest Lodge Road near the former R. J. Wallis Elementary School in the Woodside housing area. This includes two new wells that were established with the cooperation of the Federal Government through the Army Corp of Engineers. These three wells are located up gradient on the water table from known contaminants and are equipped with standby generators. The established Wellhead Protection Zone will provide a ten year advance notice of any potential contamination. Two wells are located near the Kinross Correctional Facility on Curtis Road and Water Tower Drive, and they are equipped with accommodations that allow connection of portable generators if required. A Wellhead Protection Zone has also been established for these two wells.

The system pressure and water storage supply is provided by two elevated storage tanks. A 500,000 gallon tank is located northwest of intersection of Curtis Road and Water Tower Drive. This 500,000 tank is operated year round. A 250,000 gallon tank is located at the southwest corner of the intersection of Country Club Road and Forest Lodge Road. The 250,000 tank is operated seasonally and is drained in the winter months and taken off line.

A new eight inch well was installed on the northeast end of the Kinross Community Park (fairgrounds) in 2004, allowing for the completion of a new bathhouse and added camp sites.

Current community water useage is 1.1 million gallons per day (mgd), and the current daily water production capacity is 2.736 mgd, leaving an excess capacity of 1.636 mgd.

Distribution

The Township water is supplied to customers on the basis of a metered system. The water mains within the system are predominately "Transite" pipe and water service lines are Type K copper and are in good condition.

In the former KAFB re-locatable housing areas, the mains have experienced leakage from connection fitting failure of the black polyethylene pipe service lines, which then leads to erosion of the "Transite" pipe. The Township has programmed replacement of the mains and water service lines in the affected areas. The water mains in the campground areas are ductile iron pipe.

New water system extensions and replacements projects consist of installations of PVC water mains with Type K copper service lines. Permits and design submittal are required from the Michigan Department of Environmental Quality for water distribution system replacement and expansions.

System issues

Water mains at north edge of the residential neighborhood have been shut off due to leaking connections of poly pipe service lines to "Transite" pipe. The areas are in the northern section of the former KAFB re-locatable housing, and presently no homes are connected to these mains.

Many duplex homes are serviced with only one water service, but have different occupants on each side. This has led to difficulties in undertaking water turn-offs for nonpayment of bills. Kinross Township has required any replacement of water services in these situations to be performed with two separate water service lines, and this issue will be addressed in an ordinance update.

Private Wells

Areas outside of the Township's public water supply distribution area must be serviced by private wells. The Chippewa County Health Department requires a permit to install a well system. The Health Department is located at 508 Ashmun Street in Sault Ste Marie, Michigan.

Sanitary Sewer System

Collection System

Township sanitary sewers are available in the residential, commercial, and industrial sections of the developed area of the former KAFB. The sanitary mains within the system are vitrified clay pipe, and sewer laterals are 6 inch diameter vitrified clay pipe. Numerous sewer laterals have been replaced by property owners by slip lining 4 inch diameter PVC pipe inside the 6 inch vitrified clay pipe. There are eight lift stations within the system and all are equipped with standby backup generators.

Treatment Plant

Kinross Charter Township fully operates and maintains the sewer system. The sanitary sewer plant, located at the Department of Public Works on Kincheloe Drive west of Water Tower Drive, consists of primary, secondary and tertiary treatment of wastewater. Process equipment includes mechanical screens, grit chamber, primary clarifier, one first stage trickling filter, two second stage trickling filters, two final sedimentation tanks, and disinfection chlorination.

The plant is designed for treatment of an average daily flow of 1.1 million gallons per day (mgd). At present, treatment of sewage at the plant averages 0.85 mgd, leaving an excess capacity of 0.25 mgd. Kinross Township has completed over $4.5 million in improvements in the last 10 years on system and plant, and current capacity is designed to meet needs until around the year 2014. However, the addition of a major industrial facility would potentially require the enlargement of the wastewater treatment plant and an increase in production of water supply.

Permits and design submittal are required from the Michigan Department of Environmental Quality for sewer system replacement and expansion projects.

Community input reveals that some residents have had problems with drainage back-up in their homes, which was relieved after public drains were cleaned.

Septic Systems

Areas outside of the Township's sanitary collection system area must be serviced by onsite sewage disposal systems. In most areas of the township, soil composition and the high water table provide severely limited conditions for onsite septic system installation.

Chippewa County Health department approvals are required for onsite disposal system including septic absorption fields and concrete vaulted pit toilets. More advanced systems require Michigan Department of Environmental Quality approval. "Constructed Wetlands" systems are also an option.

The Kinross Lake residential area has onsite septic systems on small lots. The area has been recommended by engineering studies to be serviced in the future by way of the township sewer collection system.

A new septic field and tank was installed on the Northeast end of the Kinross Community Park (fairgrounds) in 2005 along with the expansion of camp sites.

Solid Waste Management Systems

Solid waste collection is provided under contract by private sector services and is transported to the Dafter Sanitary Landfill for disposal. The Township operates a drop off recycling collection program at the sewage disposal treatment plant for those residents and businesses not involved in the weekly housing curb side program. This includes all recyclables and cardboard.

Power Plants, Transmission Lines, and Gas Lines

Following in an overview of major utilities and services other than those provided by the Township that impact planning issues in Kinross Charter Township.

Kinross Township is supplied with electric service from Cloverland Electric Cooperative and Edison Sault Electric. The generated electric provided by Cloverland Electric Cooperative is comprised of 42% hydroelectric, 40% coal, 14% nuclear, and 3% gas power. Power service is available throughout the eastern half of the township and is limited in service area on the western half of the township in the Federal Forest area. Kinross Township is supplied with natural gas service from the Michigan Consolidated Gas Company.

Citi-Data.com reports that houses in Kinross are heated with the following fuels by percentage; 76% utility natural gas, 10% bottled gas, 7% fuel oil, 5% wood, and 3% electricity.

Department of Public Works Staff

Staff currently includes 16 full time employees as follows.

Employees	State Licenses
• 2 Licensed operators	water and waste water license
• 1 operator	unlicensed waste water, license water
• 3 utility workers	
• 3 maintenance employees	
• 2 mechanics	
• 2 laborers	
• 1 part time laborer	
• 1 seasonal laborer	
• 1 superintendant	water and waste water license
• 1 administrative assistant	

Public Input on Utilities

Several residents mention the need to clean and repair storm drains and to clean the sewer drains in Woodside Housing area. There is some support for the expansion of water/sewer services to support potential businesses as long as the project is deemed economically feasible. There was a comment that the Township should accept responsibility for public utilities beyond property lines.

Alternative fuel suggestions include the creation of bio-fuel stations in the Township, and making natural gas available to more homes. Residents suggested that they appreciate the affordable and great tasting water, and garbage removal service. However, non-water district residents suggested that their garbage costs were excessive. Rural residents would appreciate garbage pick-up service.

The Township is preparing a new ordinance for outdoor wood burning stoves due to desire of residents to address and protect air quality, and is considering the addition of wind energy ordinances to support alternative energy facilities. There is widespread support for the potential development of a bio-fuels industry within the Township.

Recommendations

Roadway Storm Drains

1. Kinross Township and the Chippewa County Road Commission need to resolve the dispute over ownership of the road storm drains and determine financial responsibility for maintenance and operation of the drainage systems.

2. The Windermere condominium area filtration type drainage system should be programmed for replacement with storm sewer system. The existing filtration drainage system can compromise ground water quality because surface water can directly enter the ground water aquifer.

3. The Township should implement storm water management principles into a model stormwater ordinance, subdivision ordinance, zoning ordinance, and site plan review process, including the reduction of impervious surfaces with bio-filtration methods, reduced volume of stormwater runoff, and other principles of low impact development. Techniques should be evaluated in relation to soil and other surface conditions, and should be complimentary to the Wellhead Protection Plan.

   The first step is to implement programs on municipally owned or operated properties, create demonstration projects, and provide technical assistance and public educational materials. General implementation principles include (but are not limited to) the following:

a. Preserve natural features and sensitive areas
b. Cluster development
c. Minimize impervious surfaces through appropriate parking ratios and aisle standards
d. Minimize site disturbance
e. Manage stormwater as a resource for water supply, carbon sequestration, and recreation — not a waste
f. Require post-construction stormwater treatment controls on-site for all projects creating 1 acre or more of impervious surface area, with design to be certified by a certified engineer or landscape architect, and subject to review by the Township public works department

Application of low impact design principles is appropriate for combined sewer systems, transportation corridors, and brownfield sites as well. These techniques reduce municipal infrastructure and utility maintenance costs, assist in meeting regulatory obligations, protect sensitive habitat, reduce salt usage and snow removal (less paved surfaces), replenish groundwater drinking supply, and improve community character. Developers experience reduced land clearing, grading, and infrastructure costs, increase marketability, potentially greater lot yields, and assistance in meeting LEED (Leadership in Energy and Environmental Design) certification. Use of native landscaping also reduces maintenance costs and pollutants associated with turf grass.

Additional pre-treatment requirements for high risk uses may be utilized, such as vehicle storage, cleaning, maintenance and repair facilities, fueling stations, fast-food restaurants, convenience stores, public works storage areas, commercial nurseries, salvage yards, recycling facilities, facilities that store or generate regulated substances, marinas, certain industrial uses, and others as required.

Implementation may require local government incentive in the protection of residents' health, safety, and welfare through protection of water resources. Examples include stormwater credits, maintenance agreements between homeowner associations and the community, reduced setback requirements, increased floor area, accelerated plan reviews, reduced plan review fees, density bonuses, recognition programs, and free technical assistance.

Water Distribution System

1. The Township should continue to implement the recommendations of the Wellhead Protection Plan. Provisions of the plan are incorporated into a zoning overlay in the Township ordinances. All building and zoning officials should be provided with a copy of the plan, and this plan should serve as a reference for review of any plans for development within the Wellhead Protection zones. When the Township updates the zoning ordinance, care should be taken to ensure that provisions for groundwater and well head protection are implemented, including provisions for the handling of hazardous substances.

2. The Township should continue implementation of a water valve exercise and hydrant flushing program. All mains are presently flushed each spring and fall. Hydrant flow and water system residual pressure records are maintained for future ISO insurance rating documentation.

3. A Water System Master Plan and a five year capital improvement plan should be developed for the water system.

4. The Township should consider participation in a regional watershed protection plan should the opportunity arise.

Sanitary Sewer System

1. The Township should continue the routine sewer line cleaning maintenance program. All mains are presently cleaned yearly.

2. The present treatment operations are operating at 70 percent of capacity. Future development or expansion of large acreage industrial, commercial, or residential property will need to be evaluated for impacts on the treatment process. The Township is presently performing an evaluation of the plant and system for potential industrial expansion.

Septic Systems

1. Implement inspection programs at time-of-sale or upon application for building permit to identify failing septic systems and promote system improvements to protect surface and groundwater quality.

2. Work with the Health Department and the Department of Environmental Quality to develop combined septic systems/drain fields, and other alternative methods, such as constructed wetlands, for dealing with rural compact development while protecting groundwater.

Solid Waste Management Systems

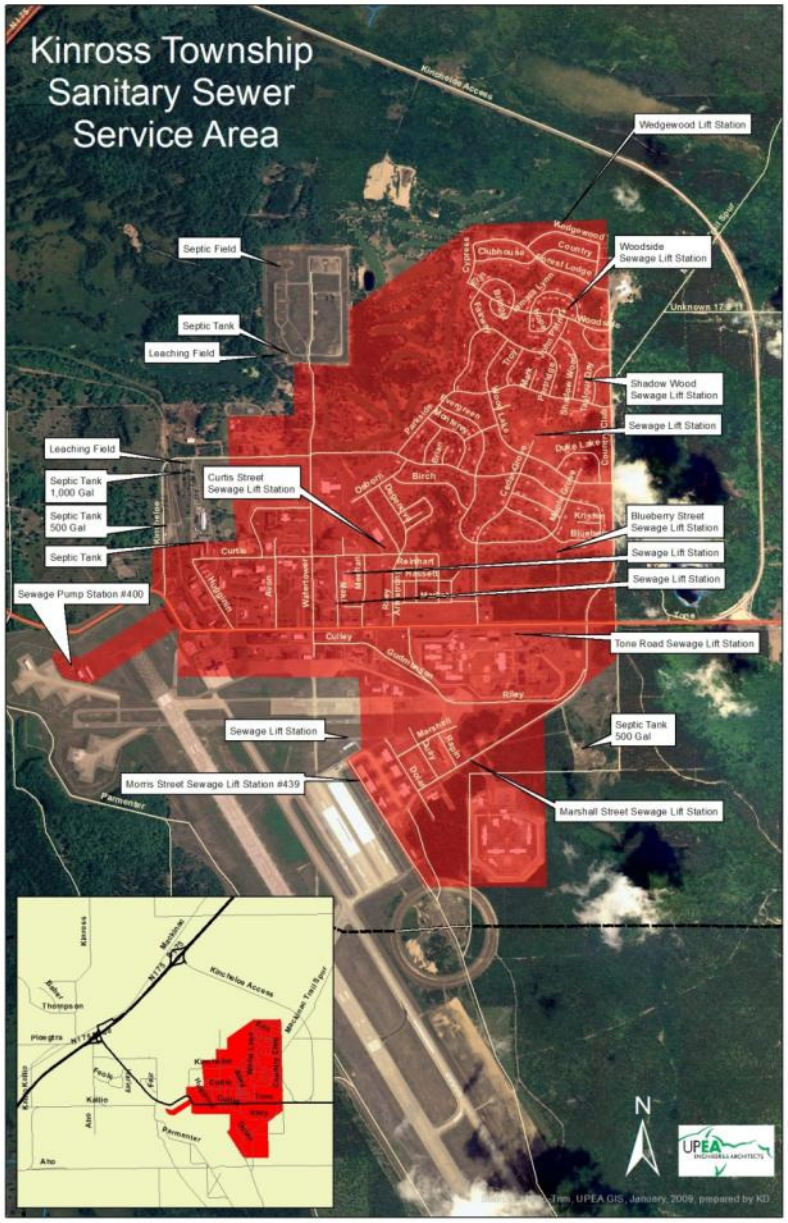
1. Improve utilization and performance of recycling programs with community education designed to encourage waste recovery programs.

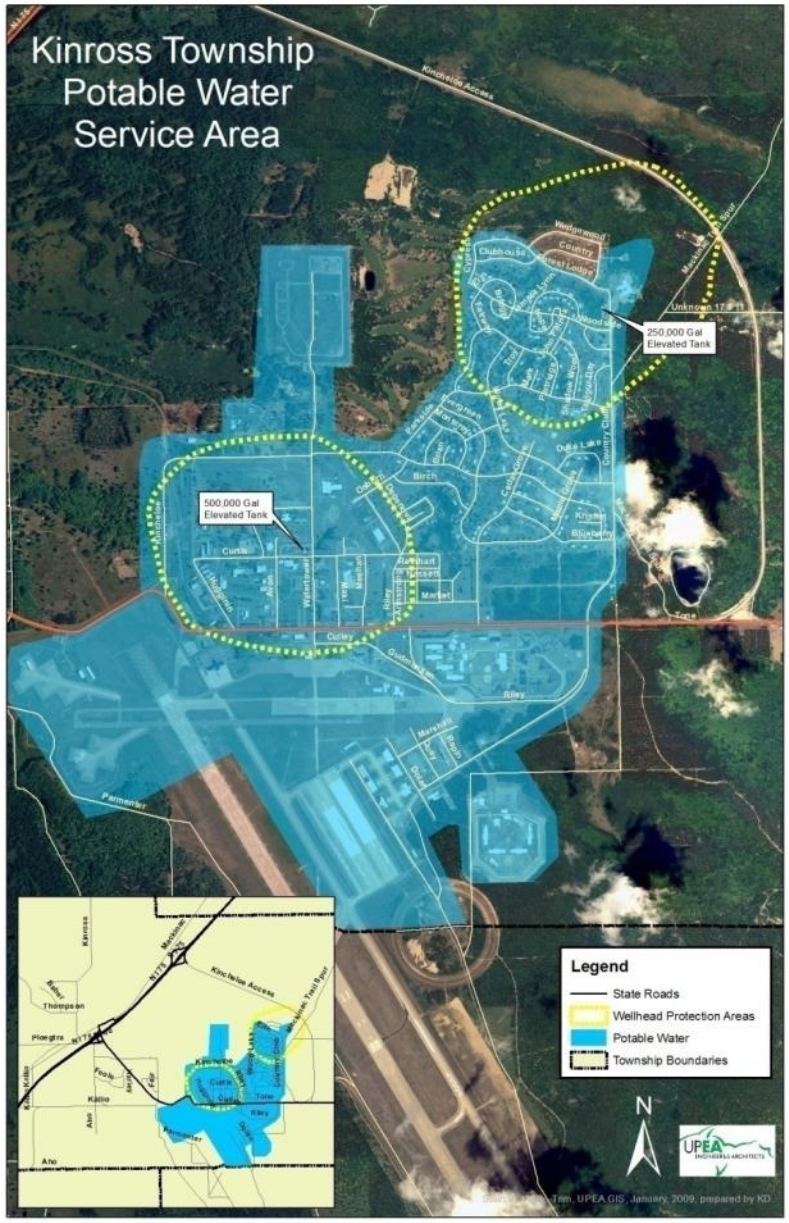
General Utilities Recommendations

1. The Township may consider extending water/sewer infrastructure if there is potential for a major industry, but should require a development impact study and utilize grants or outside funding to finance the infrastructure improvements.

2. The Township should work with the utility providers to negotiate placement of utilities underground with new development in order to create a more aesthetically pleasing commercial and residential core area.

Figure 3-5: Kinross Township Sanitary Sewer & Potable Water Service Areas





Public Services Infrastructure

Public Safety

Police Protection

Service 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 areas of the Township, with the primary patrol area consisting of locations previously part of the KAFB, funded through a special assessment district established in 1981. The Department is comprised of one full time chief, two full-time officers, and one part-time secretary. These officers cover both privately owned and Tribal trust land calls along with one tribal officer who is assigned to the Kinross office. No additional staff or capital expenditures are anticipated at this time, although another vehicle may be added at some time in the future depending on area growth.

Fire Protection

The Township's fire station is located in the Kincheloe area on the south side of M-80 just west of Water Tower Drive, but the Township is working toward development of a new building to house both the fire and ambulance services to save on maintenance costs, provide more up-to-date facilities, and to prepare for future department growth. The Kinross Charter Township Volunteer Fire Department is comprised of approximately twelve to twenty certified volunteer fire fighters operating on a "good neighbor" policy of mutual aid with neighboring municipalities, placing principle responsibility for fire emergency services upon the municipality with the quickest access to the location.

The Fire Department currently has two engines, one tanker, one rescue unit, one grass fire vehicle, snowmobiles and toboggans for snowmobile rescue, and jaws of life extrication equipment. Fire hydrants exist all along the Township's public water system. If new large industrial or commercial expansion occurs within the Township, additional equipment may be needed. Current anticipated needs include a four wheeler and toboggan wheels for four wheeler rescue.

Most emergency calls are rescues and extrication assistance along with the ambulance service or grass fires. Firefighters train once a month outside the fire hall, and this training is viewable by public. The firefighters assist with airport emergency service along with the Township EMS personnel.

Ambulance Services

The Township's ambulance services are housed across the street from the airport terminal. The Kinross EMS provides ambulatory services to the Township and surrounding municipalities of Rudyard and Dafter under a cooperative agreement based on quickest response

time. The Kinross EMS employs 26 people and has four ambulances and one intercept vehicle (paramedic services). They have an agreement with the hospital to provide transfer service.

Educational Services

The Rudyard School District now services the entire Kinross Charter Township area since the closing of the R. J. Wallace Elementary School in 2007. The area has one elementary school, Turner-Howson, servicing grades kindergarten through third grade, along with a half day program for four year olds, and an Early 5 Kindergarten program. The Middle School encompasses grades four through eight, and the High School consists of grades nine through twelve.

Residents can be proud that the Rudyard High School was awarded a Bronze medal in U.S. News & World Report's second annual list of America's Best High Schools. This award is based on two factors, 1) students perform better than statistically expected for the average student in the state and 2) least-advantaged students are performing better than average for similar students in the state.

Additionally, the Turner-Howson Elementary School received an "A" on the school report card as determined by the Michigan Department of Education, meaning they scored well in school performance indicators, achievement status, achievement change, and achievement growth.

Residents lament the loss of their community school, and they and the Rudyard School District hope to reopen the school at some future date. The Rudyard School District currently uses the vacant building for storage, providing security measures to protect the building and its contents.

High quality, local educational services are provided by Maplewood Baptist Academy, a public Christian school operated by the Fundamental Baptist Church. Grades K-12 benefit from very low student/teacher ratios and high quality instruction.

Above: Rudyard High School, home of the Bulldogs.

Above: Rudyard Middle School 7th and 8th grade band.

The Rudyard School District owns several undeveloped properties within the Township, including a 240 acre and 160 acre parcel approximately five miles west of Kinross, and two 40 acre parcels, one on Gaines Highway near M-80 abutting the Dukes Lake property, and the other nearby on the opposite side of Gaines Highway. The School District has no specific proposed use for the land which is currently used as a conservation area for which they sell Carbon Credits. The Sault Area Public Schools also owns land in the Township including approximately 400.25 acres near the I-75/Gaines Highway intersection.

Kinross Charter Township community members have expressed the need for more educational programs for kids and adults. Currently, the Rudyard School District operates the 21st Century Kids Café, which is an after school program operating until 5:30 pm. The program is capped at 60 kids, including only grades kindergarten through 6th grade. There is a need to serve additional students and to create a program for middle school students as well. When the program ends each day, the children living in the Kinross area are taken by bus to the central drop off location at the Community Recreation Center, where they are picked up by parents or walk home.

Above: Kinross water tower

Consolidated Community School Services is a seven district consortium for student enrichment, alternative adult and community education. In Kinross, they provide alternative education, adult High School completion, GED testing, and some Michigan Works programs and services for youth & adults. There is a Headstart program located in Kincheloe.

Residents have expressed the need for more organized, supervised programming at the Recreation Center to encourage more productive activity by area youth, ideally involving families in educational programs as well. There is a need for volunteers and leadership to provide supervision and create new learning opportunities.

The community has expressed the view that education is important to their future. Education plays a key role in successful economic development practices by facilitating the advancement of workforce skills that are matched to future potential employment initiatives, ensuring that educational investments are relevant to employment. Alternately, available area educational programs may turn out a workforce skills base around which to recruit compatible businesses and industries. A strong educational framework is necessary for exploring and training toward future competitive business practices in a transitioning economy. Partnerships need to be developed between prospective business and area workforce and educational organizations to create specialized educational services to support specific industry and business opportunities. The goal is to create an open model between the educational and job systems which employs iterative and interactive feedback mechanisms to adjust to changing conditions and educational needs.

Continuing adult education is also an important community amenity for retirees who may choose to settle in the area and later serve as valuable careers mentors to young entrepreneurs or businesses within the community. Additionally, the community will benefit from utilizing elders as advocates, allies, and resources. Intergenerational programs benefit youth and elders alike, creating a potential support network for both. Additionally, youth can serve a valuable community function by participating in projects designed to mine and preserve the cultural experiences and knowledge of their elders. The goal is to create sustainable communities for all ages.

Health Care Services

Kinross Charter Township is fortunate to have Northern Urgent Care Clinic based in a convenient location in Kincheloe, serving resident needs for general health care close to home and other services. This clinic employs three physicians and six other support personnel. They see one of their biggest challenges as a need to advertise their services, as many seem unaware that general services are provided, not just emergency services. The clinic serves all ages on a wide range of health care concerns. The clinic would like to add a family practice, as the nearest such facility now is in Sault Ste. Marie, Pickford, or Cedarville. They would like to provide services to Tribal members following the closure of the Tribal clinic; however the Tribe maintains a cooperative agreement with War Memorial Hospital's walk-in clinic in Sault Ste Marie. The Urgent Care Clinic also fills generic drugs and antibiotics prescriptions, while a pharmacy delivery service provides additional options for those patients who cannot travel to more distant pharmacies.

In the same building is the War Memorial Behavioral Health care facility. Kincheloe also has a VA Medical Services office with eight employees to service veterans. Additionally, there are currently two dentists in town.

An assisted living facility has been considered for Township property located within walking distance of the golf course, post office, bank, and coop. This would provide a housing option that is much needed in the area. A private developer is needed to catalyze this project.

Community Services Recommendations

Public Safety Services

I. Perform periodic public surveys addressing the perceived performance and capabilities of area public safety institutions and personnel. Have an independent committee or organization distribute the surveys, collect and tabulate results, and present to the Township Board for review.

II. Continue to pursue the project to integrate the fire and ambulance services in a combined, more energy efficient facility that will allow for future expansion and more up-to-date support. Keep the facility centrally located and close to crucial transportation networks.

III. Coordinate supervision and security for the Community Recreation Center during peak usage hours to improve the perception of the Center as a safe, secure environment for children. Mobilize volunteers for security duty if necessary, providing the necessary training and support services.

Educational Services

Kinross Township should consider creating an educational task force to explore Township educational needs and opportunities as relates to the workforce and economic development. Suggested activities include:

1. Set up an eight- to ten-person task force of area experts and mentors representing the public school system, curriculum development professionals from the nearby institutions of higher education, community workforce development/training representative, economic development agency representative, person in charge of the prison educational programs, health care education professional, tribal education representative, business people, and a representative of the aging population who is knowledgeable in education.

2. Create a database of currently available and readily accessible educational programs among area institutions and organizations. Research the various potential occupations and industries that are supported by these specific educational offerings, determine the size and characteristics of the potential local workforce being developed by these programs, and engage in efforts to recruit businesses and industries that utilize these skills, resulting in greater retention of area graduates.

3. Consult with area economic development and workforce development organizations, and research company annual reports to identify potential business and industry recruits that support existing firms, are spin-offs of existing firms, or who are well-suited to locational amenities in Kinross Township. Then look for gaps in training/education not addressed by existing educational and training organizations that may offer potential for workforce development. Consider supplementing area educational and workforce programs with local specialized Academies or Vocational Technical training institutions or programs.

4. Create a survey to identify available residents who are subject matter experts and potential occupational mentors and who would be willing to offer classes in local continuing education programs. Possibilities include youth who are willing to tutor elders in computer use and applications, or experts in gourmet cooking, organic gardening, fishing, crafts, art, etc. Organize a program to provide continuing education classes out of the Recreation Center facility. See a proposed survey in Appendix C.

5. Work to identify and intervene with school drop-outs and marginalized, challenged, unemployed, or underemployed members of the population and get them into programs to update skills for specific job opportunities. Work with the prison to offer education and training to inmates in valuable job skills that will prepare them for careers in industries with current or projected shortages of available labor, and create a placement program to move them directly into job opportunities upon release. Kinross Township has

such a large prison population that this kind of program could go a long way toward addressing regional labor shortages that will occur within the next 5-10 years due to the large number of baby boomers retiring and leaving vacancies in various essential occupations.

6. Link residents to on-line educational offerings and make sure that they have access to the necessary software and equipment. Improve the computer facilities at the Recreation Center.

7. Look at the feasibility of creating a Kinross educational foundation to support continuing education costs for area youth with the condition that they return to Kinross after graduation to work in selected jobs for a specified time period.

8. Engage Student Organizations at LSSU to provide educational/recreational programming to be held at the Recreation Center on a rotating basis. LSSU operates a Volunteer Center as a satellite office of the United Way of the Eastern Upper Peninsula, and they can be reached through the Office of Campus Life. Potential LSSU student organizations include service fraternities and sororities, special interest clubs (such as the anime club (Japanese animation), Ducks Unlimited (Wetland Conservation), Fisheries and Wildlife Club, Gamers Club, Martial Arts Club, Native American Student Organization, Yoga Club, professional organizations (such as Exercise Science Professionals, LSSU Investment Club, Professional Recreation Association), and educational organizations (such as Students Enhancing Environmental Knowledge (SEEK) and Student Organization for Diversity). Various engineering and manufacturing clubs may be interested in sponsoring a project day with middle/high school students to encourage interest in the field.

9. The Maagwejig Tribal Volunteer Center also operates as a satellite center of the United Way of the Eastern Upper Peninsula Volunteer Center. The center manages, tracks, and matches community volunteers with volunteer opportunities.

10. Involve elders in educational and after-school programs. They can be involved in tutoring through the America-Reads Challenge, and can chaperone activities at the recreation center. In turn, students can help elderly with chores.

11. Consider adding a music room at the Recreation Center, and utilize volunteers to provide music and dance lessons on-site for kids in the after school program. (Or arrange for paid instruction)

Community and Recreation Facilities

Community and recreational facilities not only provide opportunities for economic development in the Township, they represent valuable community amenities in providing places for people to gather and collaborate. In the 2005 Master Plan survey, respondents were asked to make suggestions for the improvement of the Kinross Community Park, the Recreation Center, Kinross Lake, and Dukes Lake. This input is included in this section in order to guide recommendations for future capital investments. This section also examines the forest recreation opportunities in the Township.

Michigan has a substantial public outdoor recreation land base at the federal, state, and local level, but also faces some challenges. Much of the recreation infrastructure is aging and in need of substantial renovation to meet safety and security needs, universal access, and flexibility to adapt to future shifts in recreation demand. There is a need to provide for greater longevity and reduced maintenance as well as more energy efficiency. Also needed is significant renovation of bridges, the development of trailhead facilities, and the re-routing of trails to protect environmental values. Kinross Charter Township would benefit from adopting policies to achieve these goals in their own facilities.

The Michigan Department of natural Resources (MDNR) recommends the *Recreation Park and Open Space Guidelines* of the National Recreation and Park Association (NRPA) as a standard for comparison for minimum acceptable spatial allocation measures for public parkland. The accepted standards, used as flexible planning guidelines, not absolutes, are:

- Community-based parks—6.25 to 10.5 acres of parkland per 1,000 residents
- Regional-serving parks—5 to 10 acres of parkland per 1,000 residents

The standards address the following types of parks:

- Mini-parks with specialized facilities serving a limited population or interest group with a service area less than ½ mile radius, located within neighborhoods and in proximity to multi-family or elderly housing—0.25 to 0.5 acres per 1,000 people
- Neighborhood park or playgrounds with areas for intense recreation activities with a service area of a 1 mile radius to serve a population up to 5,000, located with easy accessibility to neighborhood populations, geographically centered, and with safe walking and bike access—1 to 2 acres per 1,000 people
- Community Park with intense recreational facilities or areas of natural quality for outdoor recreation with a service area of more than one neighborhood (1 to 2 mile radius), over 15 acres in size, easily accessible to the neighborhood served—5 to 8 acres per 1,000 people

Planning Regional 11, including the Eastern Upper Peninsula, offers 13.15 acres of local parkland per 1,000 people—an abundance of opportunities. This does not include nearby state or federal lands and facilities. It is important to note that nearby state or federal lands and facilities can serve as potential substitutes for some types of community recreation. However, opportunity exists for more mini-parks designed to improve the character of the urbanized area, and to offer more variety of open space close to neighborhoods. These may be designed as tot-lots, community gardens, or handicapped accessible parks close to elderly housing.

As can be seen in the chart at right, Kinross Charter Township is deficient in archery range, rifle range, and shotgun range according to the Michigan DNR Opportunity Standards. However, it should be noted that many individuals who would utilize such facilities in the Township, shoot in the outdoors instead. It is recommended that these opportunities only be pursued if there is public consensus for a need, perhaps relating to seasonal use.

The chart shows a need for an additional 4 picnic tables in relationship to the community population. In general, community participation comments should be utilized in determining optimal location for these additional structures. There is also a need for two additional playgrounds, with probably at least one close to the residential center of Kincheloe. Adding shuffleboard to one playground may allow elders an activity while supervising younger children.

Figure 3-6: Recreation Analysis

Recreation Opportunities per Michigan DNR Opportunity Standards: Kinross Charter Township

Kinross Charter Township Population* 8,709**	Michigan Recreation Standard--1 unit per population	Standards per Area Population	Existing Facilities	Needs Compared to Existing	Deficiencies per Standards
Archery Range (incl private, commercial)	50,000	0.17	0	-0.17	No*
Baseball Fields***	5,000	1.74	2	0.26	No
Basketball Courts, outdoor***	5,000	1.74	2	0.26	No
Bicycle Trails (miles)	40,000	0.22	2	1.78	No
Golf Courses (private, commercial)	25,000	0.35	1	0.65	No
Horseshoe pits	7,500	1.16	2	0.84	No
Ice rinks, indoor	100,000	0.09	0	-0.09	No
Ice rinks, outdoor	20,000	0.44	1	0.56	No
Picnic area/tables	200	43.55	40	-3.545	Yes
Playgrounds	3,000	2.90	1	-1.90	Yes
Rifle ranges (private, commercial)	50,000	0.17	0	-0.17	No*
Shotgun ranges (pvt, commercial)	50,000	0.17	0	-0.17	No*
Shuffleboard	7,500	1.16	0	-1.16	Yes
Sledding hills	40,000	0.22	1	0.78	No
Soccer fields	10,000	0.87	0	-0.87	Yes
Swimming pools (outdoor)	20,000	0.44	0	-0.44	Yes
Tennis courts (outdoor)	4,000	2.18	1	-1.18	Yes
Volleyball (outdoor)	7,500	1.16	1	-0.16	No
Boat launches (parking)	400	21.77	0	-21.77	Yes
Campgrounds/Campsites	150	58.06	116	57.94	No
Cross-country ski trails (miles)	10,000	0.87	12	11.13	No
Fishing access (feet)	100	87.09	2820	2732.91	No
Fishing piers	100,000	0.09	1	0.91	No
Hiking trails (miles)	5,000	1.74	1	-0.74	Yes
Horseback riding trails (miles)	20,000	0.44	0	-0.43545	Yes*
Nature areas	50,000	0.17	300 + acres	Surplus	No
ORV areas (acres)	7,500	1.16			No
ORV trails (miles)	10,000	0.87	40+	39.13	No
Land open to snowmobiling (acres)	1,000	8.71	50+	41.29	No
Snowmobile trails (miles)	3,000	2.90	38	35.10	No
Swimming beaches	25,000	0.35	1	0.65	No
Roller skating (incl commercial)	20,000	0.44	0	-0.44	Yes

*Including Prison Population

**2007 Population Estimate, U.S. Census Bureau

***Not including school facilities

* See notes in text

Source: Michigan Department of Natural Resources. 1986. *Building Michigan's Recreation Future*

The community may choose to evaluate the local demand for a soccer field, outdoor swimming pool, roller skating, and boat launch with parking. There is already a recognized need for walking trails and better pedestrian access within the core, although hiking opportunities are abundant in Kinross Charter Township.

There are no designated horseback riding trails in Kinross Charter Township, although this is allowed. However, the fairgrounds provide an opportunity to board horses for equestrian tourists, and marked trails would invite use.

This analysis is a quantitative analysis, yet there are other factors to be considered in recreation planning, such as location and quality of opportunities, accessibility for all members of the population, and unique community needs. For a more extensive qualitative analysis, see the following sections which also contain community input.

Management responsibility for the Township parks, including programming, falls to the Kinross Township Recreation Committee, an appointed body comprised of three members of the Township Board. This committee provides direction and policy for all Township Park facilities. They also advise the Township Board on recreation matters, and oversee the Recreation Center, trail grooming activities, R.V. Parks, and Fairgrounds.

Funding for recreation comes from the general fund and income from Kinross Community Park (Fairgrounds), Recreation Center rental, and Golf Course operations. The direct maintenance of the Township's facilities is performed by the Department of Public Works, with supplemental assistance from work crews of the Kinross Correctional Facility, Summer Youth Corps, and other volunteer groups.

Forest Recreation

Chippewa County ranks second among all Michigan counties for total acreage devoted to federal and state recreation land, and third for total acreage devoted to national forests. Forest recreation areas provide the most extensive public recreation lands in Kinross Charter Township.

As seen in the map at right, the Hiawatha National Forest covers most of the western portion of the Township, while the Lake Superior State Forest covers extensive areas of the eastern portion of the Township, including areas adjacent to the urban area of Kincheloe, greatly impacting land use options.

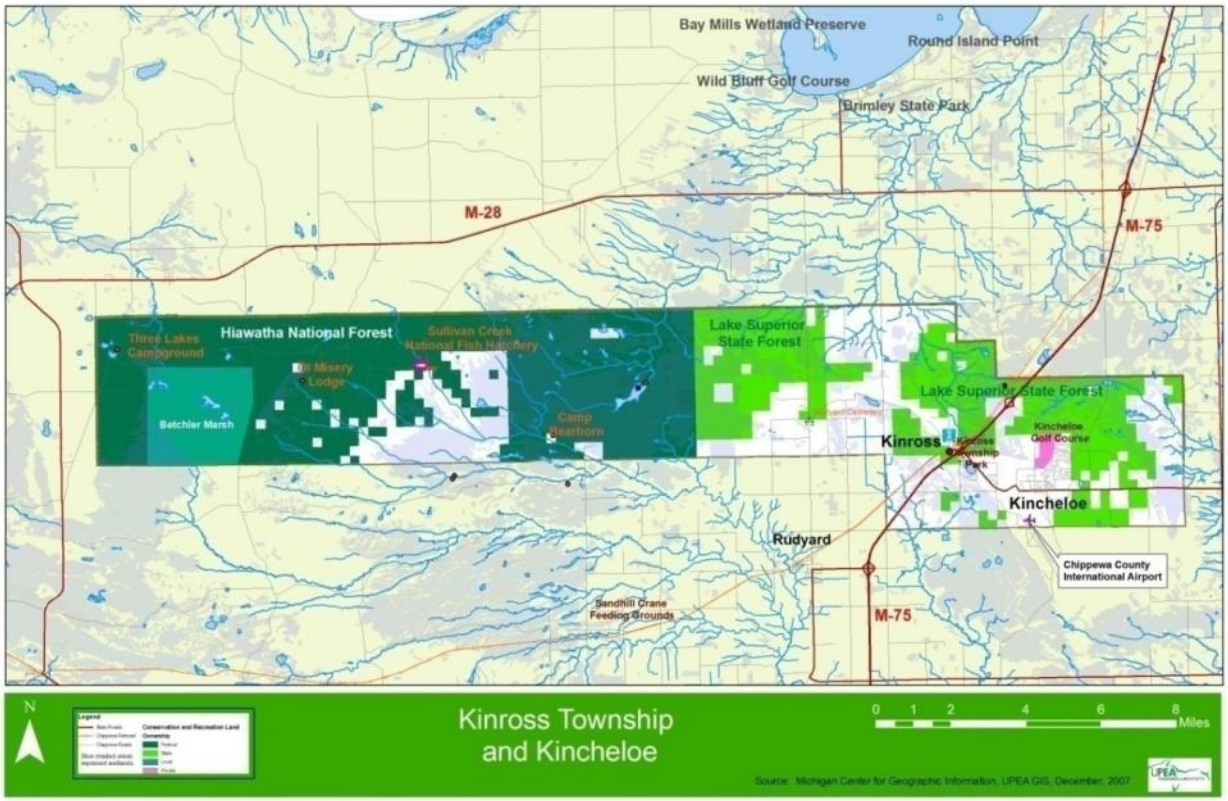


Figure 3-7: Conservation, recreation, and forest lands in Kinross Charter Township

The Hiawatha National Forest is 880,000 acres, about 36,640 of which are within the boundaries of Kinross Charter Township. Most National Forest lands reverted from tax delinquent properties in the 1920's and 1930's. They started mostly as cut-over, burned, and abused lands which have recovered today due to decades of forest management. National Forests are owned by the citizens of the United States, and managed by the U.S. Forest Service. The U.S. Forest Service is part of the U.S. Department of Agriculture.

The State of Michigan owns nearly four million acres of land and has the largest state forest system in the lower 48 states. The largest of these State Forests is the Lake Superior State Forest which consists of 1,040,000 acres, about 16,420 of which are within the boundaries of Kinross Charter Township. State Forests are owned by the citizens of Michigan and are managed by the Michigan Department of Natural Resources.

The Michigan legislature offers a tax reduction to private forest owners willing to manage their forest for timber production and limited public access. Commercial Forest Reserve properties offer lands open to hunting and fishing, with only foot access guaranteed, although some private owners will allow motorized vehicles on their property. There are approximately 3,760 acres of lands in Commercial Forest Reserve in Kinross Charter Township. See Current Land Use section for more detailed maps of these properties.

Lake Superior State Forest and Hiawatha National Forest

The Forest areas contain extensive forested upland and lowlands. Passive recreational opportunities include camping, fishing, hunting, hiking, swimming, snowshoeing, bird watching, and cross-country skiing. There are several trout streams in the Township, including Prey Creek, Sullivan's Creek, Sweiger Creek, Clear Creek, and the North Branch Pine River (see map next page).

The Hiawatha National Forest Plan was revised in 2006, and includes public comments. A summary of the management areas is included in Chapter 4: Forest Management and Land Use. In general, the Forest Service is authorized to manage National Forests for outdoor recreation, timber, watershed, wildlife, and fish purposes, providing a continued supply of goods and services to the American people. Primitive camping is allowed for free nearly anywhere, and there are also some developed and handicapped-accessible facilities.

State Forests are mandated to provide an integrated forest recreation system while remaining working, multiple-use forests providing for wood, habitat, energy, recreational, and environmental needs. They offer dispersed recreational activities such as hunting, fishing, wildlife viewing, dispersed camping, and picking wild edibles as well as moderately developed recreational activities such as hiking, cross-country skiing, snowmobiling, off-road vehicle riding, campgrounds, mountain biking, and equestrian use. Facilities tend to be rustic.

Three Lakes Campground—Hiawatha National Forest

The campground is a peaceful, quiet area located two miles south of M-28 at Strongs Corner on FR-3142, nestled between Whitmarsh, Brown, and Walker Lakes. There are 28 camp

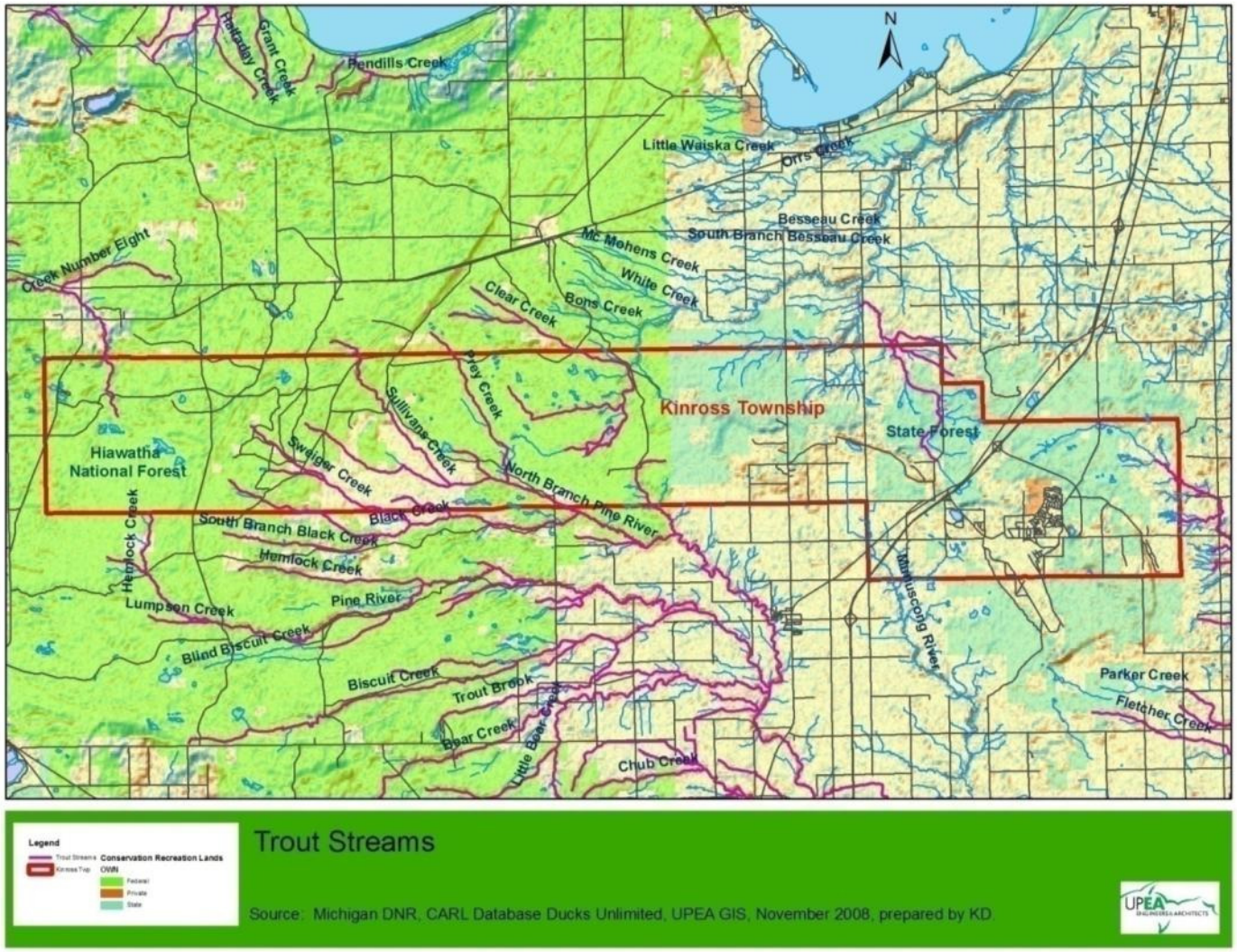
Forest Recreation Opportunities

sites each with tables and fire rings. Drinking water and toilets are available. Amenities include picnic area, swimming, hiking, and fishing. The lakes are accessible to non-motorized watercraft, and provide a peaceful, quiet setting for the easy one-mile walk along the beaches and through the forest.

Motorcycle Trail Lake Superior State Forest

The Michigan Department of Natural Resources provides a motorcycle trail approximately 30 miles in length in the Lake Superior State Forest in eastern Kinross Township. The trails system is designed for motorcycles and off-road vehicles less than 50 inches in width. Please see map in Appendix D.

Figure 3-8: Trout Streams in Kinross Charter Township



Pine Bowl Pathway

State Michigan Department of Natural Resources Pine Bowl Pathway is located 4 miles east of Kinross on Wilson Road South of Highway M-80. Kincheloe is the nearest town to this amenity, being located two miles from the trailhead. In the winter, the three loops comprising an almost 17 mile system are groomed for classical cross country skiing. There are no fees for skiing although donations are accepted. The trails are located in the ancient shores of pre-glacial Lake Algonquin with rolling topography and mixed pine/hardwood forest. Trails are used for hiking and mountain biking from spring through fall.

Sullivan Creek National Fish Rearing Station

Adult brood stocks of three strains of Lake Trout are maintained at this hatchery on Sullivan Creek in the central portion of the Township. Spawning operations are conducted each fall in which the eggs are incubated until they reach the eyed stage, and are then shipped to other hatcheries for rearing and release. All fish from this hatchery are stocked into Lakes Michigan and Huron. This U.S. Fish & Wildlife Service facility partners with other agencies including the Michigan Department of Natural Resources, Department of Environmental Quality, and Department of Transportation, Bay Mills Indian Community, Sault Ste. Marie Tribe, and Michigan Sea Grant, among others to conserve and manage vital fish and aquatic resources. Lake Trout and Brook Trout are raised for restoration in the upper Great Lakes to support sport fisherman.

Snowmobile Trail Network

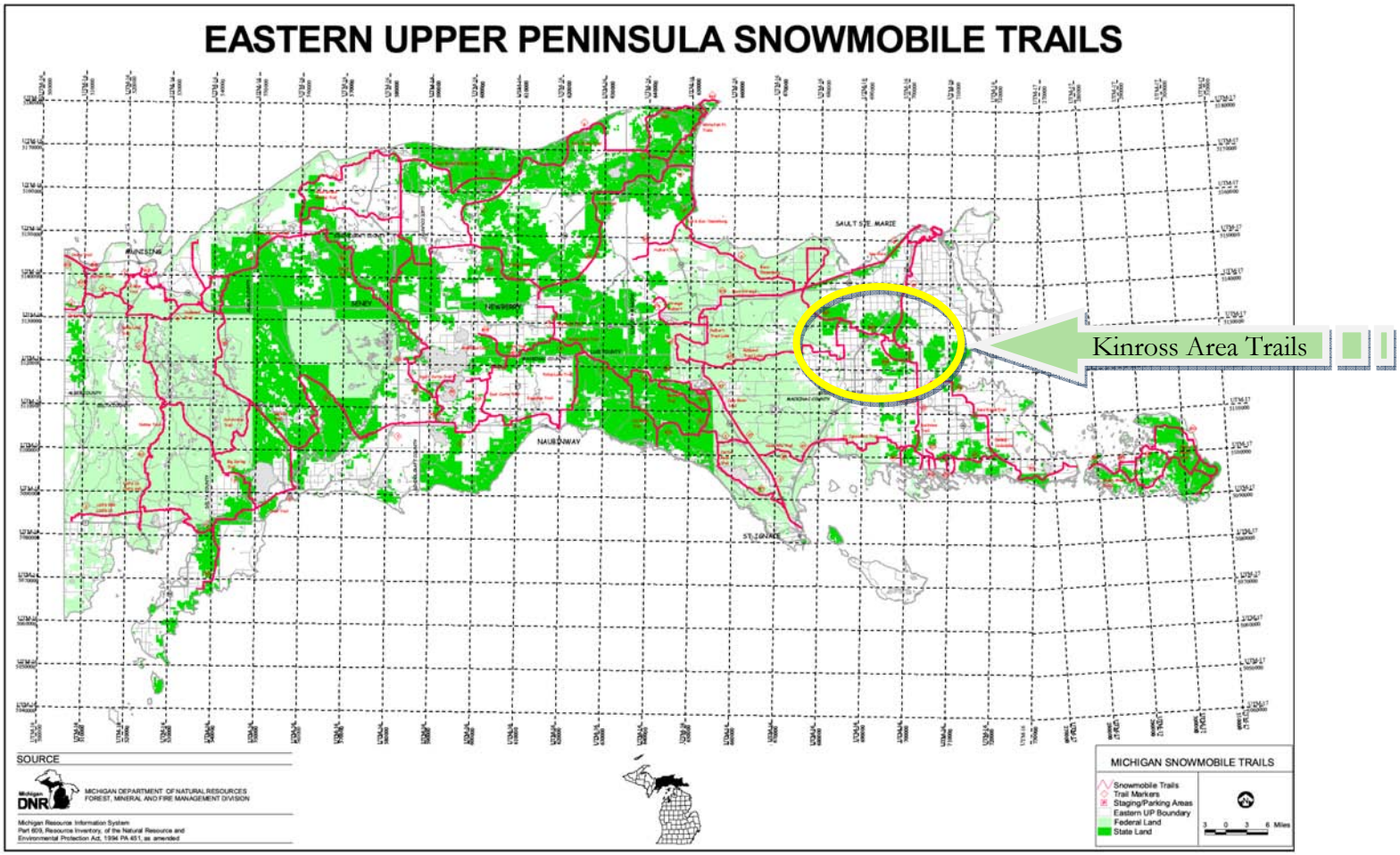
Kinross Township is a central hub of the Eastern Upper Peninsula groomed snowmobile trail system. Trails lead northeast and northwest from Kinross to Sault Ste. Marie and Paradise Michigan. Trails lead southeast to the Detour area and then to on to Drummond Island area. The southern trail leads to Pickford and St. Ignace, and western trail leads to the Trout Lake area. Snowmobile tourism is a significant economic benefit to the winter tourism season.

Kinross Township is part of the Eastern Upper Peninsula Snowmobile Council (EUPSC) community, which offers a web-link to the Michigan Snowmobile Association Trail Reports. Although Kincheloe is featured as part of the trail network on the website, the Township does not currently participate in the Trail Condition Report. However, Kinross Township does participate in trail grooming, and does list Current Conditions on the Township website. Kinross Township has created an ordinance to regulate the operation of snowmobiles within the perimeter of the former Kincheloe Air Force base.

Above: Former Countrywood Cabins facility

Rental snowmobiles are available in the nearby communities of Hulbert and Newberry along Highway M 28. Countrywood Cabins in Kinross previously offered lodging and rentals for the sport, however, the property is currently closed, leaving a gap in complementary services. The trail runs through the urbanized area of the Township, so food and convenience items are readily available along the trail.

Figure 3-9: Eastern Upper Peninsula Snowmobile Trails



Community Outdoor Recreation

RV Park East

RV Park East is located a couple blocks off Tone Road, east of Riley Drive, between existing residential and future commercial development sites along the current snowmobile trail. This Township-owned RV Park contains 64 self contained campsites with water, sewer, and electric hookups. There is also a toilet/shower facility and a Community Building/Clubhouse for use by campers. Seasonally, a campground host is contracted to assist in facility operations. This campsite is within easy walking distance of Kincheloe businesses, services, and restaurants as well as Dukes Lake and the community Recreation Center, and there is room for future expansion of facilities. Tent sites are also available. Amenities include public telephone, horseshoes, picnic tables, and fire pits. The site contains some beautiful, mature trees that would provide a perfect backdrop for summer concerts and performances utilizing moveable seating for impromptu gatherings.

Above top: Landmark trees near the RV Park East.
Left: Hiawatha Music Festival, Marquette, MI
Above: Moveable seating in Bryant Park, NY

RV Park West

This Township owned camping facility is located off M-80 adjacent to the Fairgrounds in a rural setting less than one mile from 1-75 exit 378. It includes 52 campsites with water and electric hookups as well as rustic tent sites. The park also includes a toilet/shower facility and sanitary dump station. A large area for primitive camping (with up to 251 sites) is also available. Facilities are handicapped accessible. Seasonally, a campground host is contracted to assist in facility operations. Both RV facilities are available at daily, weekly, and monthly rates.

Recommendations from the Recreation Plan for Kinross Charter Township (2008 to 2013) include installation of barrier free pathways throughout both parks along with pedestrian path lighting. Implementation of a tree preservation and planting program utilizing diversified species planting was suggested to create a sustainable urban forest, enhancing local aesthetics and character, and improving the urban pedestrian environment.

The Oaks at Kincheloe Golf Course

This public, 18 hole golf course is located on the former KAFB on Kincheloe Drive east of Water Tower Road. The 150 acre course includes a driving range, clubhouse, pro-shop, club and cart rentals, kitchen facility, and event space rental.

The township operates and maintains the golf course. A private operator leases and operates portions of the club house facility. Access to the clubhouse is currently not handicapped accessible.

During the 2005 Master Plan survey, participants suggested that renovations are needed for the clubhouse, including improvement to barrier free accessibility. They suggested "Free Kids Golf Day" to appeal to young residents.

Someone also suggested that revenues from the Golf Course get reinvested into facilities on the site, while another person suggested selling the golf course or eliminating the proposition (presumably to save money).

It was suggested that the Robert Trent Jones plaque at the Veterans Memorial be moved to the golf course, although this would not be recommended should the facility be sold for private development or management.

The area around the golf course has been suggested as a potential for new, more upscale residential housing or alternative housing types. This will be explored more in Chapter 6: Future Land Use. The Township should look for ways to utilize this asset in winter months as well, perhaps with signed and groomed cross-country ski trails, sledding and ski parties, or an outdoor winter art show.

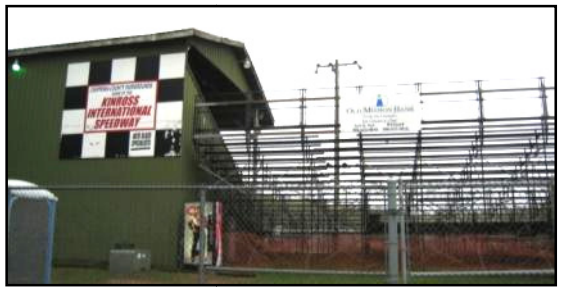
The Oaks

Kinross Community Park (formerly Chippewa County Fairgrounds)

This 100 acre site, located primarily on the north side of M-80 approximately one half mile east of I-75, is the home of the Chippewa County Fair and includes extensive facilities supporting the fair and other community events held on the grounds. The Township owned facilities include:

- 4-H building with kitchen, dining area, and reception hall
- 4-H concession stand
- Two exhibit halls
- Seven horse barns and 326 horse stalls
- Two race tracks used for harness, snowmobile and stock car racing
  - One half mile racetrack with an infield area, expanded to hold 2,000 people in the handicapped accessible grandstand
  - Quarter mile asphalt banked race track within the infield of the dirt track
- Fair and race track offices
- Four stock barns
- Picnic area with restrooms and playground
- Primitive camping facilities
- New bathhouse
- Restrooms
- Horse area
- New six inch well and septic system

Above: Kinross Community Park picnic area
Right: Various park facilities



This site includes a swimming beach area along Kinross Lake which is accessed via a pedestrian underpass at I-80. Public facilities are handicap accessible and are maintained by the Township. The stock car events are managed by the Sault Area Stock Car Association.

2005 Master Plan Survey Suggestions for Kinross Community Park

Programs

- More functions ie: craft shows, animal events, dog shows, horse racing (26)
- Family activities (9)
- Organizational use of facilities (fee based) (6)
- Flea Markets (6)
- Advertising/promotion of facilities (like camping area)/events (6)
- Snowmobile races (5)
- Craft and art festivals (5)
- Farmer's Market—Fourth of July events (5)
- Bi-weekly/monthly concerts, community events, and outdoor trade shows (5)
- Recreation for teenagers and small children (3)
- Fireworks (3)
- Advertise events via billboard (2)
- Horseshoe tournaments (2)
- Community picnic (2)
- Available for weddings, family reunions (2)
- Dog sled races
- Youth camps
- Camping groups
- Supervised, year-around camping
- Monthly campsite rental for Kinross residents at reasonable rate
- Available for shows and traveling entertainment (take student suggestions)
- Use dirt track for youth motor cross rallies and races
- Partnership with LSSU and Bay Mills Community College
- Special event hosting such as hot air balloons, ice sculptures, Wild West Days, BMX events
- Trail rides
- Classic Car show

Kinross Community Park Public Input Summary

Programs:

Residents envision a true "community" space, utilized to bring together families and support youth with new programs. They would like to see greater utilization of the facility by area organizations, and would support advertising or promotional efforts to increase revenues. Improved, focused leadership for events management and promotion was suggested.

Program suggestions include summer activities such as craft and arts festivals, farmer's markets, concerts, outdoor trade shows, fireworks, horseshoe tournaments, youth camps, trail rides, dog shows, special events hosting, and traveling entertainment.

Winter activities include snowmobile races, dog sled races, winter camping, and ice sculptures.

Services:

Residents identify a need for better facility maintenance and management. They want to maintain affordability of the events and programs to encourage attendance, and recognize the need to provide bus transportation.

Services

- Maintenance, upkeep (7)
- Keep it mowed (6)
- Cleaner bathrooms (5)
- Open year around (4)
- Clean up public swimming area (3)
- Free use of hall for Township residents (2)
- Cheaper prices (2)
- Keep prices down to encourage use (2)
- Parking break for elders
- Bus service
- Unlock and maintain bathrooms
- Control dust/dirt

Facilities

- Update park and buildings (13)
- More picnic tables (11)
- Update old equipment for safety (6)
- New cookers (4)
- Better playground equipment (4)
- New bathrooms (3)
- Clean /improve 4-H building or tear it down (3)
- Update kitchen in 4-H building (2)
- New 4-H building (2)
- Band shell for regularly scheduled concerts (2)
- Upgrade RV/Camping spots (2)
- Snow-cross track (2)
- Outdoor ice skating rink with warm up station
- Beautify, add walking paths, more white lighting
- Beautification, flowers and landscaping

Top: Winter Carnival Houghton
Center: Yurt camping
Bottom: Disc Golf

Kinross Community Park Public Input Summary

Existing Facilities:

Many residents recognized the need to update the 4-H building, including the kitchen facilities, and the campgrounds. They suggested general repair and aesthetic enhancement of existing facilities and updating of equipment.

Some residents are concerned about the cost of the facilities relative to the benefits, and envision new uses for some of the underutilized land. This might include opening up some of the land for residential use, or even utilizing existing buildings for new uses such as self-storage.

Suggested New Facilities:

Residents would like to have picnic tables, cooking equipment, playground equipment, and a band shell for concerts. They suggest sports equipment such as disc golf and a baseball diamond. A fenced in dog park might create a social gathering space while helping to solve the problem of loose dogs.

They envision facilities to support winter events, including a snow-cross track, outdoor ice skating rink, and warm-up station.

Beautification:

The landscape of the park can be enhanced with walking paths, pedestrian lighting, and flowers and other landscaping.

- Bigger track and grandstand
- Disc golf course
- Ball diamond
- Running water in bathrooms and water fountains
- Dog run area
- Water and sewer
- Self-storage facilities (discount for Township residents)
- Longer track paved to be NRA compatible

Other

- Always enjoyed it like it is (3)
- Sell the facility, too costly to upkeep, no profits even during fair (2)
- Bulldoze and use for housing development
- Downsize and use for something else
- Charge Fair Board for 2 week use
- Move it
- Pave it
- More respect from staff at fair
- Need new Fair Board
- Quit letting Fair Board dictate what and who goes and uses it
- Hire a fairgrounds/events manager to bring in more events
- Fix watershed issues
- The fair is a great asset
- Don't employ prisoners
- Don't over-invest Kinross Charter Township funds
- Don't fence it in, it belongs to the Township and we are the Township
- Stop noise of the races

Top: Colorful design of a fair concession stand invoking thoughts of summer. Center: Fairground campsite and track areas. Bottom right: Snowmobile racing adds to winter fun. Bottom left: Farmer's Market in Marquette.

Additional recommendations

General maintenance should be enhanced on buildings within the park, and any future facility enhancements should incorporate Universal Access principles. Enhancements may also include energy efficiency and increased use of durable materials.

The Recreation Plan for Kinross Charter Township (2008 to 2013) recommends renovation of the 4H Building for public meeting space, with improved kitchen and restroom facilities. Also suggested is the installation of a paved parking area, walking paths, and site lighting.

Walking Paths and Lighted Trails

Kinross Lake

Kinross Lake is connected to the Fairgrounds site by a pedestrian tunnel under Highway M-80. It is 40 acres in size, seven feet deep, and has no outlet. The site includes a fishing pier, sand beach and picnic facilities. This facility is not handicapped accessible.

2005 Master Plan Suggestions for Kinross Lake

Programs

- Supervised, non-motorized boat rentals (5)
- Planned programming/swimming events (4)
- Allow non-motorized boats (2)
- Allow small boats with motors
- Community music night for different stages of learning
- Advertise for family outings
- Block street, picnic on designated days

Services

- Clean it up (66)
- Get rid of weeds (18)
- Dredge the lake (15)
- Ask residents of private lake to clean it up (5)
- Clean it up or fill it in (4)
- Better maintenance (3)
- Better supervision (2)
- Life guard (2)
- Resolve sewage problem first

Facilities

- Add more fish (14)
- Better public access/beach area (9)
- Better access (7)

Kinross Lake Public Input Summary

Most of the lake is fronted by private residential development, so residents have mixed feelings on further public investment for the small beach area. There is also concern over water contamination from septic fields. In general, there is more public support for improvement to Dukes Lake.

Programs:
Suggestions include non-motorized boat rentals, allowing non-motorized and small motorized boats, and organized activities such as concerts, swimming events, and picnics.

Services:
Suggestions include weeding, cleaning, and dredging the public area (also involving private residents of the lake in the clean-up effort). Supervision may be needed for swimming.

Facilities:
Suggestions include stocking fish, improving public access, adding a boat dock/launch Picnic tables, fire pits, small playgrounds, concessions, and lighting would improve use.

- Boat dock/launch (5)
- Picnic tables (5)
- Fire pits (3)
- Develop to be used as a recreation area again (2)
- Small playground for children (2)
- Add lights around the lake
- Camping area
- Fence side of beach area
- Closer bathrooms
- Nice restaurant
- Hot dog stand

Other

- Nothing, it is a lost cause (7)
- Not sure (5)
- Fill it in and turn into an open space park (4)
- Nothing (3)
- Not enough public land (2)
- Tax to clean up lake
- Fine the people who knowingly pollute the lake with their housing
- Not suitable for swimming
- Not suitable for boating

Top left: Fire pits with benches can stimulate community gathering in both summer and winter. Top right: Dock or boardwalk lighting increases safety and improves the mood. Bottom left: Water trikes are a great non-motorized boating option. Bottom right: Waterfront lighting should be pedestrian scaled and be friendly to night skies.

A 2006 study performed by Lake Superior State University's Michael Jones indicated that both Kinross and Dukes Lake had poor oxygen levels during the winter months that could negatively affect the survival of fish during winter months. Kinross Lake is surrounded by a compact development of residences which may contribute to nutrient pollution through septic systems and fertilizer use; however, all nutrient levels were safely below the secondary drinking water regulations set by the EDA. Road run off from salt applications for snow removal are also detrimental, and complicate water oxygen levels in the winter. Most of the fish caught for the study were brown bullheads, and fish counts were low. The study suggested increasing fish populations and size in Kinross Lake, and removing macrophyte biomass.

Recommendations from the Recreation Plan for Kinross Charter Township (2008 to 2013) include construction of a barrier free access from existing parking lot to the lake, improved picnic and beach facilities, and construction of a barrier free fishing platform.

Dukes Lake

Dukes Lake is located within walking distance of the commercial and residential core of Kincheloe just north of M-80 and west of Gaines Highway. It is a 9.3 acre inland lake, 51 feet deep at its maximum depth, spring fed with no outlet. The Township owned and operated fishing and swimming beach is surrounded by forested land, and has a picnic site, and restrooms. A gravel access roadway and parking lot service the beach area. A number of informal, off-road trails also intersect the site. The beach area is accessed by way of a walkway and steps; no barrier free accommodations are provided. The lake provides excellent fishing opportunities from the shoreline in summer and ice fishing in winter. No motorized boats are permitted on the lake. The hilly terrain is ideal for sledding in the winter.

2005 Master Plan Suggestions for Dukes Lake

Programs

- Open ski hill (6)
- Advertise for family outings, public beach (5)
- Winter sledding (3)
- Ice skating (3)
- More activities (3)
- Monthly kids fishing day (2)
- Community music night for people in different stages of leaning can enjoy

Services

- Clean it up (57)
- Better enforcement of laws, supervision, stop foul language/profanity (24)
- Add lifeguard (8)
- Maintain bathrooms (4)
- Keep riff raff/trouble-makers out (4)

Dukes Lake Public Input Summary

Dukes Lake serves a valuable community function as a focus for family and youth activities within walking distance of homes. This beautiful lake is also a hub for several community trail systems.

Programs:
Suggestions include incorporating a ski or sledding hill and allowing ice skating activities. Programs such as monthly kids fishing days or community concerts would be appreciated.

Services:
Suggestions include clean-up and supervision of activities and users.

Facilities:
There was a large consensus for extending and improving the beach and picnic areas. To promote fishing, it was suggested that the lake be stocked with fish and that a fishing boardwalk be installed to separate swimmers from those fishing. Better access is needed, and possibly a launch or dock for non-motorized boats. Other suggestions include park, playground, fireplace pavilion, concession stand, lighting, walking trails water fountains, trash receptacles, and a sledding/ski tow rope.

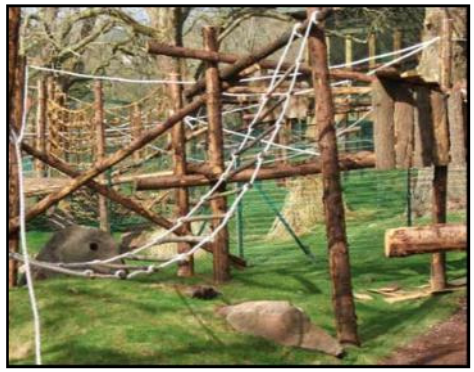
- Control vehicle traffic on beach area (3)
- 24 hour coverage to stop vandalism (2)

Facilities

- Extend/improve/dredge lake to make more beaches (14)
- Improved picnic area with tables (15)
- Campgrounds (11)
- Stock for fishing (10)
- Board walk around lake (8)
- Boat launch/dock (7)
- Better access (5)
- Small playground for children (5)
- Add a park (4)
- Pavilion with fireplace (3)
- Designated fishing area (3)
- Non-motorized boat rentals available (3)
- Concession stand (3)
- Lights around lake (3)
- Walking trails (3)
- Bike path around lake (2)
- Water fountains
- Tow/lift rope for sleds along M-80 hill
- Better roadway
- Dumpster for summer use
- Turn it into a built in swimming pool so it will be clean

Other

- Good the way it is (5)
- Not sure (4)



Top left: Kids Fishing Day Top right: Boardwalk path preserves sensitive natural areas.
Center left: Adventure playground. Center right: Pavilion with fire pit and vent.
Bottom left: Handicapped accessible fishing pier. Bottom right: Fishing at Dukes Lake.

- Leave gate open (3)
- Lock gates at night (2)
- No dogs (2)
- Nothing, they get everything now (2)
- Unsafe for swimming because of holes and drop-offs
- Mileage for recreation

A 2006 study performed by Lake Superior State University's Michael Jones indicated that both Kinross and Dukes Lake had poor oxygen levels during the winter months that could negatively affect the survival of fish. Nutrient levels at Dukes Lake did not exceed the maximum level set by the EPA, although water clarity levels were low. Dukes Lake is stocked annually with rainbow trout by Kinross Township and the Michigan Department of Natural Resources, and had higher oxygen levels throughout the year compared to Kinross Lake. However, Dukes Lake stratified during the summer and winter months causing low oxygen levels in areas of low water circulation. The study suggests continued stocking of trout and reduction of yellow perch. More protection is needed for the larger Rainbow trout.

Additional Recommendations

Increased maintenance is suggested for the restroom building. Minor improvements such as installation of several picnic tables, benches, and grills would enhance the present operation.

The Recreation Plan for Kinross Charter Township (2008 to 2013) recommends improvements to barrier free accessibility, an access road, parking, and picnic area. The installation of fishing piers and carry-in canoe launch are recommended.

Long term goals include campground construction with a mix of improved and primitive campsites. Campsite facilities to include a barrier free toilet/shower facility serving both campsites and beach day use area. Future planning could expand recreational opportunities with incorporation of a sledding hill.

Recreational Additions

Community Indoor Recreation

Recreation Center

The Kinross Recreation Center is seen by many as the focal point for community in the Township. This Township owned and operated facility opened in 1995, and is supported by one full-time and two part-time staff members along with volunteers. The Tribe also supplies funding for programs through grants. The facility is available from noon until 9 pm Monday through Friday, and can be utilized for special events on weekends.

One important function of the recreation center is serving as host for the After School program that accommodates 20 to 30 kids who are transported by school bus to the facility. This program offers crafts, games, and snacks for all ages.

The indoor facility includes a gymnasium, several classrooms, fitness center, game room (open Friday only, with mostly board games), computer lab (with Broadband Internet Access, nine computers, and a printer), Resale Shop (only one offered in town), toilet facilities, and licensed kitchen facilities. The Resale Shop offers furniture, household items, and clothing. The classrooms are available to rent for parties and other gatherings for $10 per hour, and are well-utilized. These facilities are handicapped accessible.

On the recreation center grounds are two softball and baseball fields, horseshoe pits, outdoor basketball courts, two volleyball courts, two tennis courts, an exercise track (with fitness stations), outdoor hockey rink, outdoor restrooms, playground and picnic sites, and a BMX bike track.

Programs include 4-H meetings, sports programs, Pretty Girl Friday (dress up in donated formal dresses and makeup), and Kids Club activities. YouthWorks program volunteers from Sault Ste. Marie assist with Kids Club, and perform community projects as part of a ministry outreach program, including games and interactive programs, work projects such as home rehab, and social service projects. Tribal events are also held at the center, including Culture Club and Tribal Town meetings. Public events are also hosted by the Recreation Center, including the Memorial Day parade, Golf Scramble, holiday celebrations such as Santa and Easter Bunny visits, Senior Citizen Holiday Center (distributes fruit baskets to 180 people), community garage sale, tool sale, and Veterans Pow Wow (Sault Tribe). There was an unsuccessful effort to provide lunches for senior through the Community Action group (needed funding).

Recreation Center security is provided by local police when needed.

The program director reports the following equipment needs for the facility:

- Paved outdoor ice rink (to better conditions caused by the sandy soil)
- Skatepark (perhaps on the empty tennis court)
- Upgraded BMX track (the kids have tried to build this themselves)
- Upgraded playground equipment (perhaps the currently unused playground equipment at the closed school building could be relocated to the rec center)

2005 Master Plan Survey Suggestions for the Recreation Center

Programs

- More programs for everyone/family (16)
- More activities for adults and seniors (dances) (13)
- Open on weekends (13)
- Open the recreation center earlier (11)
- Make more friendly for younger kids (7)
- Change hours so the youth can use it (5)
- More computer hours/classes (5)
- Educational programs (4)
- Have programs for adults and teens (dances) (2)
- Kids day for age 1-10 (2)
- Baseball tournaments (2)
- Day for teens, dances
- Host tournaments (basketball and horseshoes)
- Rent for reunions, conferences, etc
- More dances
- Blood drive
- Annual Christmas craft show
- Bicycle repair training
- Boys/Girls club

Kinross Recreation Center Public Input Summary

The Recreation Center provides a valuable framework for social service and community interaction, nestled in the heart of the residential population center.

Programs:
Suggestions include additional hours of operation (earlier and weekends), and additional programs and activities for diverse users, including families, adults, and seniors.

Services:
Suggestions include better upkeep, marketing of programs, and supervision of activities and users. There is specifically a concern for the safety and well-being of younger kids.

Facilities:
Suggestions for outdoor facilities include better playground facilities and a skatepark. Participants also desired more fitness equipment, swimming pool, racquet ball and hand ball courts, senior citizen café, and quiet room for studying.

Below: Skatepark in Ashland, WI

Services

- Better upkeep of whole complex and grounds (22)
- Better advertising of services available (10)
- Increase patrol of grounds to discourage problem kids from intimidating or threatening other kids (7)
- More staff (6)
- Employ personnel that are people friendly (6)
- More volunteers (5)
- New management (3)
- Put more money in maintenance (3)
- Better supervision (2)
- Keep it from becoming a hang-out for drinking and drugging (2)
- Stop allowing teenagers to control the gym
- Hire a full-time security officer to monitor the halls
- Bus service

Top : Underutilized playground equipment at the closed school.
Middle left: Intergenerational media programs benefitting kids and elders.
Middle right: Senior dances are suggested as program additions.
Bottom: A storytelling circle for cultural gatherings.

Facilities

- Add more fitness equipment (5)
- Fix/improve the playground (3)
- Skate park/ramps (2)
- Swimming pool (2)
- Senior citizen café
- Boxing bag and gloves
- Add racket ball and hand ball courts
- Sprinkler system for ball fields
- Quiet room for studying

Other

- Larger budget (7)
- Doing a good job (4)
- Close, cost too much (3)

- Get rid of teenage riff raff (2)
- Open too many hours with lack of use (2)
- Stop giving those people that work there a hard time, they seem to care about kids

Recommendations

1. Minor connectivity improvements are needed to improve access to the center from the neighborhood by constructing pathways which are maintained in the winter from the center north to the street system.

2. Recommendations from the Recreation Plan for Kinross Charter Township (2008 to 2013) include construction of fitness pathways, replacement of the baseball backstops, and new dugouts.

3. Long term goals could include construction of a covered outdoor ice arena for hockey and recreational skating.

Community Wide Recreation Recommendations

1. It is recommended that the community construct a system of pedestrian/bicycle pathways connecting recreation properties and activity centers to the residential population center, improving non-motorized mobility options and contributing to more healthy communities. Documenting current informal pathways should provide guidance for desired location. Trails should be seen as part of regional and local transportation planning. Additionally, trails have been shown to create tourism value, with some systems reporting that one quarter of users come from outside the County in which they are located. Criteria for trail creation should include:
    a. Connect population centers, activity centers, health centers, natural areas, and schools within the community
    b. Tie to regional trail systems, including those on State Forest lands and on designated Heritage Routes
    c. Design trails to enhance tourism and economic development opportunities (residential or commercial)
    d. Provide improved universal access to natural resources
    e. Provide for sustainability of the trail system with acquisition, development, operations, and maintenance plans
    f. Preserve inactive railroad corridors for future railroad use with interim trail use
    g. Provide for trail security
    h. Use the trails to reduce social isolation and to encourage mingling

2. Motorized trails should be provided for users to allow safe, non-disruptive access to businesses while not using surface streets, thereby promoting safety. This may necessitate securing long-term leases or easements through the lands of willing private owners.

3. Design for flexibility and multiple team sport uses in public outdoor athletic sport complexes, and adopt Universal Accessibility principles for new or rehabilitated recreation facilities. The W. K. Kellogg Foundation supports these initiatives through the Access to Recreation Grant.

4. Utilize green technology in outdoor recreation facilities, including more efficient lighting, more effective use of natural light, better use of solar, wind, and other renewable sources, use of renewable fuels (bio-diesel), and improved recycling and reuse of waste products. Other beneficial practices include "Growing, not Mowing" to preserve native landscapes and save energy, biological control of invasive species, and the use of certified "green" cleaning agents.

5. Partner with youth-oriented mentoring organizations such as 4-H, BigBrothers/Big Sisters, or community volunteers to introduce youth to hunting and other outdoor activities.

6. The Township will continue to maintain a current, MDNR-approved, five-year Recreation Action Plan to enable the Township to compete for State and Federal recreation grants. Region 11, the Eastern Upper Peninsula, is one of the regions in the state having the lowest number of local units with current plans. As part of this plan update process, the Township will survey residents for level of satisfaction with local recreation opportunities.

7. The Township will look for opportunities to participate in regional recreation plan initiatives through intergovernmental agreements related to multi-jurisdictional trails. It is especially vital to participate in the acquisition of abandoned rail-corridors to maintain these important transportation links and potential recreational corridors.

8. The Township will offer incentives to encourage new developments to provide useable open space and recreation areas.

9. The Township should consider turning its wetlands into recreational opportunities for wildlife viewing, hiking, and other passive recreational activities that support resource conservation, wildlife habitat protection, and water resource protection. Especially valuable are wetlands with adjacent grasslands for waterfowl production. Appropriately designed trails offer interpretive educational experiences for students, residents, and visitors. The Michigan Natural Resources Trust Fund (MNRTF) supports acquisition and development of lands, and there are incentives for private owners to enter conservation programs, such as the Conservation Reserve Enhancement Program (CREP) and NRCS Wetlands Reserve Program. Many private

Above: Wetland boardwalk.

and non-profit organizations also support these initiatives, as well as utility companies and Native American Tribes. Kinross Township already owns wetland property northwest of Kincheloe, as does the Sault Public School District and the State of Michigan. Regional, collaborative initiatives for interconnected, multi-jurisdictional systems gain more funding support, therefore, the Township should look at the possibility of partnering with neighboring jurisdictions for wetland projects. This may require the creation of a recreation authority or utilization of intergovernmental cooperation agreements or memorandums of understanding.

Transportation & Communication Infrastructure

Today residents of Kinross Township, as in most all communities in the United States, depend heavily on motorized transportation networks for access to residential and commercial locations within and beyond the Township. Many essential community functions, including schools, shopping, and job networks exist in locations outside the Township. The Township also relies on the highway transportation network to supply workers to the regional employment destinations located in Kincheloe, including the prison and health care system. Available air and rail access are essential to the ability of the Township to attract future industry. The Township also enjoys a role as a destination for snowmobilers from Upper and Lower Michigan during the long winter season.

Roadway Network

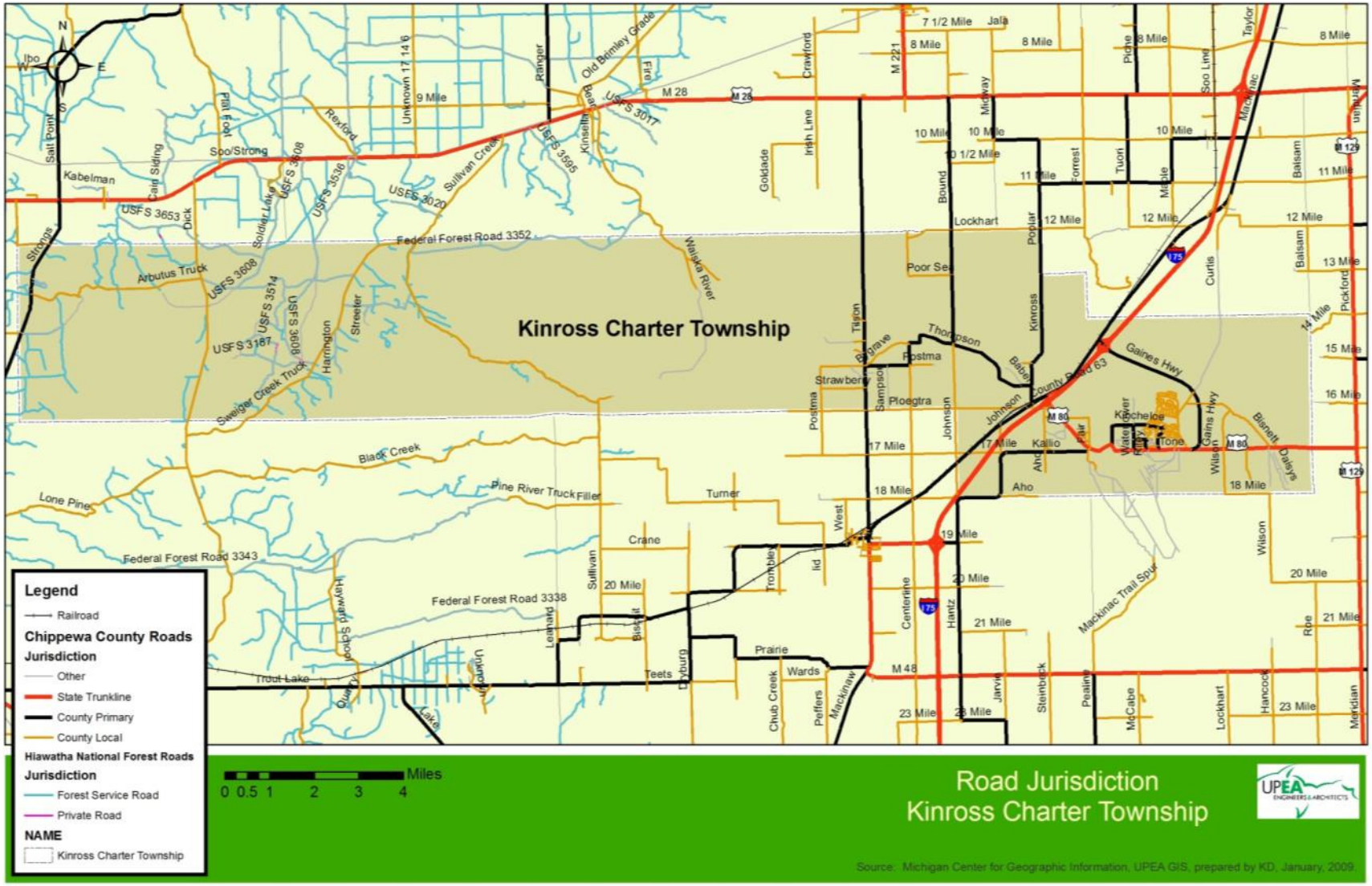
The principle transportation mode in the Township today is vehicular transportation served by the roadway network. Roads serve two basic purposes, the movement of traffic and provision of access to adjoining property. Each of the roads within the Township has a specific traffic capacity, design standard, and design use. By defining the function of roads and their service to the community, the appropriate land uses can be encouraged adjacent to these roads. The design of a road depends principally on its functional classification and the traffic volume it is expected to accommodate at some future time. Different design elements of roads include the number of lanes, width and surfacing of shoulders, width of structures, type of surface, and design speed. It is important to employ access management principles to preserve proper road function and the value of public investment along major roads. The road network in Kinross Charter Township is described in detail below. (See map next page)

Interstate Highway System

Interstate Highway I-75 is located in the eastern half of the Township and traverses the township in a north easterly direction. The Interstate is a limited access highway and provides access interchanges at Gaines Highway and State Highway M-80 in Kinross Charter Township. I-75 provides regional access to Sault Ste. Marie and St. Ignace communities. To the North, the I-75 interstate highway system connects with the Canadian highway system by way of the International Bridge at Sault Ste Marie. It connects to the Lower Peninsula of Michigan by way of the Mackinac Bridge, continuing southward to the Metro Detroit area.

Funding for road maintenance and improvements on I-75 is provided by the Michigan Department of Transportation. Maintenance activities are provided by the Chippewa County Road Commission through a contractual agreement with the MDOT.

Figure 3-10: Road Jurisdiction in the region of Kinross Charter Township



State Highway System

State Highway M-80 is a state trunkline accessible from the I-75 interstate system and it traverses east to State Highway M-129, a north/south highway located one mile east of the township boundary. State Highway M-129 provides access to Sault Ste. Marie to the north and Cedarville to the south.

State Highway M-28 traverses east to west across the Upper Peninsula, as is located one to three miles north of the township. This highway provides access to many seasonal Federal Forest Service and County roads servicing the western portion of Kinross Township.

Funding for road maintenance and improvements for the State highway system are provided by the Michigan Department of Transportation (MDOT) by way of Capital Preventative Maintenance funds or Restoration Rehabilitation funds. Maintenance activities are provided by the Chippewa County Road Commission through a contractual agreement with MDOT.

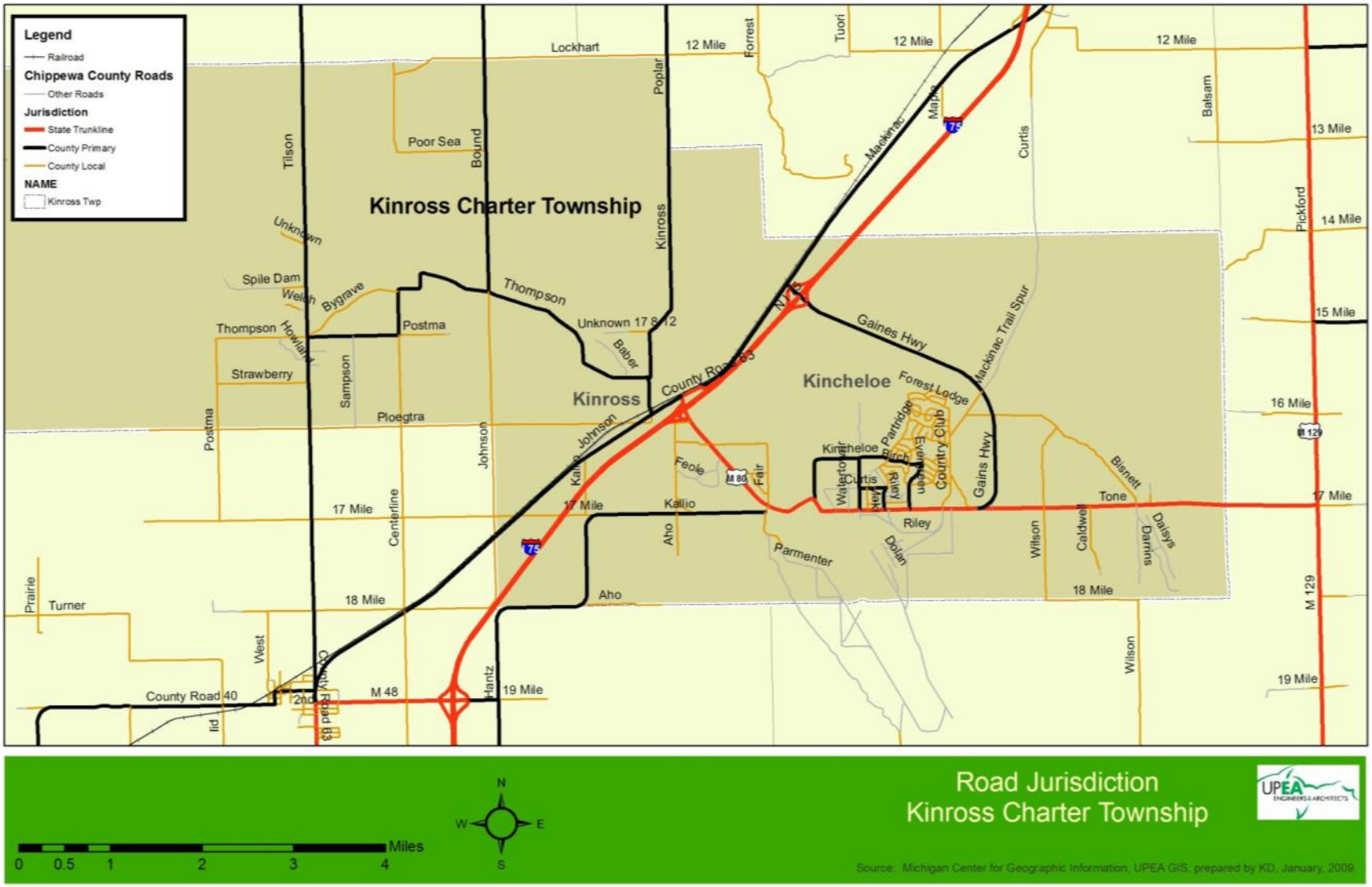
County Highway system

The County designates roadways as primary or local in accordance with the State of Michigan Act 51 of 1951. The designation of "primary" is utilized for roadways which provide circulation throughout the county and connect to neighboring communities.
Primary roads on the east side of the Township include:

- Tilson Road
- Bound Road (North of Thompson Road)
- Country Club Drive
- Water Tower Road (Kincheloe Drive to M-80)
- Ploegtra Road
- Curtis Road (Water Tower Road to Riley Ave)
- Riley Ave (Curtis Rd to M-80)
- H 63/Mackinac Trail
- Thompson (most portions)
- Gaines Highway
- Centerline Road (portions)
- Kallio Road (portions)
- Kincheloe Drive
- Kinross Road

The only Primary Road on the west side of the Township is Strong Road. See next page for closeup.

Figure 3-11: Road Jurisdiction in the area of Kinross and Kincheloe



County road funding for road maintenance is provided by the Michigan Transportation Fund. Maintenance activities are provided by the Chippewa County Road Commission. Rehabilitation and reconstruction is provided through the MDOT Small Urban Fund with 80 percent State funds, 10 percent County Road Commission funds, and 10 percent Kinross Charter Township resources.

Local Road System

All other roads within the Township are classified by the Chippewa County Road Commission as "local". Within the Township, local roads serve as access and minor collector roadways.

An extensive local road network is developed within the urban area of the former Kincheloe Air Force Base. The area is bounded by Gaines Highway on the north and east, State Highway M-80 on the south, and the Mackinaw Trail on the west.

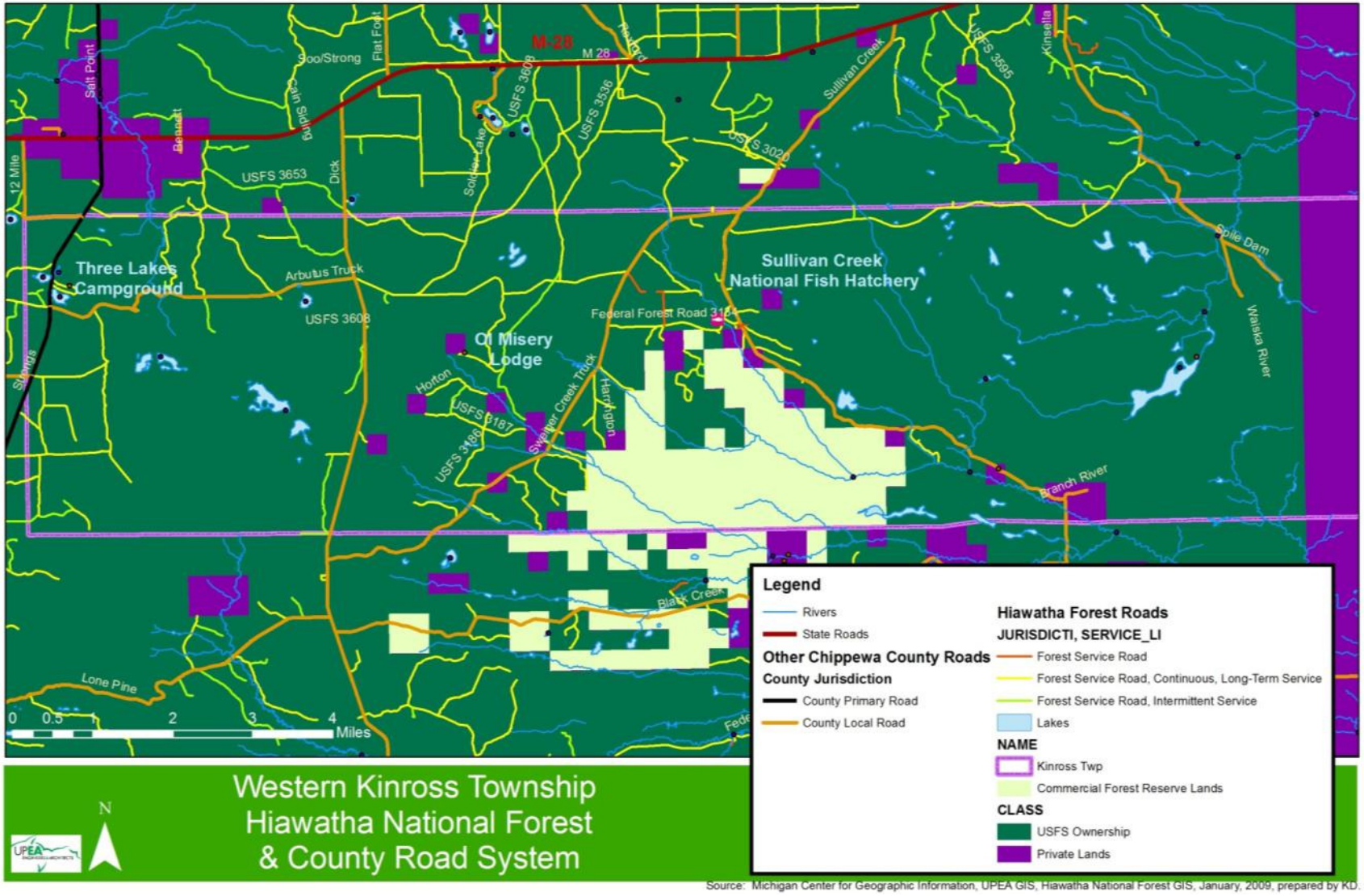
The remainder of the Township to the west has extensive land ownership by the United States Forest Service, and consists of large private holdings of forest land.

County road funding for road maintenance is provided by the Michigan Transportation Fund. Maintenance activities are provided by the Chippewa County Road Commission. Rehabilitation and reconstruction is provided by the County Road Commission and Kinross Charter Township. The cost of construction for sand and gravel work activities is allocated at 50 percent County Road Commission and 50 percent Kinross Charter Township. The cost of construction for asphalt surfacing work is allocated at 15 percent County Road Commission and 85 percent Kinross Charter Township.

Forest Service Roads

The map on the next page illustrates in more detail the jurisdiction and term of service for the Hiawatha National Forest System Roads.

Figure 3-12: Road Jurisdiction in the Hiawatha National Forest



Source: Michigan Center for Geographic Information, UPEA GIS, Hiawatha National Forest GIS, January, 2009, prepared by KD.

National Functional Classification: Small Urban Funding

Chippewa County Road Commission serves as the administrator for the roadway portion of the Federal Surface Transportation Program funding (STP) within Kinross Charter Township. In an urban area with a population over 5,000 people, the small urban program provides funding for rehabilitation and reconstruction of the roadways classified as major collector, minor arterial, and principal arterial. Only classified roads are eligible for federal highway aid.

Interstate I-75 is classified as a principal arterial (rural interstate), meaning that it accommodates major traffic movements over long local or regional distances.

Urban minor arterials interconnect with and provide access to principal arterials, accommodating more modest trip lengths and placing a higher emphasis upon access to land uses. Urban minor arterials include Gaines Highway, H-63 Mackinaw Trail (M-80 to Gaines Highway), and M-80 (Gaines Highway to eastern township limit).

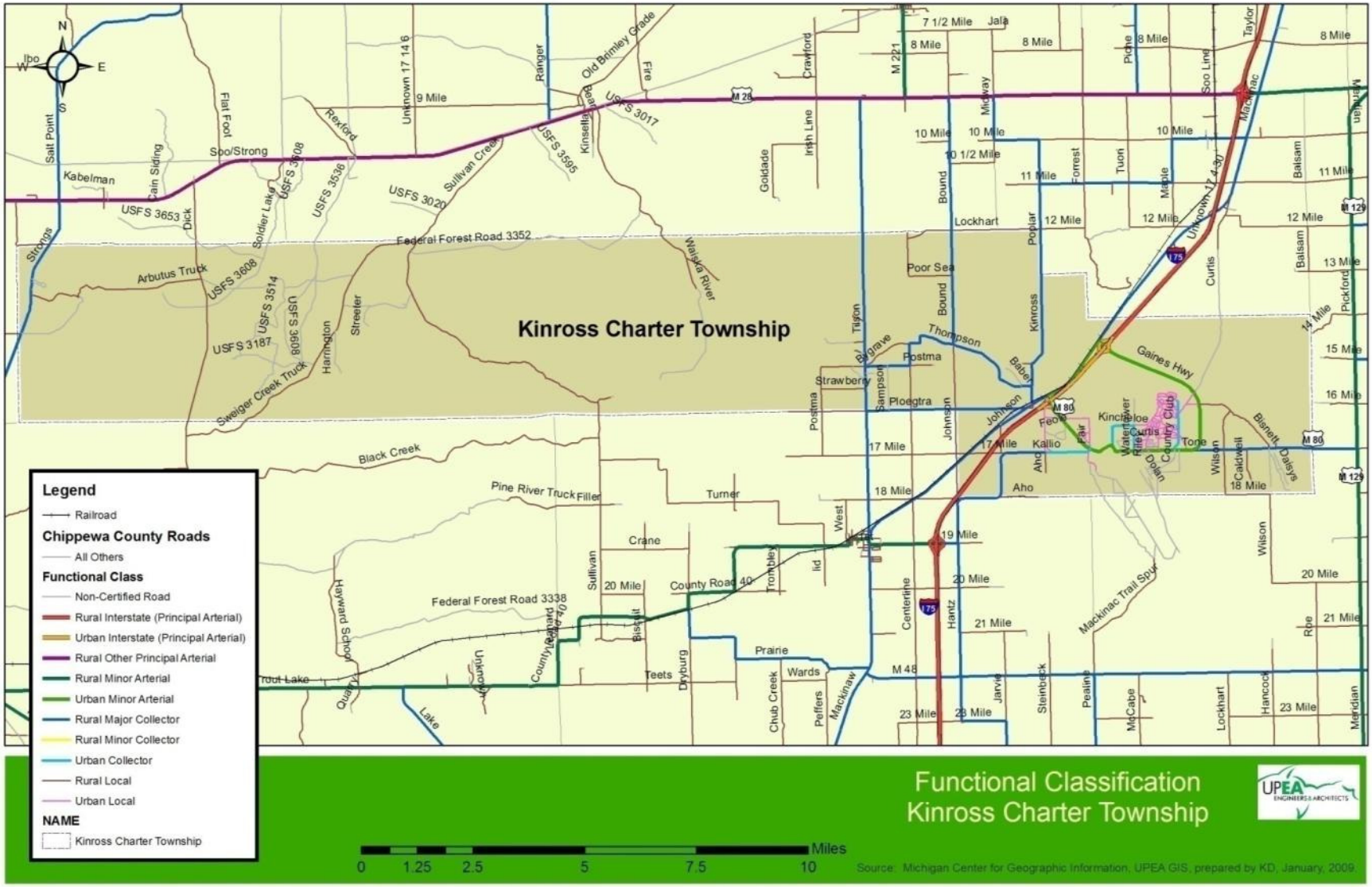
Rural major collectors emphasize access to abutting land area and serve to collect traffic for distribution to the larger arterial systems within neighboring municipalities. These roads interconnect people in the economic activity centers not served by statewide arterial highways. Rural major collectors include:

- Strongs Road
- Tilson Road
- Bound Road
- Kinross Road
- Ploegtra Road
- Thompson Road
- Centerline Road (portions)
- Kallio Road (portions)
- Mackinac Trail (North of Gaines Hwy, South of M-80)

Urban collectors within Kincheloe include:

- Water Tower Drive
- Riley Avenue
- Country Club Road (Cedar Grove Dr)
- Kincheloe Drive
- Curtis

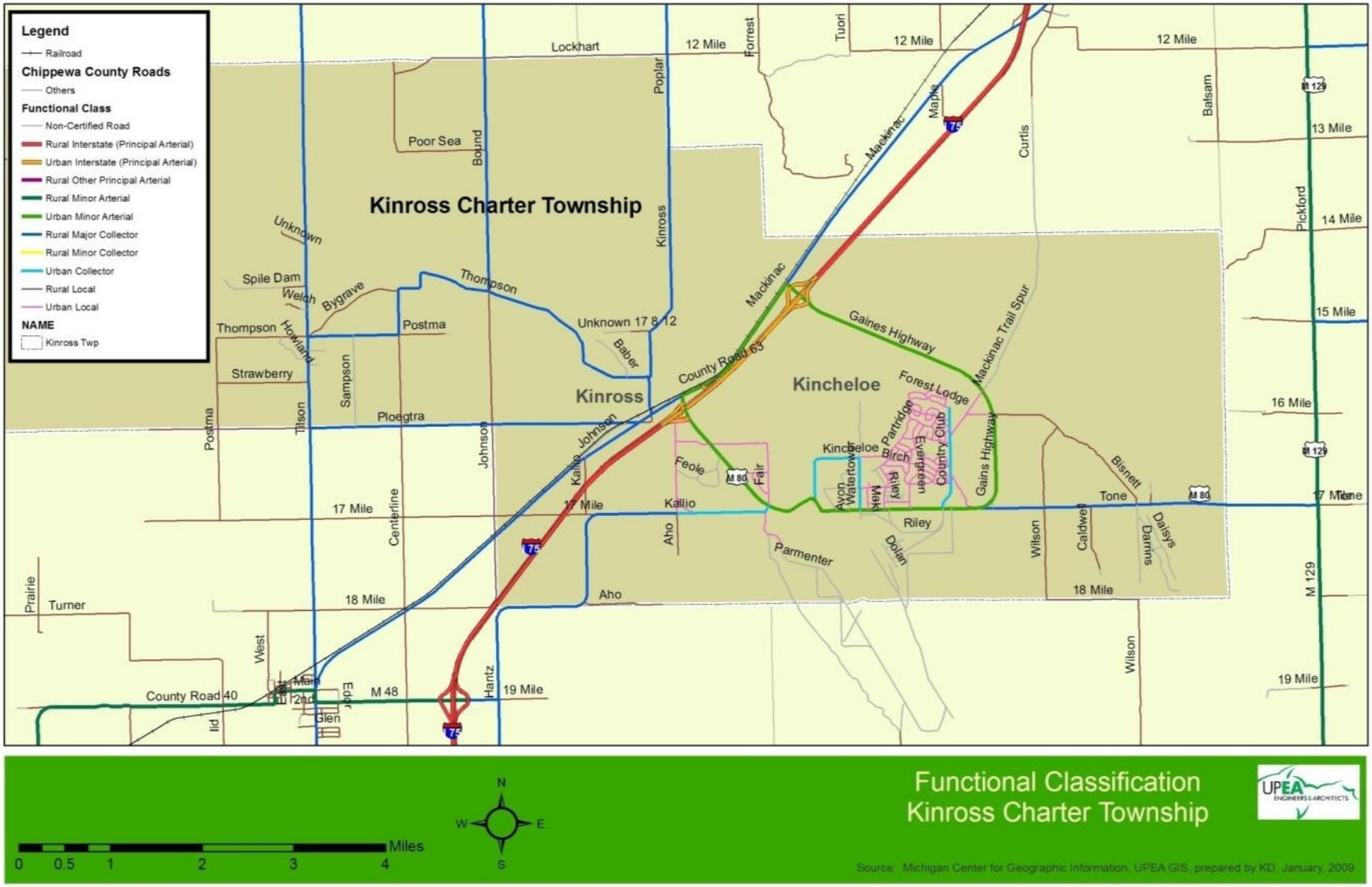
Figure 3-13: Functional Classification in the region of Kinross Charter Township



Local Roads emphasize access to abutting properties and the collection of traffic for distribution to collector and arterial corridors. This classification applies to the remainder of roadways within the Township. See map next page for a closer view of the Functional Classification.

Traffic counts were performed on 6 major arterials between 2004 and 2006. The remaining major street and local streets have not been inventoried in the previous twenty year period. Vehicular counts have been declining since 2002 on M-80 between the junction of I-75 and Gaines Highway, down from 3,373 in 2002 to 2,873 in 2005. Average daily traffic counts have also been declining since 2002 on M-80 between Gaines Highway and the Junction of M-129, down from 2,079 in 2002 to 1,868 in 2005. Ninety-two percent and higher proportions of vehicles classified were either car, cycles, or pickups traveling on all segments of M-80. High traffic hours are 8 am and 5 pm on M-80.

Figure 3-14: Functional Classification in the area of Kinross and Kincheloe



Current Road Conditions—PASER Rating System

The first step in the resource allocation process is to assess current infrastructure conditions. The Chippewa County Road Commission unitizes Pavement Surface Evaluation and Rating (PASER) inventory and asset management system for assessing the condition of National Functional System major streets. A Rural Task Force reviews project submittals. Most roads were evaluated in 2006 (see map next page).

PASER is a visual survey method developed by the University of Wisconsin Transportation Information Center to evaluate road conditions. Ten separate ratings are used to evaluate the surface distress of the pavement based on pavement material and types of deterioration present. The ratings are then grouped into three categories based on the type of work required, including Routine Maintenance, Capital Preventive Maintenance, and Structural Improvement.

Routine Maintenance includes regularly scheduled preventative treatments such as street sweeping, drainage clearing, gravel shoulder grading, and sealing of tight cracks. PASER ratings 8-10 are included in this category which includes newly constructed or recently improved roads requiring little or no maintenance.

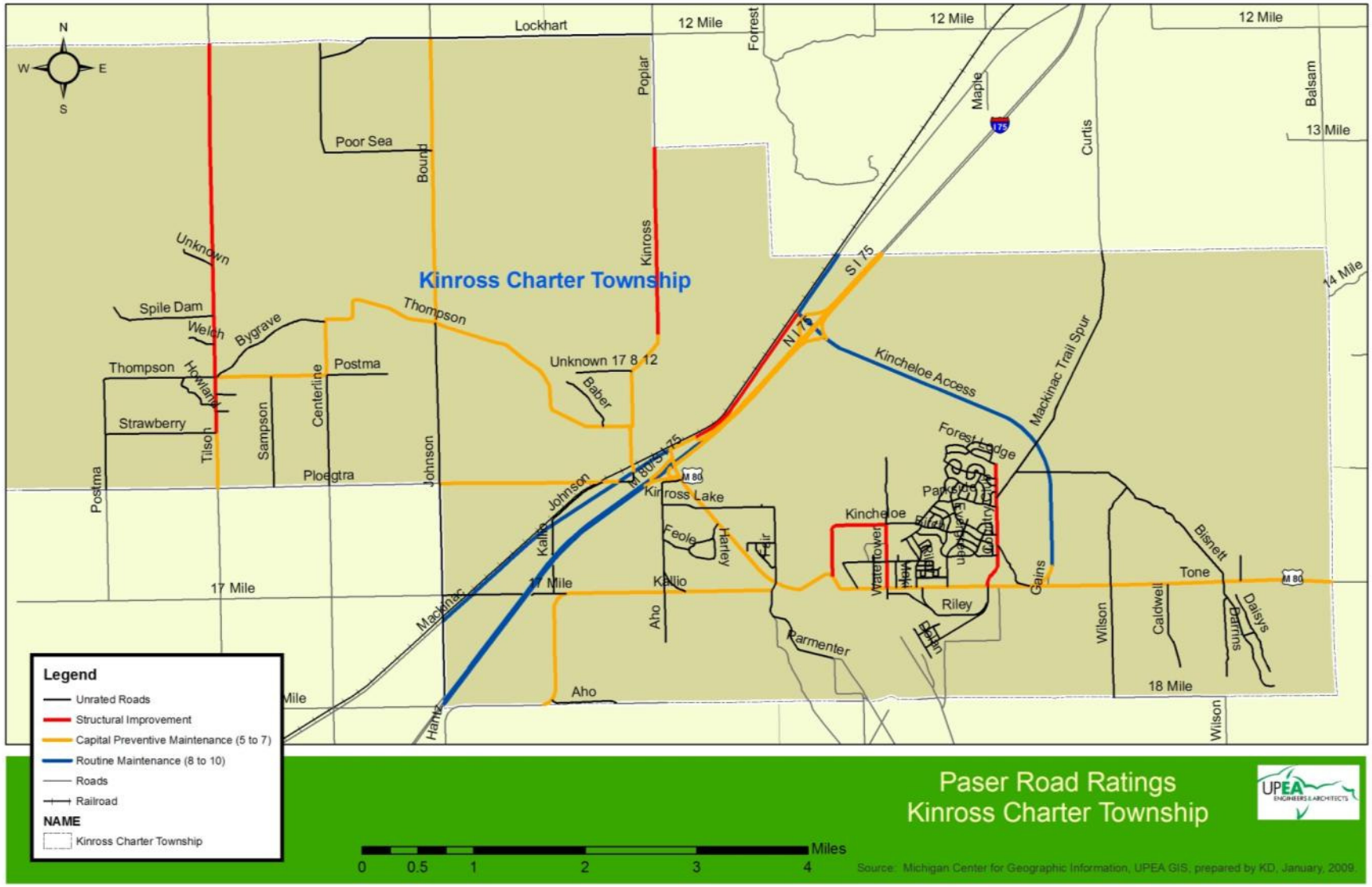
Capital Preventive Maintenance consists of planned treatments applied to existing roadways to retard further deterioration, maintain or improve function, and correct distress. PASER ratings 5-7 are included in this category which contains roads with good structural support with surface deterioration, such as cracks over ¼ inch.

Roads rated as needing Structural Improvement include those in need of repair to improve the structural integrity of the pavement. PASER ratings 1-4 are included in this category. Typical problems include rutting greater than ½ inch deep, cracking in the wheel path, severe block cracking, alligator cracking, and cracks with severe erosion. These roads may need major rehabilitation or reconstruction. The map shows that at the time of rating (mostly in 2006, a few rated in 2005 or 2004), roads needing Structural Improvement were Tilson Road, Kinross Road, and Strongs Road in the rural portion of the Township, and Kincheloe Drive, Watertower Road, and Country Club Drive within Kincheloe. Also needing Structural Improvement was the section of Mackinac Road between the intersections of I-75 and I-80 and I-75 and Gaines Highway (Kincheloe Access).

Roads in need of Capital Preventive Maintenance within the rural portion of the Township were portions of Strongs, Kinross, Tilson, Bound, Thompson, Kallio, and Ploegtra roads. All of M-80 within Kinross Charter Township showed a need for Capital Preventive Maintenance. The remainder of the rated roads were rated as needing Routine Maintenance only.

Tilson Road was replaced in 2008, and the Mackinac Road section referenced above is scheduled for mill and pave treatment in 2009, including the addition of a 4' paved shoulder. Roads within Kincheloe needing structural improvement are submitted for the 2009 Stimulus Package through the Small Urban Program.

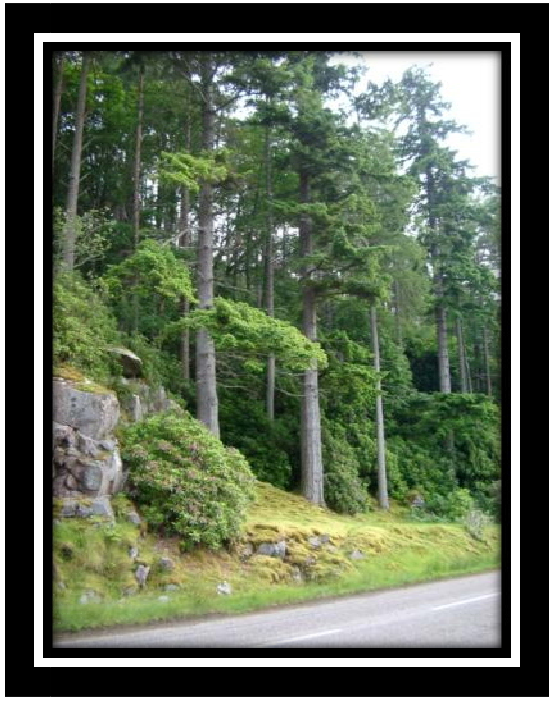
Figure 3-15: PASER Ratings in Kinross Charter Township, 2004-2006



Aesthetic Enhancement Program

The Michigan Department of Transportation has conducted an aesthetic project opportunity inventory for sites along Michigan's trunklines with the goal of improving the visual quality of the environment. Several projects are listed along I-75 and M-80 in Kinross Charter Township. Programs such as the Transportation Enhancement Program and Heritage Route Program may be used to help fund these projects. Project opportunity types include aesthetic or environmental landscape treatments, streetscaping, corridor management plans, scenic easement acquisitions or turnout sites, structure removal or improvements, vegetation management opportunities, and land form improvements. Aesthetic Enhancement examples are shown above. The Kinross corridor management plan is in the final design and approval process, with some right of way encroachments and driveway issues presenting challenges. Proposed construction dates are 2009 – 2010.

Figure 3-16: Aesthetic Enhancement Proposals in Kinross Charter Township



Aesthetic Enhancement Treatment Examples:
Trees clumped or in rows, groundcover on slopes, vegetative buffers alongside the road.

Aesthetic Enhancement Treatment Examples: Above Left: Current entry sign to the Kincheloe/Kinross Area. Above Right: More pleasing combined sign. Lower Left: Current bleak M-80 corridor through Kincheloe. Lower Right: Streetscape with simple lighting, banners, sidewalks, curbside parking.

Aviation

The Chippewa County International Airport (CIU) is located in Kinross Charter Township at the former Kincheloe Air Force Base, and is 17 miles south of the City of Sault Ste. Marie and 37 miles north of the City of St. Ignace. The Airport is located on 851 Acres of property, and is owned and operated by the Chippewa County Economic Development Corporation. The Airport consist of two landing runways, two taxiways, a general aviation apron, an air carrier apron, a 20,400 square foot terminal building, numerous hangers for general aviation and corporate aviation, parking for aircraft rescue, and firefighting facilities. Services include fueling, aircraft deicing, U.S. Customs and immigrations services, and private aircraft hangars.

The Airport is accessed by way of State Highway M-80, which provides convenient access to the I-75 Interstate Freeway system. Public parking is located adjacent to the general aviation airport terminal. Presently, Mesaba Airlines operates two flights per day to Detroit, Michigan. For more on the airport in relation to development, land use, and zoning, see Chapter 4: Built Environment.

Rail Service

Although operating rail lines have slowly disappeared since the days of the mining boom, Kinross Township is fortunate to be located on a regional rail network stretching across the entire Upper Peninsula from Menominee in the South, through Escanaba, to Sault Ste. Marie in the North. This asset offers a vital supply line, and an advantage for attracting industry, especially if rising oil prices make highway transportation less financially viable.

This rail system also provides access between ports on Lake Michigan with those on Lake Superior. However, passenger rail service is not offered at this time. (See map next page)

The Canadian National Railway operates the freight line which travels North/South through the Township parallel to the Mackinaw Trail Highway, then travels west parallel to County Road 40. A railroad spur track terminating at State Highway M-80 services the Chippewa County Economic Development Corporation property on the North side of Sate Highway M-80 near the airport. (See map at right)

Figure 3-17: Rail spur servicing Kincheloe

Public Transit

The Eastern Upper Peninsula Transit Authority is a two county transportation system (Luce and Chippewa Counties) that operates a bus service for the Kinross Charter Township area. A high level of service is provided to several area human service agencies and employment center passengers. The service operates Monday through Friday between 5 am and 11:30 pm. The fleet includes 8 vehicles, 4 of which are lift-equipped for handicapped passengers.

This network serves a population of around 25,500 people utilizing 10 employees. In fiscal year 2007, over 53,000 passengers utilized the service, for a total of over 302,262 miles and 13,560 vehicle hours. Operational funding is presently obtained from use fares, State of Michigan operational funds, and federal funding. Fares are currently $3 each way between Sault Ste. Marie and Kincheloe, or 20 rides for $35 (or $25 for seniors over age 65 or handicapped riders). Funding for bus acquisition has been previously obtained from the State of Michigan. A detailed schedule of arrival and departure times from Kinross Township to Sault Ste Marie is available from the EUPTA.

A significant portion of the ridership base consists of employees of the state prison system. The EUPTA also provides residential pick up locations and offers senior citizen and handicapped person discounts.

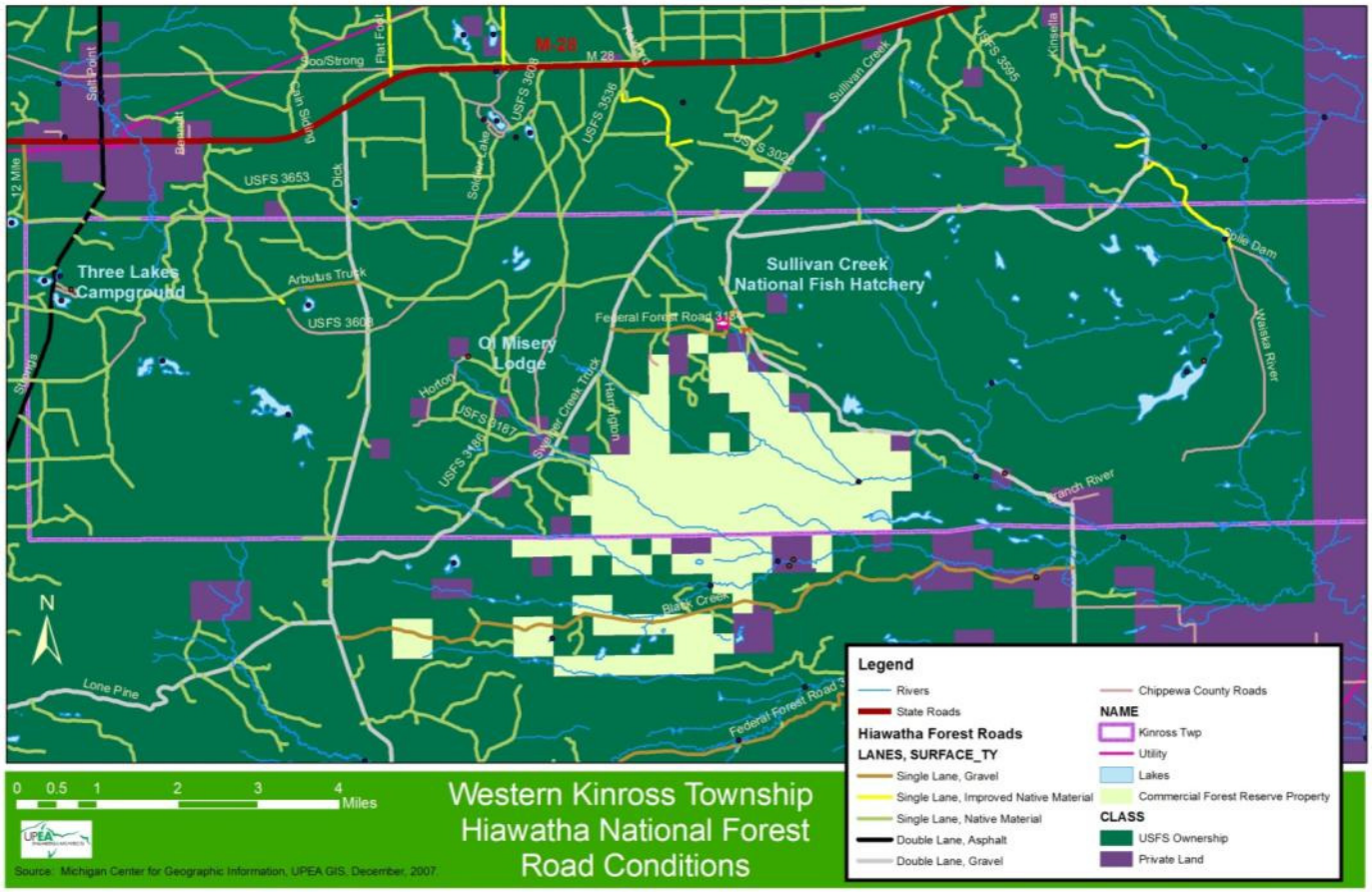
Figure 3-18: Rail Service in the Upper Peninsula

Non-Motorized Transportation

Bicycles are permitted on all Michigan highways and roads except limited access freeways or unless otherwise posted. Bicycles are allowed on all road systems including those in State Forests, State Parks, National Forests, and National Parks. All-terrain bicycles are suited for many of the state and national forest trails, however, portions of the North Country National Scenic Trail and Hiawatha National Forest prohibit bicycles. Bicycles are also prohibited in congressionally designated wilderness areas. Some State Parks allow bicycles on trails, but bicycles are not allowed on National Park trails. Eastern U.P. bike map is in Appendix E.

The map at right illustrates the road system in the Hiawatha National Forest. Most roads are single lane roads of native material (shown in green), but a few are single lane, improved native material (shown in yellow), or single lane gravel (shown in brown). Double lane gravel roads are shown in gray, and double lane asphalt roads are shown in black (Strongs Road).

Figure 3-19: Hiawatha National Forest Road System



Wireless Telecommunications Infrastructure

Lighthouse provides high speed wireless service within the former base area (main population area), with an effective radius of three miles. This has facilitated the start up of additional businesses in Kincheloe. Satellite high speed service is also offered to all residents. However, the challenge to service is the airport height restrictions. Providers are unable to install towers, utilizing the water towers instead. However, higher towers are needed with the tree heights in the surrounding area. The ability to expand to WiMAX (Worldwide Interoperability for Microwave Access) would double the current coverage area and give 60-80% faster service.

Century Tel has a high speed fiber optic network in the area, with planned expansions.

Wireless Telecommunications infrastructure is essential to economic development in a community, but siting of towers requires careful attention to conditions that will lead to optimal service according to applicable regulations with the minimum number of towers. Siting of wireless infrastructure should include the following considerations:

- Try to site to meet the carrier's desired coverage objective while integrating with any existing or planned neighboring site infrastructure
- Locate facilities in or around areas of mature vegetation that screens all or part of the facility, thereby reducing its visual impact.
- To the extent permitted by federal regulations that govern marking schemes, color the structure to blend in with the surrounding vegetation or skyline.
- Plant vegetative cover or construct fencing at the base of the facility to screen the ground equipment.
- Require low-profile or slim-lined structures where the antennas are installed more closely to the tower, reducing the physical profile of the facility.
- Colocate wireless equipment on existing structures when possible (athletic field light structures, transmission towers, chimneys, water towers)

Transportation Recommendations

1. *Asset Management Program*
   It is recommended that the township implement an evaluation of road conditions by utilizing an asset management program. The training and software are available through the Michigan Technological University's LTAP services. Educational classes on rating road are provided annually by the LTAP. An Asset Management System could be implemented with township staff in conjunction with the Township's Road Advisory Committee. The Township would be able to forecast maintenance requirements and prioritize construction projects. An asset based management system will also assist in estimating budgets for maintenance of the street system. Expenditures for crack sealing, sealcoats, overlays, rehabilitations and reconstructions can be forecasted.

2. *Expansions of the Street System*
   During the planning session, numerous requests were made for an additional street connection north to Gaines Highway to reduce travel distance from either the residential area or central commercial area. The extension of a roadway from the residential area would benefit all people traveling north from the urban core to the I-75 interstate system. Two alternative locations could be explored for possible construction. Country Club Road could be extended north to connect with Gaines Highway. Water Tower Road could be extended north to Gaines Highway. The design would need to take into consideration the environmental conditions and ownership of the site, but this location could open up additional residential area for development.

3. *Traffic Counts, Accident Histories, and Sign Inventory*
   The utilization of accurate and up-to-date traffic information would be beneficial for projecting needs and priorities in project implementation. It is recommended that the Kinross Charter Township or Chippewa County Road Commission perform traffic counts on five year cycles for the major street system and ten year cycles for local roads. The traffic accident information can be inventoried in "Road Soft" software available to communities from the Michigan Department of Transportation. It is recommended that regulation sign inventory and maintenance replacement records be entered into the data base.

4. *Pedestrian and Bicycle Accommodations*
   The Michigan Pedestrian and Bicycle Safety Action Plan was published in April of 2006 by the Governor's Traffic Safety Advisory Commission. Kinross Township would benefit from implementation of alternate modes of transportation into road improvement planning projects. Paved road shoulders for pedestrian and bicycle use could be constructed on rural section roadways. Planning could include construction of sidewalks in the commercial corridors to provide more efficient year-around circulation of pedestrians and separation from vehicular traffic on higher volume streets. Eastern Upper Peninsula Regional Planning and Development Commission is presently preparing a Non-motorized Comprehensive Plan for the region with a completion date estimated to be Fall of 2009.

5. *Dedication of Roadways*
   Presently the Chippewa County Road Commission has adopted a policy of not accepting residential subdivision roads. This present policy is a potential detriment to residential subdivision development. It is recommended that the Kinross Charter Township pursue discussion with the County Road Commission to address future roadway expansions and roadway dedication.

6. *Enhancements*
   Michigan Department of Transportation enhancement grant funding may be a potential source of funding for improvements for streetscape implementation on the major street system. The Township should consider streetscape improvements including lighting, signage, and landscaping in the commercial corridors.

7. *Public Transit*
   Continued promotion and support of the present bus system provided by Eastern Upper Peninsula Transit Authority is recommended.

Chapter 4: Current Land Use & Development Patterns

Current Land Use

Kinross Charter Township's overall land use pattern reflects rural character with a low level of development and extensive forested and open areas. Residents are mostly concentrated in the Kincheloe area along with almost all the commercial and industrial uses. Most agricultural lands are in hay production, although there are scattered vegetable, strawberry, and maple syrup producers.

The maps and charts on the following pages illustrate the current land use configuration of Kinross Charter Township. Estimates for current land use are as follow:

- National Forest – 47%
- State Forest – 22%
- Private Wooded Areas – 12%
- Commercial Forest Reserve Properties – 5%
- Residential on Forested Lands – 4%
- Residential on Agricultural Lands – 4%
- Combined School owned forest lands – 2%
- Other Open Space or Development Ready Property – 1%
- Built Environment – 3%

Figure 4-1: Equalized Value Comparison

Property	1985	1996	2008
Agricultural	443,371	747,150	2,213,400
Residential	7,441,565	19,637,050	40,452,100
Commercial	1,287,410	3,524,700	4,039,700
Industrial	1,693,800	1,609,550	1,513,100
Total	**10,866,146**	**25,518,450**	**48,218,300**

Source: 1996 Kinross Charter Township Master Plan and Chippewa County Equalization

Essentially, over 90% of Kinross Charter Township is maintained in some kind of forest/natural resource use. By comparison, the State of Michigan is estimated to consist of 53% forest, 25% agriculture, 13% other vegetation and wetlands, and 10% built environment. The large amount of land in public ownership is limiting to the tax base, but provides extraordinary recreational opportunities.

In the 1997 Master Plan, natural areas were estimated to be 94% of the township, with agriculture at 3%. The rest of the built environment was estimated to be about 3% of land uses. This is very consistent with conditions in 2009.

Figure 4-2: Current Land Use Chart

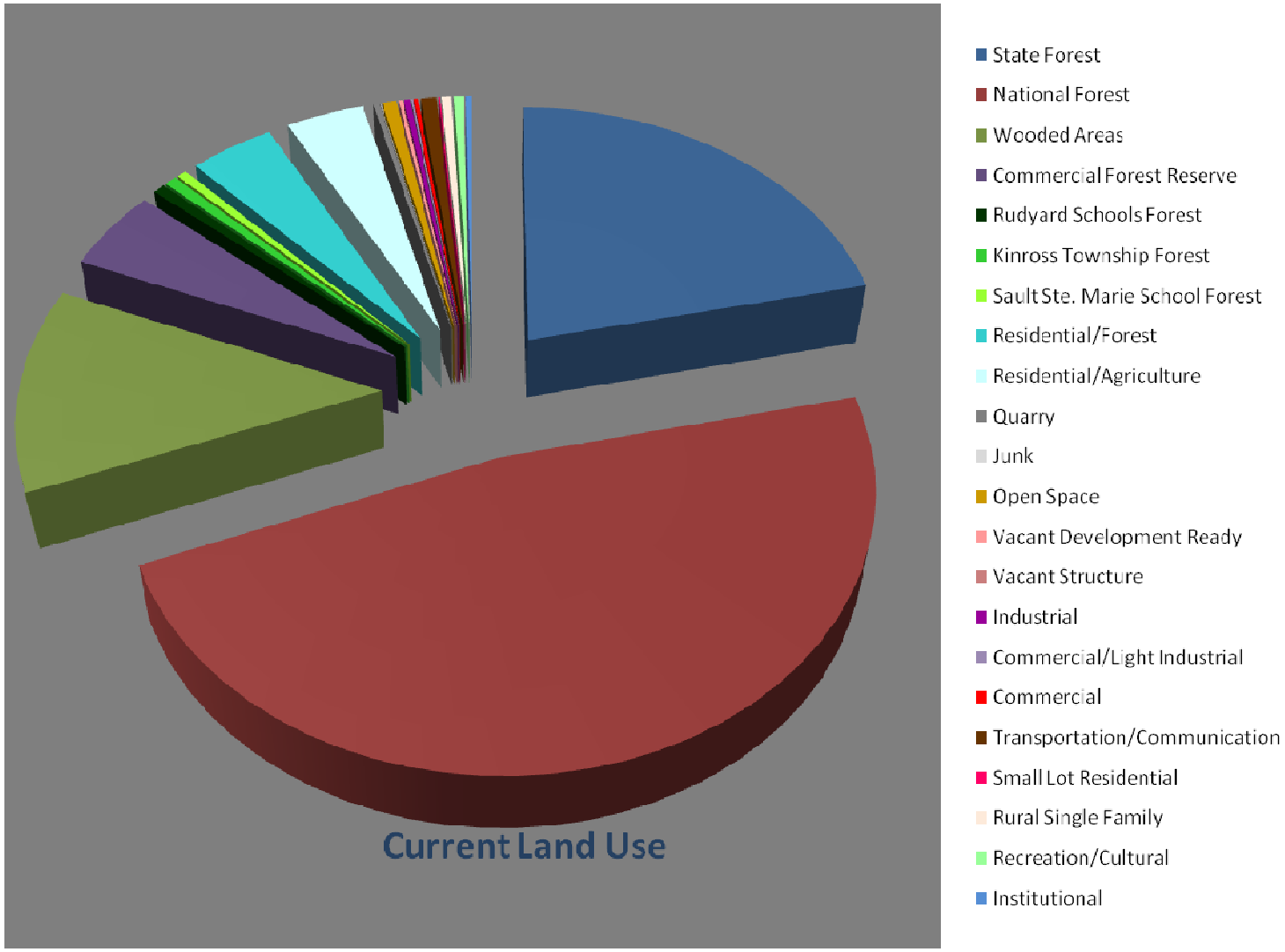


Figure 4-3: Current Land Use Western Kinross Charter Township

As can be seen in the map below, almost all of western Kinross Charter Township is wooded, with portions now utilized as Federal forest (dark green), commercial forest reserve (brown), or general woodlands. There are a few scattered dwellings with woods (tan areas), probably for recreation use. Roads are generally for forest service use. This area represents basically 40,960 acres (64 square miles) of woodlands, wetlands, rivers, and wild areas with very few roads or dwellings.

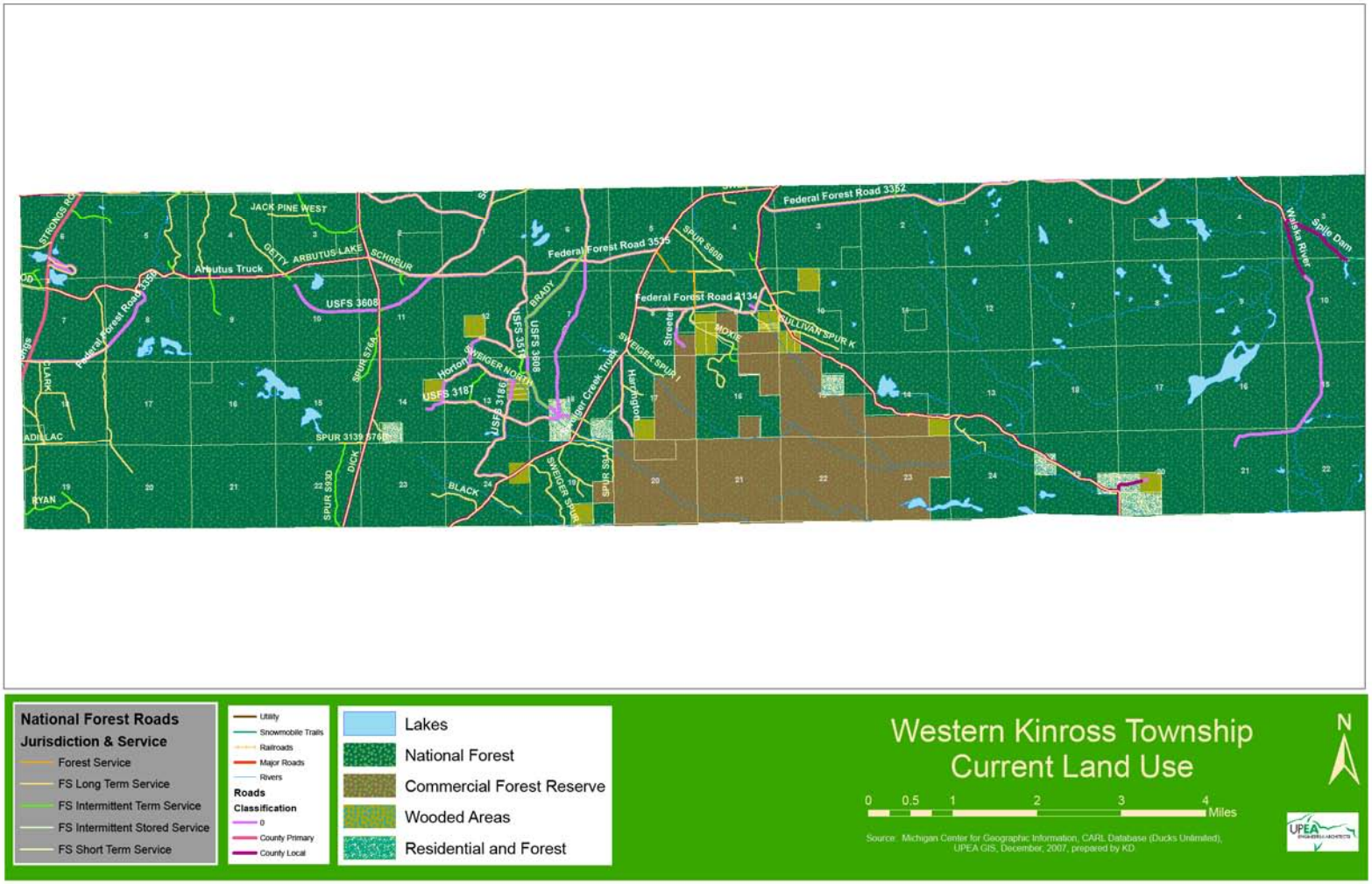
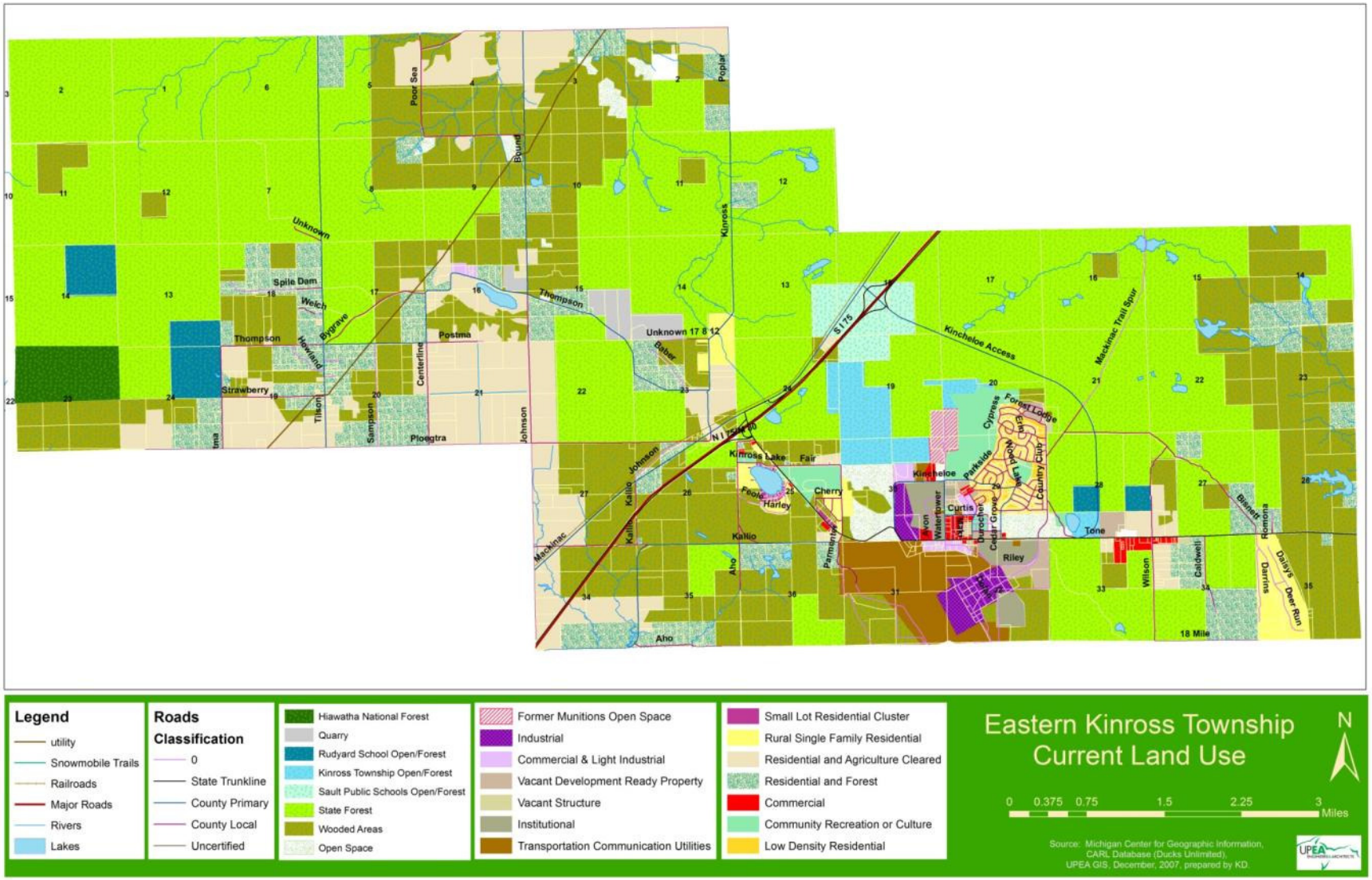


Figure 4-4: Current Land Use Eastern Kinross Charter Township



Agricultural lands and farms are scattered among forested lands in the central portion of Kinross Charter Township, mainly along the northern and southern borders but also along Thompson Road, Bound, and Postma. There is a commercial junk yard and some quarries in this portion of the township.

Exiting onto M-80 from I-75, travelers are confronted with scattered commercial and residential uses, including an area of mobile homes. Rounding the curve into Kincheloe, the view is of the miles of fence and open space utilized by the airport, sawmill, and the extensive property of the Kinross Correctional Facility. The north urbanized area contains commercial uses in scattered placement, lacking in streetscaping or sidewalks. Vacant properties and structures are also in view. There is some landscaping surrounding the southern correctional facilities, and there is a beautiful stand of mature pine trees in the urban core. The RV Park creates a nicely treed open space adjacent to the commercial facilities and residential areas. Trails lead into the woods surrounding Kincheloe and Dukes Lake, which is southeast of the main residential neighborhood. Woods line the entire length of Gaines Highway. Scattered farms, residences, commercial uses, and a subdivision are located along the eastern portion of M-80.

Environment & Natural Features

Background

Chippewa County was completely covered by a series of glaciers during the Pleistocene Epoch, with the present topography and soil material resulting from glacial deposits of the Wisconsin Glacier which melted 10,000 to 12,000 years ago (the last to recede). Isolated hills and knobs dot the landscape in the Township and north to Sault Ste. Marie. Soils on the lake plain are fine textured. There are deep organic deposits in Betchler Swamp with very few trees.

Farming is a relatively recent practice in the County, reaching a high in 1925 with over 1,700 farms. As of 2002, there are 372 farms, mostly in trefoil-grass hay production, with a few in livestock production. This represents 93,924 acres, with an average farm size of 252 acres (median 180 acres). Of this total acreage, there is 61,550 acres of total cropland, almost 35,000 acres of which is harvested. 340 acres are irrigated. Other products produced in the County include oats, barley, wheat, trefoil seed, corn, specialty crops (raspberries, strawberries, apples), and even cheese and honey.

Above: A picturesque farm in a quiet location of Kinross Charter Township.

The average farm had a market value of agricultural products sold of $15,566. Sixty-six farms were receiving government payments. Total County income from farm-related sources, before taxes and expenses was $251,000. The average net cash income per farm was only $4,000.

Climate

Climate is a challenge for food and crop production. Depending on daily minimum temperatures, the growing season varies from 106 to around 190 days (5 years in 10 probability), with occasional seasons extending over 200 days. Last freezing temperatures in the spring vary from early May to early June. First freezing temperatures in fall occur in mid September to mid October.

In winter, the average temperature is around 15 degrees Fahrenheit. The lowest temperature on record in the County is -39 degrees Fahrenheit in Dunbar, and highest temperature is 98 Degrees. In summer, the average temperature is around 60 degrees, with the average daily maximum temperature at about 72 degrees. Mean annual temperature is around 40 degrees Fahrenheit. Average annual daily

maximum temperature is about 50 degrees, and average annual daily minimum temperature is about 31 degrees. Annual mean temperature is about 40 degrees.

Total annual precipitation is 34.67 inches at Sault Ste Marie, and 33.76 inches at Whitefish Point. Average annual snowfall is about 129 inches, with the highest daily snow depth at 50 inches in March of 1972.

Soils, Wetlands, and Topography

Soil composition analysis is used in land use planning to predict soil behavior for selected land uses and to identify special practices needed to ensure compatibility of land use. Improvements may be needed to overcome soil limitations, depending on the planned use of the land. This information is useful to farmers, foresters, community officials, engineers, developers, and home buyers.

Kinross Charter Township contains the following general soil associations:

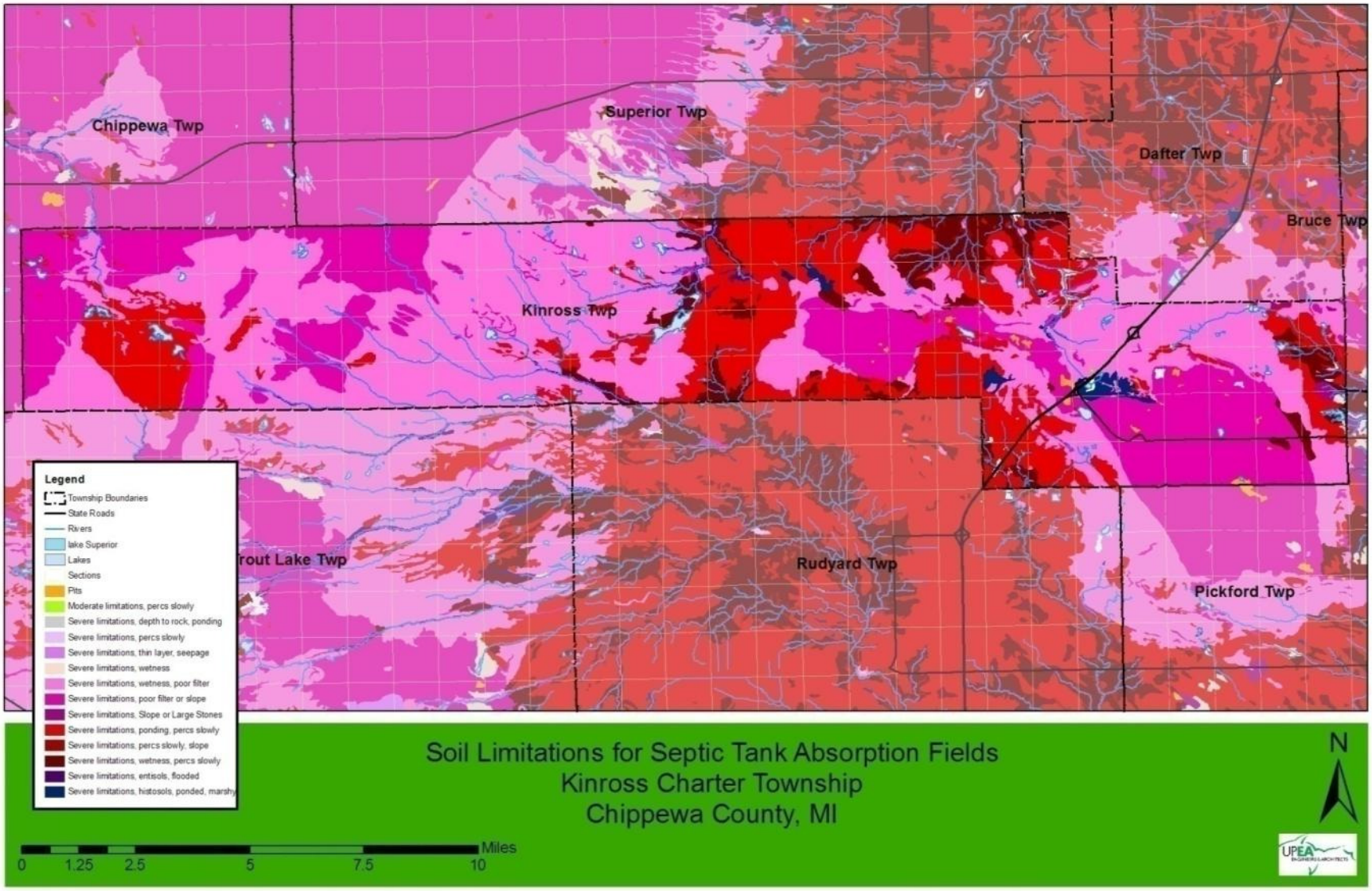
1. *Kalkaska-Rubicon association*
   These are very deep, nearly level to very steep soils, somewhat excessively drained and excessively drained, sandy soils on outwash plains and group moraines. Typically, the area appears as broad plains, ridges, and knolls. These soils are located in the far west-northwest of the Township (Hiawatha National Forest) as well as the southeast, including the area surrounding M-80. The major soils are used as woodland, with seedling mortality being the main limitation. Slope may be a limitation. The soils are generally well suited to building site development, but are poorly suited to septic tank absorption fields and sewage lagoons because of poor filtering capacity.
2. *Markey-Dawson association*
   These are very deep, nearly level, very poorly drained, mucky and peaty soils on outwash plains, lake plains, and ground moraines. This association is generally located in broad depressions, swamps, and drainageways. This association is found in the area of Betchler Marsh in the western end of the Township (Hiawatha National Forest) and in the area northeast of Kincheloe (Lake Superior State Forest). The major soils are used as woodland or as support for native bog vegetation. Wetness and instability of the muck are management concerns. These soils are unsuited to building development because of ponding and low strength. They are also unsuited to onsite waste disposal systems because of seepage, ponding, excess humus, and restricted permeability.
3. *Kalkaska-Au Gres-Kinross association*
   These are very deep, nearly level to very steep, somewhat excessively drained, somewhat poorly drained, and poorly drained, sandy and mucky soils on outwash plains, ground moraines, and lake plains. Generally these are upland plains, ridges, and knobs. These soils are located mostly within the Hiawatha National Forest, and contain portions of the Sweiger Creek and the North Branch Pine River. Major soils are used as woodland, with equipment limitations resulting from wetness or steep slopes. Some of the soils are suitable for building site development with slope limitations. Others are poorly suited or unsuited to building site development. All are poorly suited or unsuited to septic tank absorption fields and sewage lagoons because of poor filtering capacity and wetness.

4. *Markey-Kinross-Croswell association*
   These are very deep, nearly level to undulating, very poorly drained, poorly drained, and moderately well drained, mucky and sandy soils on outwash plains. Generally these are in broad depressions and drainageways, or on low plains and in swales and depressions. This is the area in the central western portion of the Township including Sullivan Creek, Sweiger Creek, the North Branch Pine River, and the West Branch Waiska River. It is also located in the northern Kincheloe area. Major soils are used as woodlands with seedling mortality and equipment limitations due to wetness. Some of the soils are unsuited to building site development and onsite waste disposal systems because of wetness. Some are fairly well suited to buildings without basements. They are poorly suited to onsite waste disposal systems because of the high water table and a poor filtering capacity.
5. *Fibre-Allendale-Pickford association*
   These are very deep, nearly level, poorly drained, and somewhat poorly drained, mucky, sandy, and loamy soils on lake plains, ground moraines, and outwash plains. This association is generally located on broad flats and in drainageways and depressions and are frequently ponded. Some are on slightly higher ground or on low knobs. The major soils are used as woodland, but some areas are used as cropland, being somewhat suitable, but also generally unsuited. It is necessary to remove excess water, control ponding, provide drainage outlets, and control soil blowing during dry periods. Equipment limitations results from wetness. These soils are unsuited for building site development and septic tank absorption fields because of wetness, restricted permeability, and a poor filtering capacity. A few of the soils are well suited to sewage lagoons.
6. *Pickford-Rudyard-Ontonagon association*
   These are very deep, nearly level to very steep, poorly drained, somewhat poorly drained, and well drained, loamy soils on lake plains. Soils in this association are in broad low areas and in drainageways and depressions, and are frequently ponded. This association is found just west of Kinross. The major soils are used mainly as cropland, hayland, or pasture. The wetness and erosion hazard in steeper areas, along with restricted permeability in all major soils offer limitations. There is also a high shrink-swell potential. The major soils are poorly suited or generally unsuited to building site development and septic tank absorption fields. They are well suited, fairly well suited, or poorly suited to sewage lagoons.

The maps on the next two pages illustrate soil properties relating to development potential. The first page is a stark illustration of the limitations for utilizing septic tank absorption fields within all areas of Kinross Charter Township. Figure 4-5 shows the degree and kind of soil limitations that affect septic tank absorption fields. The limitations are considered severe if soil properties or site features are so unfavorable or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. You can see that every area of Kinross Charter Township falls under severe limitations.

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. The soil is evaluated to depths between 24 and 72 inches. Permeability, a high water table, depth to bedrock or to a dense layer, and flooding affect absorption of the effluent. Large stones and bedrock or a cemented pan interfere with installation.

Figure 4-5: Soil limitations for septic tank absorption fields in Kinross Charter Township



Unsatisfactory performance of septic tank absorption fields, including excessively slow absorption of effluent, surfacing of effluent, and hillside seepage can affect public health. Ground water can be polluted if highly permeable sand and gravel or fractured bedrock is less than 4 feet below the base of the absorption field, if slope is excessive, or if the water table is near the surface. There must be unsaturated soil material beneath the absorption field to filter the effluent effectively. Basically, all these less than optimal conditions exist in abundance in the Township, requiring care in installation of septic tank absorption fields, and limiting development in areas of the Township without public sewer systems.

The next series of maps explore development possibilities in more detail within the township based on soil analysis, wetlands, and topography. The Township is divided into four sections, including western, west-central, east-central, and eastern.

The soil analysis map was created by combining an in-depth analysis of each soil type listed by the U. S. Department of Agriculture Soil Conservation Service for suitability for various uses. A determination was first made of the suitability of the soil for development purposes, ranging from "suitable for building sites" (yellow), to "suitable to build with fill" (light orange), and "suitable to build with attention to slope" (dark orange). Fill or land shaping may be required to help with effluent absorption. From there, attention was turned to the identification of prime crop or farm lands, including "prime cropland" (medium purple), "crops with drainage and pasture" (light purple). There is also a category for soils "suitable for woodlands, crops, and pasture" (medium green). Some soil categories are ideal for wildlife areas (bright green). Most restrictive soil conditions are divided into various types of wetland areas (blue shadings), steep woodlands (dark green), wetland trails (dark purple), and other trails (browns).

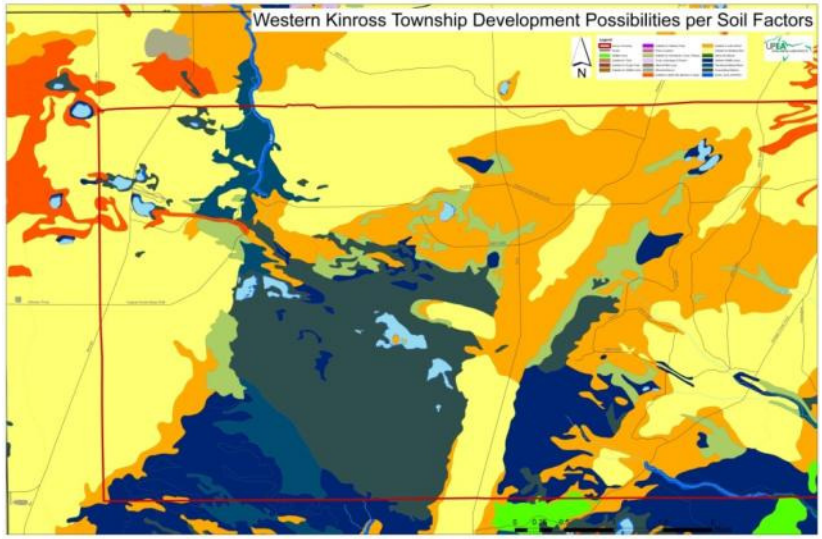
The second maps in the series represent areas of hydric soils and wetlands that impact development, and also show contour lines. The final map in the series indicates development limitations based on ownership of tribal lands, conservation/recreation lands, and wetlands.

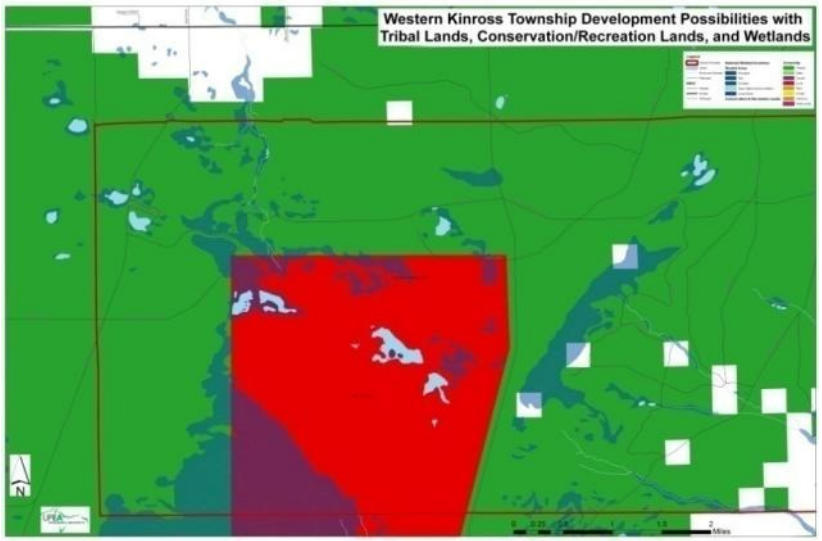
As seen on the next page, Western Kinross Charter Township remains almost entirely within the ownership of the Hiawatha National Forest system, and includes a large area of the Betchler marsh—areas off limits for development. The soil analysis indicates much area has soil factors that are suitable for development, or development with some land alteration. There are some limitations due to slope, but the most common limitation is the wetlands. See section on forests for more specific land use information for this section.

Figure 4-6: Western Kinross Charter Township development possibilities

Although soils may be suitable for development in portions of western Kinross Charter Township, the area is almost entirely under the ownership of the Hiawatha National Forest system, or currently in the commercial forest reserve program. Additionally, much of the area is in the Betchler Marsh. Refer to the section on Forest Management and Land Use for more information on current management practices in the Hiawatha National Forest.

As you can see in the map at right, there are large soil areas that would be suited for building sites (yellow) even with fill (orange). There are no prime cropland soils in the area, but there are some small areas that could be suitable for crops or pasture (dull green). Most is hydric soil or wetland ranging from bogs, swamps, muck to wooded wetlands with wildlife habitat.





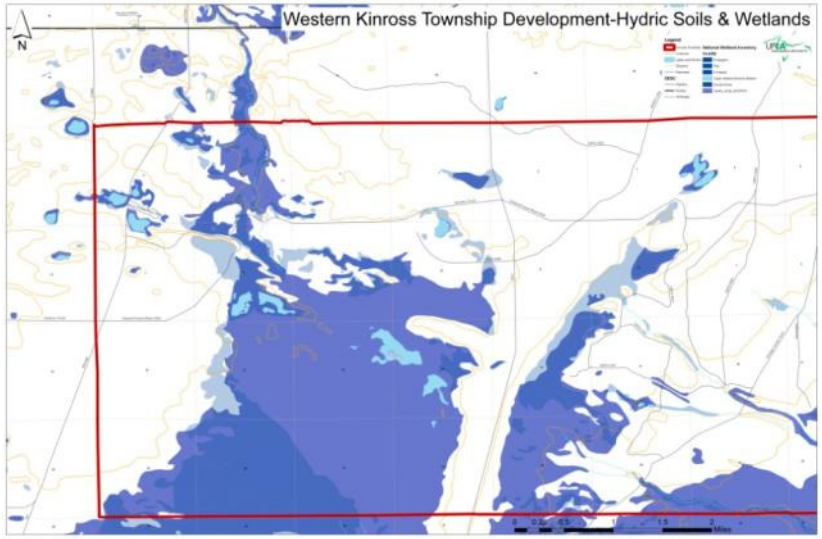
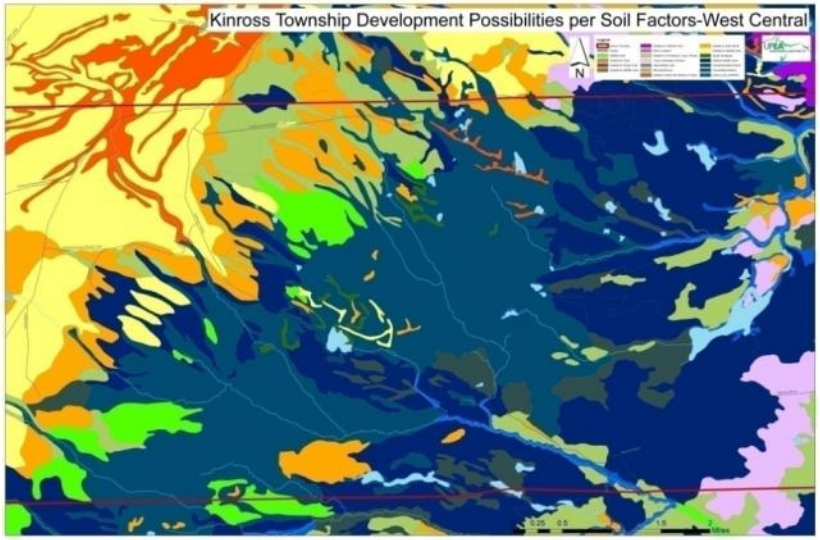
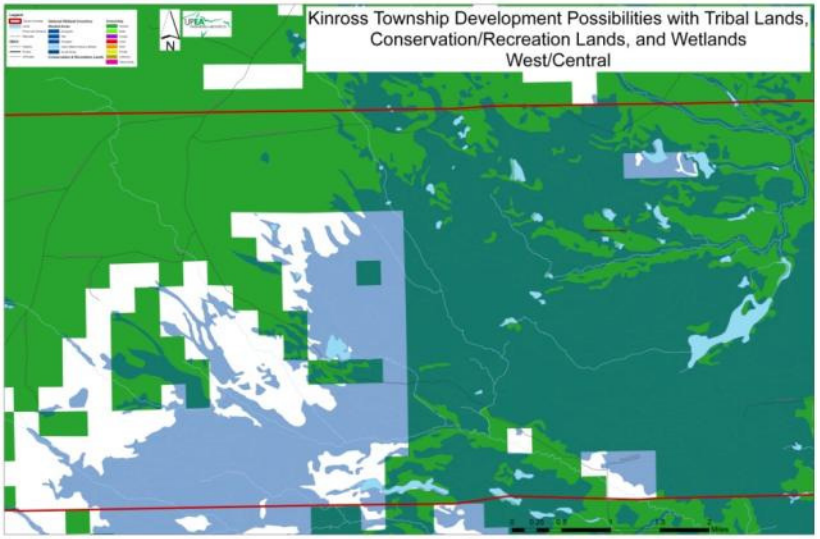


Figure 4-7: West Central Kinross Charter Township development possibilities

Again, although some areas of west central Kinross Charter Township may have soils somewhat suitable for development, the area is largely under the ownership of the Hiawatha National Forest system, or is currently in the commercial forest reserve program. Additionally, much of the area is covered by wetlands, and is most suited for wildlife or natural habitat. Some areas in the eastern portion are suited for crop production or pasture with drainage, but the area is largely unserviced by suitable roads. See the section on Forest Management and Land Use for more information.





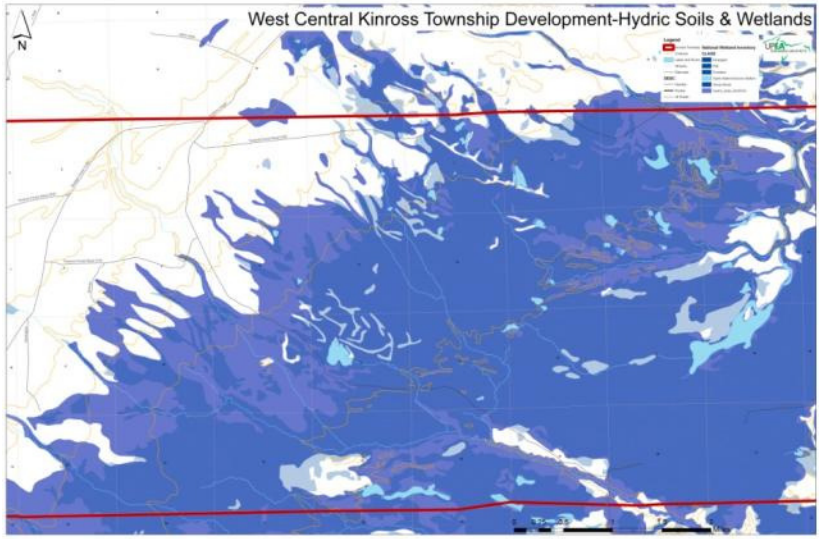
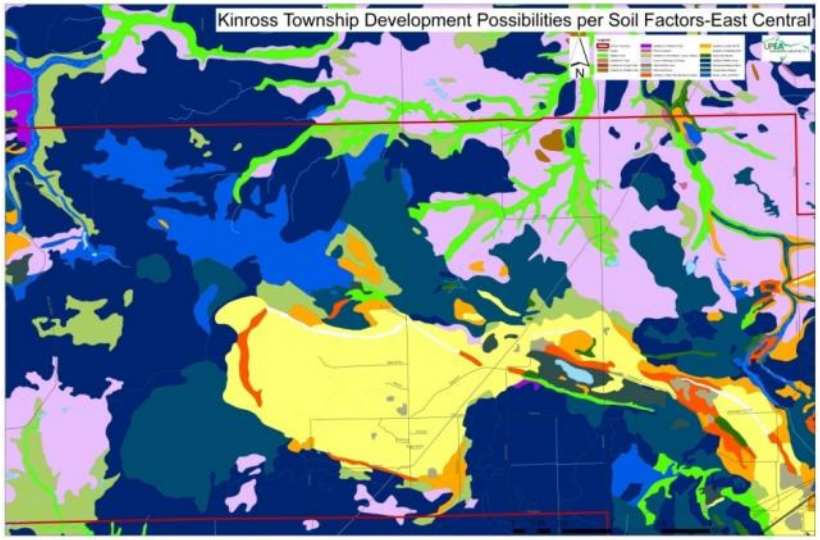
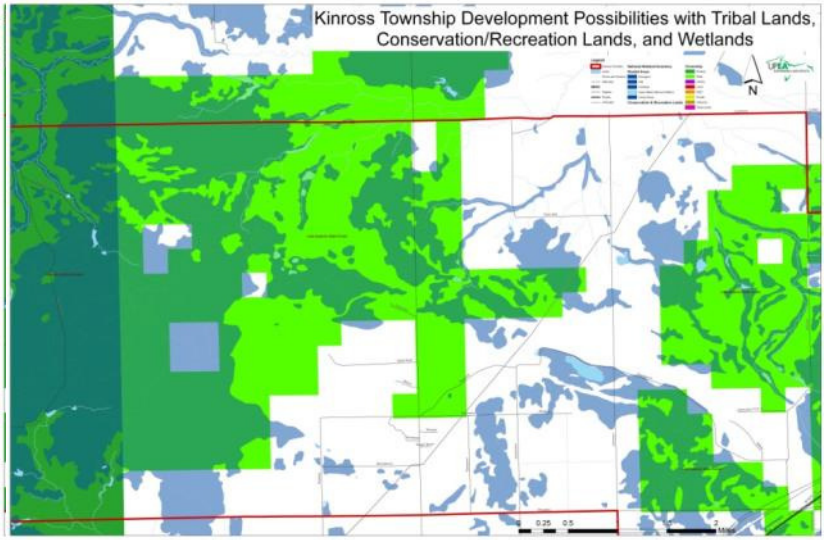


Figure 4-8: East Central Kinross Charter Township development possibilities

Much of the area of east central Kinross Charter Township is in the Lake Superior State Forest system, or contains hydric soils or wetlands. However, the remainder is somewhat suitable for development and crop or pasture production with the appropriate drainage and attention to proper septic systems. Rural development is currently scattered along the main county roads, interspersed with crop and forest lands. Some food producing farms still remain in operation.

The bright green soils at right are those particularly likely for wildlife areas, including the finger areas along the streams in the northern sections, and one area within wetlands in the area near Kinross. These areas should not be disturbed except for passive recreation.





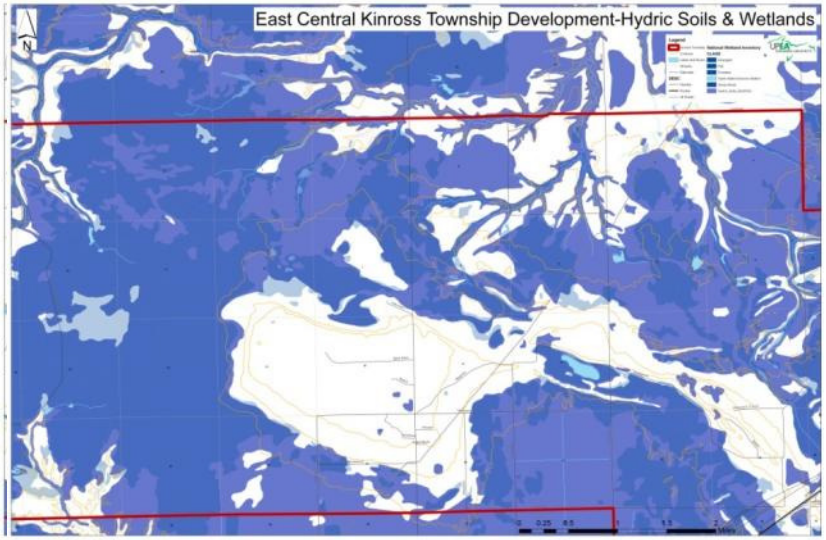
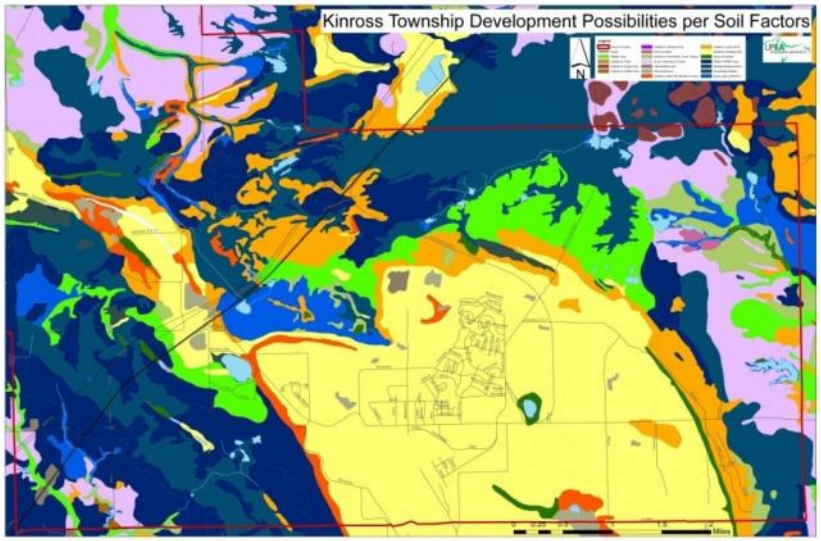
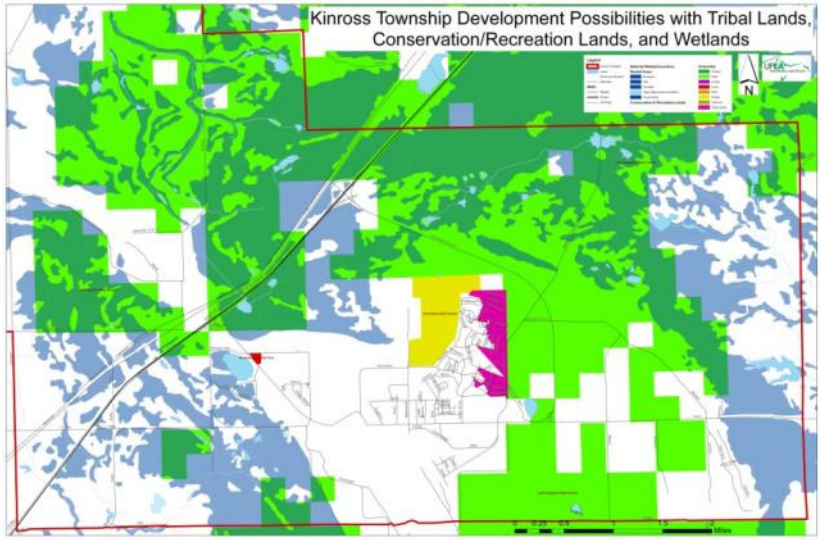
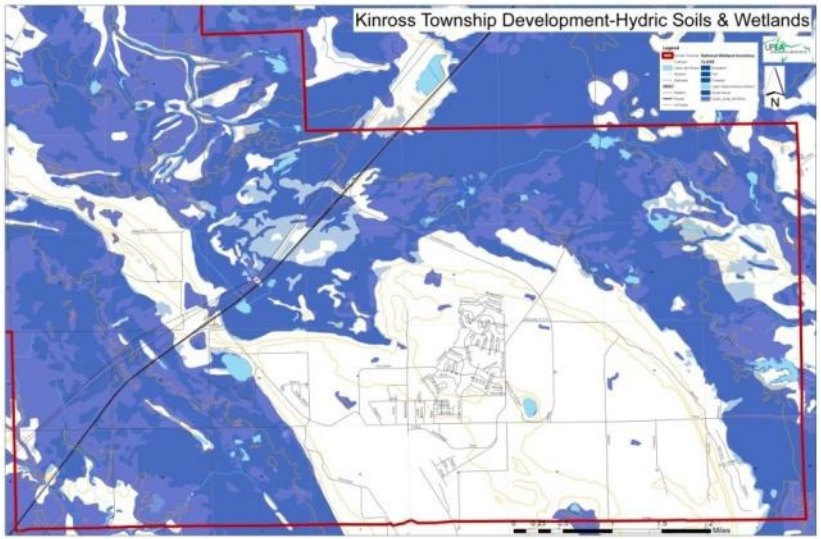


Figure 4-9: Eastern Kinross Charter Township development possibilities

The eastern portion of Kinross Charter Township contains the majority of the urbanized environment within the former military base area, and contains all of the public water, sewer, and stormwater systems. Major highways converge in the area of Kinross/Kincheloe. This area also contains almost all the commercial and industrial uses of the Township, and is a transportation hub for snowmobile, air, rail, and public transit opportunities. Wetlands also dominate the landscape along with woodlands and the Lake Superior State Forest. Kinross and Dukes Lake are in this section of the Township. Public recreation opportunities include the Kinross Community Park (Fairgrounds), Oaks Golf Course, Recreation Center, Kinross Heritage and Military Museum, RV parks, etc.







Forest Management and Land Use

The Hiawatha National Forest service prepared a plan in 2006 to establish the management direction for forest resources. Desired forest conditions are met with both natural ecological processes and a diverse range of management tools, emulating nature to the extent practical. Environmentally sustainable management practices are used in the provision of resources to communities. Attention is given to watershed and riparian area ecological function. Recreation opportunities are provided in a multiple-use setting by implementing the recreation opportunity spectrum consisting of the following components:

- Primitive—an essentially unmodified, natural environment of fairly large size, with low evidence of users (no motorized use)
- Semi-primitive motorized—predominantly natural environment of moderate to large size with low concentration of users (natural surface roads and trails suitable for motorbikes)
- Semi-primitive non-motorized—predominantly natural environment of moderate to large size, with low interaction of users (no motorized recreation use)
- Roaded natural—predominantly natural-appearing environment with moderate evidence of the sights and sounds of humans, with moderate to high interactions (conventional motorized use is allowed and incorporated into design)
- Rural—natural environment substantially modified by development of structures, vegetative manipulation, agriculture, enhanced recreation activities, activity facilities, and modest user densities (facilities for intensified motorized use and parking)
- Urban—substantially urbanized environment, renewable resource modification and utilization, enhanced recreation, exotic and manicured vegetation, predominant human presence, large number of users (facilities for intensified motor use and parking, mass transit)

Forest-wide management direction of interest to the Township includes the following:

- Meet Tribal trust responsibility and treaty obligations within the Hiawatha National Forest
- Maintain or enhance air quality conditions
- Do not allow livestock grazing
- Accommodate appropriate recreation opportunities and minimize user conflicts while sustaining natural resources
- For inland lakes, watercraft access is restricted to one per lake, with varying access according to size, depth, adjacent land ownership, and use for trout fishery
- Provide for a trail system with connections to recreation and local community services with minimized user conflicts
- Coordinate with adjacent public agencies for complementing OHV and snowmobile routes and policies
- Identify, evaluate, preserve, enhance, and increase in number the heritage resources
- Meet visual quality, wilderness area protection, soil, watershed management, vegetation management, wildlife, fish, sensitive plant, and endangered and threatened species habitat management objectives. Highlights include:
    - Protect vegetation and control road development around ponds

  - Restore disturbed riparian areas and wetlands, and protect riparian corridors from road and trail development
- Land Uses Management
  - Identify and correct recreation residences that do not meet local safety, health, and sanitation requirements
  - Identify and correct any special use permits that are not in compliance
  - Do not develop any new recreation residence tracts
  - Place roads and utility distribution systems in existing corridors where possible
  - New construction, upgrades, and replacement of existing utility distribution lines should be buried where possible
  - Implement best management practices to protect wetlands and water quality during construction and maintenance operations
- Minerals and Geology
  - Avoid sand and gravel extraction below seasonal water table within ¼ mile of designated cool and cold water streams
  - Inventory significant geologic features and identify management strategies for them
- Land Ownership
  - Land adjustment activities should strive to achieve five goals
    - Protect or enhance habitat for federal threatened and endangered and sensitive species, watershed function, research and unique ecological and geological features
    - Consolidate ownership to provide blocks of National Forest system land of sufficient size to meet management area objectives
    - Reduce amount of property lines
    - Improve legal access to National Forest System lands
    - Acquire parcels needed for specific management purposes
  - Consider land adjustments with local communities, governments, and Tribes to meet their needs for lands from the Hiawatha National Forest tracts
  - Consolidate surface and subsurface mineral ownership
- Transportation
  - Do not construct new arterial and collector roads, retain existing
  - Reconstruct an average of 10 miles of arterial/collector roads and one bridge per year
  - Restrict road use when conditions would cause road damage or for safety reasons
  - Decommission roads that are not needed for public or administrative use or that are causing resource damage
  - Obliterate temporary roads and reclaim per soil standards

The following map shows the management areas within the Hiawatha National Forest.

Figure 4-10: Hiawatha National Forest Management Areas

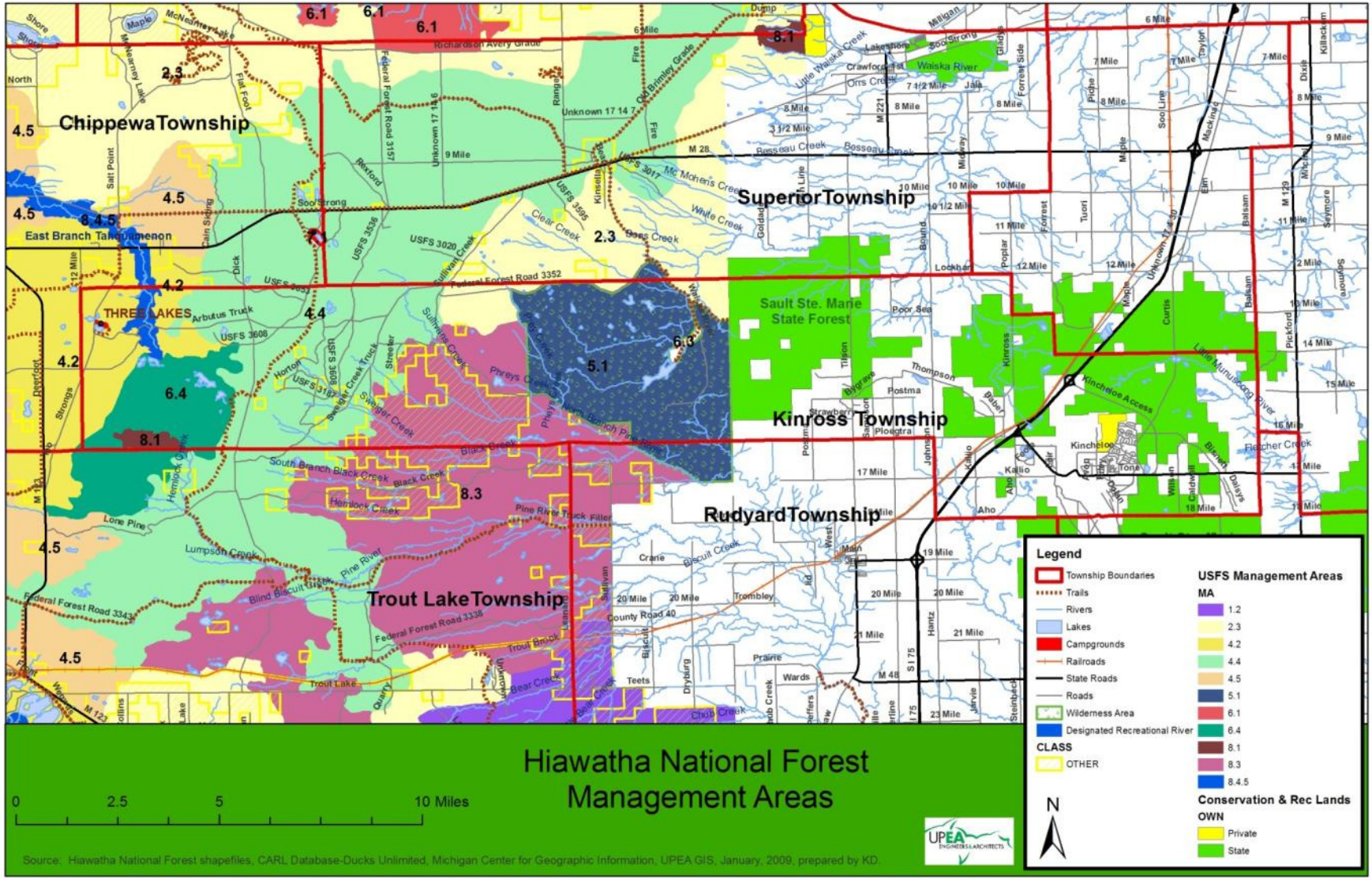


Figure 4-11: Hiawatha National Forest Management Area Summary

The following tables contain a summary of the characteristics, goals, and recreation for each management area in Kinross Charter Township.

The extreme western end of Kinross Charter Township is management area 4.2, which is mainly for timber production. It is a roaded natural recreation opportunity spectrum, with diverse recreation opportunities, including the Three Lakes Campground area. It is bisected by the East Branch Tahquamenon River, classified as a wild, scenic river with recreational designation (management area 8.4).

The next management area, 6.4, is managed for timber production, wildlife habitat, and semi-primitive, motorized recreation. It encompasses the general location of the Betchler Marsh. Nestled within this area is management area 8.1, which is an ecological preserve for research and education with no recreation. Tamaracks are featured in the Tamarack flats.

The next management area, 4.4, is

Hiawatha National Forest

Mgmt Area ID	Suited Uses		Topography		Natural Features			
	Timber Products	Goals	Description	Slope	Soils	Wetlands	Vegetation	Wildlife
2.3	Sawlogs	Timber Production	Rolling to Steep	6% to 40%	Productive sands & uplands, loamy sands, silt loams	20% of Area along streams & lowlands	Northern Hardwoods predominate (sugar maple & beech), red maple, cherry, yellow birch, basswood, white pine, hemlock	Black Bear, Black-Throated Blue Warbler, Northern Goshawk, Red-Shouldered Hawk, Wood Thrush, Veery, American Marten, Redback Salamander, Barred Owl
4.2	Conifer Timber Products	Timber Production	Gently sloping to Rolling	<15% mostly, up to 50% dunes	Dominate sands ranging from wet to very dry	26%	Mostly Red Pine, Jack Pine, Oak, Aspen, white Pine, Northern Hardwoods	Red Squirrel, American marten, Kirtland's Warbler, Pine Warbler
4.4	Conifer Timber Products	Wildlife Habitat and Timber Production Prone to fire	Nearly level to gently sloping	<5%	Dominate dry sands, low to mod productivity	15%	Mostly Jack Pine, Oak, Aspen, Paper Birch, Lowland Hardwoods, Red Pine, White Pine, Blueberries	Kirtland's Warbler, Sharp-Tailed Grouse, Upland Sandpiper, Northern Harrier, Sandhill Crane, American Kestrel, bluebird, Black-Backed Woodpecker
5.1	No-Congress-ionally Designated Wilderness "Delirium"	Remote, Undisturbed, Scientific Study, Education, Solitude, Semi-primitive non-motorized recreation	Nearly level to gently rolling	2% to 10%	Wet sands and clays	62%	Wild Woodland with a variety of species	Animal and Bird Habitat
6.3	No	Quiet, secluded forests for fish and wildlife habitat management	Rolling	5% to 30%	Dominant sandy to well-drained gravely sands or muck	31%	Hemlock, White Pine, Spruce, Tamarack, Oak, Northern Hardwoods with older, serene forests with large trees	Osprey, Bald Eagle, Loon, Black Bear, American Marten, Bobcat
6.4	Timber Products	Timber Production, Wildlife Habitat, Semit-Primitive, motorized recreation	Nearly level to gently rolling	2% to 15%	Well-drained sands and loams to poorly drained organics	64%, lies on the Betchler Marsh	Cedar, Black Spruce, Hemlock, Aspen, Red and White Pine, Lowland Hardwoods with older, dense conifer stands, old lakeshore dunes, forested wetland, lowland brush, marshes, and sedge meadows	American Marten, Otter, Mink, Muskrat, Black Bear, Raccoon, Marsh Wren, Deer, Snowshoe Hare
8.1	No	Preserve for ecological research, observation, genetic conservation, monitoring, educational.	Typically gently rolling	Range from nearly level to steep on dunes	Range well drained sand on dunes to very poorly drained organic over shallow limestone	74%	Minimal evidence of human disturbance, full diversity of native upland and lowland communities without non-native invasives. Features Tamarack in the Betchler Tamarack Flats.	Natural
8.3	Timber Products	Small scale timber production, and remote habitat	Nearly level to rolling	5% to 20%	Wet outwash sands and lake deposits	64%	Cedar, Black Spruce, Hemlock, Tamarack, White Pine, Lowland Hardwoods, Open Wetlands, Old dunes, Lowland Brush, Marshes, Sedge Meadows	Gray Wolf, American Marten, Bobcat, Black Bear, Canada Lynx in remote areas.
8.4	Designated Recreational River		Nearly level	<5%	Poorly drained sands and organics	57%	Cedar, mixed swamp conifer, mixed swamp hardwoods with some tamarack, aspen, balsam fir.	Timber wolf, Whitetailed Deer, Bobcat, Sandhill Cranes, Black Bear.

managed for conifer timber products, wildlife habitat, and is prone to fire. It is a roaded natural recreation opportunity spectrum (NROS).

Management area 8.3 is managed for small scale timber production and remote habitat, with diverse recreation opportunity. Just above this area, management area 2.3 is managed for timber production, and is in a roaded NROS.

At the eastern edge of the Hiawatha National Forest in Kinross Charter Township, management area 5.1 is a designated wilderness area called Delirium. It is managed for remote, undisturbed study, solitude, and education, with semi-primitive, non-motorized recreation. This area is designed to prevent loss of wilderness and sensitive species. Within this area is management area 6.3, also managed as a quiet, secluded forest for fish and wildlife habitat management activities. It is a semi-primitive, non-motorized recreation area.

Manage-ment Area ID	ROS*	Recreation Opportunities											
		Pleasure Driving	Campsites	Dispersed Camping	Quiet Sports	Fall Color Tour	Hunting Fishing	Trapping	Horseback Riding	Berry Picking	ORV	Snow-mobile	Closed Roads good for non-motorized recreation?
2.3	Roaded Natural	X	X	X	Skiing Hiking	X	X	X	X	X	Posted trails and roads	Groomed trails & forest roads	Yes
4.2	Roaded Natural	X	X	X	Skiing Hiking	X	X	X	X	X	Posted trails and roads	Groomed trails & forest roads	Yes
4.4	Roaded Natural			X	Skiing Hiking		X			X	Posted trails and roads	Groomed trails & forest roads	Yes
5.1	Semi-Primitive Non-motorized			Primitive	Snowshoeing Hiking Backpacking		Fishing only				No	No	Foot trails only-no motorized travel
Note:This is a Congressionaly Designated Wilderness allowing Minimal Recreation, following "Leave No Trace" and "Wilderness Awareness" practices. Environmental management practices are designed to prevent loss of wilderness. Sensitive species will be protected from activity. Visitor group sizes may be restricted for camping or travel. Campfires may be prohibited or restricted. No mechanical devices or gathering of forest products. No new utility corridors allowed. Minimal, temporary, research allowed. No roads except those accessing private lands in the Wilderness.													
6.3	Semi-Primitive Non-motorized			Primitive	Hiking Skiing Snowshoeing Kayaking		X				No	No	Revegetating old roads
Note: Trailheads should be located on the perimeter or outside the management area. Vegetation management is allowed only for resource enhancement, insect and disease treatment, and promoting old growth. Need permits to allow access to supply utilities to private land or recreational facilities. Natl Forest land not available for exchange. No motorized use and roads will be decommissioned.													
6.4	Semi-Primitive Motorized				Hiking Skiing		X				Posted trails and roads	Groomed trails & forest roads	Yes
Note: Vegetation management for timber production. Recreation facilities constructed to meet levels 1 (primitive) and 2 (semi-primitive). Permits may be allowed for access to supply utilities to private land, recreational facilities, or administrative sites.													
8.1	None										No	No	Roads closed
Note: New or expanded recreation use conflicting with objectives is prohibited. Motorized use prohibited. No vegetative management. No special use permits for utilities. No common mineral permits that disturb the surface. Decommission and obliterate roads.													
8.3	Diverse				Hiking		X			X			Some
Note: Recreation facilities only for safety or resource protection. Maximum size of temporary openings only 25 acres.													
8.4	Diverse		Designated	X	Accommo-date canoe passage.		X	X		X	Desginated routes and forest roads	Desginated routes and forest roads	
*ROS is Recreation Opportunity Spectrum													
Note: Vegetation to help maintain river's water temperature to preserve brook trout. Encourage nesting birds. Remove beaver dams. Enhance river resources, free flow, and visual quality. No new motorized trails or permanent river crossings. Develop parking, signing, and improved access to the river and interpretive education, info, and signage. Maximum size of temporary openings only 25 acres. Encourage underground utilities and allow new or expanded only if no other feasible alternatives and require vegetation management plan. Make maximum use of existing right-of-ways. Managed or prohibited mineral pits. Try to buy more land around the rivers, not to exceed an average of 100 acres per river mile. Trying to get easements from private landowners for river access at M-123 (Eckerman Road) and H83. No land within the river corridor for landfills or waste disposal, make sure all septic systems meet permit and local code regulations. Remove roads where resource damage occurs or it's not necessary. Minimize number of signs.												

Built Environment

Airport Land Use Considerations

The Chippewa County International Airport is owned by the Chippewa County Economic Development Corporation (CCEDC), and is situated on 851 acres of land. A new 20,400 square foot terminal building was built in 2002, and the airport has a number of aircraft storage and maintenance hangars on the property. CIU has two runways, one with grooved concrete surface, and one with grooved asphalt surface. Primary Runway 16/34 is 7,201 feet long and 200 feet wide. Crosswind Runway 9/27 is 5,000 feet long by 75 feet wide.

The airport is identified at night by a rotating beacon which is located approximately 2,400 feet southeast of the runway intersection. Runway edge lighting is used to outline runways during periods of darkness and/or restricted visibility. At CIU, one runway has high intensity runway lights while the other has medium intensity runway lights. Aircraft fueling facilities include two underground storage tanks, and fuel is dispensed by fuel trucks. There are also two 2,000 gallon tanks providing diesel fuel and gasoline for airport maintenance use.

A study was commissioned by Chippewa County International Airport (CIU) and completed in November 2006 for potential development of a Polar Air Cargo Facility and/or a General Aviation Terminal Facility. The full study is available at the Township Offices for review. In general it was determined that a Polar Air Cargo Facility was not a viable development option to pursue at present due to small population base, substantial investment needed, and distance from major markets. The study did suggest expansions of the general aviation services as a possible future growth area.

CIU completed an Airport Master Plan in January 2007, focusing on future development. The study suggests that CIU could expect passenger enplanements and commercial operations to nearly double what they were in 2004, with cargo tonnage more than doubling. Based aircraft are also expected to increase. This would necessitate increases in length of at least two runways, but would not require land purchases. However, it is possible that expansions would cause changes in the safety and airspace obstructions area, and might impact the correctional facility to the east. Other potential impacts include wetlands and wildlife habitat for federally threatened bald eagles and gray wolf populations. Airport traffic is low enough that noise and light impacts are not substantial.

Various methods were used to forecast level of demand, including trend line analysis, growth rate analysis, market share ratio, and correlation analysis (based on historical population and per capita income). None of these methods factored in the effect of oil prices and the potential impact on aviation fuel and service costs. Many airlines are already operating on marginal profits, and a dramatic increase in oil prices would have a detrimental impact on profits through increased operating costs. In this case, area income levels and business profits may not be flexible enough to absorb increases in ticket prices to cover increased fuel prices, and demand may decrease.

Runway protections zones, (RPZ) have been established to preclude obstructions potentially hazardous to aircraft and to control building construction as a protection from aircraft nuisance and hazards to people on the ground. RPZs are to be kept free of structures and development that would create a public place of assembly. If these RPZs are not owned by the aviation facility, aviation easements are recommended to control height and land use issues. Kinross Charter Township has a defined Aviation District to prevent incompatible land uses on or near airport property. Permitted uses must be connected to CIU, such as terminals, storage, fuel, and hangar facilities. Special permitting is needed for any other uses.

The FAA has defined Runway Object Free Areas (OFAs) and Runway Safety Areas (RSAs). Dimensions are determined by several criteria. Runway 16/34 meets a precision approach standard, and Runway 9/27 meets a visual approach standard.

The OFA is a two-dimensional ground area centered on the runway. Essentially, any above-ground objects are prohibited in this area. Runways 16/34 meets FAA requirements for OFA widths of 800 feet centered on the runway centerline and OFA lengths of 1,000 feet beyond runway end. The OFA for Runway 9/27 meets the FAA requirements of 300 feet in length and 500 feet in width centered on the runway centerline beyond the runway end.

The RSA is a critical area surrounding the runway that provides an area for aircraft to come to rest in the event of an excursion from the runway surface. The RSA must be cleared, graded and free of potential hazardous surface variations and be properly drained. It must be capable of supporting snow removal equipment, aircraft rescue and firefighting equipment, and aircraft, and it must be free of objects except those mounted on low-impact resistant supports whose location is fixed by function. The RSA for Runway 16/34 is 500 feet wide, centered on the centerline, and extends 1,000 feet beyond each runway end. The RSA for Runway 9/27 is 300 feet in length and 150 feet wide.

The CIU Obstruction Chart, compiled by the National Oceanic and Atmospheric Administration, showed no penetrations of the Airport Obstruction Identification Surfaces.

The 2007 Chippewa County International Airport Master Plan states that the current airfield layout will not require the construction of additional runways through the 20-year planning period. However, it was recommended that the Airport maintain and protect land and airspace for the addition of various aircraft types in the future, including those for a long-distance (polar) cargo route, a United States Homeland Security facility, and/or an Airbus maintenance facility.

It was suggested that the decommissioned portion of Runway 16/34 be reinstated to a length of either 9,000 feet or 12,001 feet to increase economic potential for larger aircraft. It was also suggested that Runway 9/27 be extended from 5,000 feet to 7,200 feet, and widened from 75 feet to 200 feet, but challenges include deficiencies in pavement strength, the necessity of potential wetland mitigation, need for substantial fill material, negative habitat impact, and potential negative impacts to the correctional facility. Lengthening would require

additional study of airspace obstructions. The best alternative was considered to be an extension of 150 feet on each runway end to avoid as many negative impacts as possible. Additionally, lengthening of Runway 16/34 could potentially impact bald eagle and gray wolf habitat near the southern airport perimeter, requiring a survey of nesting activities. Any airport activity taking place within ¼ mile of a nesting area for bald eagles must be limited to occur between June 11 and January 9 to avoid nesting season.

An additional access point was suggested for cargo shipments and large aircraft maintenance on the north end of the airfield. The north area was also identified as the best option for further development. During an environmental clearance process, the impacts of construction would have to be evaluated in accordance with the Clean Air Act Amendments of 1990 and the Clean Water Act of 1977. No historic, archaeological, and cultural resources are anticipated to be impacted by expansion plans, but the State Historic Preservation Office must be consulted in the environmental documentation process. CIU is not located within a floodplain or coastal zone management area. No significant light emissions impacts are anticipated.

It is not recommended that further density of residential or institutional uses be developed within the Township Aviation zoning district.

The following map illustrates the airport restriction zones within Kinross Charter Township. The charts of the following pages describe Land Use Guidelines and Planning Strategies for the various Runway Safety areas. The Visual and Precision Approach charts should be utilized for detailed decisions regarding RPZ, RSA, OFZ, and OFA measurements in site plan review or zoning decisions. The other maps include approximate airport zone overlays onto the future land use map for Kinross Charter Township. These maps should be utilized for general planning use only, and not zoning use as measurements are not precise.

The main concerns currently in relation to the airport restriction zones include the Straits and Chippewa Correctional Facilities located along M-80, and the residential areas located between the Fairgrounds and M-80, including mobile homes along M-80. These uses lie within restriction area #3, in which land uses recommendations include those that are relatively unoccupied by people, and that do not concentrate population indoors or outdoors. A density of 0-5 people per acre is recommended. For residential uses, mobile home parks are prohibited. Special function land uses such as schools, churches, day care facilities, hospitals, and nursing homes are also prohibited. Correctional facilities that house residents who are restricted in movement, are not especially mentioned, however would seem an "at risk" population because of the density of population and restricted mobility. Further development of the airport would require attention to this matter, and care should be taken not to exacerbate unfavorable land uses and conditions within these restricted zones.

Figure 4-12: Airport Restriction Zones

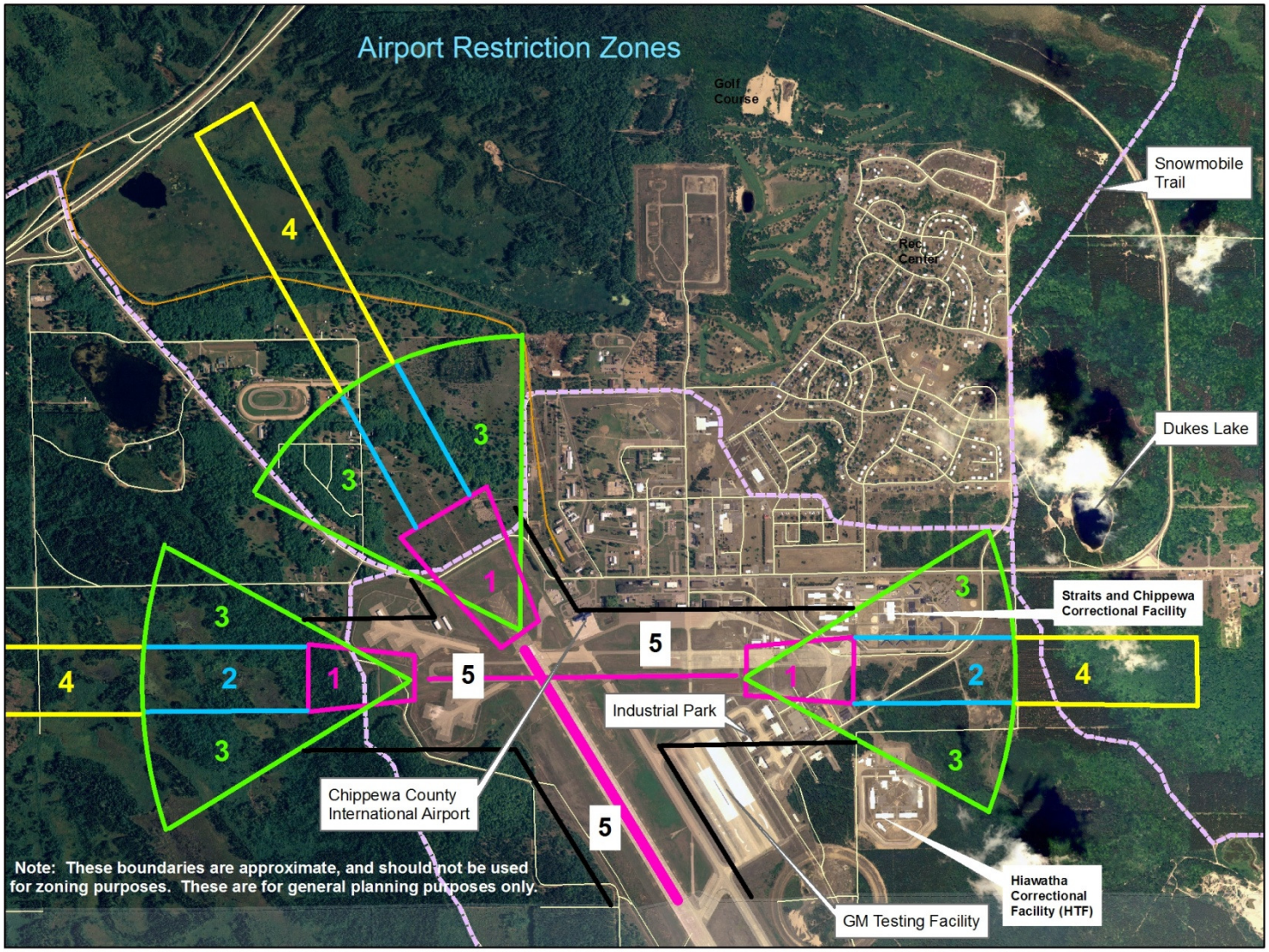


Figure 4-13: Compatible Land Use Matrix, Aviation District, Zone 1

Accident Safety Zones, Land Use Guidelines and Planning Strategies for New Development			
Accident Safety Zone	**Land Use Characteristics**	**Land Use Guidelines**	**Land Use Planning Strategies**
Zone 1	Population Density	Avoid land uses which concentrate people indoors or outdoors	1. 0 - 5 people/acre
			2. Airport sponsor should purchase property if possible.
			3. Zone land uses, which by their nature will be relatively unoccupied by people (i.e. mini-storage, small parking lots)
	Residential vs. Non-Residential Land Use	Prohibit all residential land uses. All non-residential land uses permitted outright subject to the Population Density and Special Function Land Use guidelines.	1. Create a height hazard overlay ordinance around the airport.
			2. Airport sponsor should purchase property if possible.
			3. Airport sponsor should obtain avigation and obstruction easements.
			4. During the site development process, shift all structures away from the runway centerlines if possible.
			5. Landscaping requirements shall establish only low growing vegetation.
			6. Prohibit high overhead outdoor lighting.
			7. Require downward shading of lighting to reduce glare.
			8. Evaluate all possible permitted conditional uses to assure compatible land use.
	Special Function Land Use	Prohibit all Special Function Land Uses	1. Prohibit overhead utilities and all noise sensitive land uses.
			2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities, and churches.
			3. Limit storage of large quantities of hazardous or flammable material.
			4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.
Note: Since the dimensions of Zone 1 correspond to the dimensions of the Runway Protection Zone (RPZ), those airports receiving federal grant dollars from the FAA's Airport Improvement Program should strongly consider purchasing the RPZ or otherwise acquire rights to the property for the RPZ.			

Figure 4-14: Compatible Land Use Matrix, Aviation District, Zone 2

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Accident Safety Zones, Land Use Guidelines and Planning Strategies for New Development			
Accident Safety Zone	**Land Use Characteristics**	**Land Use Guidelines**	**Land Use Planning Strategies**
Zone 2	Population Density	Avoid land uses which concentrate people indoors or outdoors	1. 0 - 5 people/acre
			2. Zone land uses, which by their nature will be relatively unoccupied by people (i.e. mini-storage, small parking lots)
	Residential vs. Non-Residential Land Use	Prohibit all residential land uses. All non-residential land uses permitted outright subject to the Population Density and Special Function Land Use guidelines.	1. Create a height hazard overlay ordinance around the airport.
			2. Prohibit mobile home parks.
			3. Obtain avigation and obstruction easements.
			4. During the site development process, shift all structures away from the runway centerlines if possible.
			5. Landscaping requirements shall establish only low growing vegetation.
			6. Prohibit high overhead outdoor lighting.
			7. Require downward shading of lighting to reduce glare.
			8. Evaluate all possible permitted conditional uses to assure compatible land use.
	Special Function Land Use	Prohibit all Special Function Land Uses	1. Prohibit overhead utilities and all noise sensitive land uses.
			2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities, and churches.
			3. Limit storage of large quantities of hazardous or flammable material.
			4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.

Figure 4-15: Compatible Land Use Matrix, Aviation District, Zone 3

Accident Safety Zones, Land Use Guidelines and Planning Strategies for New Development			
Accident Safety Zone	**Land Use Characteristics**	**Land Use Guidelines**	**Land Use Planning Strategies**
Zone 3	Population Density	Avoid land uses which concentrate people indoors or outdoors	1. 0 - 5 people/acre
			2. Zone land uses, which by their nature will be relatively unoccupied by people (i.e. mini-storage, small parking lots)
	Residential vs. Non-Residential Land Use	Limit residential development to Low Density housing standards. All non-residential land uses permitted outright subject to the Special Function Land Use guidelines.	1. Create a height hazard overlay ordinance around the airport.
			2. Prohibit mobile home parks.
			3. Obtain avigation and obstruction easements.
			4. During the site development process, shift all structures away from the runway centerlines if possible.
			5. Landscaping requirements shall establish only low growing vegetation.
			6. Prohibit high overhead outdoor lighting.
			7. Require downward shading of lighting to reduce glare.
			8. Evaluate all possible permitted conditional uses to assure compatible land use.
	Special Function Land Use	Prohibit all Special Function Land Uses	1. Prohibit overhead utilities and all noise sensitive land uses.
			2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities, and churches.
			3. Limit storage of large quantities of hazardous or flammable material.
			4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.

Figure 4-16: Compatible Land Use Matrix, Aviation District, Zone 4

Accident Safety Zones, Land Use Guidelines and Planning Strategies for New Development			
Accident Safety Zone	**Land Use Characteristics**	**Land Use Guidelines**	**Land Use Planning Strategies**
Zone 4	Population Density	Limit population concentrations.	1. Less than 40 people/acre in buildings, less than 75 people/acre outside buildings.
	Residential vs. Non-Residential Land Use	Limit residential development to Low Density housing standards. All non-residential land uses permitted outright subject to the Special	1. Create a height hazard overlay ordinance around the airport.
			2. Prohibit mobile home parks.
			3. Obtain avigation easements.
			4. Clustered development to maintain density as long as open space remains unbuilt. Place clustered development away from extended runway centerline.
			5. Require downward shading of lighting to reduce glare.
			6. Evaluate all possible permitted conditional uses to assure compatible land use.
	Special Function Land Use	Prohibit all Special Function Land Uses	1. Prohibit high overhead utilities and all noise sensitive land uses.
			2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities, and churches.
			3. Limit storage of large quantities of hazardous or flammable material.
			4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.
			5. Evaluate noise sensitive land uses in light of aircraft noise contour lines (if available) when establishing new zoning.

Figure 4-17: Compatible Land Use Matrix, Aviation District, Zone 5

Accident Safety Zones, Land Use Guidelines and Planning Strategies for New Development			
Accident Safety Zone	**Land Use Characteristics**	**Land Use Guidelines**	**Land Use Planning Strategies**
Zone 5	Population Density	Avoid land uses which concentrate people indoors or outdoors	1. 0 - 5 people/acre
			2. Zone land uses, which by their nature will be relatively unoccupied by people (i.e. mini-storage, small parking lots)
	Residential vs. Non-Residential Land Use	Prohibit all residential land uses. All non-residential land uses permitted outright subject to the Population Density and Special Function Land Use guidelines.	1. Create a height hazard overlay ordinance around the airport.
			2. Airport sponsor should purchase property if possible.
			3. Obtain avigation and obstruction easements.
			4. During the site development process, shift all structures away from the runway centerlines if possible.
			5. Landscaping requirements shall establish only low growing vegetation.
			6. Prohibit high overhead outdoor lighting.
			7. Require downward shading of lighting to reduce glare.
			8. Evaluate all possible permitted conditional uses to assure compatible land use.
	Special Function Land Use	Prohibit all Special Function Land Uses	1. Prohibit overhead utilities and all noise sensitive land uses.
			2. Zone land for uses other than for schools, play fields, hospitals, nursing homes, daycare facilities, and churches.
			3. Limit storage of large quantities of hazardous or flammable material.
			4. Ensure permitted uses will not create large areas of standing water, or generate smoke/steam, etc.

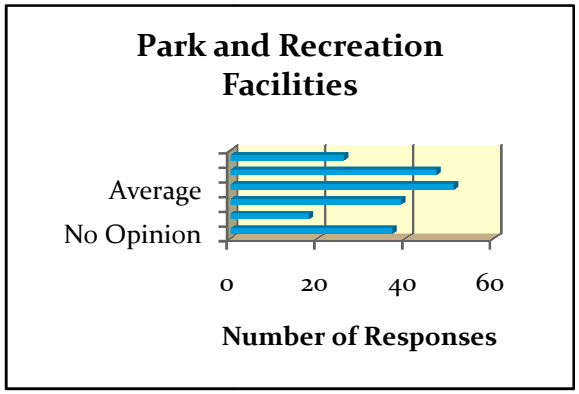
Chapter 5: Community Visioning

Public Participation Process

The Planning Commission began efforts to secure community input in 2005, utilizing a self-administered Master Plan survey. Community input was also compiled at a public open house held May 14, 2008, and through several meetings with the Planning Commission.

2005 Master Plan Survey Results

According to the Kinross Charter Township Planning Commission, 1,449 surveys were distributed, and 255 surveys were returned, representing a response rate of 17.6%. See copy of survey and summary of written comments in Appendix F. Community input for specific facilities was summarized in Chapter 2, Infrastructure, Civic and Recreational Facilities. The survey was designed to evaluate services, facilities, and perceptions of development issues in order to best serve the needs and desires of the community.
Section I consists of a Township Report Card which rates level of satisfaction with various services, departments, and programs. Respondents were asked to choose of level of satisfaction on a five point scale from "poor" to "average" to "very good". Responses were weighted on a five point scale, with "poor" receiving one point, "Below Average" two points, "average" three points, and "Good" four points, and "very good" five points. Overall total weighted scores ranged from a low of 417 to a high of 813. See Figure 5-1, "Township Report Card" on the next page.



The chart at right illustrates responses for level of satisfaction for "Park and Recreation Facilities". Most respondents rated the facilities "average", with total weighted count of 567. The chart below illustrates responses for level of satisfaction for "Recreation Programs", and again, most respondents answered "average" for a total weighted count of 637. "Township Office staff" received the highest weighted score of 813, with the "Fire Department" and "Ambulance Service" also receiving scores over 800. Items receiving total weighted count scores in the 700's are "Household Garbage Pick-Up", "Citizen Information (Newsletters)", "Water Billing", "Water Service", "Township Department of Public Works Staff", "Recycling Drop-Off", and "Police Department". "Overall Satisfaction with the Township Government" scored 696 weighted points.

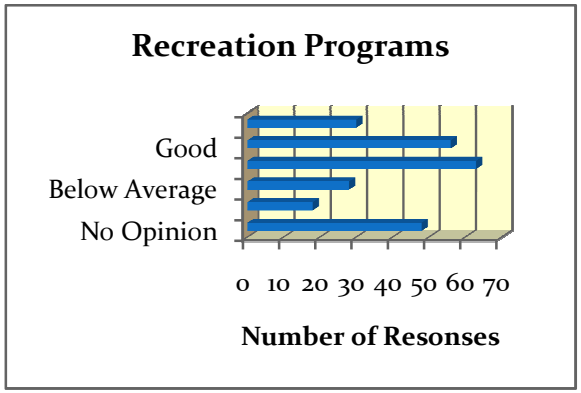
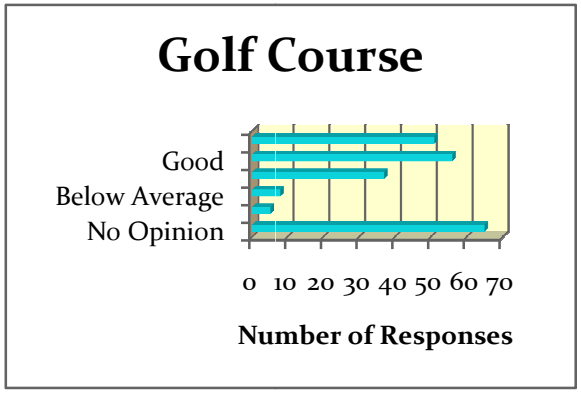


Figure 5-1: Township Report Card

	Level of Satisfaction										
	Very Good		Good		Average		Below Average		Poor		Total
	Actual Count	Weighted Count-5	Actual Count	Weighted Count-4	Actual Count	Weighted Count-3	Actual Count	Weighted Count-2	Actual Count	Weighted Count-1	**Weighted Count**
Township Office Staff	61	305	90	360	40	120	11	22	6	6	**813**
Fire Department	73	365	86	344	29	87	6	12	2	2	**810**
Ambulance Service	76	380	84	336	23	69	9	18	6	6	**809**
Household Garbage Pick-Up	86	430	66	264	25	75	10	20	5	5	**794**
Citizen Info (Newsletters)	42	210	78	312	60	180	30	60	18	18	**780**
Water Billing	63	315	76	304	45	135	4	8	7	7	**769**
Water Service	69	345	79	316	27	81	3	6	2	2	**750**
Township DPW Staff	48	240	90	360	40	120	13	26	3	3	**749**
Recycling Drop-Off	51	255	80	320	41	123	10	20	6	6	**724**
Police Department	43	215	72	288	47	141	24	48	25	25	**717**
Overall Satisfaction with Township Government	19	95	77	308	71	213	27	54	26	26	**696**
Sewer and Drains	40	200	63	252	55	165	24	48	10	10	**675**
Clerk's Office	38	190	72	288	48	144	10	20	14	14	**656**
Rec Center Staff	42	210	62	248	48	144	17	34	11	11	**647**
Recreation Programs	30	150	56	224	63	189	28	56	18	18	**637**
Treasury's Office	38	190	61	244	52	156	10	20	11	11	**621**
Snowmobile Trail Grooming Program	43	215	71	284	30	90	11	22	4	4	**615**
Golf Course	51	255	56	224	37	111	8	16	5	5	**611**
Assessor's Office	29	145	51	204	56	168	18	36	18	18	**571**
Park and Recreation Facilities	26	130	47	188	51	153	39	78	18	18	**567**
Supervisor's Office	36	180	44	176	37	111	24	48	44	44	**559**
Planning Commission	15	75	46	184	60	180	19	38	16	16	**493**
Township Board	17	85	32	128	57	171	28	56	37	37	**477**
Board of Review	14	70	45	180	54	162	22	44	10	10	**466**
Zoning Board of Appeals	14	70	35	140	54	162	15	30	15	15	**417**

As shown in the chart at right, of the people who rated the Golf Course, by far the most responses were average or above, but most respondents did not have an opinion on the golf course, perhaps reflecting lack of familiarity with the facility.



In Section II, respondents were asked to rate various issues as being "major issues", "minor issues", or "not an issue". The issues rated as "major" by a majority of respondents are as follows:

- Appearance of your neighborhood—64%
- Deteriorating buildings—59%
- General appearance of community—57%
- Speeding on streets—55%
- Areas for new business—55%
- Abandoned or junk cars—55%
- Crime—52%
- Enforcement of ordinances—51%

The issues rated as "minor" by a majority of respondents are as follows:

- Traffic—50%

Items which were perceived by a majority to be "not an issue" are:

- Housing availability for purchase—55%
- Housing availability for rent—57%
- Areas for new housing development—51%

All other issues were divided more evenly between available responses. In order to rank the issues in order of overall perceived importance, the number of responses classifying each issue as either "major" or "minor" issues were compared (but not counting those who had "no opinion" or said it was "not an issue"). Issues rated as "major" were counted as two points, and those rated as "minor" were counted as one point. In this case, top ten ranking issues (by weighted count) are:

1. Deteriorating buildings
2. Speeding on streets
3. Abandoned or junk cars
4. General appearance of community
5. Appearance of your neighborhood
6. Areas for new business
7. Enforcement of ordinances
8. Overgrown vacant lots

9. Crime
10. Protection of selected woodlands and forests

Figure 5-2: Current and Future Issues	Minor Issue-- Weight 1		Major issue-- Weight 2		Total Weighted Count
	Actual Count	Weighted Count	Actual Count	Weighted Count	
Deteriorating buildings	75	75	140	280	**355**
Speeding on streets	82	82	135	270	**352**
Abandoned or junk cars	81	81	129	258	**339**
General appearance of community	68	68	135	270	**338**
Appearance of your neighborhood	49	49	138	276	**325**
Areas for new business	67	67	128	256	**323**
Enforcement of ordinances	75	75	114	228	**303**
Overgrown vacant lots	96	96	97	194	**290**
Crime	76	76	99	198	**274**
Protection of selected woodlands and forests	66	66	99	198	**264**
Limiting the location of industrial development	94	94	72	144	**238**
Difficult neighbors	88	88	65	130	**218**
Limiting new commercial development to selected areas	73	73	72	144	**217**
Overhead utility lines	96	96	53	106	**202**
Limiting development in residential areas	93	93	50	100	**193**
Limiting development along the M-80 corridor	74	74	57	114	**188**
Expansion of water and sewer services	65	65	59	118	**183**
Traffic	104	104	35	70	**174**
Increasing lot sizes requirements for building	71	71	37	74	**145**
Areas for new housing development	61	61	36	72	**133**
Housing availability for purchase	72	72	26	52	**124**
Housing availability for rent	66	66	23	46	**112**

Next respondents were asked to rank their level of support for various issues or programs. Answer choices included, "Strongly Support", "Support", "Oppose", "Strongly Oppose", and "No Opinion". In the following weighted analysis, the responses were weighted by a factor of four (Strongly Support), down to a level of one (Strongly Oppose) in order to reflect level of support. The figures on the next page illustrate the results by issue. The issues or programs that were most strongly supported (and least opposed) include more commercial

development, more industrial development, recycling programs, kids fishing day, beautification development, more tourism development, and development of the two beaches. Clearly, these results show a community that believes in the value of development!

Figure 5-3: Ranking of issues by level of support	Strongly Support--Weight 4		Support-- Weight 3		Oppose--Weight 2		Strongly Oppose--Weight 1		Total Support Points	
	Actual Count	Weighted Count	Actual Count	Weighted Count	Actual Count	Weighted Count	Actual Count	Weighted Count	Actual Count	Weighted Count
More Commercial Development	136	544	87	261	9	18	2	2	234	**825**
More Industrial Development	125	500	88	264	11	22	2	2	226	**788**
Recycling Programs	87	348	122	366	12	24	13	13	234	**751**
Kids Fishing Day	109	436	94	282	10	20	3	3	216	**741**
Beautification Development	85	340	122	366	9	18	6	6	222	**730**
More Tourism Development	82	328	109	327	33	66	6	6	230	**727**
Development of Dukes Lake Beach	91	364	84	252	21	42	8	8	204	**666**
Development of Kinross Lake Beach	89	356	79	237	29	58	9	9	206	**660**
The "4th of July" fireworks	85	340	83	249	22	44	6	6	196	**639**
Heritage Days	56	224	113	339	15	30	6	6	190	**599**
Snowmobile Trail System	60	240	95	285	27	54	12	12	194	**591**
Historical Development	49	196	113	339	22	44	10	10	194	**589**
Improvement of Golf Course	53	212	66	198	49	98	21	21	189	**529**

The next question was, "What do you think of the enforcement of Township ordinances?" Ordinances with a clear majority indicating that enforcement was perceived "Lacking" were animal control, juvenile curfew, nuisances (junk cars, noise, etc), deteriorating buildings, and noxious weed control. Ordinances with a clear majority indicating that enforcement was perceived "Adequate" were building code, zoning code, rental housing, and commercial sign/billboard ordinances. Fifty-one percent of respondents thought enforcement of traffic/speeding ordinances was adequate, while 43% thought enforcement was lacking. Similarly, respondents were almost equally split between the perception that "snowmobile use in housing area" ordinances were either adequately enforced or lacking in enforcement. Very few respondents perceived that enforcement was "too strict" (not more than 16 people for any ordinance).

Respondents were next asked to rate their satisfaction with area businesses as either "Very good", "Good", "Average", "Below average",

"Poor", or "no opinion". For purposes of simplification, we counted responses of "Very good" or "Good" to indicate a positive response, and "Below average" or "poor" to indicate a negative response, but did not weight the various responses. An overwhelming majority rated "health services" (69%), "grocery and/or hardware shopping" (73%), and "shopping hours" (69%) as good or very good. Forty-nine percent (49%) rated "eating places" as either below average or poor, and 44% negatively rated "variety of goods available". Most people rated "price of goods" as average, and "customer service" and "gas station/convenience stores" as either positive or average. Responses for satisfaction with "bars/restaurants" and "quality of goods available" were evenly spread between positive, average, and negative choices.

Respondents were then asked to comment on composting activities. A majority said they had dropped off yard waste at the compost site, but most had not picked up finished compost or wood chips or started their own backyard composting pile.

Figure 5-4: Level of support for various land use issues	**Support**	**Support %**	**Oppose**	**Oppose %**
1. Preservation of the rural character of Kinross Charter Township (KCT)	154	**81%**	36	**19%**
2. KCT should control the land type uses that are not compatible with existing uses in that area	148	**73%**	54	**27%**
3. KCT should limit the types of development along the M-80 corridor	111	**56%**	88	**44%**
4. KCT should limit the location of adult businesses in the community	163	**77%**	49	**23%**
5. KCT should limit the subdivision of farmland in selected Township areas	91	**50%**	90	**50%**
6. KCt should limit the location of any new industrial development	121	**57%**	91	**43%**
7. KCT should limit the location of any new commercial development	112	**54%**	97	**46%**
8. KCT should limit the types of development permitted in areas with concentrations of residential properties to "residentially compatible" uses	169	**80%**	43	**20%**

The next question was "How do you feel about the following future land uses?" Response choices were "strongly support", "support", "oppose", "strongly oppose", and "no opinion". Again, we combined responses for the two supporting choices for a positive result, and combined the two opposing choices for a negative result for simplification. The results are shown in the figure above. In general, respondents showed a strong level of support for preservation of the rural character of the township, controlling incompatible land uses, limiting the location of adult businesses in the community, and limiting land uses in residential areas. Responses were evenly split between support and opposition for limiting the subdivision of farmland in selected township areas. All other issues indicated a small majority of support over the opposition, including limiting type of development on M-80 and limiting location of commercial and industrial

development.

2008 Public Open House

2008 Public Open House

The May public input session was conducted as an open house complete with food and drink. Participants viewed maps showing various aspects relating to land use such as soil types and wetlands, and reviewed "idea stations" presenting various issues such as economic development, placemaking, and sustainable communities. A presentation on background trends and conditions was presented, and participants were asked to give short, spontaneous answers to questions relating to these topics throughout the presentation to generate discussion. A group discussion followed in which participants offered perceptions of township strengths, challenges, and needs. Finally, participants grouped around maps and were asked to envision land use changes and new connections.

2002 Community Award for Best Tasting Water in Michigan

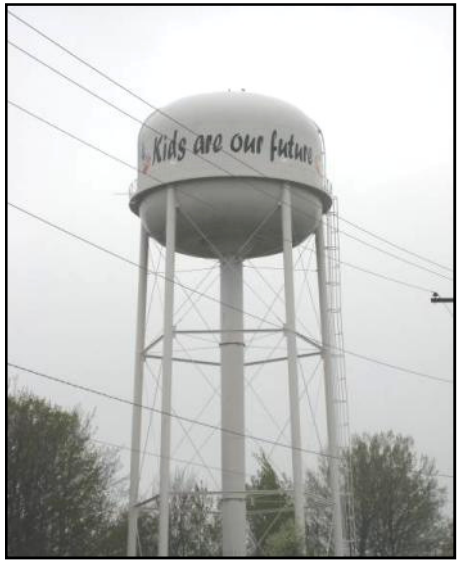
Participants listed strengths as "best tasting water", recreation center (offering daily exercise, meeting space, and computers), race track and fairgrounds (regional draw), good campgrounds, airport, golf course, swimming at Duke's Lake, and well built, affordable housing. In further discussions throughout the evening, participants also mentioned the snowmobile trail system, medical facility, grocery store, gas station, two hardware stores, forest land/hunting opportunities, and water and sewer system as assets. Neighborhoods were valued as being quiet with low traffic and quality housing. It was mentioned that many of the duplexes are owner occupied, providing a close oversight of rental units. The prison employment base was appreciated. Another asset mentioned was the availability of industrial and commercial property, much of which is owned by the township.

Perceived challenges include ordinance enforcement, underutilization of the Quonset buildings and lakes, and problems with property maintenance, especially rental properties, negatively impacting visible community pride.

Population issues include poverty related issues, the transient nature of the population associated with prisoner families, difficulty engaging and watching youth, lack of volunteers, and parents dropping off kids but not becoming involved.

The closed R. J. Wallace Elementary School in Kincheloe.

There were perceived problems with the pickup points and schedule of public transit, problems with the road system (community set up around auto transportation), and an issue of kids walking on the streets in the winter time (because there are no plowed trails from residential areas to the recreation center and other community locations). Kids also have to walk on the streets in the winter to meet buses.



A proud reminder of the value placed on youth in the Kincheloe community.

Residents were concerned with the "Rudyard separation" relating to the closing of the school in Kincheloe and transfer of the children to the Rudyard schools. Perceived disadvantages include the loss of this activity center, and an increase in the difficulty of parents to be involved from a distance. The community harbors hopes that the school may reopen in the future.

Residents perceive there is a need to clean and spiff up the Recreation Center and add youth programs (including summer programs and organized sports). They would like to have community trails, a bowling alley, ice skating/hockey facilities, a multi-use youth building, and campground at Duke's Lake. They recognize the need to empower parents, a volunteer base, program task force, and young leaders. There is a need for pedestrian pathways to facilitate access from the neighborhoods to downtown, and there is support for the idea of opening small stores close to the residential neighborhoods. Finally, participants expressed a need for one and two bedroom apartments within the community.

Participants discussed the pros and cons of having the prisons in the community. Positive factors include local, well paying jobs, addition of new families to the community, and retirees staying in the community. The prisons position Kincheloe as a regional employment destination.

Negative factors include the high visibility of the facilities near the neighborhoods, transient prisoner family population, and culture clash between long-time residents and prisoner families. For example, there seems to be a differing level of community pride and respect between the two populations.

> ***The people of Kinross Township need to cooperate and work together and develop a sense of community.***
> Resident comment at public workshop

In trying to discover a community vision, participants were asked to complete the sentence, "The people of Kinross Township . . ." Several people responded that people need to become more involved and become informed about Township issues. Others perceived that people are energetic, eager to work, and do care for the community. People were described as "generally happy", "friendly", "laidback and helpful", and "mostly loud and young". It was mentioned that the people are diverse in culture and economics, and very politically minded. One person said that the people "take pride in their 'close-knit'ness'".

> ***The center of my community is undefined.***
> Resident comment at public workshop

Several people mentioned that there is no feeling of community among the people, and that people need to concentrate on Kinross as their home and development neighborhood spirit. Related comments include suggestions for a central gathering point of planned "adult" activity, more activities for youth, and more family activity offerings close to home.

It was suggested that people need to promote the area more, and concentrate on supporting industry. A couple of negative comments include "people are losers" and "people do not want any more people moving here". One person suggested that tax dollars are not being used wisely.

> ***There is no clear downtown—not favorable to centralized shopping, tourism, and/or pedestrians.***
> Resident comment at public workshop

Various place based responses to "The center of my community is . . ." include "my house", "the grocery store", "Recreation Center and Township Hall", "my block", "the public schools", "community park", "housing", "downtown Kincheloe or Kinross", and "the prison area" (job base).

One participant defined the center of the community by activity, including church, family, and township activities. Others used the question as an opportunity to describe the community center, saying that it is "boring", and "not visually appealing". People suggested that more business and shopping in the area, such as the addition of a "fast food chain", but not a "pizza joint", would help add vitality to the center.

When asked about their economic situation, most participants were generally optimistic about their future, and about half that number were worried or concerned about the future, with a few worried about paying the bills currently. When asked what it would take to help them feel better about their economic situation, respondents answered:

- More jobs, higher pay
- Keep jobs in our country (3 responses)
- More money
- Better fuel prices (2 responses)
- Lower the price of gas 50%
- Being assured that our economy will go up
- For milk and gas prices to be lowered
- Population growth
- More civic pride
- More security at certain places
- The economy is very hard and more family and fun things should be done
- More activities here
- New national leadership
- No war
- Enticement of new businesses into area to include manufacturing (2 responses)
- Develop plans to utilize our open properties – offer incentives to attract and keep those businesses

Participants were asked how they feel about their employment situation. Wages were described as alternately "below average", "fair", "adequate but not keeping pace with cost of living". Some expressed the wish for higher wages and more benefits, and others countered by saying that the cost of living is lower in the Upper Peninsula.

There were several retirees in the group, and at least two unemployed persons. One of these said that they lost their job because of rising fuel prices, maybe the first in a new trend. One person felt that working for the tribe is very unsecure. Another said that many jobs are seasonal in nature.

Responses to estimated distance to work ranged from 1-3 miles, 20-25 miles, and even up to 62 miles. Estimated distance traveled in running errands ranged from one (1) to 25 miles. Most responses for distance to entertainment were around 20 to 25 miles, with other responses varying from 1 to 30 miles. One person said they travel 300 miles for entertainment. Most people indicated that Sault Ste. Marie was their destination for shopping, recreation, and entertainment.

Finally, participants were asked to finish the sentence, "Housing in Kinross Township is generally . . ." Responses include:

- Good price for amount of sq. ft.
- Adequate in number of units/lacking pride and interest in appearance (junk vehicles, rundown, lack of repair and maintenance)
- Good (2 responses)
- Available and reasonable
- In good shape structure-wise
- Not well-maintained
- Need changes to ordinances
- Poorly maintained but adequate in supply
- Lacking the beauty of the area – not up to par
- Below standards but overall ok
- Too much junk in yards
- Zoning not enforced
- Just fine
- Storm sewers need to be addressed
- Viewed as low income however there is much available
- Fair but gangs are bad!
- Eye sore
- Same all over
- Adequate but would benefit from beautification plan and pride in homes and yards
- Some owners should take a little more care with upkeep and take more pride in appearances. However, we do currently have adequate housing available.
- Affordable and of sufficient square footage
- Above average and available
- Better built and more affordable than elsewhere

Summary of Community Challenges

In general, residents of Kinross Charter Township value the rural character of the township, and feel development should proceed according to carefully considered standards assuring compatibility. There are concerns that land splits will lead to sprawl and difficulty in service provision.

The Kincheloe area is challenged by issues of identity and aesthetics while historically being dominated by distinctive uses; first the Airforce Base, then the correctional system. The commercial core lacks cohesiveness and a sense of place, and the security concerns of the Correctional Facilities can be daunting to the pedestrian. More pedestrian connections are needed between the residential areas and the recreation center and the commercial core. Safe routes off the streets are needed, especially in the winter. However, there is great opportunity in the amount of publicly-owned land ready for redevelopment. A greater diversity of housing is needed, and additional residents in Kincheloe would also support new businesses.

Community members express concern regarding the appearance of their neighborhoods and the general community, citing blight, deteriorating buildings, abandoned or junk cars, and overgrown vacant lots as concerns. There is awareness that a lack of property maintenance and enforcement negatively impacts visible community pride. Residents would like to see better maintenance and utilization of facilities. There are some issues of incompatible uses within the residential areas, and also concerns associated with shared driveways and duplexes.

Residents are also concerned about job quality and stability, and rising prices in a challenged economy. They support the need for more local commercial and industrial development, recycling programs, tourism development, beautification, and youth programs, which would keep more money in the Township rather than exporting to the Sault. It was suggested that a local Economic Development Corporation is needed to coordinate activities. Residents direct attention to improving quality of life within the Township.

Vision Statement

Sustainable communities embody and implement an ethical framework in which the social, economic, natural, and built environments are created with the interests of the future in mind. A sustainable community considers the future impacts of its actions and policies, but also considers the impacts upon neighboring jurisdictions and the region in which it exists. In this way, enduring value is protected. These ethics are based on the perspective that the Community will only be as healthy as the larger region, or its bioregional host, and that the wealth of a region and the economic well-being of its inhabitants are inextricably tied to the health of the ecosystem.

Sustainable communities are also about creating more equitable and just conditions. These conditions may be embodied in economic strategies, universal access provisions, diversity programs, and land use policies that create a place for everyone.

Vision statements are a short summary of how the community should look and function in the future. Kinross Charter Township's vision statement reflects sustainability principles, and guides all other goals and objectives for the future.

In 2020, Kinross Charter Township will have a sustainable future:
Residents, property owners, and visitors will experience a community in which economic, social, and environmental policies are aligned to preserve and protect natural and historic resources; create new housing, economic, and leisure opportunity for all; nurture a strong sense of place; and ensure the efficient provision of important community services, systems, and facilities so as not to overburden future generations or the environment.

Chapter 6: Future Land Use Plan—Trends and Critical Development Issues

In Michigan, the built environment is now expanding at a rate eight times faster than the population (Public Sector Consultants 2001). Although this is not as common an occurrence in the Upper Peninsula due to the vast tracts of publically owned land, land fragmentation is an issue for forest, agriculture, or energy resource production. Land fragmentation also results in service inefficiencies and a diluted sense of place.

The Future Land Use Plan provides strategies for future land use and development in the Township. This plan must be supported and implemented through regulatory tools, including zoning and other development ordinances. Changes will need to be made to the current zoning ordinance and other development ordinances to accommodate the policies of this Master Plan. These changes will be outlined in the Zoning Plan of Chapter 7. Extensive changes to the current zoning and subdivision ordinances are also needed to implement legislative changes of the Zoning Enabling Act (PA 110 of 2006) and Land Division Act (PA 288 of 1967, as amended).

The Future Land Use Plan was established after analysis of the Township's demographic, social, and economic trends, natural features, existing facilities and infrastructure, environmentally sensitive areas, and neighboring municipal land uses. Public participation helped to shape the goals upon which this land use plan is based. This land use plan proposes that no new land uses should be established, or land rezoned, unless adequate public facilities and services can be efficiently provided. The Future Land Use Plan proposes that new development remain concentrated in the area of Kincheloe where adequate roads and public services exist. The preferred strategy involves the reuse of currently vacant land and buildings to add increasing density and critical mass of activity. The density standards suggested along with each land use should be understood as an average density per area, not necessarily a uniform minimum standard. Specific dimensional standards associated with various land uses will be established in the zoning ordinance. This section compares current zoning to proposed future land uses in order to guide the transition to ordinance revision. The next Chapter provides a preliminary Zoning Plan with more detailed suggestions for revision.

Efficient and sustainable food production is an international, national, state, and local concern as agricultural lands are being consumed by more profitable market uses such as residential development. Communities in the Upper Peninsula import almost all of their local food and essentials, making them vulnerable to rising fuel costs and supply disruptions. For reasons of food security and local sustainability, the preservation of land for agricultural use is very important to the long-term health and viability of a community. Future land use strategies should address preservation of some land in proximity to population centers for production of food. Land divisions of 10 acres result in increasing fragmentation of these lands, resulting in decreased viability for food production. This plan proposes land divisions from 1-5 acres, and over 20 acres. It is understood that division of land into larger parcels can increase the opportunity for sprawl. However, in this case, land uses have been arranged in nodes and along established transportation corridors to avoid this issue. Conservation and Cluster development has been suggested. The large amount of protected, publicly-owned lands also diminishes the potential for sprawl.

Land fragmentation manifested by development of in-holdings within dedicated public land management and acquisition boundaries threatens outdoor recreation opportunities on public land investments and also threatens the integrity of natural resources that support outdoor recreation. Development in close proximity to sensitive natural resources and public lands threatens the quantity and quality of these assets as well as increases public safety concerns between hunting and neighboring land uses. Any loss of wetlands to development must be considered permanent, and therefore unbeneficial to the natural systems. Privately owned parcels surrounded by public land use lack adequate public and emergency access, undermining public safety and welfare. For this reason, these parcels are planned as resource protection areas.

Demand for land and water trail recreation, motorized and non-motorized, appears to be increasing, suggesting a need to better link existing trail systems.

It is planned that more intense commercial uses generating comparatively high traffic levels be located with direct access to M-80. These uses shall be framed around Smart Growth Principles (see Appendix G) and low impact development principles, with attention to aesthetic enhancement, good access management practices (shared and connected driveways), appropriate landscaping and buffering, and preservation of sensitive natural features to ensure a positive impact on surrounding land uses.

This plan supports the continued development of industrial uses in near proximity to Kincheloe provided adequate public services and facilities are provided. Priority would be given to projects that locate within already established industrial areas near transportation resources.

Mixed-Use development and a variety of residential density are incorporated into this plan to encourage housing diversity and affordability and provide 24 hour vitality in the commercial core. This increase in density will support public transit and the development of new businesses and services. Appropriate screening and buffering is suggested to assure compatibility between uses.

Future Land Use Descriptions

Following is a description of proposed Future Land Use Categories.

National Forest Reserve Lands

Includes lands currently within the boundaries of the Hiawatha National Forest, and intended to serve as resource protection for timberlands, recreation lands, wetlands, biodiversity, and habitat as per the forest management plan.

State Forest Reserve Lands

Includes lands currently within the boundaries of the Lake Superior State Forest, and is generally intended to serve as resource protection for timberlands, recreation lands, wetlands, biodiversity, and habitat as per the forest management plan. However, these lands may, when located adjacent to the currently urbanized area, be traded for other Township lands as developable property, provided the proposed development satisfies the intentions and goals of this Master Plan and meets Planning Commission and Township Board approval.

Resource Protection

Lands primarily used for conservation and preservation of natural resources, biodiversity, habitat, and sensitive environmental areas, for uses compatible with natural resources, such as low impact recreation, hunting camps, trails, and wildlife areas. Generally lands which are not located on County maintained roads or served by public sewer and water.

Resource Density

The primary function of this land is for agriculture, forestry, mining, energy resource production, or related resource activity, with residential uses allowed at a minimum of **20+ acres per unit (ideally 40+)** density.

Secondary Rural Residential Density

Residential land uses utilizing septic and private well at a density of **less than 5 or more than 20 acres per unit** located on a local County road.

Primary Rural Residential Density

Residential uses utilizing septic and private well at a density of **less than 5 or more than 20 acres per unit** located on a primary County road. Allows a slightly higher residential density **(9-12 units per 40 acres)** when formatted as a residential conservation or cluster

development, provided that at least 60% of the space is usable, undeveloped, open space (eg. 24 of 40 acres) and that approved waste handling systems are engineered.

Rural Low Density Residential

Residential density of **1-5 acres per unit (1 unit per 1-5 acres)**, utilizing a septic system and located in the less populated areas of the Township.

Urban Low Density Residential

Residential density of **1-5 units per 1 acre**, comprised of mostly single family detached units, but may include two-family attached units located in the public service area.

Small Lot Residential Cluster

Generally formatted as waterfront or residential cluster development on lots less than 7,000 square feet, but characterized by access to adjacent common open space. Should include water protection regulations when adjacent to a waterfront and without access to public services.

Corridor Mixed Use

This land use allows for a mix of moderately intense, appropriately buffered uses (such as residential, commercial, and recreation) along a major transportation corridor. This area may include large retail uses that service a regional customer base, preferably accessible to nearby residential uses, and meeting Smart Growth and Low Impact Development principles with appropriate attention to landscaping and aesthetics.

Local Mixed Use

This land use allows for a mix of low intensity, appropriately buffered uses (such as residential, commercial, and recreation) generally located close to residential concentrations, activity centers, and important local road intersections. These uses provide goods and services mainly to a local customer base and provide opportunities for affordable housing in close proximity to important products and services.

Urban Core Mixed Use

This land use allows for a mix of uses within a single building, such as ground floor commercial or office, with upper story residential or office, but with no commercial use allowed above a residential use. Also applies to areas containing a mix of housing types and residential densities along with other uses. Residential classifications in the Urban Core mixed use area may include low density of 4 units per acre, medium density of 5-8 units per acre, and high density of 9+ units per acre. Appropriate buffers and careful layout of structures are important in this area to ensure compatibility.

Small Office and Multi-Family Mixed Use

An area which is mainly intended for multi-family residential use, but will encourage small office uses meant to conveniently serve the residents of surrounding neighborhoods.

Industrial

This area includes industrial service and manufacturing firms which engage in intense scale or volume of activity and may store materials or vehicles outdoors. Few customers, especially the general public, come to the site. These areas are characterized by the presence of heavy machinery, building materials, and raw materials for processing and storage, and the utilization of chemicals and intense processes.

Commercial and Light Industrial

Light industrial uses are fully enclosed with no outdoor operations or storage of materials or vehicles and with less intense operations that are compatible with commercial uses. These areas may include repair, distribution, laboratory, cleaning, and mini-warehousing operations.

Institutional

Large educational, religious, and social uses and facilities (including prisons). These uses will be appropriately buffered and designed so as not to negatively impact community aesthetics, sense of place, resident quality of life, and adjacent property values.

Air Transportation

Includes the area designated for the airport and airport-owned facilities.

Recreation/Open Space

This land use is characterized by recreational uses without substantial structures or public services, but available for public use.

Civic/Open Space

Community Recreation and open space uses which may include covered facilities and public services.

Future Land Use Maps

The following maps present the Future Land Use maps for Kinross Charter Township in closeup view.
As shown, almost all of western Kinross Charter Township will remain wooded, with portions now utilized as Federal forest (dark green), being maintained for uses consistent with the forest management plan as presented in Chapter 4. Other areas now currently in commercial forest reserve or general woodlands are designed as a resource protection land use. The few scattered dwellings within the woods continue to be primarily for recreational use. Roads are generally for forest service or recreational use.

Land within east central Kinross Charter Township is generally apportioned to reduce land fragmentation, cluster more intense residential uses along primary county roads, preserve areas for agricultural production that will also protect water resources, and maintain rural character of the Township with controlled growth. This area includes National Forest land, State Forest land, Resource Protection areas, Resource Density areas, Civic or Open Space (cemetery), Primary Rural Residential Density, Secondary Rural Residential Density, and a Local Mixed Use area in the vicinity of Kinross.

Land within eastern Kinross Charter Township contains a full range of future land use descriptions within and adjacent to the urban core of the township. Uses along the primary M-80 corridor between I-75 and Kincheloe include Corridor Mixed Use, Local Mixed Use, Resource Protection, Secondary Rural Residential Density, Civic or Open Space, Recreation Open Space, and Air Transportation uses. Immediately surrounding Kinross Lake is the Small Lot Residential Cluster land use, surrounded by Primary Rural Residential Density. Uses abutting M-80 in Kincheloe include Heavy Industrial, Institutional, Corridor Mixed Use, and Commercial and Light Industrial. Heavy Industrial uses are adjacent to the institutional uses and airport property in the vicinity of the current industrial park, and expanding west of the airport. The urban core abutting the corridor consists of Urban Core Mixed Use, Small Office and Multi-Family, Urban Low Density Residential, Commercial and Light Industrial, and Recreation Open Space uses within a compact, potentially walkable area. Clustered nodes of mixed use serve neighborhoods adjacent to I-75 and along M-80 east of Kinross. An area has been planned for Corridor Mixed Use/potential big box development at the eastern intersection of Gaines Highway and I-75. Local mixed use is planned for the west side of I-75 at the intersection of Gaines along Mackinac Trail. By extending the primary residential area north to Gaines Highway, it is hoped residents would be able to utilize non-motorized transportation to access this potential new development while having more direct access to Gaines Highway. Land along Gaines Highway is also a potential location for industrial uses as determined by the Kinross Township planning commission.

Figure 6-1: Future Land Use, Western Kinross Charter Township

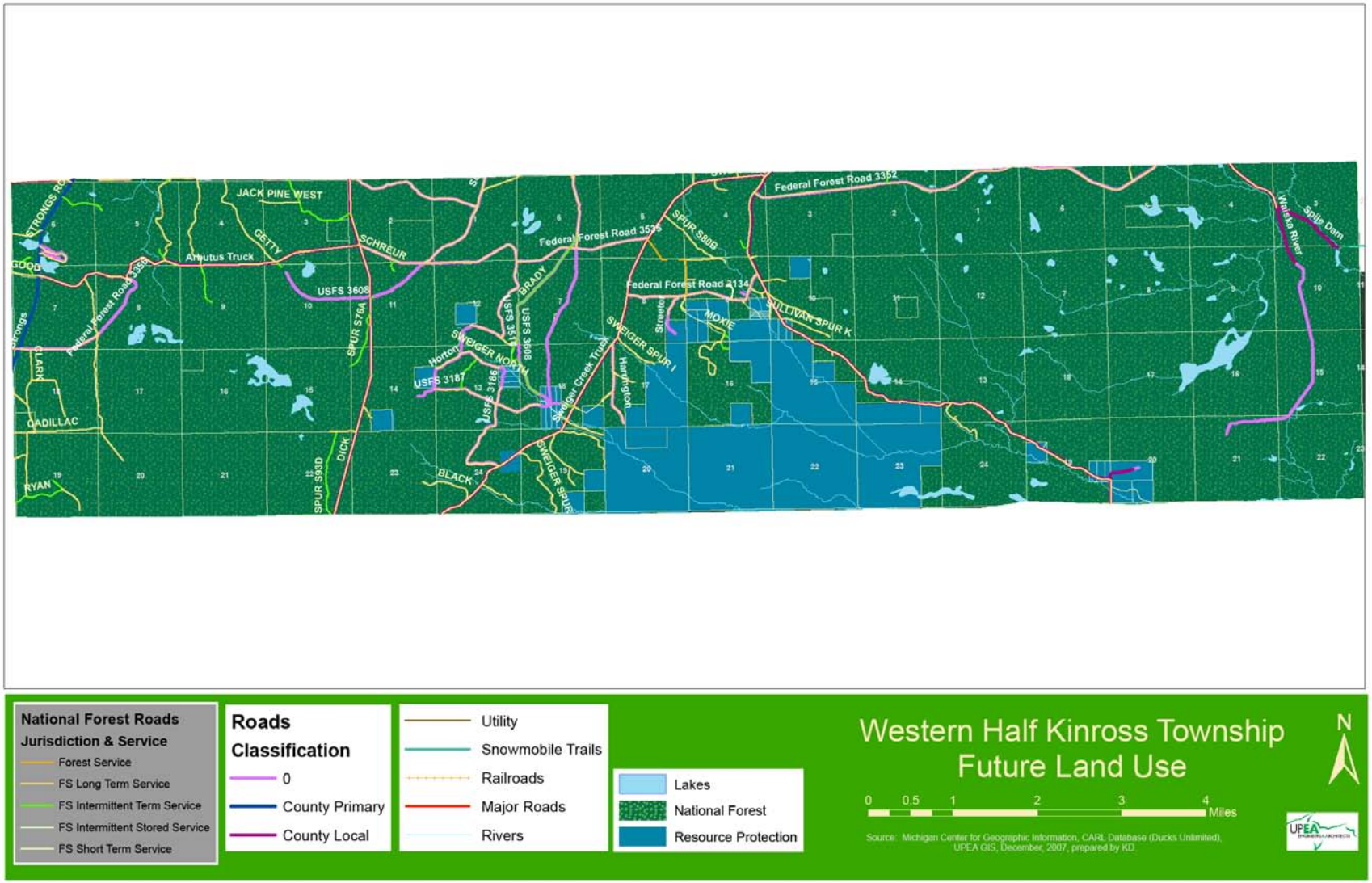


Figure 6-2: Future Land Use, East Central Kinross Charter Township

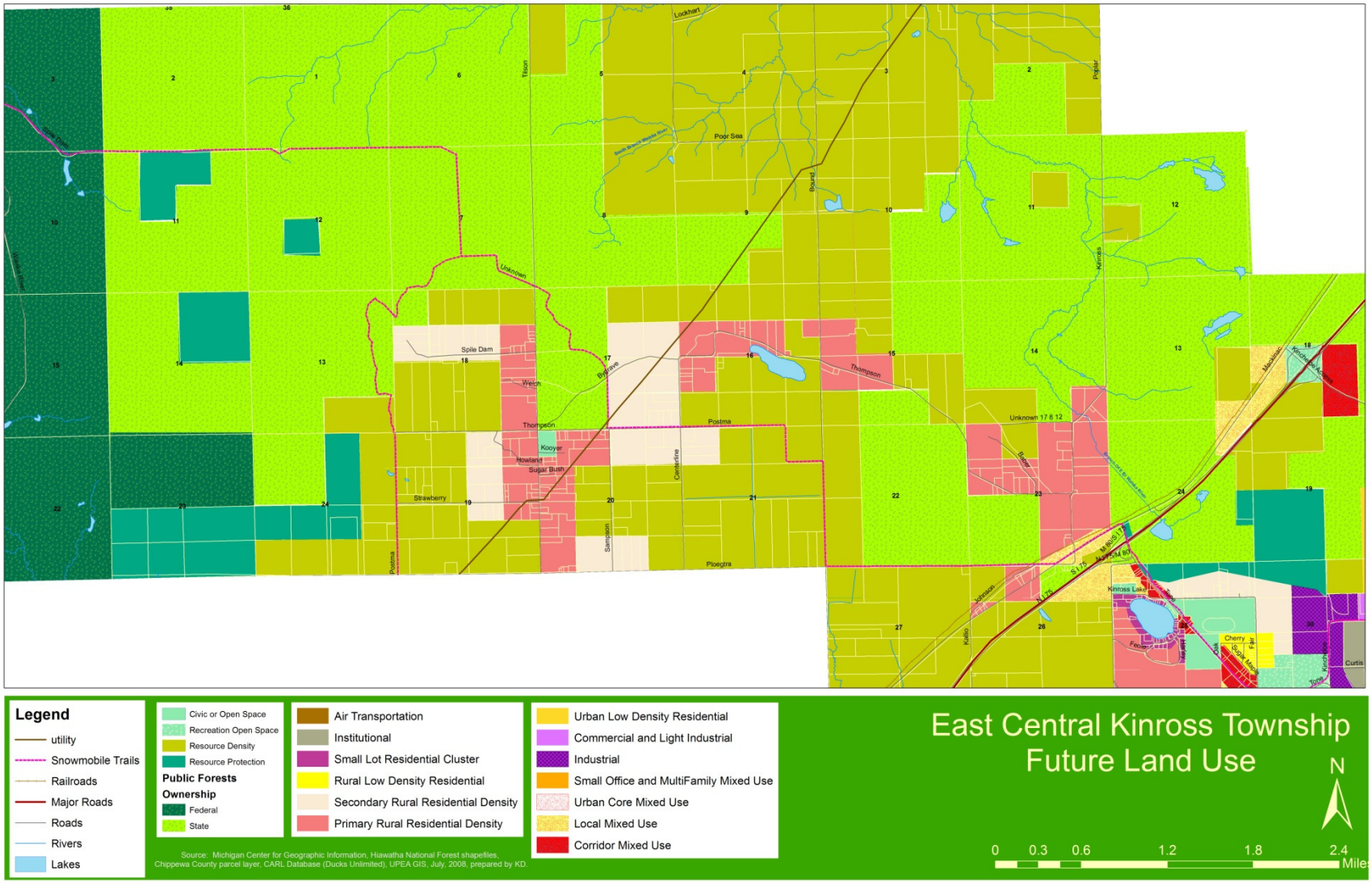


Figure 6-3: Future Land Use, Eastern Kinross Charter Township

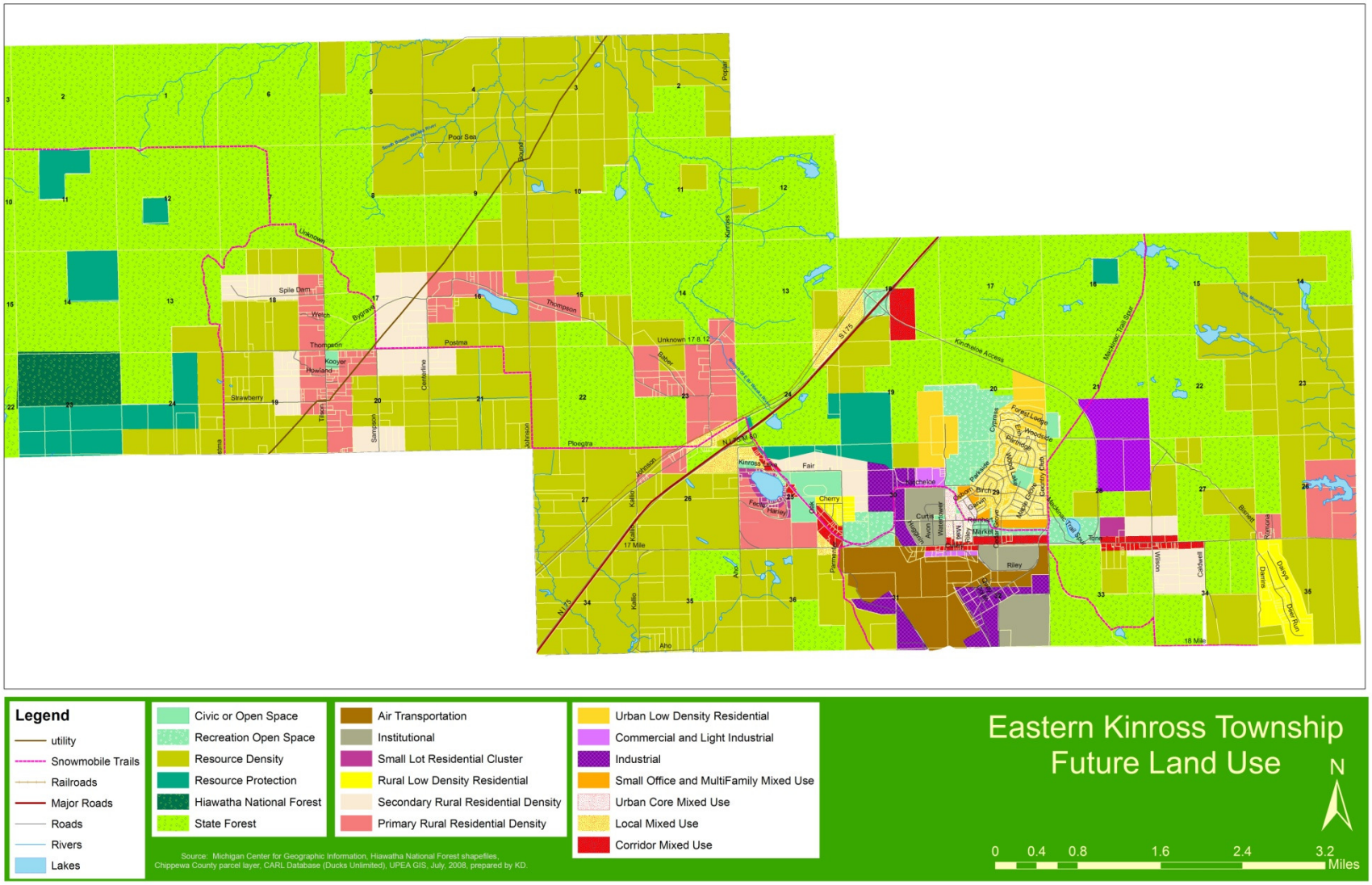
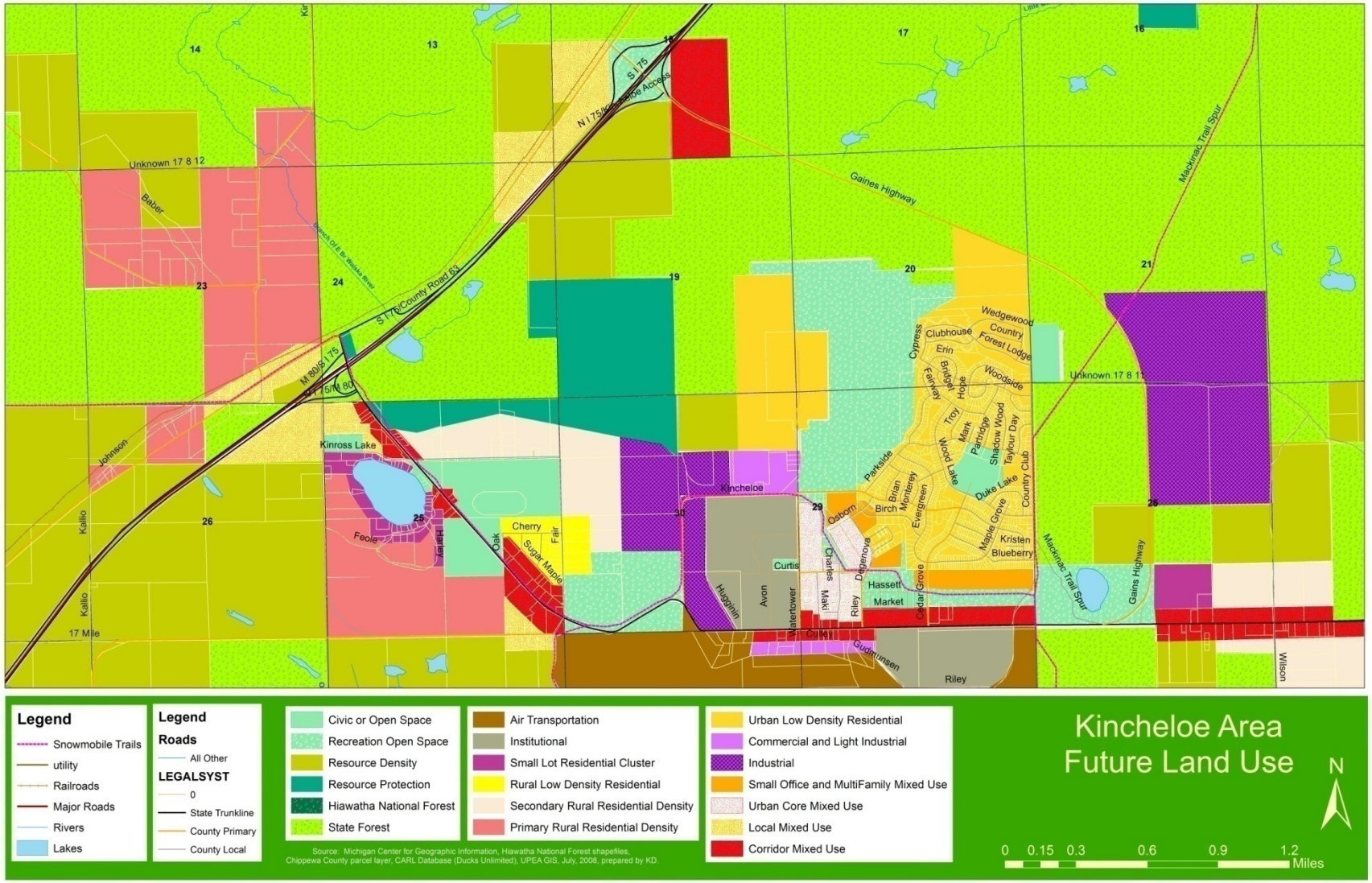


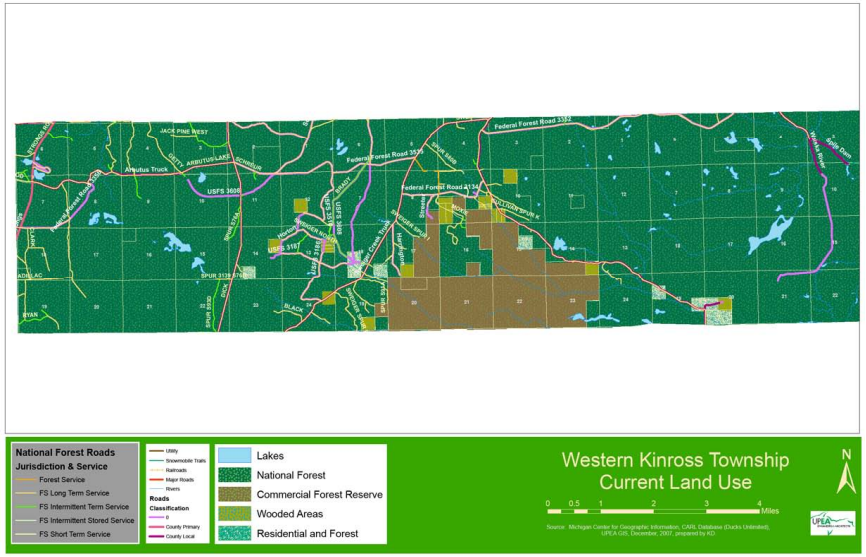
Figure 6-4: Future Land Use, Kincheloe Closeup



Comparison of Current and Future Land Use Descriptions

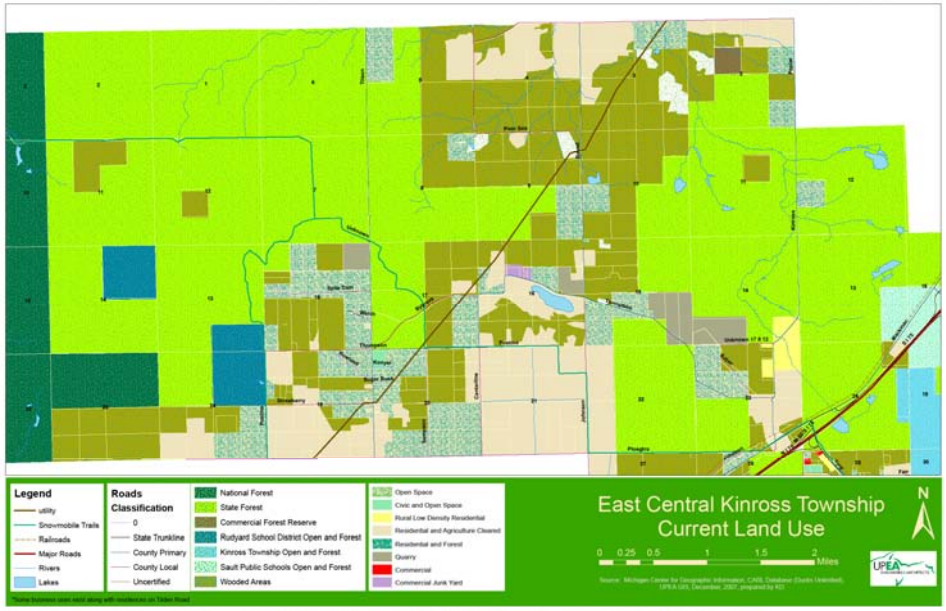
Western Kinross Township

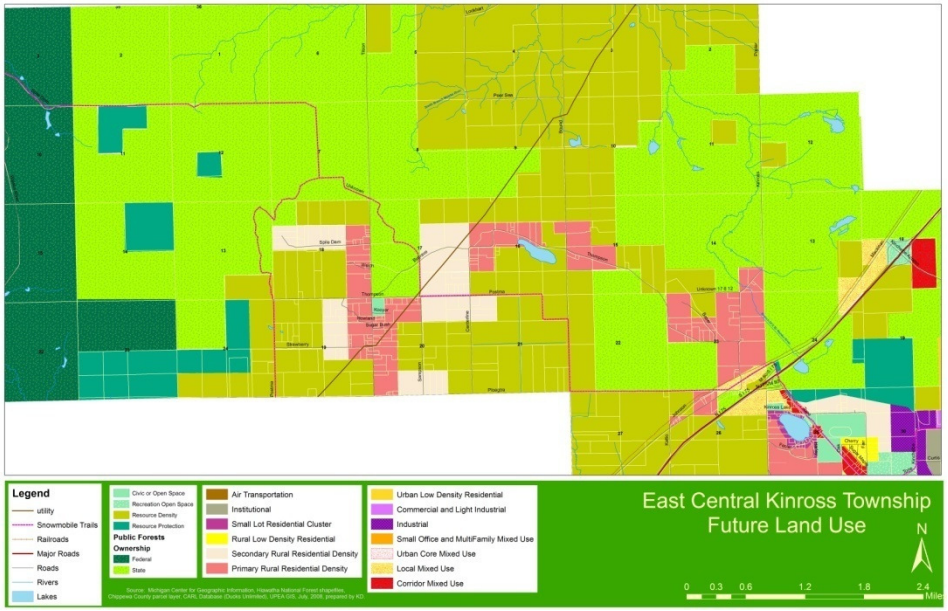
There is no major visible change in land use in Western Kinross Township since commercial forest reserve property is consistent with the Resource Protection land use, and the National Forest property will continue to be governed by the goals of the forest management plan as they are currently.



East Central Kinross Township

Because of the currently high predominance of publically-owned, forested, or open land in east central Kinross Charter Township, future land use will remain largely consistent with current land use. Future residential uses will accommodate and encourage more clustering of development with engineered waste systems and common open spaces. This area will be preserved as one with the most potential for agriculture and local food production within close proximity to the urban center of the township.





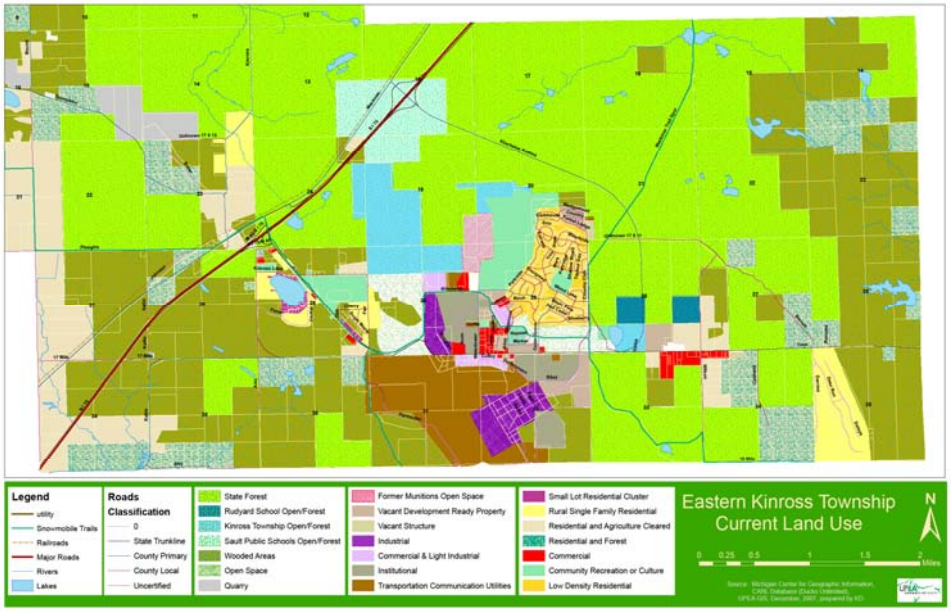
Eastern Kinross Township

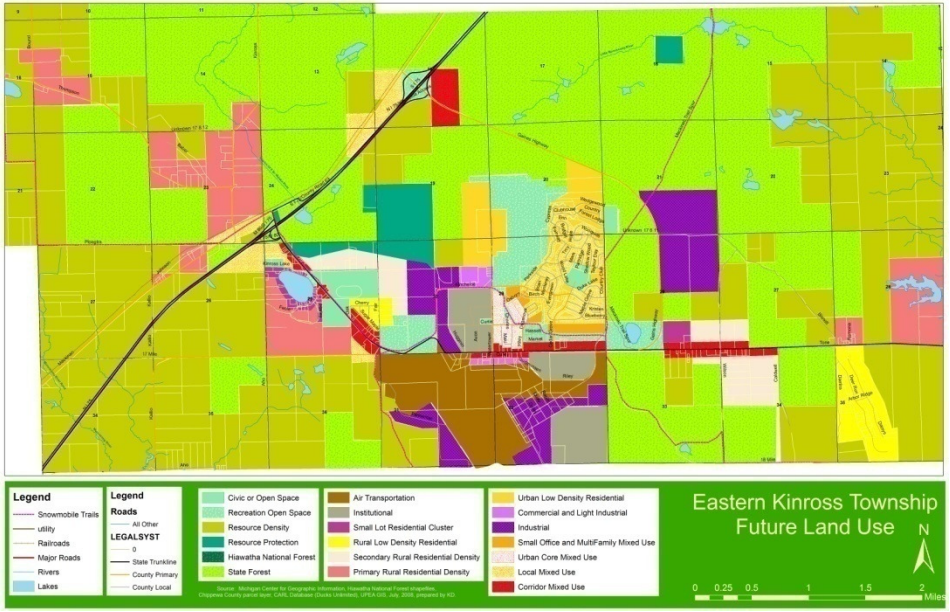
The future land use plan for eastern Kinross Charter Township will allow for development of a mix of uses within various nodes, including Kinross (along Mackinac Trail), I-75 and Gaines Highway, western to eastern Kincheloe along M-80, M-80 directly east of Gaines Highway, and central Kincheloe. Mixed use development is very important to encouraging implementation of smart growth principles, live/work proximity, and multi-modal transportation options. It also assists in creating a critical mass of 24 hour activity to encourage business development.

In the future, Kincheloe will encourage multi-story structures where compatible with the airport zones to achieve diversity of housing types, increase density within the urban service area, and add design variety. This will also help to buffer the predominance of the institutional uses.

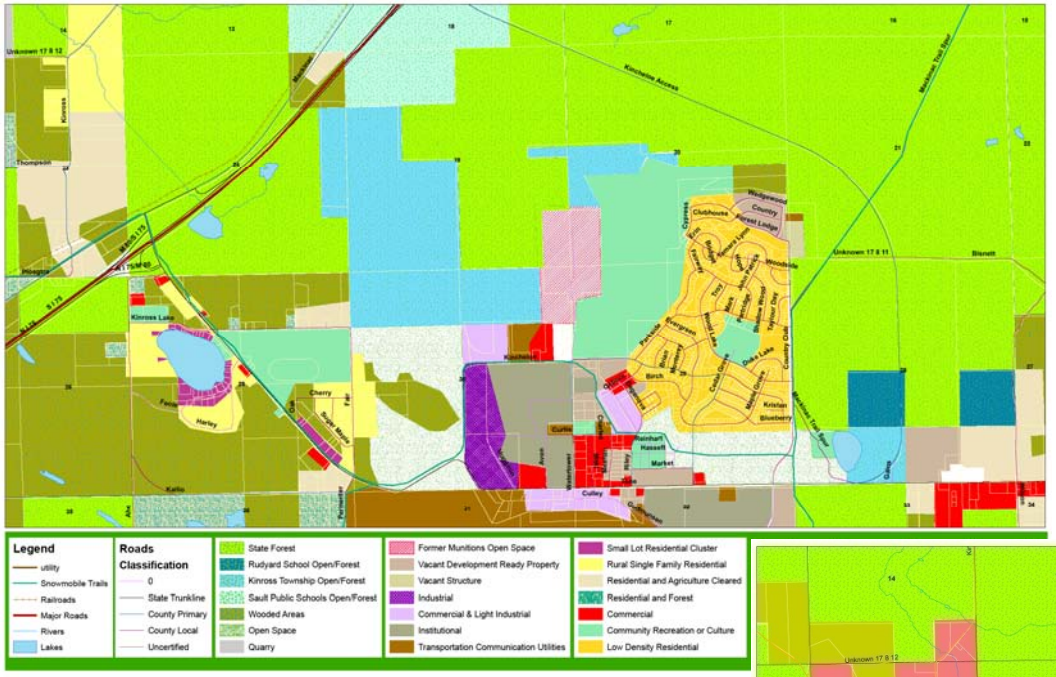
The future land use plan calls for protection for the wetland areas northwest of Kincheloe for interpretive recreation areas. The primary Kincheloe residential area will be extended to Gaines Highway if an agreement can be reached with the State Forest. New low density residential development is planned around the small lake on the eastern edge of the township and in the area west of the golf course. Primary Rural Residential is planned along the southern end of Kinross Road and along Thompson Road. New development is not meant to further exacerbate any inconsistency with the recommendations of the airport plan, nor is expansion of the airport planned at this time.

See the next page for a closeup comparison of current and future land uses in Kincheloe.

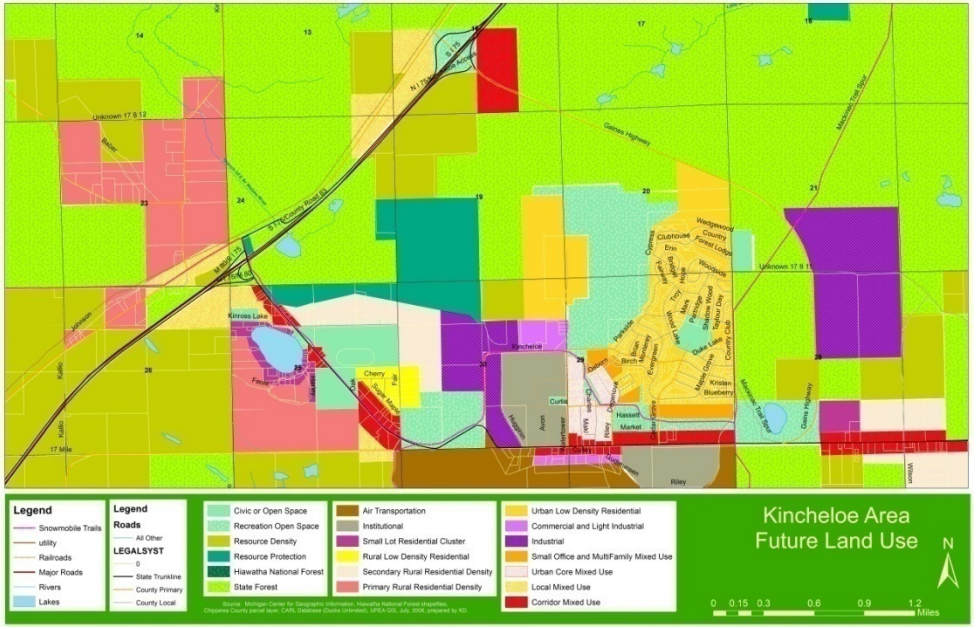




Kincheloe Area



Left: Current Land Use, Kincheloe



Right : Future Land Use, Kincheloe

Comparison of Future Land Use Plan to Current Zoning

Current Zoning Designations

Single Family Residential (R1)

To reserve areas principally for single-family residential use and to maintain safe and desirable conditions for year-round family living and primarily to promote the proper use, enjoyment, and conservation of the water, land, topographic, and vegetation resources of the Township deemed particularly adapted to such uses. Minimum lot area is 15,000 sq ft, with minimum lot width of 100 ft, minimum front yard of 30 ft, and minimum dwelling area of 720 sq ft, and maximum height of 30 ft.

Mixed Residential (R2)

Provide for the widest variety of housing types in a single district, to provide for lodging and rooming houses, and to serve the needs of the Township for apartments, townhouses, and group housing of similar housing and density. Minimum lot size for each lot without public water and sewer is 15,000 sq ft, with minimum lot width of 100 ft, minimum front yard of 54 ft, minimum dwelling area of 600 sq ft, and maximum height of 30 ft. Minimum lot size for each lot with public water and sewer is 6,000 sq ft, with minimum lot width of 60 ft, minimum front yard of 54 ft (reduced to 34 ft for some areas), and minimum dwelling area of 600 sq ft, and maximum height of 30 ft.

Agriculture (A)

The predominant land uses are primarily agricultural and rural in character, embodying agricultural and comingled with bodies of water, forestlands, and open country. Intent is to conserve and promote the general continuance of these uses, while also recognizing the gradual extension of residential and other property uses into the district, guided by good land development standards. Has a 5 acre minimum parcel area, except for single family dwellings that follow the requirements of the R1 Single Family district. Minimum lot width is 100 ft, minimum front yard of 40 ft, with minimum dwelling area 600 sq ft and maximum height of 35 ft.

Forest Recreation (FR)

Intended to promote the proper use, enjoyment, and conservation of the water, land, topographic and natural resources of the Township particularly adapted in general to recreational and forest uses. On parcels exceeding 5 acres in size, allows 1 additional single-family dwelling following the standards of the Single Family District. Also allows seasonal hunting and recreational cabins or cottages accessible to an improved public road or an applicant-maintained private road. Has a 10 acre minimum parcel area, except for single family dwellings that follow the requirements of the R1 Single Family district. Minimum lot width is 100 ft, with minimum dwelling area 600 sq ft, minimum front yard of 40 ft, and maximum height of 35 ft.

Institutional (INST)

This district is designed to provide a location for institutional uses separate from other types of development. Includes correctional facilities, hospitals, nursing homes, medical care facilities, etc. Minimum parcel size is one acre, with minimum lot width of 100 ft, minimum front yard of 50 ft, and maximum height of 35 ft.

Recreational Commercial (REC COMM)

To reserve specific areas for recreational use, whether privately or publicly owned, whether commercial in nature or free for public use, such as golf courses and related uses, fairgrounds and race tracks, museums, etc. Minimum parcel size is 5 acres, with minimum lot width of 200 ft, minimum front yard of 40 ft, and maximum height of 35 ft.

Residential Commercial (RES COMM)

To reserve areas for mixed residential uses as well as retail and service related businesses to accommodate the residents. Uses the Single-Family Residential District standards, with multiple-family dwellings subject to special approval. A special provision states that commercial uses along M-80 shall be placed not more than 330 feet from the center line of M-80. Minimum lot size for each lot without public water and sewer is 15,000 sq ft, with minimum lot width of 100 ft, minimum front yard of 40 ft, minimum dwelling area of 600 sq ft, and maximum height of 35 ft. Minimum lot size for each lot with public water and sewer is 6,000 sq ft, with minimum lot width of 100 ft, minimum front yard of 40 ft, and minimum dwelling area of 600 sq ft, and maximum height of 35 ft.

Commercial (C)

To provide for the continuation of and enhancement of existing commercial areas and development of new commercial areas, accommodating retail and business activities that cater to the needs of permanent residents and visitors. Minimum lot size for each lot without public water and sewer is 20,000 sq ft, with minimum lot width of 100 ft, minimum front yard of 30 ft, and maximum height of 35 ft. Minimum lot size for each lot with public water and sewer is 7,500 sq ft, with minimum lot width of 100 ft, minimum front yard of 30 ft, and maximum height of 35 ft.

Aviation (AV)

To provide an area apart from other uses specifically for the Chippewa County International Airport uses, buildings, and associated activities.

Light Industrial (I 1)

This district is designed to accommodate primarily wholesale activities, warehouses, and industrial operations whose external and physical effects are restricted to prevent detriment to the surrounding districts. Minimum parcel size is one acre, with minimum lot width of 100 ft, minimum front yard of 75 ft, and maximum height of 35 ft.

Heavy Industrial (I 2)

This district is designed primarily to accommodate manufacturing, assembling, and fabrication activities including large scale or specialized industrial operations, whose external physical effects will be noticed to some degree to surrounding districts. Designed to permit manufacturing and processing of finished products from raw materials in an Industrial Park. Minimum parcel size is 20 acres, with minimum lot width of 500 ft, minimum front yard of 100 ft, and maximum height of 35 ft.

State Forest

Planned Unit Development (PUD)

Site of at least 10 acres controlled by one owner or group of owners, with density increases of 15% for character, identity, architectural and siting variation, unspecified lot size variations, at least 40% of gross area as open space, or 50% of net area as open space. At least 25% of gross area to be used as common open space for recreational use, but not less than 6,000 sq ft. There are environmental design requirements to preserve existing trees, waterways, scenic viewing areas, historic points, flood plains, and vegetated steep slopes. Vehicular circulation is NOT connected with external streets to encourage through traffic, and parking areas are also arranged to discourage through traffic to other parking areas. Requires a 30 ft buffer around the perimeter. The PUD allows for reduced building spacing, front yard requirements, lot width requirements, increased density and height with a maximum building height of 30 feet.

Relationship of Current Zoning to Future Land Uses

Managed **National and State Forest** lands are consistent with current zoning.

The **Resource Protection** land use is a new zoning designation that is similar to Forest Recreation but does not provide for residential of the character and standards of the Single-Family Residential designation, but only allows for seasonal, recreational, hunting camp type dwellings.

The **Resource Density** land use is similar to the current Forest Recreation District, but has a minimum parcel size of 20 acres as opposed to 10 acres.

The **Secondary Rural Residential Density** land use has some similarities with the current Agricultural zoning district, having a minimum parcel size of 5 acres per unit, but does not allow for residential development having the dimensional standards of the Single-Family zoning district to be inserted into the district as the current zoning does. The current ordinance has the effect of allowing a housing configuration with dimensional standards more suited to urban areas with public sewer services and primary roads into a zone without these services.

The **Primary Rural Residential Density** land use is also similar to the current Agricultural zoning district with a minimum parcel size of 5 acres per unit, but does allow for residential development with more urban dimensional standards to be built within conservation or cluster

development configuration, with mandated open space provisions and engineered waste treatment systems. This district maintains roads of sufficient grade to support increased density.

The **Rural Low Density Residential** land use is located in areas without public water and sewer services, and thus resembles the current practice of allowing residential of the Single-Family Residential zone dimensional standards to be built in outlying areas of the township, resembling a subdivision configuration, with the exception of the one acre (43,560 sq ft) minimum lot size requirement as opposed to the current 15,000 sq ft minimum requirement.

The **Urban Low Density Residential** land use is consistent with the general standards of the current Single-Family Residential (R-1) zoning district with the exception that it allows a lower minimum lot size because the district is contained within the areas currently serviced by public sewer and water. This will encourage a greater diversity of housing types and will help to support public transit provision in Kincheloe.

The **Small Lot Residential Cluster** land use is a new category designed to accommodate the residential development around Kinross Lake where there are small lot sizes and clustered housing but no public services.

The **Corridor Mixed Use** area, **Local Mixed Use** area, and **Urban Core Mixed Use** area are all new designations meant to allow for customized dimensional and design standards as appropriate in encouraging mixed residential and commercial uses consistent with surrounding context. The Urban Core Mixed Use District is designed to accommodate higher density development within the commercial core of Kincheloe, supported by residential development in a pedestrian oriented configuration. This district is meant to accommodate the development of a true Downtown district in Kincheloe. The Corridor Mixed Use District can accommodate larger scale commercial uses, but is meant to be supported by Low Impact Development standards, Smart Growth principles, and aesthetic enhancement provisions. It is intended that these corridor uses be configured with shared parking access and connected parking lots to support good access management principles along the M-80 corridor.

The **Small Office and Multi-Family Mixed Use** area is a new designation meant to utilize higher density residential development as a buffer between the more intense commercial mixed use areas and residential areas of Kincheloe. The addition of small offices to the current Mixed Residential designation (R 2) will help ensure that employment and essential services can be located within walking distance of primary neighborhoods in Kincheloe. This district is similar to the current Residential Commercial zoning designation except that multi-family housing uses are permitted by right, and not by special approval.

The **Industrial** land use, and **Commercial and Light Industrial** land use, are both similar to the current Heavy Industrial (I-2) and Light Industrial (I-1) zoning designations. Similarly, the **Institutional** land use is identical to the current zoning designation of the same name.

The **Recreation/Open Space** and **Civic/Open Space** land use designations are similar to the Recreational Commercial zoning district, but more accurately reflect the primary use of the space, which is for civic, recreation, and open space use, not truly commercial.

Figure 6-5: Current Zoning, Kinross Charter Township

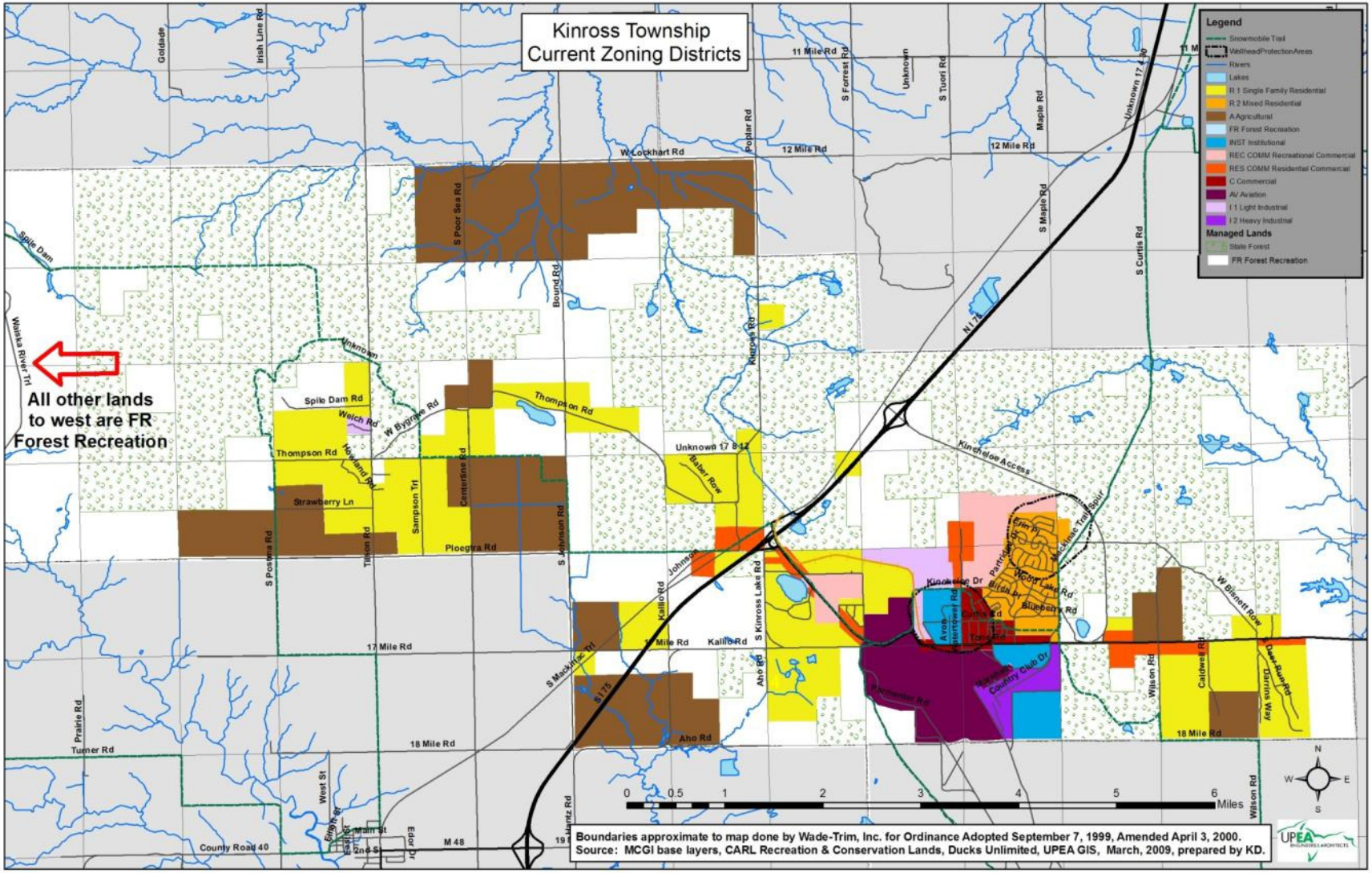


Figure 6-6: Current Zoning, Kinross Charter Township Inset

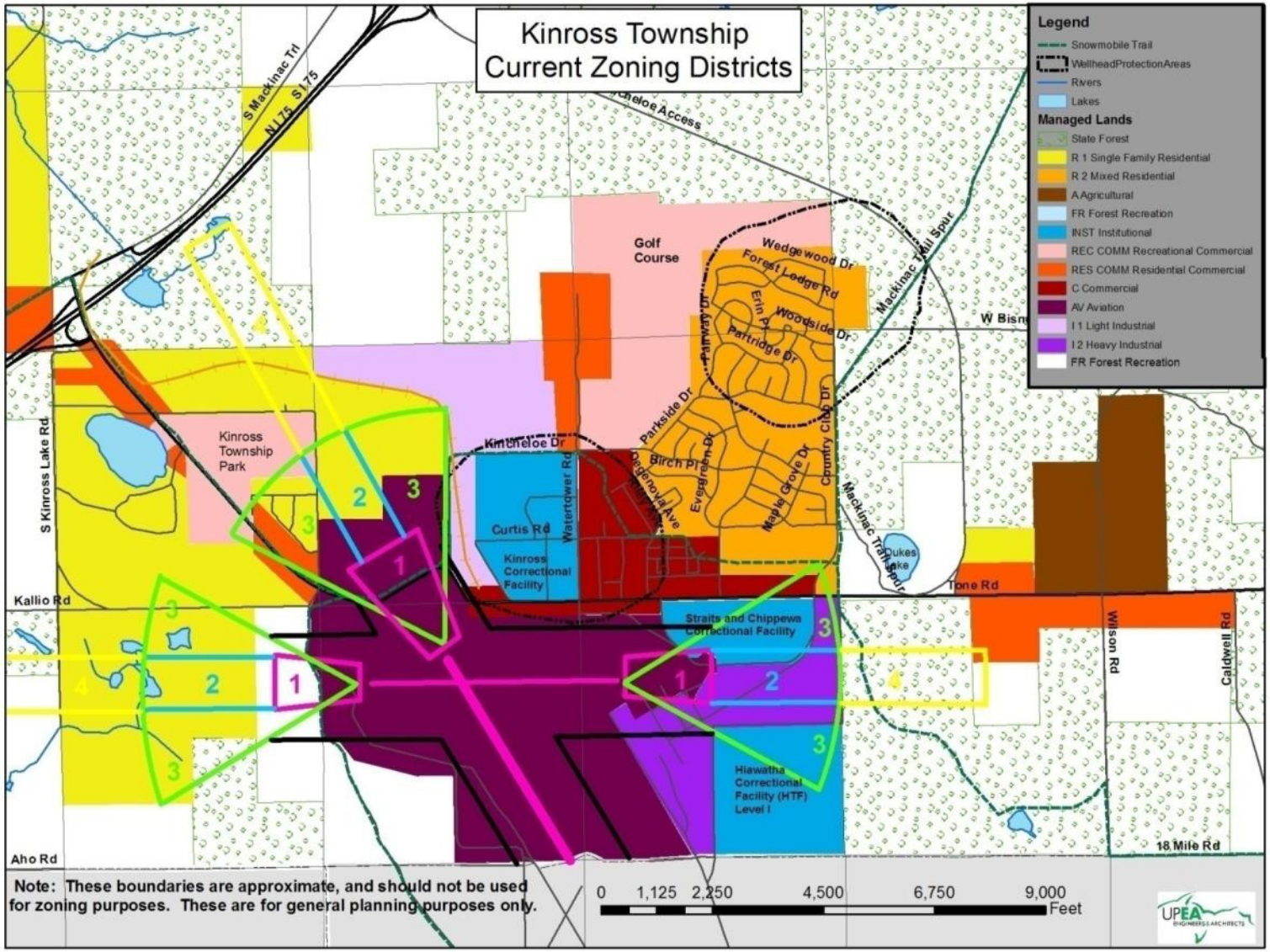


Figure 6-7: Future Land Use, Eastern Kinross Charter Township

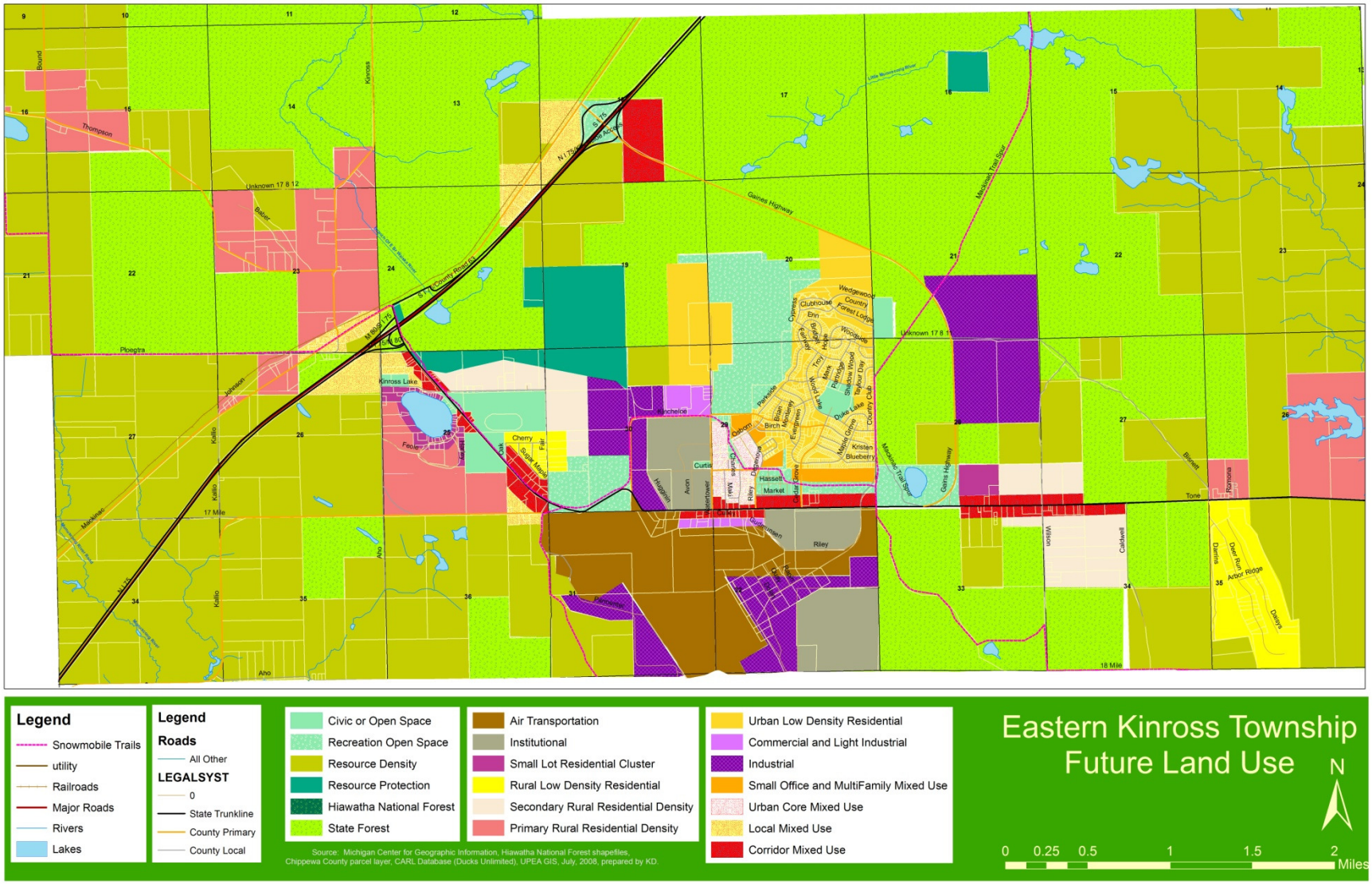
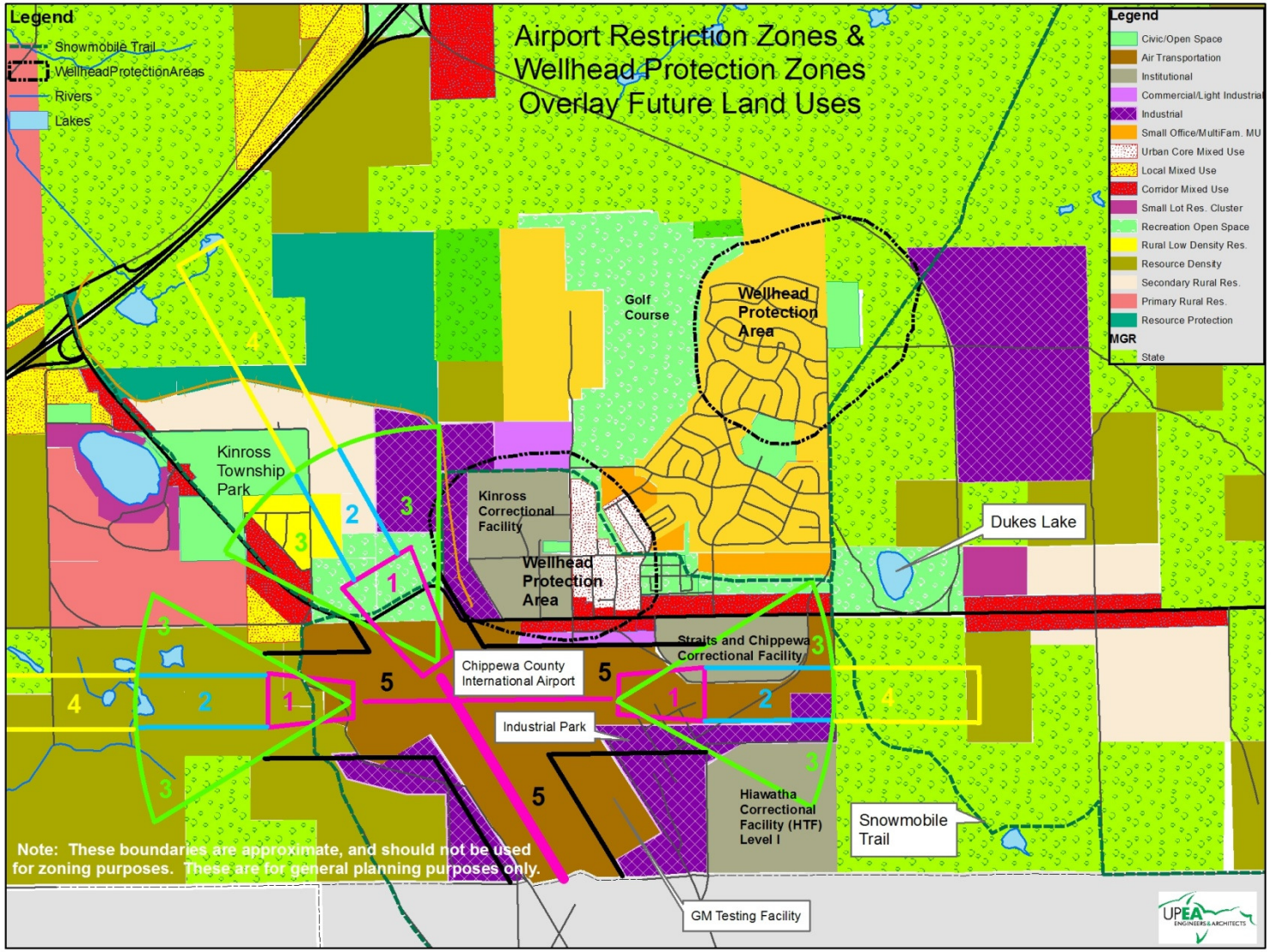


Figure 6-7: Future Land Use, Eastern Kinross Charter Township



Chapter 7: Strategic Plan

Community Goals, Objectives, Policies, Strategies

This section begins with a vision statement for Kinross Charter Township, which provides a framework for all the goals and objectives to follow. The goals and objectives are organized by topic for easier reference. Each goal is numbered and referenced in the comprehensive matrix at the end of the strategic plan. Within the matrix, each goal/objective is given a priority ranking and is matched with potential funding programs as referenced in the Appendix.

Community Vision Statement

In 2020, Kinross Charter Township will have a sustainable future:
Residents, property owners, and visitors will experience a community in which economic, social, and environmental policies are aligned to preserve and protect natural and historic resources; create new housing, economic, and leisure opportunity for all; nurture a strong sense of place; and ensure the efficient provision of important community services, systems, and facilities so as not to overburden future generations or the environment.

General Plan

Housing Goals and Objectives

I. ***Kinross Charter Township will address sustainability in housing by implementing Smart Growth policies to preserve housing affordability, support the demand for new housing types (such as those facilitating multi-generational living arrangements or meeting the needs of specific populations such as senior citizens), protect the environment, and preserve the traditional neighborhood infrastructure that supports walkability and mixed-use development. For example, housing policy shall support a range of housing opportunities and choices, walkable neighborhoods, and distinctive, attractive communities with a strong sense of place. Mixed-use development is supported while preserving open space, farmland, natural beauty, and critical environmental areas. Housing development patterns will support a variety of transportation choices, strengthen and direct development towards existing communities, and take advantage of compact design.***

A. **Housing Market Study**—It is recommended that Kinross Charter Township undertake a housing market study with the goal of gauging the sustainability of the housing market in Kincheloe considering the impact of potential rising fuel costs in the near future and beyond, as discussed on page 82 of this plan. The study would address commuting and shopping patterns and the potential impact of rising fuel costs in order to anticipate the need for public transit or cooperative travel

options to keep residents in the area. The study would also look at specific housing and community services/amenities needs and preferences to attract/retain residents and workers, along with ability to pay. This study could be done in partnership with potential developers or industry partners should they anticipate increased housing demand. The study should include profiling of potential target markets for housing in Kincheloe.

B. **Housing Energy Efficiency**—The Township should assist residents in pursuing improvements to housing energy efficiency in order to preserve affordability in the future. Incentives can be created in partnership with local energy suppliers and other governmental or non-profit agencies for property owners who wish to upgrade structures for energy efficiency. This should be a high priority in order to safeguard the health and well-being of residents in anticipation of rising costs for home heating, and to respond to the need to reduce dependence on foreign energy sources. The decreasing availability and rising costs of oil in the future will adversely impact the cost of home heating and transportation, therefore renewable energy sources must be pursued and conservation measures must be implemented with as much haste as possible.

C. **Infill Development**—Kinross Charter Township will prioritize future infill development located within current public services districts, limiting future development outside of water and sewer districts. Additional density will be approved within appropriate areas supporting mixed-use, multi-family, multi-story units in areas outside the limits of the airport height regulations.

D. **Cluster Development**—Rural development should be clustered appropriately in order to preserve rural character and open space. Care must also be taken not to create "cluster sprawl"; it is recommended that cluster development be contained in the areas adjacent to existing population centers.

E. **Building Construction Regulations for Energy Efficiency, Quality, and Accessibility**—Mandatory provisions shall be enstated to ensure that new development meets minimum energy efficiency standards and is of sufficient quality to represent a long-term value added investment to the neighborhood and the larger community, utilizing land most efficiently and productively. New development should also meet minimum accessibility standards within the Fair Housing Act. This should be implemented for both rental and ownership properties.

F. **Nontraditional Homeownership Models**—Traditional as well as non-traditional homeownership models should be implemented to meet the needs of residents with diverse economic conditions, family composition, and lifecycle. This would include limited equity cooperatives, mutual housing, community land trusts, and mixed-use or mixed-tenure development models. Other beneficial housing types include accessory apartments, elder cottages, manufactured housing, mixed-income housing, shared residences, and single room occupancy developments. These initiatives will help protect housing affordability and diversity, and will facilitate family care for elders.

G. **Maintenance Standards**—Ensure that maintenance standards are enforced in neighborhoods, and work with the Tribe for consistency. These standards, enforced in the zoning ordinance, will protect property values and neighborhood stability. For example, The Township will implement a blight and rental inspection ordinances and enforce them.

H. **Neighborhood Identity**—Create "themes" for each neighborhood and utilize wayfinding signs to make the former base housing less confusing. Create more small public gathering spaces or parks in each neighborhood, suitable for both young children and elders. Allow the creation of community gardens in these neighborhood gathering areas to encourage socialization and local food production/security.

Commercial/Industrial Goals and Objectives

II. Kinross Charter Township will address economic, environmental, and social sustainability in the commercial and industrial sectors by implementing Smart Growth policies to support and promote a critical mass of business and personal services and entertainment uses adjacent to the residential population center. This will help to reduce vehicle miles traveled to locations outside the community for residents, and provide the tax base needed for efficient public service and transit provision.

A. **Shared Parking and Access Connections**—Surface parking can be reduced by utilizing shared parking standards for adjacent compatible uses. Adjacent parking lots should be connected when possible to facilitate easy access without returning to the highway corridor.
B. **Home Occupations**—support home occupations within residential areas provided standards regarding traffic, noise, signage, and visual impact are met.
C. **Development Impact Mitigation**—ensure through Site Plan Review Standards and Impact Studies that future industrial or large commercial development does not negatively impact the environment or overburden existing infrastructure or public services. Require appropriate buffers from adjacent land uses, whether through appropriate landscaping or newly created park, trail, or open space.
D. **Siting and Location Standards**—whenever possible, maximize existing infrastructure by encouraging new industrial development to locate within the existing industrial park or area adjacent to the existing rail line. If not possible, require new industrial development to provide the necessary new infrastructure to ensure adequate provision of sewage disposal, stormwater management, potable water, and other critical public health and welfare concerns including the appropriate buffers. Limit land division and access along major roads to prevent industrial strip development. Utilize frontage or other alternate access roads when possible.
E. **Commercial/Industrial Energy Efficiency**—The Township should assist property owners in pursuing energy efficiency improvements to preserve economic viability in the future. Incentives can be created in partnership with local energy suppliers and other governmental or non-profit agencies for property owners who wish to upgrade structures for energy efficiency. The decreasing availability and rising costs of oil in the future will adversely impact the cost of energy and transportation, therefore renewable energy sources must be pursued and conservation measures must be implemented with as much haste as possible.

F. **Infill Development**—Kinross Charter Township will prioritize future infill development located within current public services districts, managing future development outside of water and sewer districts. Additional density will be approved within appropriate areas supporting mixed-use, multi-family, multi-story units in areas outside the limits of the airport height regulations. Allow 2.5 to 3 story buildings in the commercial core area of Kincheloe.

G. **Encourage Mixed-Use Developments** that combine residential and commercial uses and provide a range of housing options.

H. **Maintenance Standards**—Ensure that maintenance standards are enforced for commercial and industrial uses, and work with the Tribe for consistency. These standards, enforced in the zoning ordinance, will protect property values and economic stability.

I. **Rehabilitate and Reuse**—Implement strategies to rehabilitate or reuse vacant buildings, support property values, and implement Smart Growth principles.

III. Kinross Charter Township will address economic sustainability in the commercial/industrial center by more clearly defining the district and creating a unique sense of place. These improvements will help to increase property values and rents, stimulate private investment, enhance the pedestrian environment, improve stormwater management, create a sense of place, provide additional wildlife habitat, and achieve heat reduction within the urban environment.

A. **Basic Streetscaping** is needed to help define the commercial district and create a unique identity. Elements include pedestrian-oriented public amenities such as sidewalks, bike/walking trails, street furniture, lighting, banners, street trees, and green infrastructure (landscape buffers, rain gardens, bioretention areas). Improvements should implement energy efficient, dark sky compliant, pedestrian-scale lighting; permeable or recycled pavement material; and native landscaping whenever possible. **Edible landscaping** such as berry bushes or nut trees can provide a community food source and encourage socialization. New development should be required to incorporate these amenities.

B. **Landscaping Incentives and Site Plan Review Standards** are needed to encourage property owners in the commercial/industrial area to buffer large or unornamented structures and reduce the impact of paved surfaces with foundation plantings and landscaped islands or buffer strips. Raised berms can be created as buffers between the large industrial structures such as the hangar buildings and the other commercial buildings. These berms should require a minimum of 50 percent opacity of plantings and include some evergreen plants to brighten the winter landscape. These landscaped buffers will also provide increased protection for pedestrians from wind during winter months. New parking areas should implement appropriate landscaping requirements in relation to the number of parking spaces provided, avoiding large expanses of impermeable concrete.

C. **Sign Regulations**—Kinross Charter Township shall update sign regulations to ensure compatibility in size, placement, and materials. This will create a safer and more aesthetically pleasing commercial center. Additionally, coordinated wayfinding

signage should be created to direct travelers to medical services, recreational opportunities, Township government, and the Co-Op.

D. **Form Based Code**—Because of the large amount of undeveloped land and land ready for redevelopment in the urban core of Kincheloe, the Township should adopt a Form-Based Zoning Code to prepare for the future development of this land. A Form-Based Code is a planning and development tool that emphasizes the physical form of the built environment (while allowing flexibility in use over time) with the end goal of producing and preserving a specific type of place. It can enhance the character of a neighborhood and protect property values by ensuring planned, preferred patterns of development and investment. These proactive codes are visually communicated through easy-to-read diagrams and illustrations, simplifying and clarifying the process for developers. These codes help a community to achieve a more consistent and predictable physical environment, and take the politics out of planning by implementing a shared physical vision for desired character. The codes can help to promote infill development that is compatible with the surrounding structures, and are implemented only when new development (or significant redevelopment) occurs.

Sustainable Services Goals and Objectives

IV. Kinross Charter Township will address the needs of citizens by staying abreast of demographic changes and economic transitions and their impact upon those residing and working in the township. Township leadership will ensure the efficient provision of public services through efficiencies and utilization of all available funding and incentive programs to address the diverse needs of citizens.

A. Public Safety Services Objectives

1. **Public Surveys**—Perform periodic public surveys addressing the perceived performance and capabilities of area public safety institutions and personnel. Have an independent committee or organization distribute the surveys, collect and tabulate results, and present them to the Township Board for review.
2. **Combined Fire/Ambulance Facility**—Continue to pursue the project to integrate the fire and ambulance services in a combined, more energy efficient facility that will allow for future expansion and more up-to-date support. Keep the facility centrally located and close to crucial transportation networks.
3. **Recreation Center Security Services**—Coordinate supervision and security for the Community Recreation Center during peak usage hours to improve the perception of the Center as a safe, secure environment for children. Mobilize volunteers for security duty if necessary, providing the necessary training and support services.

B. Educational Services—To be implemented by an Educational Task Force

1. **Educational Task Force**—Set up an eight- to ten-person task force of area experts and mentors representing the public school system, curriculum development professionals from the nearby institutions of higher education, community workforce development/training representative, economic development agency representative, person

in charge of the prison educational programs, health care education professional, tribal education representative, business people, and a representative of the aging population who is knowledgeable in education.

2. **Education/Occupation Database & Recruitment**—Create a database of currently available and readily accessible educational programs among area institutions and organizations. Research the various potential occupations and industries that are supported by these specific educational offerings, determine the size and characteristics of the potential local workforce being developed by these programs, and engage in efforts to recruit businesses and industries that utilize these skills, resulting in greater retention of area graduates.
3. **Spin-offs and Specialized Training**—Consult with area economic development and workforce development organizations, and research company annual reports to identify potential business and industry recruits that support existing firms, are spin-offs of existing firms, or who are well-suited to locational amenities in Kinross Township. Then look for gaps in training/education not addressed by existing educational and training organizations that may offer potential for workforce development. Consider supplementing area educational and workforce programs with local specialized Academies or Vocational Technical training institutions or programs.
4. **Resident Skills Survey/Mentoring/Continuing Education Program**—Create a survey to identify available residents who are subject matter experts and potential occupational mentors and who would be willing to offer classes in local continuing education programs. Possibilities include youth who are willing to tutor elders in computer use and applications, or experts in gourmet cooking, organic gardening, fishing, crafts, art, etc. Organize a program to provide continuing education classes out of the Recreation Center facility. See a proposed survey in Appendix C.
5. **Marginalized Work Force Program**—Work to identify and intervene with school drop-outs and marginalized, challenged, unemployed, or underemployed members of the population and get them into programs to update skills for specific job opportunities.
6. **Community Web Links**—Link residents to on-line educational offerings (through Township website) and make sure that they have access to the necessary software and equipment. Improve the computer facilities at the Recreation Center.
7. **Kinross Educational Foundation**—Determine the feasibility of creating a Kinross educational foundation to support continuing education costs for area youth with the condition that they return to Kinross after graduation to work in selected jobs for a specified time period.
8. **Student Organization Programming Coordination**—Engage Student Organizations at LSSU to provide educational/recreational programming to be held at the Recreation Center on a rotating basis.
9. **Elder/Intergenerational Skills Tutoring**—Involve elders in educational and after-school programs. They can tutor through the America-Reads Challenge, and can chaperone activities at the recreation center. In turn, students can help elderly with chores.

10. **Music/Dance at Rec Center**—Consider adding a music room at the Recreation Center, and utilize volunteers to provide music and dance lessons on-site for kids in the after school program. (Or arrange for paid instruction)

Recreation Goals and Objectives

V. Kinross Charter Township will institute policies to preserve and enhance public access and enjoyment of unique natural amenities and create communities that support active living and recreation environments.

A. **Snowmobile Support Network**
   1. **Service Support**—The Township will pursue opportunities to support or provide services for users of the snowmobile trail network, ensuring food and convenience items are available along the trail.
   2. **Vehicular/Trailer Parking Facility**—The Township will provide a parking area for vehicles with trailers close to amenities and services to facilitate snowmobile tourism.

B. **Kinross Community Park Recommendations**
   1. **New Program/Marketing/Promotional Support**—The Township will support increased utilization of the park and the engagement of families and youth with new programs and advertising or promotional efforts to increase revenues. Program suggestions include summer activities such as craft and arts festivals, farmer's markets, concerts, outdoor trade shows, fireworks, horseshoe tournaments, youth camps, trail rides, dog shows, special events hosting, and traveling entertainment. Winter activities include snowmobile races, dog sled races, winter camping, and ice sculptures.
   2. **Assistance with Facility Maintenance/Management**—The Township will support better facility maintenance and management by assisting in these activities.
   3. **Affordability/Public Transit**—The Township will support park events by maintaining the affordability of the events and programs and facilitating the necessary public transportation services for all residents.
   4. **4-H Building Updates**—The Township will evaluate updates to the 4-H building, including the kitchen, restroom, and campground facilities, and will consider the addition of public meeting space.
   5. **New Uses**—The Township will explore new uses for existing facilities to increase facility utilization.
   6. **New Facilities**—Potential new facilities include picnic tables, cooking equipment, playground equipment, band shell, sports equipment such as disc golf and a baseball diamond, and a fenced-in dog park. Facilities to support winter events include a snow-cross track, outdoor ice skating rink, and warm-up station.
   7. **Park Beautification**—The Township will consider beautification of the park through landscaping, walking paths, and pedestrian lighting.
   8. **Universal Access, Energy Efficiency, and Durability**—Any future facility enhancements should incorporate Universal Access principles, energy efficiency improvements, and use of more durable materials.

C. Kinross Lake Recommendations

1. **Non-Motorized Boat Rentals/Small Motorized Use**—The Township will pursue opportunities for non-motorized boat rentals, and will allow non-motorized and small motorized boats to use the facility.
2. **Public Area Clean-Up**—The Township will organize an effort to weed, clean, and dredge the public area.
3. **Facility Improvements**—Consideration of fish stocking, improved barrier free public access from the parking lot to the lake, a boat dock/launch, and a barrier free fishing platform. Picnic tables, fire pits, small playgrounds, concessions, and lighting would improve use.

D. Dukes Lake Recommendations

1. **Summer Programs**—Consideration of monthly kids fishing days or community concerts.
2. **New Recreation Facilities**—The Township will consider recreational improvements such as barrier-free beach access, non-motorized boat launch, universal-access trails, and sledding/ski hill and tow rope.
3. **Fish Stocking and Fishing Boardwalk**—To promote fishing, the lake will be stocked with fish (trout), measures will be taken to protect the larger Rainbow Trout, and a fishing boardwalk will be installed to separate swimmers from those fishing.
4. **Public Amenities** for consideration include a park, playground, fireplace pavilion, picnic tables, concession stand, grills, lighting, benches, water fountains, and trash receptacles.

E. Kinross Recreational Center

1. **Additional Hours and Program Diversity**—The Township will consider suggestions for additional hours of operation (earlier and weekends), and additional programs and activities for diverse users, including families, adults, and seniors.
2. **Better Maintenance, Marketing, and Supervision**—The Township will facilitate better upkeep of facilities, marketing of programs, and increased supervision of activities and users.
3. **New Outdoor Facilities**—May include better playground facilities, fitness pathways, replacement of baseball backstops, new dugouts, and skatepark.
4. **New Indoor Facilities**—May include fitness equipment, swimming pool, racquet ball and hand ball courts, senior citizen café, and quiet room for studying.
5. **Minor Pedestrian Connectivity Improvements**—Needed to improve access between the Recreation Center and northern neighborhoods especially during the winter months.
6. **Covered Outdoor Ice Arena**—For hockey and recreational skating.
7. **Additional Parking**—Paint lines in current lot and add more parking opportunities

F. The Oaks at Kincheloe Golf Course

1. **Golf Cart Storage**—A new canopy or storage shed for golf carts

G. RV Parks East and West

1. **Barrier-Free Lighted Paths**—Install barrier-free pathways throughout both parks along with pedestrian path lighting.
2. **Tree Preservation and Planting**—Implement a tree preservation and planting program utilizing diversified species planting to create a sustainable urban forest, enhancing local aesthetics and character, and improving the urban pedestrian environment.

H. General Recreation Recommendations

1. **Community Bicycle/Pedestrian Trail Network**—A system of pedestrian/bicycle pathways connecting recreation properties and activity centers to the residential population center, improving non-motorized mobility options and contributing to more healthy communities. Documenting current informal pathways should provide guidance for desired location. Criteria for trail creation should include:
   a) Connect population centers, activity centers, health centers, natural areas, and schools within the community
   b) Tie to regional trail systems, including those on State Forest lands and on designated Heritage Routes
   c) Design trails to enhance tourism and economic development opportunities (residential or commercial)
   d) Provide improved universal access to natural resources
   e) Provide for sustainability of the trail system with acquisition, development, operations, and maintenance plans
   f) Preserve inactive railroad corridors for future railroad use with interim trail use
   g) Provide for trail security
   h) Locate the trails to reduce social isolation and to encourage mingling
2. **Community Motorized Trail Network**—Allow safe, non-disruptive access to businesses while bypassing surface streets, thereby promoting safety, supporting tourism, and providing transportation options. This may necessitate securing long-term leases or easements through the lands of willing private owners.
3. **Multi-Purpose and Universal Access Design**—Design for flexibility and multiple purpose team sport uses in public recreation facilities, and adopt universal access standards for new or rehabilitated recreation facilities.
4. **Incorporate Green Technology**—Utilize green technology in recreation facilities, including more efficient lighting, more effective use of natural light, better use of solar, wind, and other renewable sources, use of renewable fuels (bio-diesel), and improved recycling and reuse of waste products. Other beneficial practices include "Growing, not Mowing" to preserve native landscapes and save energy, biological control of invasive species, and the use of certified "green" cleaning agents.
5. **Youth Hunting and Outdoor Recreation**—Partner with youth mentoring organizations such as 4-H, BigBrothers/Big Sisters, Boy/Girl Scouts, or community volunteers to introduce youth to hunting and other outdoor activities.
6. **Township Five-Year Recreation Plan**—The Township will continue to maintain a current, MDNR-approved, five-year Recreation Action Plan to enable the Township to compete for State and Federal recreation grants. As part

of this plan update process, the Township will survey residents for level of satisfaction with local recreation opportunities.

7. **Regional Recreation Planning Initiatives**—The Township will look for opportunities to participate in regional recreation plan initiatives through intergovernmental agreements related to multi-jurisdictional trails. It is especially vital to participate in the acquisition of abandoned rail-corridors to maintain these important transportation links and potential recreational corridors.
8. **Development Incentives for Open/Recreation Space and Public Amenities**—The Township will offer incentives to encourage new developments to provide useable open space, recreation areas, or public amenities.
9. **Wetland Interpretive and Recreational Opportunities**—The Township will consider turning its wetlands into recreational and interpretive opportunities for wildlife viewing, hiking, and other passive recreational activities that support resource conservation, wildlife habitat protection, and water resource protection. Especially valuable are wetlands with adjacent grasslands for waterfowl production. The Township should look at the possibility of partnering with neighboring jurisdictions and organizations for wetland projects, including the Sault Public School District and the State of Michigan. This may require the creation of a recreation authority or utilization of intergovernmental cooperation agreements or memorandums of understanding.
10. **Wayfinding Signage System**—Provide an area-wide wayfinding signage system to facilitate tourism and public services.
11. **Lighted Fitness or Cross County Ski Trails**—Promote year around trail use
12. **Mini-Parks in Neighborhoods and Urban Center**—The Township will pursue the development of mini-parks designed to improve the character of the urbanized area, and to offer more variety of open space close to neighborhoods. Examples include tot-lots, community gardens, or handicapped accessible parks close to elderly housing. Comparison to State standards shows a need for two additional playgrounds, with at least one located close to the residential center of Kincheloe. Adding shuffleboard to one playground may allow elders an activity while supervising younger children.
13. **Additional Facilities**—The Township will evaluate the local demand for a soccer field, outdoor swimming pool, outdoor tennis court, roller skating, or boat launch with parking. There is already a recognized need for walking trails and better pedestrian access within the core, although hiking opportunities are abundant in Kinross Charter Township.
14. **Equestrian Tourism**—The Township will promote equestrian activities including boarding opportunities at Kinross Township Park, and will pursue funding opportunities for marked trails to invite increased use. Target market will include both lower Michigan and Canadian enthusiasts who can be reached through equestrian organizations and publications.

Economic Plan

VI. Kinross Charter Township will create new opportunities for locally-based business development to diversify the economic base and create the most sustained local impact.

A. **Local Clusters and Sub-Clusters**—Quality of life for township residents can be improved by developing local clusters and sub-clusters in close proximity to population centers, connected by pedestrian and non-motorized trails or infrastructure. This improves the local, long-term sustainability and self-sufficiency of the community, and increases the potential target market for residents. Most needed clusters address basic amenities that should be conveniently available within the community, such as local food and beverage processing and distribution, personal services (non-medical), health services, and convenience services. Prime location is along the main corridors and within the urban center of Kincheloe.

B. **Focus on Select Traded Clusters and Sub-Clusters**—Kinross Charter Township will improve the sustainability and diversity of the economy by focusing on the development of select traded clusters and sub-clusters, built around existing industries and area competencies. The proximity of Lake Superior State University's Prototype Development Center and the new SmartZone in Sault Ste. Marie will assist Kinross Charter Township in attracting potential new technology start-ups and commercialization opportunities to the area.

C. **Bio-Fuel/Bio-Mass Industries**—Work with the MEDC to solicit potential bio-fuel/bio-mass industry start-ups in the area.

D. **Business Financial Resources**—The Township will explore mechanisms to provide a broad set of financial resources for start-up firms and new economic enterprises, perhaps by collaborating with Northern Initiatives of Marquette.

E. **Global Trade and Exports**—Township representatives will facilitate export trade and global markets for existing products and services within the community. The Township will collaborate to organize and train key industry personnel and entrepreneurs on maneuvering within the international trade environment and within culturally diverse economies.

F. **Foreign Firms**—The Township will work to attract foreign-based firms in strategic and complementary industries appropriate for the local conditions and economy.

G. **Global Transportation Network**—Township representatives will work with area businesses to tie in to the global transportation network, including road, air, port, and rail transportation opportunities.

H. **Technical Assistance Network**—The Township will collaborate with local economic development agencies to help create a "technical assistance network" providing low or no cost preliminary consultation to area businesses on incorporating technology within their enterprise.

I. **Internet Access**—Steps will be taken to link more homes and businesses to the global internet and to each other, including efforts to broaden wireless and high-speed internet access as much as possible.

J. **E-Commerce and Fiber Optics**—The Township will require "open capacity" on any fiber optic infrastructure that is constructed, which may be used in the future to expand E-commerce activity.

K. **Business Attraction**—The Township will partner with area institutions of higher education to attract businesses and industries that benefit from a workforce following their curriculum.
L. **Business Retention and Expansion**—The Township will collaborate with the Chippewa County Economic Development Corporation in business retention and expansion activities.
M. **Downtown Development Authority**—The Township will establish a Downtown Development Authority to create a TIF and development plan for the provision of new infrastructure to support local business development.
N. **Chamber of Commerce or Business Improvement Zone**—The Township will promote establishment of a business support organization such as a Chamber of Commerce or Business Improvement Zone (BIZ) to engage in promotional activities for area recreation, hunting and fishing, winter tourism, campgrounds, and equestrian activities.
O. **Business/Arts Incubator**—The Township will conduct a study for the feasibility of a Business/Arts incubator to aid in start-ups of new businesses and artists through shared facilities and support services.
P. **Township Website Updates**—Suggested improvements include:
    1. Provide links to **global business networking** opportunities and organizations for area businesses and organizations. This can be created by interviewing area businesses and citizens to determine existing global connections, and by talking with area economic development agencies for a listing of their contacts.
    2. Provide non-formal education programs and technical and financial assistance to aid people in learning how to access the global communications network and improve and expand their **access to the digital economy**.
    3. Create a **community profile** with photos of area events and favorite places.
    4. Create detailed **business profiles** with a link to mapped location, giving each business a page to briefly introduce their goods or services.
    5. **Feature new businesses** in articles on the Township website and in the area newspaper

VII. Kinross Charter Township will create new opportunities for educational and workforce development of its citizens to support the diversification of the economic base and create sustained local impact.

A. **Life-Long Education** will be emphasized within the community.
B. **Community Workforce/Economic Development Champion or Local EDC**—The Township will assign a community workforce and economic development champion or create a local Economic Development Corporation to work with Lake Superior State University, Michigan Works!, the Eastern U.P. Employment and Training Consortium, Regional Skills Alliance, Chippewa County EDC, Chippewa County International Airport, Sault Ste. Marie EDC, Eastern U.P. Regional Planning and Development Commission, Upper Peninsula Economic Development Alliance, Michigan Economic Development Corporation, and the Michigan Economic Developers Association on economic development initiatives. The Township will send representatives to meet with these organizations on a regular basis to represent Township interests

and gain information. The Township will collaborate with energy and utility companies for economic development opportunity.

C. **Retiree/Young Entrepreneur Mentoring Program**—The Township will look for mentoring opportunities between retired seniors and young entrepreneurs. This will require identifying talents and skills within the area permanent and even seasonal population.

D. **Alumni Attraction**—The workforce will be improved by recapturing high school graduates that leave the area for higher education through strategies such as forgiving student loans, promoting local alumni networks, and hosting welcome home events.

VIII. The Township will preserve and enhance the utilization of the core population center by nurturing a sense of attachment and commitment to "place" and deepening the social fabric of the community.

A. **Placemaking**—The Township will locate funds for placemaking projects within the population center, such as pocket parks, Kid's Discovery parks, trail amenities, etc

B. **Clean and Green Program**—The Township will organize a "Clean and Green Program" of volunteers to clean up and dispose of clutter in public areas and establish a tree planting program.

C. **Streetscaping**—The Township will fund attractive streetscapes along major roads leading to the main commercial center (including pedestrian-friendly public infrastructure and wayfinding signs, lighting, landscaping, street trees, and pedestrian walkways.

D. **Outdoor Rooms**—The Township will create public focal points and gathering spaces (a series of "outdoor rooms") for commercial/entertainment/recreation opportunities in the urban core.

E. **Urban Forestry**—Existing pine groves and large trees in the urban core and neighborhoods will be protected with a tree preservation ordinance and be supported by volunteer tree planting campaigns.

F. **Non-Motorized Transportation**—The Township will improve non-motorized transportation opportunities by integrating bike lanes (at least 4' wide, with 5' lanes next to on-street parking) and bicycle parking facilities.

Infrastructure Plan

IX. Kinross Charter Township will implement policies for the efficient provision and operation of public infrastructure and services to support fiscal responsibility.

A. Storm Sewer Objectives

1. **Maintenance**—Kinross Township and the Chippewa County Road Commission need to resolve the dispute over ownership of the road storm drains and determine financial responsibility for maintenance and operation of the drainage systems.
2. **Windermere condominiums**—The Windermere area filtration type drainage system should be programmed for replacement with storm sewer system. The existing filtration drainage system can compromise ground water quality because surface water can directly enter the ground water aquifer.
3. **Stormwater Management**—The Township should implement storm water management principles into a model stormwater ordinance, subdivision ordinance, zoning ordinance, and site plan review process, including the reduction of impervious surfaces with bio-filtration methods, reduced volume of stormwater runoff, and other principles of low impact development. Techniques should be evaluated in relation to soil and other surface conditions, and should be complimentary to the wellhead protection plan.
    a) The first step is to implement programs on municipally owned or operated properties, create demonstration projects, and provide technical assistance and public educational materials. Application of **low impact design principles** is appropriate for combined sewer systems, transportation corridors, and brownfield sites as well.
    b) Utilize additional **pre-treatment requirements** for high risk uses as required, such as vehicle storage, cleaning, maintenance and repair facilities, fueling stations, fast-food restaurants, convenience stores, public works storage areas, commercial nurseries, salvage yards, recycling facilities, facilities that store or generate regulated substances, marinas, certain industrial uses, and others.
    c) Implementation may require **local government incentive** in the protection of residents' health, safety, and welfare through protection of water resources. Examples include stormwater credits, maintenance agreements between homeowner associations and the community, reduced setback requirements, increased floor area, accelerated plan reviews, reduced plan review fees, density bonuses, recognition programs, and free technical assistance.

B. Water Distribution System Objectives

1. **Wellhead Protection Plan**—The Township should continue to implement the recommendations of the Wellhead Protection Plan. Provisions of the plan are incorporated into a zoning overlay in the Township ordinances. All building and zoning officials should be provided with a copy of the plan, and this plan should serve as a reference for review of any plans for development within the wellhead protection zones. When the Township updates the zoning

ordinance, care should be taken to ensure that provisions for groundwater and well head protection are implemented, including provisions for the handling of hazardous substances.

2. **Valve and Hydrant Flushing**—The Township should continue implementation of a water valve exercise and hydrant flushing program. All mains are presently flushed each spring and fall. Hydrant flow and water system residual pressure records are maintained for future ISO insurance rating documentation.
3. **Water Plan and Capital Improvement Plan**—A water system master plan and a five year capital improvement plan should be developed for the water system.
4. **Watershed Planning**—The Township should consider participation in a regional watershed protection plan should the opportunity arise.

C. Sanitary Sewer System Objectives

1. **Sewer Maintenance**—The Township should continue the routine sewer line cleaning maintenance program. All mains are presently cleaned yearly.
2. **Expansion Plans**—Evaluate the plant and system for potential industrial expansion opportunities and impacts.

D. Septic Systems Objectives

1. **Septic Inspection**—Implement inspection programs at time-of-sale or upon application for building permit to identify failing septic systems and promote system improvements to protect surface and groundwater quality.
2. **Combined, Engineered Septic Systems**—Work with the Health Department and the Department of Environmental Quality to develop combined septic systems/drain fields, and other alternative methods for dealing with rural compact development while protecting groundwater.

E. Solid Waste Management Systems Objectives

1. **Waste Recovery Education**—Improve utilization and performance of recycling programs with community education designed to encourage waste recovery programs.

F. General Utilities Objectives

1. **Public Infrastructure and New Development**—The Township may consider extending water/sewer infrastructure if there is potential for a major industry, but should require a development impact study and utilize grants or outside funding to finance the infrastructure improvements.
2. **Underground Utilities**—The Township should work with the utility providers to negotiate placement of utilities underground with new development in order to create a more aesthetically pleasing commercial and residential core area.

G. General Transportation Maintenance Objectives

1. **Structural Improvements**—Roads rated as needing Structural Improvement (may include major rehabilitation or reconstruction) at the time of rating (mostly in 2006, a few rated in 2005 or 2004) were Tilson Road (already replaced), Kinross Road, and Strongs Road in the rural portion of the Township, and Kincheloe Drive, Watertower Road, and Country Club Drive within Kincheloe. Also needing Structural Improvement was the section of Mackinac Road

between the intersections of I-75 and I-80 and I-75 and Gaines Highway (Kincheloe Access), but maintenance mill and pave treatment is scheduled for 2009 with the addition of a four foot paved shoulder. Progress should be monitored as some roads were submitted for funding through the American Recovery and Reinvestment Act.

2. **Capital Preventive Maintenance**—Roads in need of Capital Preventive Maintenance within the rural portion of the Township were portions of Strongs, Kinross, Tilson, Bound, Thompson, Kallio, and Ploegtra roads. All of M-80 within Kinross Charter Township showed a need for Capital Preventive Maintenance.
3. **Routine Maintenance**—The remainder of the rated roads needed Routine Maintenance only.
4. **Capital Improvement Plan**—The Township will create a capital improvement plan in accordance with the Michigan Planning Enabling Act.
5. **Asset Management Program**—The Township will implement an evaluation of road conditions by utilizing an asset management program to forecast maintenance requirements and prioritize construction projects. An asset based management system will also assist in estimating budgets for maintenance of the street system. Expenditures for crack sealing, sealcoats, overlays, rehabilitations and reconstructions can be forecasted.

H. Aesthetic Enhancement Objectives

1. **Deciduous Trees**—Plant deciduous trees in rows and clumps to improve delineation of the entrance road to Kincheloe (between I-75 and the Kinross Township Park) and to blend the built environment into the natural one. Also on the eastern section of M-80 between the prison and Caldwell Road.
2. **Shrubs and Ground Cover**—Plant shrubs and ground cover plants on the side slope of the overpass by Gaines Highway.
3. **Corridor Management Plan**—Finalize the Corridor Management Plan to address poor environmental conditions and visually poor setting along M-80 in Kincheloe.
4. **Native Ground Cover**—Provide native ground cover where the right-of-way is unclear and the exposed sand dune runs into the ditch on M-80 just west of the new residential subdivision.

I. Transportation System Objectives

1. **Street System Expansions**—the Township will consider an additional street connection from the residential area north to Gaines Highway to reduce travel distance from either the residential area or central commercial area. Two alternative locations could be explored for possible construction. Country Club Road could be extended north to connect with Gaines Highway. Water Tower Road could be extended north to Gaines Highway. The design would need to take into consideration the environmental conditions and ownership of the site, but this location could open up additional residential area for development. The Township will seek to maintain an interconnected system of roads with either a grid system, or through stubbing in new connections for future use at time of subdivision development.
2. **Traffic Counts, Accident Histories, and Sign Inventory**—The Township will obtain accurate and up-to-date traffic information for projecting needs and priorities in project implementation. It is recommended that the Kinross Charter Township or Chippewa County Road Commission perform traffic counts on five year cycles for the major street system

and ten year cycles for local roads. The traffic accident information can be inventoried in "Road Soft" software available to communities from the Michigan Department of Transportation. It is recommended that regulation sign inventory and maintenance replacement records be entered into the data base.

3. **Pedestrian and Bicycle Accommodations**—Kinross Township will implement alternate modes of transportation during road improvement projects such as paved road shoulders for pedestrian and bicycle use on rural section roadways, and construction of sidewalks in the commercial corridors to provide more efficient year-around circulation of pedestrians and separation from vehicular traffic on higher volume streets. As part of the urban bike/pedestrian trail network, the Township will connect residential areas to the commercial and entertainment areas and the north entrance to the Recreation Center. Bike parking facilities (racks) will be provided either with public funding or by agreement with private property owners and developers.
4. **Dedication of Roadways**—the Township will discuss future roadway expansions and dedications with the County Road Commission as needed to support economic development.
5. **Public Transit**—The Township will promote public transit with continued promotion and support of the present bus system provided by Eastern Upper Peninsula Transit Authority and facilitation of shared commuting as needed.

J. Aviation Objectives

1. **Airport Runway Safety Areas**—In general, all future Township practices should support the Aviation Land Use Matrix and Land Use Guidelines and Planning Strategies for the Runway Safety Areas as presented previously in this plan.
2. **Endangered Species**—Any future airport expansion will consider and avoid as many negative impacts as possible on endangered species.
3. **Density Restrictions**—It is not recommended that further density of residential or institutional uses be developed within the Township Aviation zoning district. Care should be taken not to exacerbate unfavorable land uses and conditions within these restricted zones.

Environment/Natural Features Plan

This plan is in support of the Hiawatha National Forest Management Plan and the Lake Superior State Forest Management Plan. The environment is also supported by various strategies as laid out in the Future Land Use plan and Infrastructure Plan.

X. The community's commitment to its natural resources will be reflected in policies to preserve clean air, open space, and woodlands, and protect water resources and environmentally sensitive areas.

A. Natural Resources Protection Objectives

1. **Stormwater Management**—Implement storm water management principles that include the reduction of impervious surfaces with biofiltration methods
2. **Septic Inspection**—Implement time-of-sale (or upon application for building permit) inspection program to identify failing septic systems and promote system improvements to protect surface and groundwater quality
3. **Waste Recovery**—Continually improve waste recovery programs
4. **Wellhead Protection**—Pursue continued implementation of the wellhead protection plans and ordinances
5. **"Green" Practices**—Implement less environmentally destructive management practices in greening the community
   a) Curtail the use of pesticides and herbicides in parks and greenspaces
   b) Convert spaces between buildings from turf and grass to fruit trees, native plants, and more diversely vegetated areas and curtail mowing.
   c) Preserve all prominent stands of trees within the community.
   d) Utilize reinforced turf for a permeable, more environmentally friendly alternative for surface parking.
6. **Context Sensitive Development**—Address sensitive environmental areas with context sensitive development.
   a) Enact policies to restrict and control development in areas where there are steep slopes, wetlands, soil erosion possibilities, well-head protection areas, and shorelines.
   b) Utilize incentives to provide open space easements, public access to water resources, and conservation easements.
   c) Where major creeks, riparian habitat, and other sensitive environmental features intersect with approved development areas, site design should incorporate these features as open space amenities, avoiding the fencing, channelization, and piping of creeks.
   d) Implement watershed protection measures

B. Exurban Development Objectives

1. **Reduced Land Fragmentation**—Minimize the fragmentation of open lands in order to preserve large, contiguous tracts for resource intensive opportunities such as forestry and agriculture
2. **Rural Cluster Development**—Preserve the rural character of the exurban areas by discouraging land splits and encouraging rural cluster development where feasible.

3. **Resource Protection**—Preserve large contiguous tracts for timber resources and agriculture (switch grass and hay).
4. **Preserve Sensitive Areas**—Discourage development in sensitive areas such as wetlands, steep slopes, stream corridors, and in areas poorly suited for septic systems.
5. **Exurban Character and Services**—Limit urban character development in exurban areas without public services.
6. **Farming and Compatible Development**—Limit incompatible development in areas with farming activities.
7. **Rural Character**—Allow the appropriate level of rural residential development that does not overburden the rural road network and is sensitive to rural character in location and design (look at optimum lot size in rural areas)

Zoning Plan

Significant changes are needed to bring the Kinross Charter Township zoning ordinance in alignment with this plan, and to address legislative changes in the Michigan Zoning Enabling Act, PA 110 of 2006. These changes are introduced in this section.

Changes for compliance with the Michigan Zoning Enabling Act of 2006 include, but are not limited to:

- Attention to new public notice requirements for zoning amendments, planned unit developments, appeals board hearings, special uses, etc.
- If necessary, transfer duties from a zoning board/commission to the planning commission, and clarify the terms *misfeasance*, *malfeasance*, or *nonfeasance*. Also address meeting notices.
- Clarify the authority for use variances and standards, as well as dimensional variances.
- Update Appeal and Variance procedures and standards
- Clarify terms as specified in the act, for example, "affected" versus "aggrieved", "unnecessary hardship" for use variance, and "practical difficulty" for dimensional variance
- Update procedures for addressing non-conformities.
- Update the ordinance creating the Planning Commission.
- Update rules of procedure (bylaws).
- Update all mentioned public act references.

Changes to comply with the Master Plan include, but are not limited to:

- Update Zoning Districts and Zoning Map to reflect provisions in Future Land Use Plan.
- Update dimensional standards.
- Update parking standards to reflect low impact development and Smart Growth standards, reducing requirements to minimize impervious surfaces, and requiring landscaping and improved stormwater management.
- Reconsider yard requirements and setbacks in urban districts to enable pedestrian-friendly design and compact development.
- Address best practices in stormwater management as discussed in public infrastructure section.
- Update uses and special use permit standards.
- Add provisions to implement alternative/renewable energy, food production, small animal production (where appropriate), and other sustainable development principles.
- Revise Site Plan Review and Planned Unit Development standards to be consistent with this plan, and rethink process for simplification.
- Revise waterfront protection standards to further reduce impact.

- Implement access management principles on I-80 with an access management overlay district.
- Update sign ordinance.
- Replace subdivision ordinance with one consistent with the amended Land Division Act (Very Important!)

Changes to improve zoning ordinance format and user-friendliness include:

- Adding graphic illustrations of definitions and key concepts
- Incorporate all development-related ordinances into one unified zoning ordinance, such as the quarry ordinance (special use), sign ordinance, renewable/alternative energy ordinance, subdivision ordinance, etc. This will create more consistency and ease of use.

Changes to address current issues include:

- The Kinross Charter Township Zoning Ordinance Update should identify non-conformities and see if a change in zoning district designation is needed, or if a more clear process of handling these non-conforming uses is needed. The continuation of non-conformity provision is confusing as worded.
- Site Plan Review Standards for siting of wireless infrastructure should include the following considerations:
    - Try to site to meet the carrier's desired coverage objective while integrating with any existing or planned neighboring site infrastructure
    - Locate facilities in or around areas of mature vegetation that screens all or part of the facility, thereby reducing its visual impact.
    - To the extent permitted by federal regulations that govern marking schemes, color the structure to blend in with the surrounding vegetation or skyline.
    - Plant vegetative cover or construct fencing at the base of the facility to screen the ground equipment.
    - Require low-profile or slim-lined structures where the antennas are installed more closely to the tower, reducing the physical profile of the facility.
    - Colocate wireless equipment on existing structures when possible (athletic field light structures, transmission towers, chimneys, water towers)
- Add wind energy standards to accommodate the transition to renewable energy at the utility, neighborhood, and home user scales, supporting the Michigan Renewable Energy Portfolio Standards and Interconnection Standards by the Michigan Public Service Commission (mandatory statewide net metering). Make sure that provisions are in place to mitigate the property to pre-development condition if the wind facilities are no longer in use.
- Outdoor Wood Burning provisions to preserve air quality.

Other zoning considerations:

Because so much land is ready for redevelopment within Kincheloe, this would be a perfect time to implement a form-based code to provide a framework for future development. Form-based code is a mechanism that employs extensive community input in a visioning process designed to guide the form of development to implement community goals.

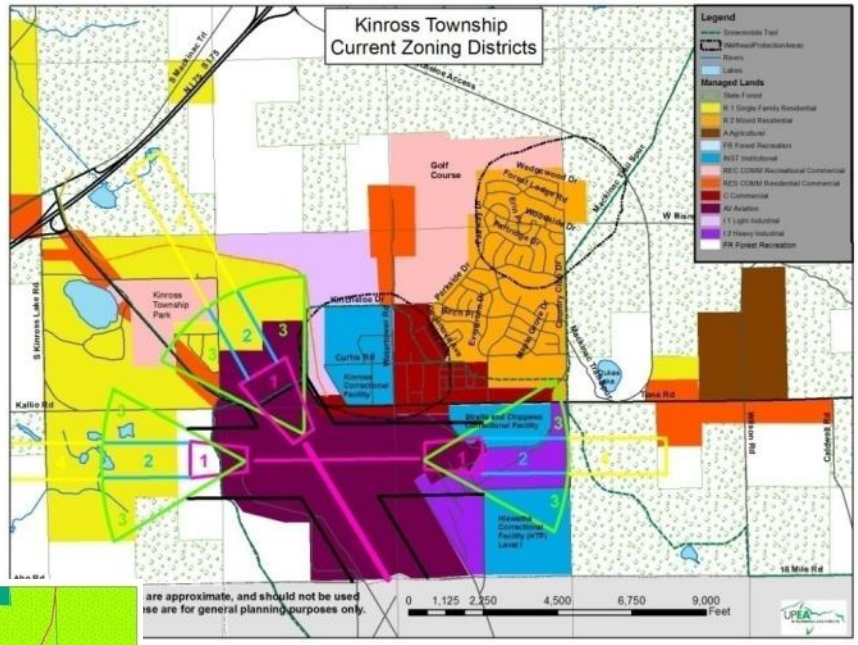
Form-based codes place more emphasis on the physical built form of development, while allowing flexibility in land use to accommodate market conditions. This zoning mechanism would accommodate many of the master plan objectives relating to sustainable development. In essence, the code would prescribe regulations for all the elements that contribute to the efficient function and aesthetic quality of the public realm, including the walls (building facades and public spaces) and floor (streetscape) of the public "living room".

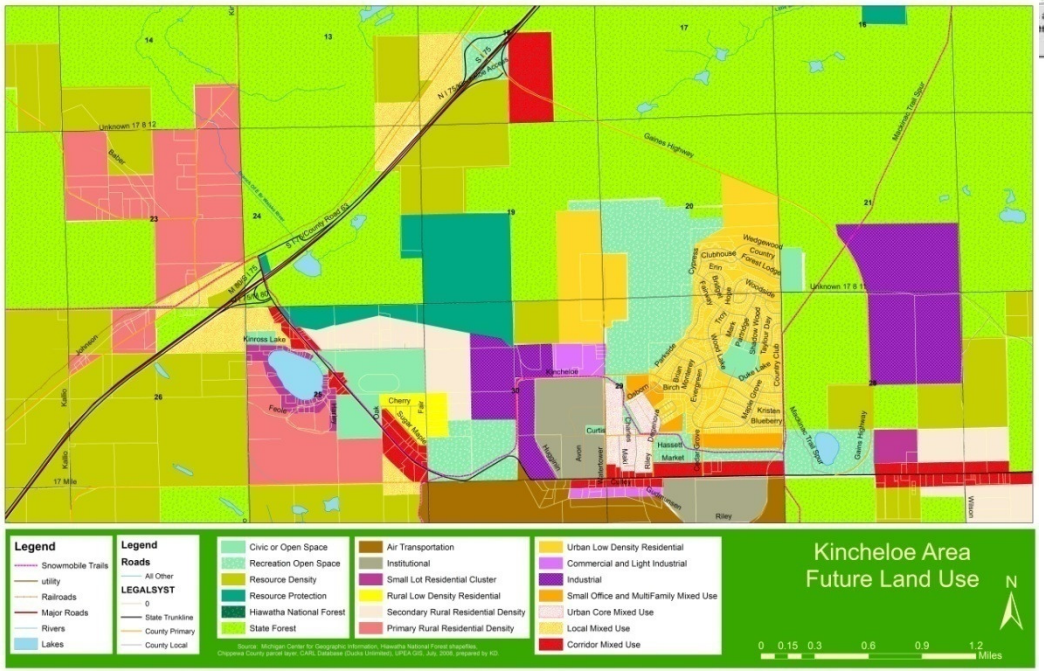
These codes have been shown to stimulate investment by reducing the time needed for development approvals, because the code, once developed, is implemented administratively. These visually specific codes allow the developer to anticipate the criteria against which their proposed development will be judged, saving in design expenses. It also gives the developer and the municipality some assurance that the value of their investment will be protected as these same quality criteria will apply to neighboring development. These codes enable communities to create a more walkable, pedestrian-oriented environment that is attractive to young people, and accommodates the needs of the aging and low income population who either choose not to depend on vehicular transportation or cannot.

Although these concepts could also be addressed through a PUD or special site plan review provisions, typically form-based codes have a unique visual format that makes them easier to understand and administer. Alternately, design guidelines can be employed to assure some continuity of design, however, these guidelines are only advisory, and not regulatory, so do not provide the same level of assurance. Form based codes can be implemented by creating a hybrid ordinance incorporating the form-based zones along with traditional zones into the existing zoning code. This kind of code is suggested for the mixed use areas of Kincheloe, and even the corridor.

Suggested Changes to Zoning Map

General changes include extending the Kincheloe residential area north to Gaines Highway, reconfiguring the area west of the golf course for urban low density residential use, implementing a resource protection area for the Kinross wetlands east of I-75, eliminating current residential zoning district in the restricted area of the west runway (replace with resource density), add heavy industrial area west of Aviation District, add mixed use areas at the intersection of I-75 and Gaines Highway, revise land uses in the commercial node east of Gaines Highway along M-80, create new residential area around the lake on the eastern edge of the township, and change agricultural district areas. Reconfigure all District boundaries to comply with the Future Land Use Plan as soon as possible.





Strategic Plan Matrix

#	Goal/Strategy	Priority Rating				Responsibility*	Funding Programs
		Ongoing	Phase 1-High	Phase 2-Med	Phase 3-Low		
General Plan-Housing							
I.A.	Housing Market Study			X		PC & Consultant, Realtors, Developers, housing agencies	83
I.B.	Housing Energy Efficiency		X			PC, TB, CC, NO	142
I.C.	Infill Development	X				PC, TB	73, 76, 83
I.D.	Cluster Development		X			PC, TB	73, 83
I.E.	Building Construction Regulations		X			PC, TB	77
I.F.	Nontraditional Homeownership Models			X		PC, TB	75
I.G.	Maintenance Standards		X			TB, MSHDA	71
I.H	Neighborhood Identity Creation			X		PC, TB	
General Plan-Commercial/Industrial							
II.A.	Shared Parking and Access	X				PC, TB, CCRC, MDOT	60,61
II.B.	Home Occupations Regulations		X			PC, TB	48,49
II.C.	Development Impact Mitigation	X				PC, TB	
II.D.	Siting and Location Standards	X				PC, TB	
II.E.	Commercial/Industrial Energy Efficiency		X			MEDC	140, 143, 145, 151
II.F.	Infill Development	X				PC, TB, EDC	56, 59
II.G.	Mixed-Use Development			X		PC, TB	50
II.H.	Maintenance Standards		X			PC, TB	62
II.I	Rehabilitate and Reuse Strategies		X			PC, TB, EDC	
General Plan-Commercial/Industrial, continued							
III.A.	Basic streetscaping and edible landscaping		X			TB, CCRC, MDOT, garden club	21
III.B.	Landscaping Incentives and Site Plan Review standards		X			PC, TB	
III.C.	Sign Regulations		X			PC, TB, CCRC, MDOT	

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General Plan--Sustainable Services							
Public Safety Services							
IV.A.1	Periodic Public Survey of public safety services	X				TB	
IV.A.2	New combined Fire/Ambulance Facility		X			TB	
IV.A.3	Recreation Center security		X			TB	2, 15
Educational Services							
IV.B.1	Set up Education Task Force			X		PC, EDC	
IV.B.2	Education/Occupation Database & Coordinated business/industry/labor force Recruitment				X	PC, MiW	
IV.B.3	Spin-offs and Specialized Training	X				PC, CC EDC, MiW, LSSU	
IV.B.4	Resident Skills Survey/Mentoring/Continuing Education Program			X		PC, MiW, LSSU, BMCC	
IV.B.5	Marginalized Workforce Program	X				PC, MiW, school district	
IV.B.6	Community Web Links--Connnect residents to on-line opportunities and improve public computer availability	X				PC, industry, LSSU	
IV.B.7	Feasibility to establish a Kinross Educational Foundation to retain talent				X	PC, consultant	
IV.B.8	LSSU Student Org programming at the Rec Center	X				PC, LSSU	
IV.B.9	Elder/Intergenerational Skills tutoring	X				PC, MiW	
IV.B.10	Music and dance services offered at Rec Center	X				PC, private	

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General Plan--Recreation							
Snowmobile Support Services							
V.A.1	Services Support for snowmobilers	X				TB, MDOT, MDNR	115, 118
V.A.2	Vehicular/Trailer parking facility		X			TB, MDOT, MDNR	
Kinross Community Park							
V.B.1	New program/marketing/promotional support	X				TB, volunteers	
V.B.2	Assist with better facility maintenance/management	X				TB	114
V.B.3	Maintain affordability and provide transportation to events	X				TB, EUPTA	
V.B.4	Updates to 4-H building	X				TB	
V.B.5	New uses for existing facilities	X				TB	108
V.B.6	New Facilities		X			TB, MDNR	109, 114
V.B.7	Park beautification landscaping, trails, lighting.			X		TB, MDNR, volunteer	109
V.B.8	Incorporate Universal Access, energy efficiency, durability		X			TB, MDLEG, NO	143, 145
Kinross Lake							
V.C.1	Non-motorized boat rentals, and small motorized use		X			TB, private	
V.C.2	Weed, clean, dredge public area				X	TB, MDNR, MDEQ, volunteer	108, 114
V.C.3	Facility improvements and additions				X	TB, MDNR, MDEQ	108

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Dukes Lake							
V.D.1	Summer programs	X				TB, volunteers	
V.D.2	New recreation facilities		X			TB	108, 113
V.D.3	Fish stocking and protection, fishing boardwalk				X	TB, MDNR, MDEQ	108
V.D.4	Public amenities			X		TB, MDNR	108, 109
Kinross Recreational Center							
V.E.1	Additional hours and program diversity		X			TB, volunteers	
V.E.2	Better maintenance, marketing, supervision		X			TB, public safety, volunteers	114
V.E.3	New outdoor facilities			X		TB, MDNR	108, 109
V.E.4	New indoor facilities				X	TB	109
V.E.5	Minor pedestrian connectivity improvements			X		TB, MDNR, MDOT	108, 113
V.E.6	Covered outdoor ice arena				X	TB, MDNR	113
V.E.7	Additional Parking		X			TB	108, 109
The Oaks at Kincheloe golf course							
V.F.1	Canopy/storage for golf carts			X		TB, private	
RV Parks East and West							
V.G.1	Barrier-free lighted paths			X		TB, MDNR	109, 113
V.G.2	Tree preservation and planting		X			TB, MDNR, volunteers	

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Miscellaneous Recreation							
V.H.1	Community bicycle/pedestrian trail network		X			TB, MDNR, MDOT	108, 109, 113, 121
V.H.2	Community motorized trail network	X				TB, MDOT, CCRC	108, 115, 116
V.H.3	Multi-purpose and universal access design			X		TB, MDNR, MDOT, CCRC	
V.H.4	Incorporate green technology		X			PC, TB, NO, consultant	108
V.H.5	Youth hunting and outdoor recreation education			X		MDNR	120
V.H.6	Current MDNR-approved, 5-year Recreation Plan	X				PC, MDNR, consultant	
V.H.7	Regional recreation planning initiatives			X		PC, MDNR, EUPRPC	
V.H.8	Development incentives for open/recreational space and public amenities		X			TB, private and nonprofit developers,	93, 108, 109
V.H.9	Wetland recreation and interpretive opportunities			X		PC, TB, MDNR, MDEQ, private, nonprofit, utility co, Tribe	108, 109
V.H.10	Wayfinding signage system		X			TB, MDOT	109, 113, 115
V.H.11	Lighted fitness or cross country ski trails				X	TB, MDNR, clubs	108
V.H.12	Mini-parks in neighborhoods and urban center			X		TB	63, 108
V.H.13	Evaluate local demand for additional facilities			X		PC, TB, EUPRPC	
V.H.14	Equestrian Tourism			X		TB, MDNR, EUPRPC, EDC	

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Economic Plan							
Local Business Development							
VI.A	Develop local clusters and sub-clusters	X				PC, TB, EDC, MiW	23, 42, 43, 44, 49, 54, 59, 60, 62
VI.B	Focus on select traded clusters and sub-clusters	X				PC, TB, EDC, MEDC, MiW	23, 24, 25, 29, 31, 32, 34, 38, 40, 42, 43, 45, 49, 53, 54, 87
VI.C	Solicit bio-fuel/bio-mass industries		X			TB, MEDC, CC EDC	1, 10, 31, 37, 40, 41, 44, 45, 46, 47, 122, 132, 134, 139, 140, 141
VI.D	Financial resources for start-up firms	X				EDC, MEDC, SBA, USDA	39, 42, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 133
VI.E	Facilitate export trade and global markets	X				EDC, MEDC	38
VI.F	Attract foreign-based firms	X				EDC, MEDC	1, 7, 10, 31, 32, 34, 36, 37, 39, 42, 43, 44, 47, 48, 50, 51, 52, 54

VI.G	Tie in to global transportation network	X				EDC, MEDC	
VI.H	Collaborate to create a technical assistance network	X				EDC, MEDC, MiW	28, 38, 39, 41, 54, 117, 128, 130, 149
VI.I	Link more homes/businesses to the global internet	X				TB, private	6, 15, 16, 39, 52
VI.J	Expand e-commerce with open capacity fiber optic	X				Private	16
VI.K	Business Attraction partnerships with educational institutions	X				EDC, MEDC, LSSU, BMCC, school district	5, 53
VI.L	Business retention and expansion	X				TB, EDC, MiW	33, 42, 62
VI.M	Establish a Downtown Development Authority		X			TB	60
VI.N	Establish a Chamber of Commerce or Business Improvement Zone		X			TB, EDC	62
VI.O	Feasibility study for business/art incubator			X		MEDC, EDA, consultant	10, 60, 61, 62
VI.P	Improve and Update Township website	X				TB	
Workforce Development							
VII.A	Promote life-long educational opportunities	X				MiW, LSSU, BMCC, MSUE	
VII.B	Community workforce/ED champion or Local EDC		X			MiW, EDC	60, 61, 62
VII.C	Retiree mentoring of young entrepreneurs	X				MiW, EDC	
VII.D	Alumni Attraction incentive program		X			TB, school district	

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Commitment to "Place"							
VIII.A	Placemaking projects in the population center			X		PC, volunteers	21, 60, 62, 63, 66, 89, 93
VIII.B	"Clean and Green" Program		X			PC, volunteers	62
VIII.C	Streetscaping		X			TB, MDOT, CCRC	21, 60, 61, 62, 63, 66, 89, 93
VIII.D	Series of "Outdoor Rooms"			X		TB, MDNR	60, 62, 63, 66, 89, 93
VIII.E	Urban Forestry-Tree preservation and planting in business/residential core		X			TB, MDNR, volunteers	126, 128, 130
VIII.F	Non-Motorized: Bike lanes and bicycle parking facilities		X			TB, MDOT, CCRC	21, 22, 60, 61, 62, 63, 66, 89, 93

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Infrastructure Plan							
Storm Sewer Objectives							
IX.A.1	Maintenance Program-Resolve ownership dispute for storm sewer and establish maintenance budget		X			TB, CCRC	17, 18, 19
IX.A.2	Storm sewer system in Windermere Subdivision		X			TB, CCRC	
IX.A.3	Implement stormwater management principles in zoning/subdivision, and siteplan review revisions		X			PC, TB, CEMCD, MDEQ	
Water Distribution System Objectives							
IX.B.1	Continue to implement Wellhead Protection Plan	X				TB, MDEQ	13, 14, 102
IX.B.2	Water valve exercise and hydrant flush program		X			TB	
IX.B.3	Water System Master Plan and 5-year CIP		X			TB, MDEQ	18
IX.B.4	Participate in regional watershed protection plan		X			PC, EUPRPC, consultant	98, 99
Sanitary Sewer System Objectives							
IX.C.1	Maintain sewer line cleaning maintenance program		X			TB	
IX.C.2	Evaluate sanitary sewer system for expansion		X			TB, MDEQ	3, 14, 17, 18, 20
Septic Systems Objectives							
IX.D.1	Time-of-sale septic inspection systems		X			TB, private	18
IX.D.2	Develop combined, engineered septic systems/drain fields in rural compact development		X			TB, MDEQ, CCHD	
Solid Waste Systems Objectives							
IX.E.1	Community education for solid waste recovery		X			MSUE, waste company	4

General Utility Objectives							
IX.F.1	Develop impact study and funding mitigation for new major development projects		X			TB, MDEQ, consultant	1
IX.F.2	Underground new utilities		X			PC, TB, MDEQ, utility co	3, 19, 20
Transportation Maintenance Objectives							
IX.G.1	Progress on roads needing Structural Improvement		X			CCRC, TB, MDOT	2, 17, 19
IX.G.2	Progress on roads needing Capital Preventive Maint.		X			CCRC, TB, MDOT	
IX.G.3	Progress on roads needing Routine Maintenance		X			CCRC, TB, MDOT	
IX.G.4	Create a Capital Improvement Plan		X			CCRC, TB, MDOT	
IX.G.5	Asset Management Program		X			CCRC, TB, MDOT	
Aesthetic Enhancement Objectives							
IX.H.1	Plant deciduous trees in rows/clumps in areas designated in the aesthetic enhancement plan			X		CCRC, TB, MDOT	21, 60, 61, 126, 130
IX.H.2	Plant shrubs/groundcover on I-75/Gaines Hwy overpass			X		CCRC, TB, MDOT	21, 60, 61
IX.H.3	Finalize the Corridor Management Plan			X		CCRC, TB, MDOT	
IX.H.4	Native ground cover at designated locations in the aesthetic enhancement plan			X		CCRC, TB, MDOT	21, 60, 61
Transportation System Objectives							
IX.I.1	Street system expansions				X	PC, TB, CCRC	1, 10, 17, 19
IX.I.2	Traffic counts, accident histories, and sign inventory	X				CCRC, TB, MDOT	
IX.I.3	Pedestrian/bicycle accommodations as part of road improvement projects		X			CCRC, TB, MDOT	19, 21, 22, 60, 61
IX.I.4	Agreement with County on road dedications	X				TB, CCRC	
IX.I.5	Promote public transit	X				TB, CCRC, EUPTA, MDOT	

Aviation Objectives							
IX.J.1	Make policies consistent with standards for Airport Runway Safety Areas	X				PC, TB, CCEDC, FAA	
IX.J.2	Minimize impact on endangered species with airport expansion opportunities	X				PC, TB, FAA, MDNR	
IX.J.3	No further density within Aviation restriction zone	X				PC, TB, FAA	
Environment/Natural Features Plan							
Natural Resource Protection							
X.A.1	Implement stormwater management principles		X			PC, TB, CCRC, MDOT, CC, MDEQ	14, 104
X.A.2	Time-of-sale septic inspection systems		X			TB, private	105
X.A.3	Improved waste recovery systems	X				TB, waste company	4, 14, 94
X.A.4	Continue to implement wellhead protection plan	X				TB, MDEQ	90, 101, 102, 107
X.A.5	Implement less environmentally destructive management practices to green the community	X				PC, TB	107, 108
X.A.6	Context Sensitive Development	X				PC, TB	
Exurban Development							
X.B.1	Minimize fragmentation of land		X			PC, TB	
X.B.2	Rural cluster development		X			PC, TB	50, 52
X.B.3	Preserve large, contiguous tracts of resource land		X			PC, TB	
X.B.4	Preserve sensitive areas		X			PC, TB, MDEQ	107, 135
X.B.5	Limit urban character development in exurban areas		X			PC, TB	
X.B.6	Limit incompatible development in farming areas		X			PC, TB	135, 136
X.B.7	Manage rural development so as not to overburden the road network or negatively impact rural character		X			PC, TB, CCRC	83

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Appendices

Appendix A: Kinross Charter Township Master Plan Survey 2005

Dear Citizen of Kinross Charter Township:

Michigan law states that "The Township Planning Commission shall make and approve a basic plan as a guide for development of unincorporated portions of the Township." The law continues: "At least every five years...the Planning commission shall review the plan and determine to commence the procedures to amend the plan or adopt a new plan."

The Township needs your help to determine how to better provide services and development throughout the Township. This survey will take about fifteen minutes to complete. Please take the time to complete and return this survey by **September 4, 2006**, so that together, we can make Kinross Charter Township a better place to live and grow. Return postage is provided.

There are two Sections to this survey. Section 1 is an evaluation of the Township services. Please use this section to tell us how we are doing in providing services.

Section II includes questions on current issues and topics that will help guide the Township's future. Your answers will help the Planning Commission and the Township Board make decisions that best meet the needs of the community.

If there is a question that you do not wish to answer for any reason, please feel free to skip that question. Although your responses to all the questions are important it is more important to have the survey returned even if some of the questions are not answered. Every answer and/or comment is very important to us. We are depending on you. Please feel free to add any additional comments in the spaces provided and remember to **PRINT LEGIBLY**.

THANK YOU FOR COMPLETING THIS SURVEY. Your assistance and interest are greatly appreciated. Please fold the survey and return it in the postage paid envelope by **September 4, 2006**. You can also drop the survey off at the Township Hall or place it in the "after hours water bill payment box".

Sincerely,
Kinross Charter Township Planning Commission

Please use this area for any additional comments you may have.

Section I Township Report Card

This section asks you to grade the Township services you receive. Standard letter grades "A, B, C, D, E" are used for the grading. ***Please circle the letter grade that best represents your opinion of how well the service is performed.*** If you have no opinion, please choose the "NO OPINION" (N) response.

How Do You Grade this service?

(Please circle one)

Part A Services/Departments	Very Good	Good	Average	Below Average	Poor	No Opinion
Township Supervisor's office	A	B	C	D	E	N
Township Clerk's office	A	B	C	D	E	N
Township Treasury's office	A	B	C	D	E	N
Township Assessor's office	A	B	C	D	E	N
Township Office staff	A	B	C	D	E	N
Township DPW Staff	A	B	C	D	E	N
Police Department	A	B	C	D	E	N
Fire Department	A	B	C	D	E	N
Ambulance Service	A	B	C	D	E	N
Rec Center Staff	A	B	C	D	E	N
Park and Recreation Facilities	A	B	C	D	E	N
Recreation Programs	A	B	C	D	E	N
Golf Course	A	B	C	D	E	N
Snowmobile Trail Grooming Program	A	B	C	D	E	N
Other:	A	B	C	D	E	N
	A	B	C	D	E	N
Part B: Boards and Commissions	**V Good**	**Good**	**Average**	**B Avg.**	**Poor**	**No Opin.**
Township Board	A	B	C	D	E	N
Planning Commission	A	B	C	D	E	N
Board of Review	A	B	C	D	E	N
Zoning Board of Appeals	A	B	C	D	E	N
Other:	A	B	C	D	E	N
Part C: General Services	**V Good**	**Good**	**Average**	**B Avg.**	**Poor**	**No Opin.**
Water Service generally	A	B	C	D	E	N
Water billing	A	B	C	D	E	N
Sewer and Drains	A	B	C	D	E	N
Household garbage pick-up	A	B	C	D	E	N
Recycling Drop-off	A	B	C	D	E	N
Keeping citizens informed (Newsletters)	A	B	C	D	E	N
Other:	A	B	C	D	E	N
	A	B	C	D	E	N
Part D: Overall Satisfaction	**V Good**	**Good**	**Average**	**B Avg.**	**Poor**	**No Opin.**
Overall satisfaction with Township government	A	B	C	D	E	N

Section II Current and Future Issues

This section seeks your opinion on a variety of current and future Township issues and topics. Your answers will be helpful to the Township Board and administration in making decisions on these issues.

(Please check the most appropriate response)

1. To what degree do you consider the following issues to be important to Township Residents?	Major Issue	Minor Issue	Not An Issue	No Opinion
Crime				
Traffic				
Speeding on streets				
Appearance of your neighborhood				
Difficult neighbors				
General Appearance of community				
Housing availability for purchase				
Housing availability for rent				

Areas for new housing development				
1. To what degree do you consider the following issues to be important to Township Residents? (continued)	**Major Issue**	**Minor Issue**	**Not An Issue**	**No Opinion**
Areas for new business				
Overgrown vacant lots				
Abandoned or junk cars				
Deteriorating buildings				
Overhead utility lines				
Limiting Development along the M-80 Corridor				
Limiting development in residential areas				
Protection of selected woodlands and forests				
Limiting the location of industrial development				
Limiting new commercial development to selected areas				
Increasing lot sizes requirements for building				
Enforcement of ordinances				
Expansion of Water and Sewer Services				

2. How do you feel about the following issues or programs?	**Strongly Support**	**Support**	**Oppose**	**Strongly Oppose**	**No Opinion**
More tourism development					
More industrial development					
More Commercial development					
Historical Development					
Beautification development					
Recycling Programs					
Development of Kinross Lake beach					
Development of Dukes Lake beach					
Improvement of Golf Course					
Snowmobile Trail system					
The "4th of July" fireworks					
Heritage Days					
Kids Fishing Day					
Other:					

3. What do you think of the enforcement of Township ordinances?	**Enforcement Too Strict**	**Enforcement Adequate**	**Enforcement Lacking**	**No Opinion**
Traffic/ Speeding				
Snowmobile use in housing area				
Animal control				
Juvenile curfew				
Nuisances (junk cars, noise, etc.)				
Building code				
Zoning Code				
Commercial Signs/Billboards				
Noxious weed control				
Deteriorating buildings				
Rental housing				
Other:				

4. How do you rate the following businesses?	**Very Good**	**Good**	**Average**	**Below Average**	**Poor**	**No Opinion**
Health Services	A	B	C	D	E	N
Grocery and/or hardware shopping	A	B	C	D	E	N
Shopping hours	A	B	C	D	E	N
Eating places	A	B	C	D	E	N
Price of goods	A	B	C	D	E	N
Customer Service	A	B	C	D	E	N
Gas Station/Convenience stores	A	B	C	D	E	N
Bars/Restaurants	A	B	C	D	E	N
Variety of goods available	A	B	C	D	E	N
Quality of goods available	A	B	C	D	E	N

Other:	A	B	C	D	E	N

5. In the past year which of the following composting activities have you undertaken and which do you plan to do in the future?	Have Done		Plan To Do		
	Yes	No	Yes	No	Unsure
Dropped off yard waste at compost site					
Picked-up finished compost or wood chips					
Start your own backyard composting pile					
Use a mulching lawnmower					
Other:					

6. How do you feel about the following future land uses?	Strongly Support	Support	Oppose	Strongly Oppose	No Opinion
Preservation of the Rural Character of Kinross Charter Township (KCT)					
KCT should control the land type uses that are not compatible with existing uses in that area					
KCT should limit the types of development along the M-80 corridor					
KCT should limit the location of Adult Businesses in the community					
KCT should limit the subdivision of farmland in selected Township areas					
KCT should limit the location of any new industrial development					
KCT should limit the location of any new commercial development					
KCT should limit the types of development permitted in areas with concentrations of residential properties to "residentially compatible" uses					

7. What should be done to better utilize the Fairgrounds (Kinross Community Park)?

8. What should be done to better utilize the Recreation Center?

9. What should be done to better utilize Kinross Lake?

10. What should be done to better utilize Duke Lake?

11. What do you like the most about living in Kinross Charter Township?

12. What do you like the least about living in Kinross Charter Township?

13. Are there any services that are not currently provided by the Township which you believe should be?

14. Please add any additional comments that you may have.

KINROSS CHARTER TOWNSHIP
MASTER PLAN SURVEY

Michigan law states that "The Township Planning Commission **shall make and approve** a basic plan as a **guide for development** of unincorporated portions of the township." The law continues: "At least every five years...the Planning Commission shall review the plan and determine to commence the procedure to amend the plan or adopt a new plan."

For that reason, the Planning Commission is conducting this survey. We hope that you, as a resident of Kinross Charter Township, will complete and return this survey to us. All results and comments will be reviewed. **Your input is important to us!**

PLEASE CHECK THE APPROPRIATE BLANK FOR EACH STATEMENT.

	YES	NO	
1.	____	____	Preservation of the rural character of Kinross Charter Township (KCT) should be an important consideration in development decisions.
2.	____	____	Township government should promote the concept of "community" within the township.
3.	____	____	The township should control the locations of types of land uses that are not compatible with the land uses existing in that area.
4.	____	____	The township should control the types of development permitted along the M-80 corridor.
5.	____	____	The township should limit the types of development permitted in areas with concentrations of residential properties to "residentially compatible" uses.
6.	____	____	The township should use its zoning authority to protect selected woodlands and forests.
7.	____	____	The township should limit the subdivision of farmland in selected township areas.
8.	____	____	The township should limit the location of any new industrial development.
9.	____	____	The township should limit the location of new commercial development.
10.	____	____	The township should better utilize Kinross Community Park (Fairgrounds).
11.	____	____	The township should better utilize Kinross Recreation Center.
12.	____	____	The township should better utilize Kinross and Duke's lakes.
13.	____	____	The township should improve its website.

PLEASE RANK THE FOLLOWING ITEMS 1 – 6 IN ORDER OF IMPORTANCE TO YOU (1 being MOST IMPORTANT, 6 being LEAST IMPORTANT).

_____ Limiting the types of development permitted along the M-80 corridor

_____ Limiting the types of development permitted in areas with concentrations of residential properties to "residentially compatible" uses.

_____ Protection of selected woodlands and forests.

_____ Limiting subdivision of farmland in selected township areas.

_____ Limiting the location of new industrial development.

_____ Limiting new commercial development to selected areas in the township.

PLEASE ANSWER BRIEFLY THE FOLLOWING QUESTIONS
(Continue on the reverse side, if necessary.)

1. What do you believe should be done to better utilize Kinross Community Park (Fairgrounds)?

2. What do you believe should be done to better utilize the Kinross Recreation Center?

3. What do you believe should be done to better utilize Kinross and/or Duke's lakes?

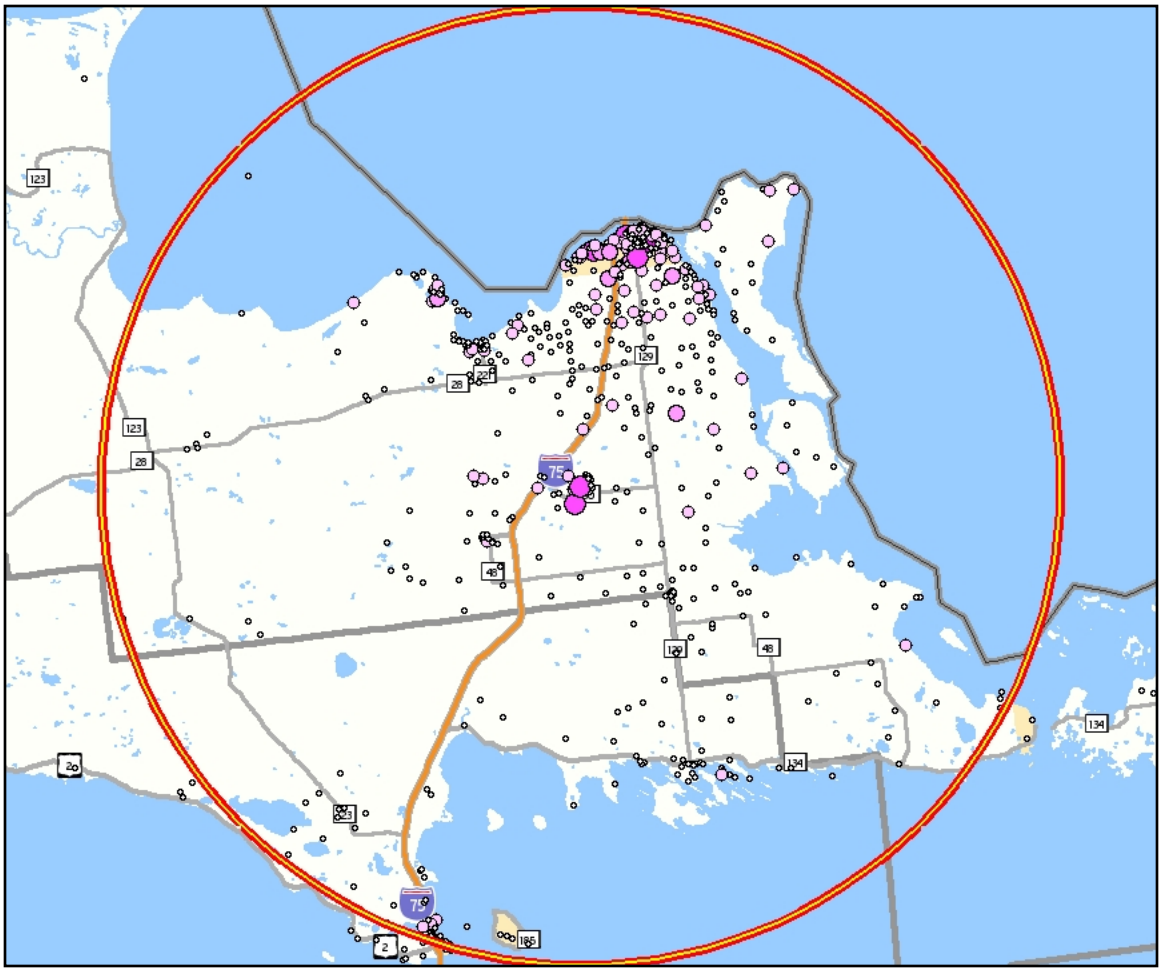
4. What improvements do you believe should be made to the township website?

5. What other changes/improvements would you like to see in the township?

cmh: 2/06

Appendix B: Labor Market Analysis Reports

Labor Shed Analysis



This map is for demonstration purposes only. For a more detailed and customizable map ouput, please use the "Print Map" tool located above the Map Viewer.

2006
- 4 - 19 Workers
- 20 - 64 Workers
- 65 - 152 Workers
- 153 - 296 Workers
- 297 - 511 Workers

Total All Jobs	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Total All Jobs	13,668	100.0%	13,841	100.0%	14,715	100.0%

Job counts in Counties Where Workers Live	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Chippewa Co., Michigan	10,408	76.1%	10,416	75.3%	11,316	76.9%
Mackinac Co., Michigan	1,366	10.0%	1,430	10.3%	1,470	10.0%
Schoolcraft Co., Michigan	229	1.7%	234	1.7%	187	1.3%
Cheboygan Co., Michigan	118	0.9%	127	0.9%	110	0.7%
Marquette Co., Michigan	112	0.8%	139	1.0%	130	0.9%
Luce Co., Michigan	104	0.8%	130	0.9%	113	0.8%
Emmet Co., Michigan	82	0.6%	59	0.4%	71	0.5%
Alpena Co., Michigan	76	0.6%	72	0.5%	84	0.6%
Otsego Co., Michigan	63	0.5%	68	0.5%	75	0.5%
Bay Co., Michigan	61	0.4%	62	0.4%	67	0.5%
All Other Locations	1,049	7.7%	1,104	8.0%	1,092	7.4%

Job counts in County Subdivisions Where Workers Live	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Sault Ste. Marie, Michigan	4,953	36.2%	4,983	36.0%	5,288	35.9%
Soo, Michigan	1,057	7.7%	1,060	7.7%	1,094	7.4%
Kinross, Michigan	945	6.9%	1,058	7.6%	1,229	8.4%
Bruce, Michigan	580	4.2%	624	4.5%	646	4.4%
Superior, Michigan	571	4.2%	497	3.6%	506	3.4%
Bay Mills, Michigan	510	3.7%	472	3.4%	516	3.5%
St. Ignace, Michigan	486	3.6%	596	4.3%	540	3.7%
Dafter, Michigan	394	2.9%	387	2.8%	460	3.1%
Clark, Michigan	368	2.7%	359	2.6%	404	2.7%
Pickford, Michigan	343	2.5%	378	2.7%	431	2.9%
All Other Locations	3,461	25.3%	3,427	24.8%	3,601	24.5%

Job counts in ZIP Codes (ZCTA) Where Workers Live	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
49783	6,723	49.2%	6,793	49.1%	7,249	49.3%
49715	1,211	8.9%	1,099	7.9%	1,156	7.9%
49788	752	5.5%	848	6.1%	970	6.6%
49781	638	4.7%	739	5.3%	715	4.9%
49780	438	3.2%	429	3.1%	583	4.0%
49774	382	2.8%	391	2.8%	435	3.0%
49724	304	2.2%	285	2.1%	352	2.4%
49719	279	2.0%	289	2.1%	298	2.0%
49854	173	1.3%	175	1.3%	147	1.0%
49736	161	1.2%	139	1.0%	155	1.1%
All Other Locations	2,607	19.1%	2,654	19.2%	2,655	18.0%

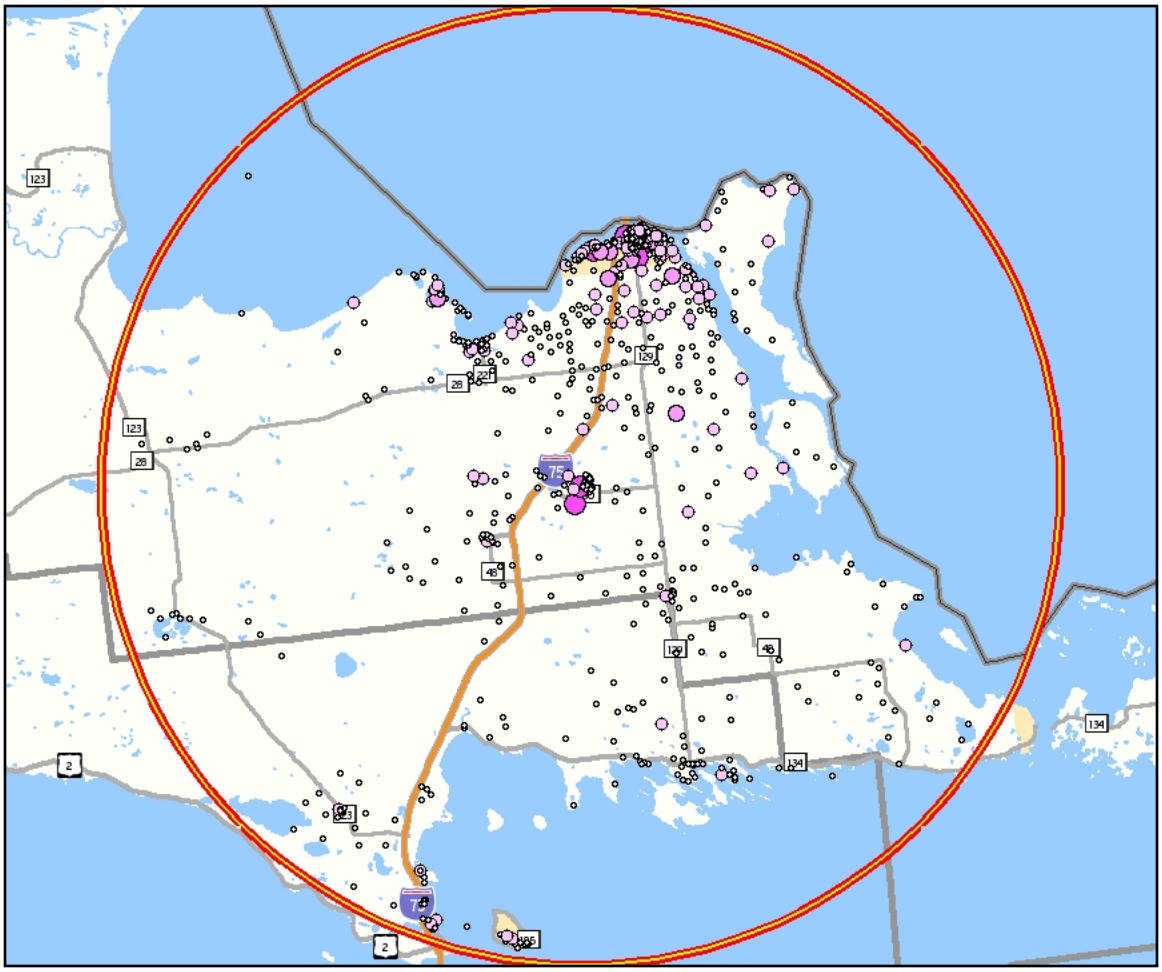
Report Settings

Year(s):	2006,2005,2004
Job Type:	All Jobs
Labor Market Segment:	All Workers
Study Selection Layer:	No layer selected.
Study Selection Features:	Only available for layer selections.
Advanced Area Selection:	Ignored.
Map Precision:	Blocks
Selected Block Count:	2802
Query ID:	123750268430954

Data Sources

US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2002, 2003, 2004, 2005, and 2006)

Home Area Profile Analysis



This map is for demonstration purposes only. For a more detailed and customizable map ouput, please use the "Print Map" tool located above the Map Viewer.

2006
- 4 - 24 Workers
- 25 - 78 Workers
- 79 - 185 Workers
- 186 - 360 Workers
- 361 - 623 Workers

Total All Jobs	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Total All Jobs	14,131	100.0%	14,096	100.0%	15,080	100.0%

Jobs by Worker Age	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Age 30 or younger	3,433	24.3%	3,367	23.9%	3,644	24.2%
Age 31 to 54	8,484	60.0%	8,632	61.2%	9,265	61.4%
Age 55 or older	2,214	15.7%	2,097	14.9%	2,171	14.4%

Jobs by Earnings Paid	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
$1,200 per month or less	4,572	32.4%	4,538	32.2%	5,155	34.2%
$1,201 to $3,400 per month	6,128	43.4%	6,217	44.1%	6,918	45.9%
More than $3,400 per month	3,431	24.3%	3,341	23.7%	3,007	19.9%

Jobs by Industry Type (2-digit NAICS)	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Agriculture, Forestry, Fishing and Hunting	84	0.6%	61	0.4%	66	0.4%
Mining, Quarrying, and Oil and Gas Extraction	105	0.7%	92	0.7%	91	0.6%
Utilities	109	0.8%	107	0.8%	99	0.7%
Construction	601	4.3%	609	4.3%	662	4.4%
Manufacturing	604	4.3%	668	4.7%	582	3.9%
Wholesale Trade	385	2.7%	336	2.4%	320	2.1%
Retail Trade	1,697	12.0%	1,686	12.0%	1,849	12.3%
Transportation and Warehousing	209	1.5%	229	1.6%	233	1.5%
Information	229	1.6%	241	1.7%	203	1.3%
Finance and Insurance	392	2.8%	413	2.9%	382	2.5%
Real Estate and Rental and Leasing	105	0.7%	89	0.6%	110	0.7%
Professional, Scientific, and Technical Services	271	1.9%	287	2.0%	255	1.7%
Management of Companies and Enterprises	86	0.6%	74	0.5%	69	0.5%
Administration & Support, Waste Management and Remediation	246	1.7%	229	1.6%	204	1.4%
Educational Services	1,412	10.0%	1,474	10.5%	1,792	11.9%
Health Care and Social Assistance	1,713	12.1%	1,643	11.7%	1,669	11.1%
Arts, Entertainment, and Recreation	926	6.6%	910	6.5%	945	6.3%
Accommodation and Food Services	1,362	9.6%	1,382	9.8%	1,455	9.6%
Other Services (excluding Public Administration)	353	2.5%	350	2.5%	372	2.5%
Public Administration	3,242	22.9%	3,216	22.8%	3,722	24.7%

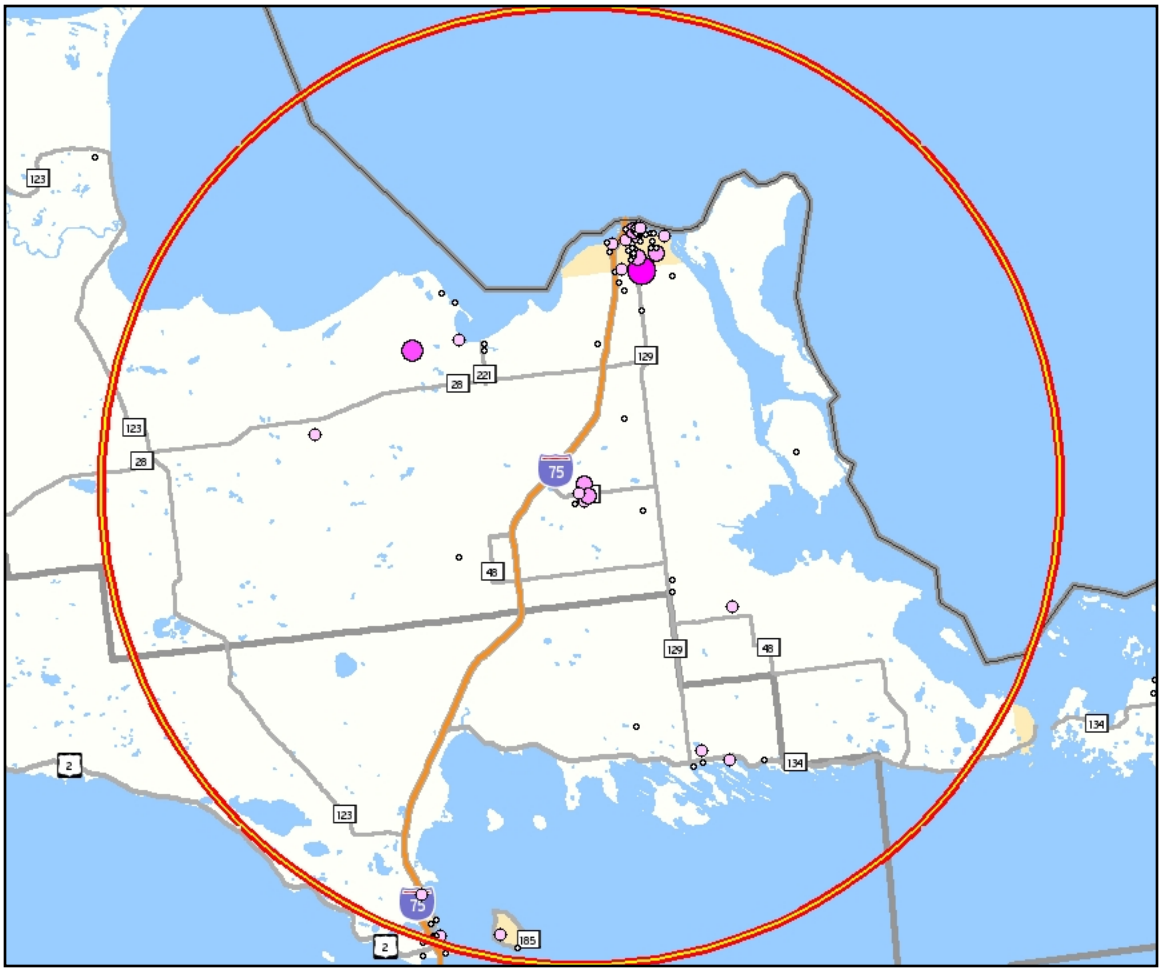
Report Settings

Year(s):	2006,2005,2004
Job Type:	All Jobs
Labor Market Segment:	All Workers
Study Selection Layer:	No layer selected.
Study Selection Features:	Only available for layer selections.
Advanced Area Selection:	Ignored.
Map Precision:	Blocks
Selected Block Count:	2802
Query ID:	123750245330540

Data Sources

US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2002, 2003, 2004, 2005, and 2006)

Commute Shed Analysis



This map is for demonstration purposes only. For a more detailed and customizable map ouput, please use the "Print Map" tool located above the Map Viewer.

2006
- 12 - 84 Workers
- 85 - 283 Workers
- 284 - 671 Workers
- 672 - 1310 Workers
- 1311 - 2263 Workers

Total All Jobs	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Total All Jobs	14,131	100.0%	14,096	100.0%	15,080	100.0%

Job counts in Counties Where Workers are Employed	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Chippewa Co., Michigan	10,317	73.0%	10,286	73.0%	11,262	74.7%
Mackinac Co., Michigan	1,327	9.4%	1,414	10.0%	1,410	9.4%
Schoolcraft Co., Michigan	229	1.6%	197	1.4%	151	1.0%
Ingham Co., Michigan	191	1.4%	171	1.2%	164	1.1%
Marquette Co., Michigan	167	1.2%	174	1.2%	206	1.4%
Luce Co., Michigan	157	1.1%	148	1.0%	173	1.1%
Emmet Co., Michigan	138	1.0%	148	1.0%	140	0.9%
Grand Traverse Co., Michigan	135	1.0%	110	0.8%	127	0.8%
Dickinson Co., Michigan	117	0.8%	113	0.8%	98	0.6%
Cheboygan Co., Michigan	108	0.8%	100	0.7%	126	0.8%
All Other Locations	1,245	8.8%	1,235	8.8%	1,223	8.1%

Job counts in County Subdivisions Where Workers are Employed	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Sault Ste. Marie, Michigan	4,781	33.8%	4,854	34.4%	5,017	33.3%
Soo, Michigan	2,424	17.2%	2,382	16.9%	2,510	16.6%
Superior, Michigan	1,170	8.3%	1,178	8.4%	1,135	7.5%
Kinross, Michigan	1,156	8.2%	1,108	7.9%	1,518	10.1%
St. Ignace, Michigan	532	3.8%	548	3.9%	624	4.1%
Clark, Michigan	422	3.0%	432	3.1%	438	2.9%
Pickford, Michigan	342	2.4%	340	2.4%	389	2.6%
Manistique, Michigan	203	1.4%	182	1.3%	137	0.9%
Mackinac Island, Michigan	176	1.2%	203	1.4%	181	1.2%
Lansing, Michigan	157	1.1%	134	1.0%	141	0.9%
All Other Locations	2,768	19.6%	2,735	19.4%	2,990	19.8%

Job counts in ZIP Codes (ZCTA) Where Workers are Employed	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
49783	7,276	51.5%	7,322	51.9%	7,601	50.4%
49715	1,241	8.8%	1,246	8.8%	1,202	8.0%
49788	1,147	8.1%	1,100	7.8%	1,507	10.0%
49781	609	4.3%	656	4.7%	684	4.5%
49719	414	2.9%	424	3.0%	424	2.8%
49774	319	2.3%	319	2.3%	368	2.4%
49854	195	1.4%	177	1.3%	133	0.9%
49757	176	1.2%	203	1.4%	181	1.2%
49868	150	1.1%	141	1.0%	163	1.1%
49855	138	1.0%	140	1.0%	160	1.1%
All Other Locations	2,466	17.5%	2,368	16.8%	2,657	17.6%

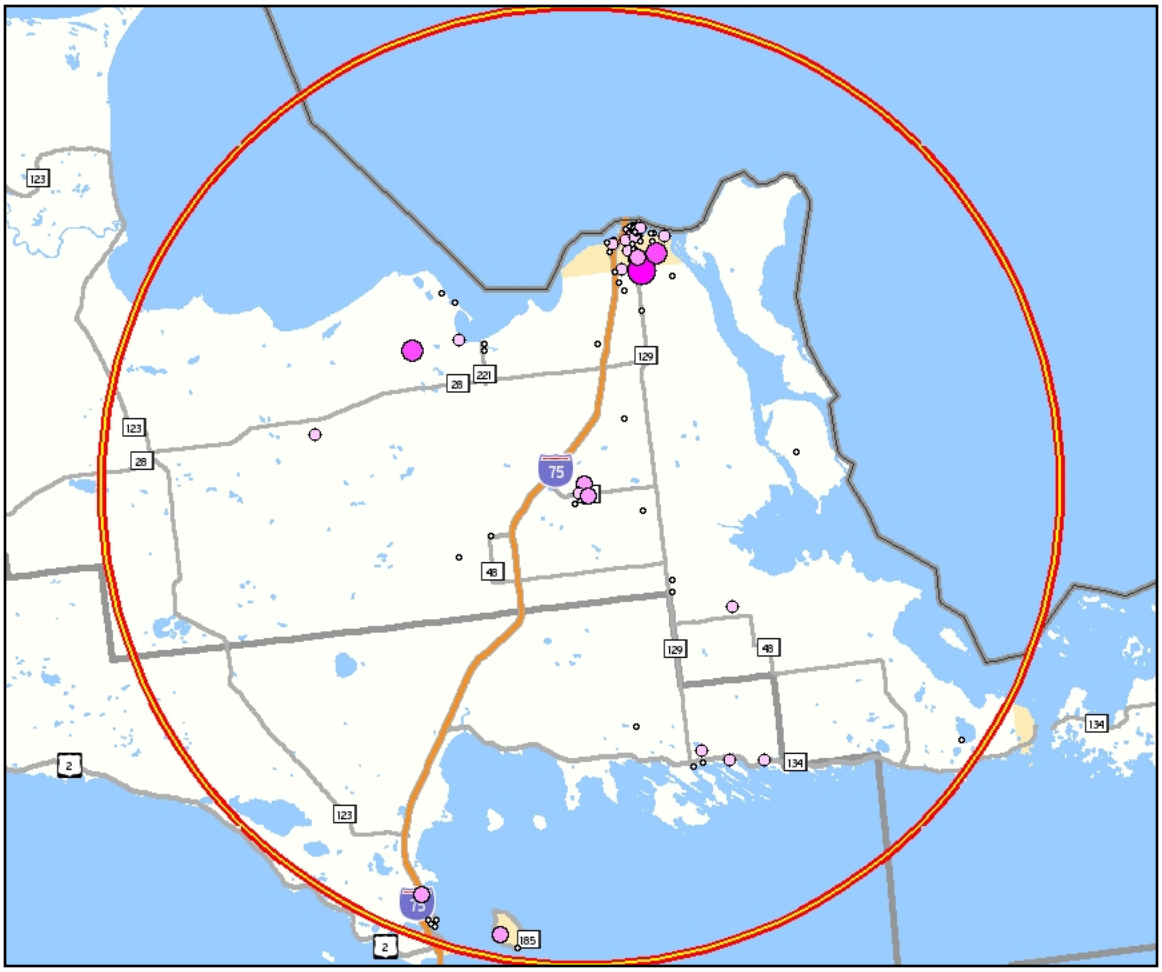
Report Settings

Year(s):	2006,2005,2004
Job Type:	All Jobs
Labor Market Segment:	All Workers
Study Selection Layer:	No layer selected.
Study Selection Features:	Only available for layer selections.
Advanced Area Selection:	Ignored.
Map Precision:	Blocks
Selected Block Count:	2802
Query ID:	123750231830310

Data Sources

US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2002, 2003, 2004, 2005, and 2006)

Work Area Profile Analysis



This map is for demonstration purposes only. For a more detailed and customizable map ouput, please use the "Print Map" tool located above the Map Viewer.

2006
- 14 - 98 Workers
- 99 - 329 Workers
- 330 - 779 Workers
- 780 - 1520 Workers
- 1521 - 2627 Workers

Total All Jobs	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Total All Jobs	13,668	100.0%	13,841	100.0%	14,715	100.0%

Jobs by Worker Age	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Age 30 or younger	3,224	23.6%	3,267	23.6%	3,462	23.5%
Age 31 to 54	8,307	60.8%	8,514	61.5%	9,111	61.9%
Age 55 or older	2,137	15.6%	2,060	14.9%	2,142	14.6%

Jobs by Earnings Paid	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
$1,200 per month or less	4,236	31.0%	4,330	31.3%	4,873	33.1%
$1,201 to $3,400 per month	6,161	45.1%	6,260	45.2%	6,896	46.9%
More than $3,400 per month	3,271	23.9%	3,251	23.5%	2,946	20.0%

Jobs by Industry Type (2-digit NAICS)	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Agriculture, Forestry, Fishing and Hunting	68	0.5%	54	0.4%	61	0.4%
Mining, Quarrying, and Oil and Gas Extraction	99	0.7%	103	0.7%	102	0.7%
Utilities	119	0.9%	126	0.9%	118	0.8%
Construction	530	3.9%	507	3.7%	546	3.7%
Manufacturing	481	3.5%	511	3.7%	469	3.2%
Wholesale Trade	285	2.1%	255	1.8%	248	1.7%
Retail Trade	1,512	11.1%	1,524	11.0%	1,591	10.8%
Transportation and Warehousing	212	1.6%	229	1.7%	232	1.6%
Information	242	1.8%	237	1.7%	217	1.5%
Finance and Insurance	344	2.5%	344	2.5%	354	2.4%
Real Estate and Rental and Leasing	84	0.6%	74	0.5%	85	0.6%
Professional, Scientific, and Technical Services	220	1.6%	261	1.9%	226	1.5%
Management of Companies and Enterprises	94	0.7%	94	0.7%	80	0.5%
Administration & Support, Waste Management and Remediation	217	1.6%	194	1.4%	187	1.3%
Educational Services	1,435	10.5%	1,492	10.8%	1,839	12.5%
Health Care and Social Assistance	1,468	10.7%	1,504	10.9%	1,490	10.1%
Arts, Entertainment, and Recreation	1,317	9.6%	1,357	9.8%	1,366	9.3%
Accommodation and Food Services	1,251	9.2%	1,327	9.6%	1,338	9.1%
Other Services (excluding Public Administration)	343	2.5%	331	2.4%	351	2.4%
Public Administration	3,347	24.5%	3,317	24.0%	3,815	25.9%

QWI Indicators - Private Sector Jobs	2006		2005		2004	
	Count	Share	Count	Share	Count	Share
Number of Employers	892	100.0%	898	100.0%	914	100.0%
Employment (Beginning-of-2nd quarter)	5,213	100.0%	5,289	100.0%	5,373	100.0%
Employment, Stable Jobs	4,389	100.0%	4,404	100.0%	4,661	100.0%
Separations, Stable Jobs	561	100.0%	634	100.0%	438	100.0%
New Hires, Stable Jobs	253	100.0%	336	100.0%	327	100.0%
Firm Job Gain	3,032	100.0%	3,075	100.0%	3,090	100.0%
Firm Job Loss	328	100.0%	435	100.0%	310	100.0%
Employment (reference quarter)	9,371	100.0%	9,559	100.0%	9,477	100.0%
Average Monthly Earnings, Stable Jobs	2,095	100.0%	1,984	100.0%	1,806	100.0%
Average Monthly Earnings Separations from Stable Jobs	672	100.0%	847	100.0%	684	100.0%
Average Monthly Earnings, New Hires, Stable Jobs	1,460	100.0%	1,256	100.0%	1,113	100.0%

Quarterly Workforce Indicators (QWI) in OnTheMap are considered to be experimental. For the latest and most accurate QWI statistics, use the QWI Online application at http://lehd.did.census.gov.

Job counts and average earnings measures that are subject to item suppression at the block-level do not contribute to estimates for the selected area in this report. To the extent that the selected area in the QWI Report is affected by item suppression, job counts in the QWI Report will be lower than the corresponding job counts in the Shed Report.

Report Settings

Year(s):	2006,2005,2004
Job Type:	All Jobs
Labor Market Segment:	All Workers
Study Selection Layer:	No layer selected.
Study Selection Features:	Only available for layer selections.
Advanced Area Selection:	Ignored.
Map Precision:	Blocks
Selected Block Count:	2802
Query ID:	123750257030756

Data Sources

US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2002, 2003, 2004, 2005, and 2006)

Appendix C: Proposed "Discover Our People" Survey

Discover Our People--KinrossTownship

1. Introduction

Some of the most important resources in any community are people and their various experiences, talents, and skills. Identification of those who can serve as potential mentors, leaders, subject experts, and teachers provides a foundation for creating and improving talent.

At the same time, the community needs to facilitate interaction to best utilize the skills and knowledge of its citizens. This survey is intended to identify valuable "people" assets in Kinross Township, and to explore ways to bring people together in sharing and growing.

Please contact Kelly Drake, Planner, U. P. Engineers & Architects, with questions or problems. She can be reached at 1-800-862-6061 or by e-mail at kdrake@upea.com

You will have the choice of providing your name at the end of the survey. You may begin the survey at any time and return at a later time, but once you click done, you cannot return to the survey. It is important that you complete the survey. The bar at the top of the page will let you know how far you have progressed toward finishing the survey. You may have to scroll down to see all the questions on the page. Click "next" to go to the next page of questions, click "prev" to return to the previous page. You will be given the chance to select "done" after the last question. You can return and finish your responses at any time unless you have selected "done".

Survey participants filling out a paper form can return it to the Township Hall or mail to:
U. P. Engineers & Architects
Attn. Kelly Drake
102 W. Washington, Ste 217
Marquette, MI 49855

Thank you for your participation!

Discover Our People--KinrossTownship

2. Getting to Know You

1. I live in (name of township, village, city) . . .

2. How long have you lived there?

- Less than 5 years
- 5-10 years
- Between 10 and 20 years
- All my life

3. Choose highest level of education completed.

- Less than High School graduate
- High School graduate
- Some college, no degree
- Associate's Degree
- 4 year degree (Bachelor's)
- Graduate or Professional Degree

Other (please specify)

Discover Our People--KinrossTownship

3. Domestic and Food Skills

Please select all areas in which you have skill or strength.

4. My domestic and food skills.

- Sewing/tailoring
- Canning/preserving foods
- Baking
- Basic cooking
- Vegetable gardening
- Flower gardening
- Organic Gardening
- Fruit growing
- Crop farming/haying
- Livestock/Animal husbandry
- Beekeeping
- Hunting
- Fishing
- International Cuisine (list type below)
- Trapping
- Nutrition
- Homeopathy
- Alternative medicine
- Massage
- Candle making
- Soap making
- Housekeeping
- Spatial Organization (closets, storage, etc)
- Money management
- Child care
- Elder care

Other (please specify)

Discover Our People--KinrossTownship

4. Vocational Skills

Please select all areas in which you have skill or strength.

5. My vocational skills.

- Plumbing
- Electrical
- Carpentry/construction
- Heavy equipment operation
- Woodworking
- Concrete/Masonry/Stonework
- Flooring
- Tile
- Auto repairs
- Small engine repairs
- Welding
- Painting (exterior/interior/wall/floor)

Other (please specify)

Discover Our People--KinrossTownship

5. Arts/Crafts/Design Skills

Please select all areas in which you have skill or strength.

6. My art/craft/design skills

- Stained glass/Mosaics
- Beadwork
- Needlework
- Artistic Painting (oil, watercolor, etc)
- Drawing (pencil, pastels, etc)
- Specialty Interior Painting (faux/stenciling)
- Quilting
- Other fiber arts
- Pottery/Ceramics
- Jewelry making
- Other metal work
- Photography
- 2D Mixed Media
- 3D Mixed Media
- Sculpture
- Furniture making/repair
- Printmaking
- Woodworking
- Leather work
- Basketry
- Digital art
- Graphic design
- Animation

Other (please specify)

Discover Our People--KinrossTownship

6. Cultural and Recreational Skills

Please select all areas in which you have skill or strength.

7. My cultural and recreational skills.

- Theater
- Storytelling
- Dance (list type below)
- Singing (list type below)
- Historian (list topic below)
- Writing (list type below)
- Instrumental (list instrument below)
- Languages (list specific below)
- Film or Video (list type/application be
- Sports (list below)
- Games (list below)

Other (please specify)

Discover Our People--KinrossTownship

7. Technical Skills

Please select all areas in which you have skill or strength.

8. My technical skills.

- Accounting/bookkeeping
- Web-site design
- Computer maintenance
- Computer programming
- Desktop publishing
- Data/Information management
- Computer networking
- Word processing
- Spreadsheets
- Computer software (list programs bel

Other (please specify)

Discover Our People--KinrossTownship

8. Miscellaneour Knowledge/Competency

Please select all areas in which you have skill or strength.

9. My miscellaneous knowledge or competencies

- Disaster preparedness
- Alternative/Renewable energy
- Sustainability
- Social sciences (list below)
- Liberal arts (list below)
- Military/Tactical
- Business, Finance, Economics (list be
- Travel experience (list destinations b

Other (please specify)

Discover Our People--KinrossTownship

9. Professional/Interpersonal Skills and Experience

Please select all areas in which you have skill or strength.

10. My professional or interpersonal skills and experience

- Child development
- Family relationships
- Mediation/Arbitration
- Business development/entrepreneurship
- Communications/marketing/promotion
- Internet social networking
- Emotional and mental health
- Education/teaching (list topic below)
- Career counseling
- Public speaking
- Medical (list below)
- Administration (list below)
- Other career skills (list below)
- Other professional skills (list below)

Other (please specify)

Discover Our People--KinrossTownship

10. Sharing Your Skills

Please select all ways in which you would consider sharing your skills or experiences.

11. I would consider sharing my skills and experiences in the following ways . . .

- Personal presentation to interest groups
- Small group instruction
- One-On-One Mentoring
- Conducting an occasional class
- Conducting a regular class
- Presentation to the schools
- Writing an article or feature for a newspaper or website
- Through an internet forum or blog
- Through an instructional video available on the Municipal website

Other (please specify)

Discover Our People--KinrossTownship

11. Tools and Assistance I Would Need in order to Share my Skills

Please select all ways in which you would need assistance.

12. I would need or appreciate help with the following:

- Designing and creating a presentation
- Finding interested groups/teaching venues
- Partners to share the presentation/teaching duties
- Writing/Editing my article
- Setting up the internet forum or blog
- Creating an instructional video

Other (please specify)

Discover Our People--KinrossTownship

12. Further participation

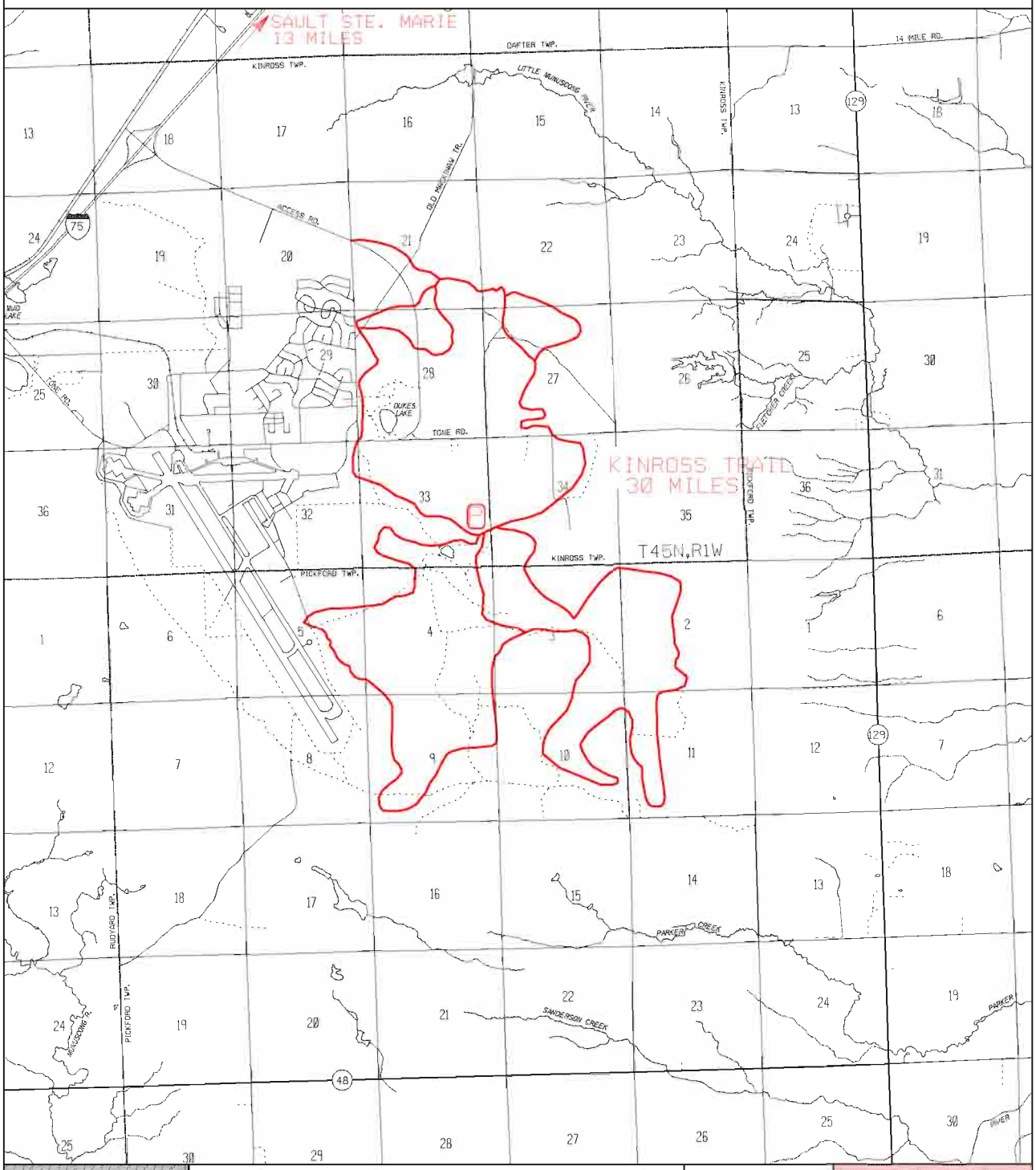
13. I would be willing to help by sharing my ideas and skills, or by helping someone else to share their skills. Write name and additional contact information such as telephone number or e-mail address below, along with an idea of how you would be willing to participate (will be kept confidential among Municipal officials).

Appendix D: Motorcycle Trail Map

KINROSS MOTORCYCLE TRAIL

CHIPPEWA COUNTY

FOREST MANAGEMENT DIVISION



ORV TRAIL-for ORV's less than 50" in width-off road motorcycles. (DNR license required)

ORV ROUTE-for ORV's of all sizes. (DNR license required unless licensed by Secretary of State)

LEGEND

PARKING

CAMPGROUND

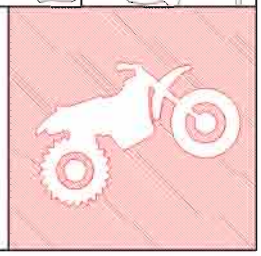
GAS - FOOD

0 .5 1

SCALE IN MILES

LOCATION

MAY 2005



ADVISORY: Trails and Routes have two-way traffic.

DISCLAIMER: Trails shown on this map are an approximate representation of the trail system at the time of publication and may not reflect current ground conditions. STAY ON SIGNED TRAILS ONLY!

Appendix E: Eastern U.P. Bicycle Map

Bicycle Safety

Be predictable and act like a vehicle
Bicyclists on public roadways have the same rights and responsibilities as automobile drivers, and are subject to the same state laws and ordinances.

Always wear an approved helmet
Always have your helmet fitted and adjusted properly. Helmets should fit snugly so that they do not move around while riding.

Ride with traffic
Motorists are not looking for bicyclists riding on the wrong side of the road. State law requires that cyclists ride with the flow of traffic.

Use hand signals
Hand signals tell pedestrians and motorists what you intend to do. It is state law that you use signals.

Watch for cars pulling out
Always assume that motorists do not see you. Make eye contact to assess your safety before proceeding in front of a vehicle.

Wear appropriate clothing
Wear light, bright and/or reflective clothing at all times to improve your visibility. Dress in layers and bring gear for unforeseen changes in weather.

Use lights at night
State law requires a front white light visible for 500 ft and a red reflector visible for 600 ft at night. More reflectors and stronger lights make you more visible.

Be courteous and respectful on trails
Show courtesy to all trail users. Adhere to trail hours and restrictions. Respect the rights of property owners.

Always yield to other, slower trail users
Slow down and use caution when approaching other trail users. When overtaking, announce your intentions by saying "passing on your left" or ringing your bell.

Ride as far to the right as practical
Form a single file line when other users are present. Slower trail users should stay to the right.

Before You Use This Map

This map has been developed by the Eastern Upper Peninsula Regional Planning and Development Commission and its partners to assist individuals in finding appropriate bicycle routes. The user is expected to exercise the good sense of a reasonable person in conjunction with the use of this map. Personal safety remains the responsibility of the user. As the Eastern Upper Peninsula Regional Planning and Development Commission does not maintain the roads or paths reflected on this map, it makes no express or implied guarantee as to the safety or condition of them. Road and path conditions indicated on the map will change with time. The suitability of traffic, roads, and trails will vary depending on your comfort and skill as a cyclist.

All private entities and person involved in the creation of this map disclaim responsibility and shall not be answerable or held accountable in any manner for loss, damage, or injury that may be suffered as the result of the use of this map.

What to expect biking in the E.U.P.

The topography of the eastern U.P. can generally be described as level. There are a few areas where land is rolling and few areas of sharp relief. Much of the area is forested or wetlands. Typical state highways will have a 2 foot paved and 4 foot gravel shoulder. Major county roads will have a 4 foot gravel shoulder. Minor county roads may have a small grass shoulder. Numerous islands, inland lakes, rivers, geological formations, with an abundance of wildflowers, cattails, tree canopy's and wildlife is sure to provide an interesting yet peaceful experience from your ride through the eastern U.P.

For more information on road surface types, conditions and traffic volumes go to the website www.eup-planning.org and follow links to Transportation - Asset Management and Traffic Counts. 2000 Population by Zip Code from www.census.gov.

Where to Bike

On the Road
Bicycles are permitted on Michigan highways and roads, the only EXCEPTIONS are limited access freeways or roads with posted prohibitions. Bicycles are allowed on road systems within State Forests, State Parks, National Forests, and National Parks. For more information on minor roads, county road commissions typically offer county road maps.

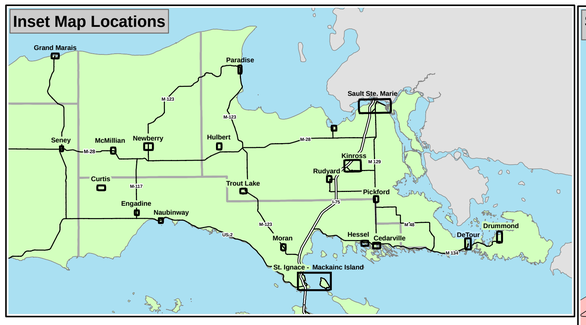
Trails in State Parks and Recreation Areas
There is no better bicycling country than Michigan's scenic and rolling two peninsulas located in the heart of the Great Lakes Basin. Plenty of trails and pathways challenge bicyclists of all ages, types and skill levels, as well as plenty of space to rest and camp.

Bikes are allowed on all paved and non-paved roads in state parks and recreation areas. Bikes may also be ridden on designated bike paths. All-terrain bicycles are suited for many of the state and national trails. For more information, call the individual park or the Michigan Department of Natural Resources Parks Division at (517) 373-9900 or visit their website at **www.mi.gov/dnr/**.

State Forests
Bicycles are allowed on most State Forest trails. Contact the Michigan Department of Natural Resources Forest Management Division at (517) 373-1275 or visit their website at **www.mi.gov/dnr/**.

Hiawatha National Forest
Beside wilderness and specifically designated hiker only trails (including the North Country Trail), the entire forest is open to mountain bikes. Contact the U.S. Forest Service at (906) 786-4062 for more information or visit their website at **www.fs.fed.us**.

North Country National Scenic Trail
When completed, the North Country Trail will be a 4,000 mile National Scenic Trail stretching from New York to North Dakota. The North Country Trail is foot traffic only thru the Hiawatha National Forest, other sections may also be closed to bicycles. For more information visit NCTA web site at **www.northcountrytrail.org.**



LEGEND

Places
- FULL SERVICE PLACES
- Some Service Places
- No Service Places

Roads
- Paved - Light AADT
- Paved - Medium AADT
- Paved - Heavy AADT
- Limited Access Freeway
- Paved - No Traffic Data
- Unpaved - No Traffic Data
- Mileage Marks

Wide Shoulder
Interchanges

Wide Shoulder means 4 foot or wider paved surface
Average Annual Daily Traffic (AADT) Volume
Light - Under 2,500
Medium - 2,500 to 10,000
Heavy - Above 10,000

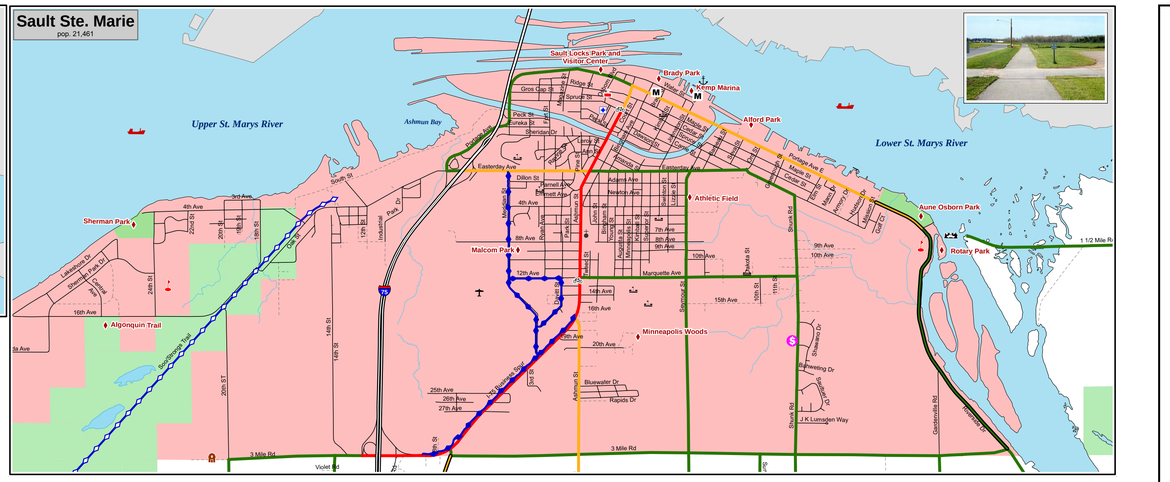
Trails
- Paved Bike Paths
- Unpaved Multi-Use Trails
- North Country National Scenic Trail

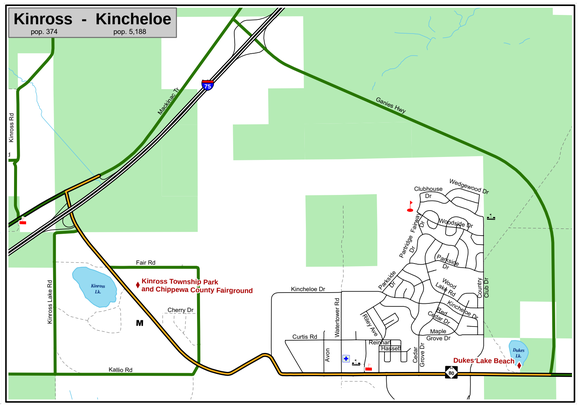
See note on map back regarding North Country Trail usage

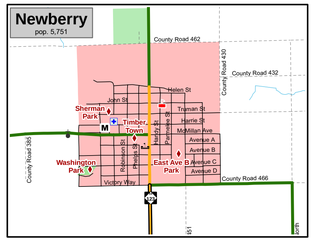
Map Symbols
- Parks and Public Recreation Areas
- Camping
- Scenic View
- Food
- Airport
- Casino
- Centennial Farm
- Golf Course
- Lighthouse
- Nature Area
- Post Office
- Wildlife Area
- Restrooms
- Swimming
- Lodging
- Car Ferry
- Cemetery
- Freighter Views
- Harbor
- Museum
- Passenger Ferry
- School
- Underwater Preserve

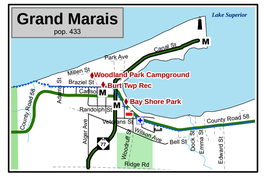
Land Use
- State of Michigan Ownership
- Hiawatha National Forest
- Parks and Wilderness Areas
- Cities and Villages
- County Lines

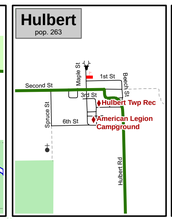
Inset Maps 2 Inches = 1 Mile

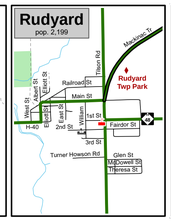


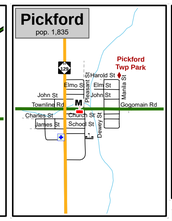


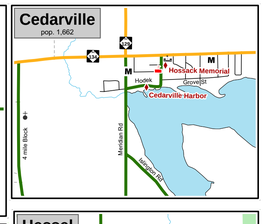


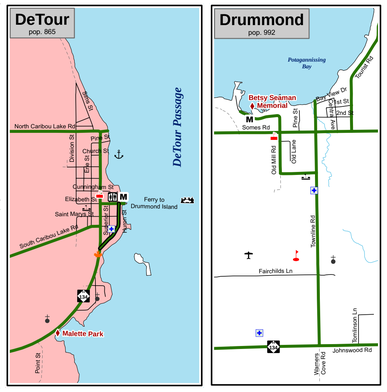


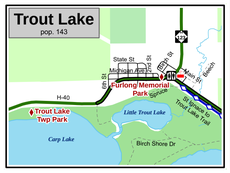


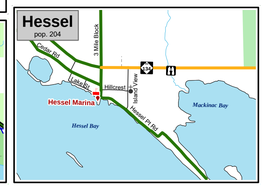


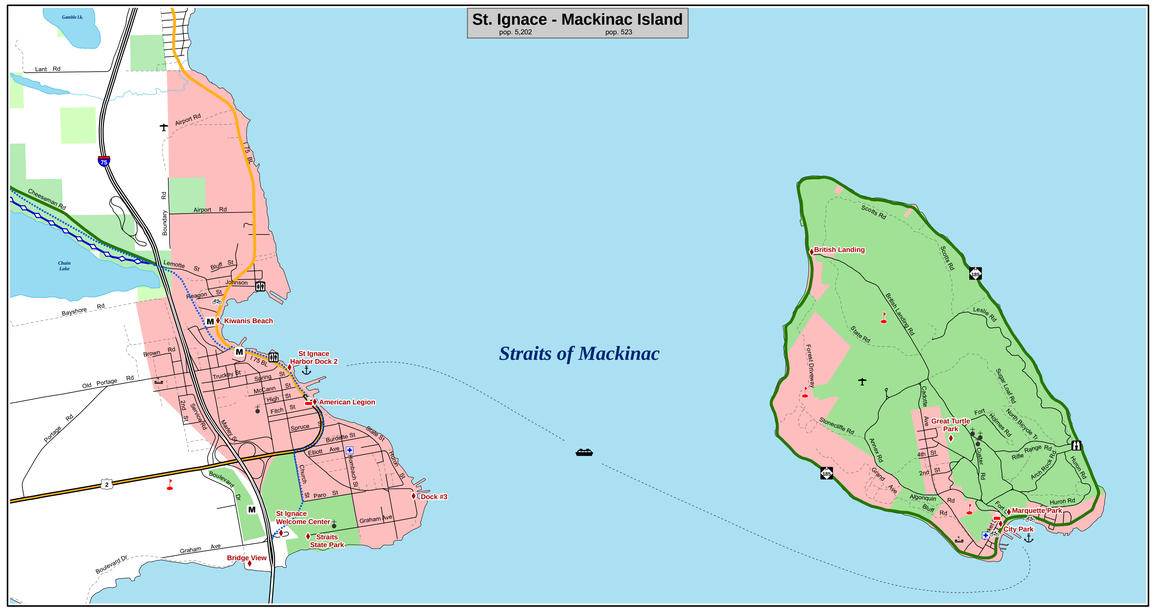












PRIMARY TRAIL INVENTORY	LOCATION	ACTIVITIES					LENGTH	SURFACE TYPE	FOR MORE INFORMATION
TRAIL NAME		HIKING	MOUNTAIN BIKING	HORSEBACK RIDING	X-C SKIING	SNOWMOBILING			
CHIPPEWA COUNTY									
ALGONQUIN	Sault Ste. Marie	Y	Y		Y		9.3 miles	Natural	www.michigandnr.com/parksandtrails
MCNEARNEY LAKE	North of Strongs	Y	Y		Y			Natural	www.fs.fed.us/r9/forests/hiawatha/recreation/skiing
PARADISE PATHWAY	Paradise	Y	Y	Y	Y	Y		Sand	
PINE BOWL	Kincheloe	Y	Y	Y	Y		7.7 miles	Natural	www.michigandnr.com/parksandtrails
SOOSTRONGS	Sault Ste. Marie to Strongs	Y	Y	Y		Y	32 miles	Ballast, Dirt, Sand	www.michigandnrtail.org
WABOOSE	Northwest of Raco							Sand	
LUCE COUNTY									
CANADA LAKES PATHWAY	South of Newberry	Y	Y	Y	Y		14 miles	Natural	www.michigandnr.com/parksandtrails
MACKINAC COUNTY									
CARP RIVER	North of St. Ignace	Y	Y		Y			Natural	
SAND DUNES	West of St. Ignace	Y	Y		Y			Natural	www.fs.fed.us/r9/forests/hiawatha/recreation/skiing
ST. IGNACE/TROUT LAKE	St. Ignace to Trout Lake	Y	Y	Y		Y		Ballast, Sand	www.michigantrail.org
ST. MARTINS POINT	West of Hessel	Y	Y		Y		3 miles	Natural	www.fs.fed.us/r9/forests/hiawatha/recreation/skiing
SCHOOLCRAFT CO.									
FOX RIVER	Northwest of Seney	Y	Y	Y			27.5 miles	Natural	www.michigandnr.com/parksandtrails

PRIMARY PARKS INVENTORY		CAMPING					PINIC		WATER		ACTIVE		
USF – U.S. FOREST CAMPGROUND SP – STATE FOREST CAMPGROUND SP – STATE PARK RA – STATE REST AREA RP – STATE ROADSIDE PARK REC – RECREATION AREA FG – FAIRGROUND	OWNER (U.S. FOREST (U.S.) FOREST (U.S.) FOREST (U.S.)

Appendix F: Summary of Written Survey Comments, 2005

Kinross Township Master Plan Survey 2005

Summarized Additional Citizen Comments:

Facilities Suggestions

- Combine two post offices (3)
- Removal of abandoned buildings on M-80 (2)
- More/better street lighting (2)
- Clean and repair storm drains on streets (2)
- Sidewalks and pathways through neighborhoods to get kids off the streets
- Clean sewer drains in Woodside housing
- More trees
- Renovate the clubhouse at the golf course
- Turn the field in front of the Rec Center into a parking lot
- Address sidewalk issues
- Expansion of water/sewer for potential business
- Bio-fuel stations
- Lighted marquee at Town Hall
- Pave gravel roads
- Technology upgrades
- Do streetscaping

Additional Services

- More police officers on duty at all times (4)
- Affordable snow plowing service for low/fixed income residents
- Plow the sidewalks
- Bus service is vital
- Programs to increase home ownership
- Longer hours at the Post Office
- Earlier hours at recreation center (fitness facilities)
- Better police protection, especially at night. Walking/bicycle patrols to get in touch with residents.
- Sanitation/trash service improvements (curbside collection of more items)
- Expand educational opportunities
- Tree/forestry program management
- Events newsletter sent to rural residents as well

- Offer natural gas to more homes
- Extend police patrol to M-129
- Clean up along M-80 corridor
- Two or more community clean-up days
- Accept responsibility for public utilities beyond property lines, below streets, etc
- Mow sides of roads
- Dust control on roads
- Handy reminders of available services in Township for newcomers

Business suggestions

- More encouragement of new business and industry-diversity from prisons (11)
- Fast food and other family restaurants (McDonalds) (4)
- Drug store (3)
- Wal-Mart supercenter (2)
- Capitalize on the central location between St. Ignace, Newberry and the Soo and bring in a regional retailer to serve all
- Better wayfinding sign for businesses at Exit 378
- Buy Local program, local procurement program
- More attractive signage for businesses
- Improve exterior of empty buildings on Tone Road
- Exercise/spa/tanning facilities
- Alternative energy
- Barber shop
- Liquor store
- Flea Market

Additional Recreation

- Fireworks over Kinross Lake (3)
- More public parks (more kid friendly parks) (2)
- Roller skating
- Skate park/ramps
- Bowling
- Card tournaments
- Movie Theater

- Adult/Teen dances
- Bike races—dirt bike track
- Horse trails separate from ORV trails
- Places for small children to play
- Walking/biking/running paths
- Entertainment businesses with dancing (some adult entertainment)
- Winter activities, such as snowmobile racing at the Community Park, cross country ski trails, sled hill
- Incentivize use of private lands for snowmobile trails
- Rope off a swimming area and hire a lifeguard at Dukes Lake
- More picnic tables throughout Township
- Fair kids activities such as ball throwing, basketball shooting contests, "punt, pass, and kick contests", rock skipping, watermelon or corn roasts
- Free kids golf day
- More staff and parent volunteers at Rec Center

Community Concerns

- Township needs to work together and stop bickering. This slows and/or stops progress (5)
- Removal of junk vehicles (3)
- Control junk in town (2)
- Community beautification, especially housing area, Kinross cemetery
- Better code enforcement
- Disorderly conduct and noise in the neighborhoods
- Fence or enclose junk yards
- Weeds/tall grass
- Barking/Loose dogs
- Too many skunks
- Raze dilapidated buildings
- Noise of ATV's (streets and golf course)
- Duplexes painted two different colors on each side
- No sense of pride and community
- Improve appearance of Kinross Community Park—update playground equipment, provide more picnic tables, mow the grass, unlock the bathrooms, upkeep the horseshoe pits
- Kinross Lake—Check septic systems (or extend sewer to this area), weed control, dredge the silt

- Teaching our children about respect for others and their property, themselves, and to GOD
- Stop kids from destroying the park
- Bring in more business
- Get rid of Shunk Properties illegal sign!!
- No Quality-of-Life!

Fiscal Suggestions

- 1% tax on those who work in the township but don't live in the township, use money for community improvement
- Change taxation to reflect level of services rendered, rural areas do not get much in return for their tax dollars (example: let those on private roads get tax breaks, or receive garbage pickup or police protection the same as those in town)
- Eliminate benefits for public officials and substitute with per diem meeting fee
- Pay law enforcement officer (Constable) "by the call" (ex. $75 per call), increase sheriff by 2 cars and State police by one extra. No secretary for the Constable.
- Reinvest the money from the golf course into the golf course
- Sell the golf course or eliminate the pro-position
- Don't spend money on radio read meters to make employee's job easier
- Put more money into development of Dukes Lake vs. Kinross Lake. Possible assessment of residents on Kinross Lake if they want to help fund clean-up
- No expansion of police or fire

Law changes

- Lower speed limit on all of M-80 to 45 mph
- Enforcement of leash law (4)
- Enforcement of trash ordinances
- Enforcement of handicap parking areas
- Enforcement of curfews
- Enforcement of visibility of street addresses and house numbers
- Enforce wheelchairs/power scooters for all stores
- Reach agreement with tribe over ordinance enforcement, it's silly to have part of a street cleaned up and let other part go because they are tribal
- Stop allowing spot zoning (residential areas used for light and heavy industrial, gravel pits, and agricultural uses)

Personnel suggestions

- Change supervisor (2)
- New police chief
- Problems with particular policemen/send police to anger management classes (keep from kicking in doors)
- Downsize police department
- Problems with Kinross Township Board

Other

- Historical Society is a great asset to our community
- Beautification contest for private residences
- Move the Robert Trent Jones plaque at the Veterans memorial to the Golf Course
- Great community—like it a lot
- Time for change—let's get with the times!!!
- Keep mail delivery as is. No streetside boxes like the condos have.

Suggestions for the Fairgrounds

Programs

- More functions ie: craft shows, animal events, dog shows, horse racing (26)
- Family activities (9)
- Organizational use of facilities (fee based) (6)
- Flea Markets (6)
- Advertising/promotion of facilities (like camping area)/events (6)
- Snowmobile races (5)
- Craft and art festivals (5)
- Farmer's Market—Fourth of July events (5)
- Bi-weekly/monthly concerts, community events, and outdoor trade shows (5)
- Recreation for teenagers and small children (3)
- Fireworks (3)
- Advertise events via billboard (2)
- Horseshoe tournaments (2)
- Community picnic (2)
- Available for weddings, family reunions (2)
- Dog sled races
- Youth camps

- Camping groups
- Supervised, year-around camping
- Monthly campsite rental for Kinross residents at reasonable rate
- Available for shows and traveling entertainment (take student suggestions)
- Use dirt track for youth motor cross rallies and races
- Partnership with LSSU and Bay Mills Community College
- Special event hosting such as hot air balloons, ice sculptures, Wild West Days, BMX events
- Trail rides
- Classic Car show

Services

- Maintenance, upkeep (7)
- Keep it mowed (6)
- Cleaner bathrooms (5)
- Open year around (4)
- Clean up public swimming area (3)
- Free use of hall for Township residents (2)
- Cheaper prices (2)
- Keep prices down to encourage use (2)
- Parking break for elders
- Bus service
- Unlock and maintain bathrooms
- Control dust/dirt

Facilities

- Update park and buildings (13)
- More picnic tables (11)
- Update old equipment for safety (6)
- New cookers (4)
- Better playground equipment (4)
- New bathrooms (3)
- Clean /improve 4-H building or tear it down (3)
- Update kitchen in 4-H building (2)
- New 4-H building (2)
- Band shell for regularly scheduled concerts (2)

- Upgrade RV/Camping spots (2)
- Snow-cross track (2)
- Outdoor ice skating rink with warm up station
- Beautify, add walking paths, more white lighting
- Beautification, flowers and landscaping
- Bigger track and grandstand
- Disc golf course
- Ball diamond
- Running water in bathrooms and water fountains
- Dog run area
- Water and sewer
- Self-storage facilities (discount for Township residents)
- Longer track paved to be NRA compatible

Other

- Always enjoyed it like it is (3)
- Sell the facility, too costly to upkeep, no profits even during fair (2)
- Bulldoze and use for housing development
- Downsize and use for something else
- Charge Fair Board for 2 week use
- Move it
- Pave it
- More respect from staff at fair
- Need new Fair Board
- Quit letting Fair Board dictate what and who goes and uses it
- Hire a fairgrounds/events manager to bring in more events
- Fix watershed issues
- The fair is a great asset
- Don’t employ prisoners
- Don’t over-invest Kinross Charter Township funds
- Don’t fence it in, it belongs to the Township and we are the Township
- Stop noise of the races

<u>Suggestions for the Recreation Center</u>

Programs

- More programs for everyone/family (16)
- More activities for adults and seniors (dances) (13)
- Open on weekends (13)
- Open the rec center earlier (11)
- Make more friendly for younger kids (7)
- Change hours so the youth can use it (5)
- More computer hours/classes (5)
- Educational programs (4)
- Have programs for adults and teens (dances) (2)
- Kids day for age 1-10 (2)
- Baseball tournaments (2)
- Day for teens, dances
- Host tournaments (basketball and horseshoes)
- Rent for reunions, conferences, etc
- More dances
- Blood drive
- Annual Christmas craft show
- Bicycle repair training
- Boys/Girls club

Services

- Better upkeep of whole complex and grounds (22)
- Better advertising of services available (10)
- Increase patrol of grounds to discourage problem kids from intimidating or threatening other kids (7)
- More staff (6)
- Employ personnel that are people friendly (6)
- More volunteers (5)
- New management (3)
- Put more money in maintenance (3)
- Better supervision (2)
- Keep it from becoming a hang-out for drinking and drugging (2)
- Stop allowing teenagers to control the gym
- Hire a full-time security officer to monitor the halls

- Bus service

Facilities

- Add more fitness equipment (5)
- Fix/improve the playground (3)
- Skate park/ramps (2)
- Swimming pool (2)
- Senior citizen café
- Boxing bag and gloves
- Add racket ball and hand ball courts
- Sprinkler system for ball fields
- Quiet room for studying

Other

- Larger budget (7)
- Doing a good job (4)
- Close, cost too much (3)
- Get rid of teenage riff raff (2)
- Open too many hours with lack of use (2)
- Stop giving those people that work there a hard time, they seem to care about kids

<u>Suggestions for Kinross Lake</u>

Programs

- Supervised, non-motorized boat rentals (5)
- Planned programming/swimming events (4)
- Allow non-motorized boats (2)
- Allow small boats with motors
- Community music night for different stages of learning
- Advertise for family outings
- Block street, picnic on designated days

Services

- Clean it up (66)
- Get rid of weeds (18)
- Dredge the lake (15)
- Ask residents of private lake to clean it up (5)

- Clean it up or fill it in (4)
- Better maintenance (3)
- Better supervision (2)
- Life guard (2)
- Resolve sewage problem first

Facilities

- Add more fish (14)
- Better public access/beach area (9)
- Better access (7)
- Boat dock/launch (5)
- Picnic tables (5)
- Fire pits (3)
- Develop to be used as a recreation area again (2)
- Small playground for children (2)
- Add lights around the lake
- Camping area
- Fence side of beach area
- Closer bathrooms
- Nice restaurant
- Hot dog stand

Other

- Nothing, it is a lost cause (7)
- Not sure (5)
- Fill it in and turn into an open space park (4)
- Nothing (3)
- Not enough public land (2)
- Tax to clean up lake
- Fine the people who knowingly pollute the lake with their housing
- Not suitable for swimming
- Not suitable for boating

<u>Suggestions for Dukes Lake</u>

Programs

- Open ski hill (6)
- Advertise for family outings, public beach (5)
- Winter sledding (3)
- Ice skating (3)
- More activities (3)
- Monthly kids fishing day (2)
- Community music night for people in different stages of leaning can enjoy

Services

- Clean it up (57)
- Better enforcement of laws, supervision, stop foul language/profanity (24)
- Add lifeguard (8)
- Maintain bathrooms (4)
- Keep riff raff/trouble-makers out (4)
- Control vehicle traffic on beach area (3)
- 24 hour coverage to stop vandalism (2)

Facilities

- Extend/improve/dredge lake to make more beaches (14)
- Improved picnic area with tables (15)
- Campgrounds (11)
- Stock for fishing (10)
- Board walk around lake (8)
- Boat launch/dock (7)
- Better access (5)
- Small playground for children (5)
- Add a park (4)
- Pavilion with fireplace (3)
- Designated fishing area (3)
- Non-motorized boat rentals available (3)
- Concession stand (3)
- Lights around lake (3)
- Walking trails (3)
- Bike path around lake (2)
- Water fountains

- Tow/lift rope for sleds along M-80 hill
- Better roadway
- Dumpster for summer use
- Turn it into a built in swimming pool so it will be clean

Other

- Good the way it is (5)
- Not sure (4)
- Leave gate open (3)
- Lock gates at night (2)
- No dogs (2)
- Nothing, they get everything now (2)
- Unsafe for swimming because of holes and drop-offs
- Mileage for recreation

What do you like most about living in Kinross Charter Township?

- Quiet and friendly (27)
- Sand and good well water (20)
- Small town feel (18)
- Rural living (20)
- Accessible to everything (16)
- Affordable housing (15)
- Available shopping/services (13)
- Affordable water (11)
- Close community (9)
- Close to work (8)
- Access to woods and trails (7)
- Quality of the neighborhood (7)
- Golf Course (7)
- Non-hectic, laid back, peaceful atmosphere (7)
- Openness/large tracts of undeveloped land (6)
- Less crime (6)
- Great water/taste (6)
- Lower cost of living (6)

- Location (6)
- People (6)
- Close to school/good school (5)
- Nice area (4)
- Churches (4)
- Tax rate (4)
- City amenities (3)
- No traffic jams (3)
- Snowmobiling (3)
- Police patrols (3)
- Quality of life (2)
- Community of helpfulness (2)
- Safe for our kids (2)
- What's not to like (2)
- Cleanness (2)
- Garbage removal (2)
- Clean air
- New airport terminal
- Available housing
- Good roads
- Summer weather
- (10 responses indicating they like nothing about living in the Township)

What do you like least about living in Kinross Charter Township?

- Lack of choices for shopping (23)
- Run down residences (18)
- Politics (16)
- Lack of dining choices (12)
- Selective law/ordinance enforcement (12)
- Unsupervised children (12)
- Township Board (11)
- Lack of job opportunities (10)
- Garbage/litter (9)

- Two different communities—Kinross/Kincheloe (8)
- Lack of respect for people/property (8)
- Noise (sirens, people, ATV's, snowmobiles, motorcycles, cars, car stereos, barking dogs) (8)
- The taxes (8)
- Junk vehicles (6)
- Lack of services (6)
- Lacking economic development (6)
- Unsupervised pets (6)
- Lack of community activities (5)
- Lack of entertainment choices (5)
- Lack of friendliness among neighbors (5)
- Lacking police presence (5)
- Corruption/incompetence of police force (5)
- Profanity from children and neighbors (5)
- Gas prices (5)
- Transit community (5)
- Renters (5)
- Too many criminals walking our street (4)
- Current supervisor (4)
- Kids walking in streets (4)
- Police slow to respond if at all (3)
- Speeding in housing (3)
- Snowmobile trail along M-80 filling driveways with snow (3)
- Lack of notice about important meetings/major changes (2)
- No sense of community (2)
- Lack of kid activities (2)
- Harassment from local police chief (2)
- Close proximity of neighbors in Kincheloe (2)
- Tribal properties (2)
- Resistance to change (2)
- Prejudice of Soo residents against our Township/bad reputation (2)
- Slow deployment of snowplows in Kincheloe (2)
- Lack of cooperation between different groups

- Negativism about Township government
- Trashy trailer/RV park
- Speeding on M-80
- No pride
- Not taking care of old Kinross school and Town Hall
- Appearance of some buildings on M-80
- Part of Kinross called Kincheloe—this is Kinross Township, not Kincheloe!
- Living on a private road with high taxes yet receive no benefits
- No full-time fire department
- Need better street lighting
- Negative reporting in newspaper
- Smoke from backyard campfires
- Unable to use lakes because of problem kids
- Wasted tax dollars
- Projects not completed (streetscape, lake dredging)
- Trying to change our rural way of life
- Lack of vision/slow growth
- No quality of life
- People referring to it as a base
- Corruption in Township office
- Prisoner families
- Lack of sewer at fairgrounds and Kinross lake
- Lack of police protection throughout Township
- Ordinances cause too restrictive of living environment
- No taxi service
- Inconvenience of driving too far to conduct business, vote
- Too many skunks
- Cost of garbage for non water district residents
- Taste of water
- Heavy truck traffic on M-80
- Lack of services outside the base
- Lack of benefits for our tax dollar
- Lack of road repair

- Spot zoning
- Gravel pits/noise/dust/truck traffic
- The dictatorial building code

Are there any services that are not currently provided by the Township which you believe should be?

- No/None (20)
- Restaurants/without bar (8)
- Stores (5)
- All services should be provided for the whole Township and not just part (4)
- Pick up litter around roadways, streets (4)
- More things for kids to do (4)
- Clean up empty lots (3)
- Keep up abandoned houses (3)
- Fast food places (3)
- Drug store/pharmacy (3)
- High speed internet access (3)
- Senior programs (3)
- Assistance for the elderly and disabled using community service individuals (3)
- More police patrols in Township (3)
- Better enforcement of laws/ordinances (3)
- Better enforcement of noise and barking dogs nuisance (2)
- Competitive telephone service (2)
- Garbage pick-up for rural residents (2)
- Upgrading the ones we already have (2)
- Fourth of July fireworks (2)
- Taxi service (2)
- After hours bus service (2)
- Adult entertainment businesses (strip bars) (2)
- Animal control (2)
- Investigation of Township board and police officers (2)
- More family oriented activities (2)
- Area meals for shut ins (2)
- Seeking/welcoming more business development/JOBS (2)

- An available supervisor, not a part-time one paid full time wages (2)
- On-line bill paying with Township (2)
- Senior housing development
- Full-time custodian at Kinross Park
- Full-time fire department
- Building inspector
- Farmer's market
- Save-A-Lot store
- Reasonable laundry facilities
- Bowling
- Nice motel
- Menards
- Sidewalk snow plowing
- Economic Development Corporation
- Adult supervision of park
- Beautification program
- Streetscape, more sidewalks
- Family friendly items
- Tree removal in water and sewer district
- Better effort on composting pile
- Up-to-date library
- Doctor services
- Barber shop
- Adequate police protection for people who aren't rich
- Yard/driveway maintenance for a nominal fee
- Need to increase revenues before offering other services
- Guidance and leadership
- VFW
- More help with area food banks
- Partnering with post high school technical and educational schools, increasing the employability of 18-26 year olds
- Separation of lots not in an association so people can own a specific lot
- Extended hours for assessor's office
- Better care of Township employees (ie wages)

- Restrict locals from walking on golf course if not golfing
- Alternative energy sources
- Cleaning of storm drains along streets
- Additional “clean up days”
- Outdoor concerts at the Fairgrounds
- Seek permit from DEQ to kill Kinross Lake via the fairgrounds like you are allowing to happen (vicarious liability)

Appendix G: Smart Growth Principles

Appendix G: Smart Growth Principles

Smart growth does not seek to stop or limit growth, but rather to accommodate it in a way that enhances the economy, protects the environment, and preserves or improves a community's quality of life. These Smart Growth tenets are:

1. Create a range of housing opportunities and choices
2. Create walkable neighborhoods
3. Encourage community and stakeholder collaboration
4. Foster distinctive, attractive communities with a strong sense of place
5. Make development decisions predictable, fair, and cost-effective
6. Mix land uses
7. Preserve open space, farmland, natural beauty, and critical environmental areas
8. Provide a variety of transportation choices
9. Strengthen and direct development towards existing communities
10. Take advantage of compact design

Appendix H: Funding Programs

Public Facilities/Utilities Programs				
Grant Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
1	Economic Development Fund for Road Projects	Funding for construction costs related to projects that address a transportation need (condition, safety, or accessibility) that is critical to an economic development project that relates to target industries (agriculture, food processing, tourism, forestry, high technology research, manufacturing, mining, office centers 50,000 sq ft or more in size), will create or retain permanent jobs, is immediate and non-speculative, and increases the tax base of the local area and immediately and positively impacts local employment and the economy.	Eligible applicants include MDOT, all county road commissions, and all city and village street agencies. Developers must work with these eligible recipients to access this fund. Requires a min 20% match. Project planning, design, right-of-way acquisition costs are eligible for use as match.	MDOT
2	MDOT Small Urban Program	Funding for road and transit capital projects located on the federal-aid highway system and within the federal urban area boundary. Projects must be consistent with regional land use and development plans. Transit eligible projects include replacement buses, fleet rehabilitation, communication equipment, and facility renovations, etc.	Cities, villages, transit agencies, and road commissions located within or serving urban areas that have a population of 5,000 to 50,000. Eligible areas funded on a rotating basis, up to $375,000 per project with 20% local match.	MDOT
3	Water and Waste Predevelopment Planning Grants	Grant to pay costs associated with developing a water or sewer application for funding. Pays for preliminary engineering report, environmental report, etc. No payment for costs incurred before grant award. Grant cannot exceed 75% of the planning costs or $15,000, whichever is less.	Public entities, tribes, and non-profit corporations apply to rural development and must demonstrate they do not have the funds available to pay for the preliminary costs--applies to rural areas and places with up to 10,000 population. Median Household Income (MHI) must be below 80% of the State Non-Metro MHI.	USDA

4	Solid Waste Management Grants	Provide technical assistance and training to reduce pollution of water resources and improve management of solid waste facilities, reduction of solid waste streams. Projects funded based on selection at National level.	Non-profit organizations and public bodies contact rural development state office--applies to rural areas and places with up to 10,000 population.	USDA
5	Distance Learning and Telemedicine	Direct loan and/or grant for equipment for classrooms: cameras, video monitors, computers, and LAN; and for physician consultation, radiology, x-ray scanners, and digital microscopes. Matching funds are required.	An incorporated entity, including a municipal corporation which operates, or will operate an educational institution, including a regional educational laboratory, library, hospital, medical center, medical clinic, or any rural community facility. Rural schools, libraries, health care clinics and other organizations that operate educational or health care facilities. For rural areas.	USDA
6	Broadband	Grant, direct loan, or loan guarantee to facilitate deployment of new and innovative technologies to provide two-way transmission of 200 kbps or more. For construction, improvement and acquisition of facilities and equipment to provide broadband service. Minimum direct or guaranteed loan is $100,000.	Legally organized entitites providing or proposing to provide broadband service in eligible rural communities with populations of up to 20,000.	USDA

7	Michigan Community Development Block Grant Program (provided through MSHDA housing and downtown programs, MEDC economic development infrastructure and public works)	Includes infrastructure, planning, and facade grants. Grants for economic development projects including public infrastructure projects, business parks and facilitites, project-specific planning, innovative and discretionary projects. Economic development infrastructure grants are necessary for the location, expansion, or retention of a specific for-profit business engaged in an economic base activity. Planning projects must be project-specific and related to implementation. Local match may be required. Public works projects must benefit low and moderate income households.	Local units of government (counties, cities, villages, and townships) with populations under 50,000. ED projects involving public infrastructure are directly related to a for-profit business location or expansion resulting in the creation of permanent jobs with at least 51% held by low- or moderate-income people. However, eligibility is project-specific, and certain business projects in non low-mod communities may be eligible. May be a job creation requirement and local match.	State
8	Michigan Volunteer Fire Assistance	To assist fire departments in acquiring fire fighting equipment for local communities.	Fire departments in rural communities with population of 10,000 or less.	DNR-USDA Forest Service
9	Assistance to Firefighters Grant	Eligible firefighting operations and safety including firefighting and personal protective equipment, modifications to firefighting facilities for safety, buildling code development and enforcement, emergency medical vehicles, contracts/consultants.	Fire departments having an arrangement with a governing body or tribal authority, and nonaffiliated EMS organizations. One-year funds, restrictions/limits on some equip. Applicants who protect a population between 20,000 and 50,000 provide at least 10% match, less than 20,000 provide 5% match.	Dept. of Homeland Security

10	Grants for Public Works and Economic Development Faciltiies	Public Works; Planning; Local Technical Assistance; and Economic Adjustment Assistance. EDA will provide Public Works investments to support the construction or rehabilitation of essential public infrastructure and facilities necessary to generate or retain private sector jobs and investments, attract private sector capital, and promote regional competitiveness, including investments that expand and upgrade infrastructure to attract new industry, support technology-led development, accelerate new business development, and enhance the ability of regions to capitalize on opportunities presented by free trade.	Tribes, local governments, public or private nonprofits cooperating with local units of government	EDA
11	Border Infrastructure Improvement Projects	To implement border security infrastructure improvement projects and initiatives.	States, local governments, territories, nonprofits, and private organizations.	Dept. of Homeland Security--Public Law 107-296
12	Operation Stonegarden	To enhance coordination between Federal, State, and local enforcement agencies to protect international land and water borders.	Counties and federally recognized Tribes in the States bordering Canada, Mexico, and international waters.	Dept. of Homeland Security

Loans				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
13	Drinking Water Revolving Fund	Low interest loans to water suppliers to finance the construction (including upgrades/expansions) of public drinking water systems.	Any water supplier who owns and operates a community or non-community (if operated as a non-profit entity) water supply. Projects drawn from a Project Priority List administered by the Environmental Science and Services Division. No local match required.	DEQ-State of Michigan General Fund, through Part 54, Act 451 of Public Acts of 1994 and Title XIV of the Public Health Service Act (Safe Drinking Water Act)
14	Water and Waste Disposal Loans and Grants	Direct loan and grants (loan guarantees available) to provide infrastructure in rural areas, such as to construct, repair, modify, expand, or improve water supply and distribution systems, waste collection, and treatment systems and other related costs. Interest rates are set quarterly based on an index of current market yields for municipal obligations. Repayment max 40 years. Grant funds may be available.	Public entities, tribes, and non-profit corporations apply to rural development--applies to rural areas and places with up to 10,000 population.	USDA
15	Community Facilities Program	Direct loan, loan guarantee, and grant to provide essential community facilities. Includes build facilities, buy equipment, operating costs. Fire and rescue, telecommunications for schools, libraries, hospitals. Not for recreation activities. Up to 100% of market value with up to 40 years amortization or life of security.	Public bodies and non-profit groups in rural areas and communities of 20,000 or less population. Guaranteed apply to intermediary.	USDA
16	Electric and Telecommunication	Direct loan or loan guarantee, for generation, bulk transmission facilities and distribution of electric power. Enhance 911 emergency service, digital switching equipment, fiber optic cable.	Non-profit and cooperative associations, public bodies and other utilities in rural areas.	USDA

Special Taxes/Use Taxes/Use Fees				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
17	Special Assessments	Fees levied by a community within a district for the financing of a local improvement that is primarily of benefit to landowners who pay the assessment.	Benefits-received principle, vary with location and density function	Local
18	User Charges	Most efficient revenue instrument for services whose benefits accrue primarily to those who consume the service (priced per unit consumed), such as financing public utilities, public transit, private inspections, special public safety services, licenses, permits, and certain roads and bridges.	Determined by marginal cost or average cost.	Local
Tax or Revenue Sharing/Other Revenue Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
19	General Obligation Bonds	Negotiable bonds issued by the community and payable from the levy of ad valorem taxes on all taxable property within the community.	Backed by full-faith and credit of issuing jurisdiction.	Local
20	Revenue Bonds	Negotiable bonds issued by the community and payable only from the net revenues of the project being financed.	Secured only by proceeds from a special tax or revenues from the project, such as user fees.	Local

Aesthetic Enhancement Programs				
Grant Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
21	MDOT Transportation Enhancement Program	Funding for 12 eligible activities including Non-Motorized Transportation (facilities for pedestrians and bicycles, preservation of abandoned railway corridors, safety and educational activities for pedestrians and bicyclists), Transportation Aesthetics (landscaping and other scenic beautification; acquisition of scenic easements and scenic or historic sites; inventory, control, and removal of outdoor advertising; scenic or historic highway programs like tourist and welcome centers) Historic Preservation (archaeological planning and research; establishment of transportation museums; rehabilitation and operation of historic transportation buildings or facilities), Water Quality & Wildlife (environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality and maintain habitat continuity)	Eligible applicants include MDOT, county road commissions, cities, villages, transit agencies, Native American tribes, the Michigan Department of Natural Resources, and metropolitan planning organizations. Other organizations may sponsor applications. Requires a min 20% match of project cost. Proposed TE projects must have a relationship to surface transportation.	MDOT
22	MDOT Safe Routes to School (SR2S) Program	To enable and encourage children to walk and bike to school, and to make this a safer and more appealing activity, encouraging a healthier lifestyle. Infrastructure and non-infrastructure projects such as sidewalks, traffic calming and speed reduction infrastructure, pedestrian and bicycle crossing improvements, on-street and off-street bicycle facilities, off-street pedestrian facilities, traffic diversion improvements in the vicinity of schools, traffic enforcement operations, training programs, and awareness campaigns.	Eligible applicants include state, local, and regional agencies including nonprofit organizations. 100% Federal funding with no match required. Infrastructure projects must be within a two mile radius of the school. A school-based planning process must be completed as a prerequisite for funding.	MDOT

Commercial/Industrial Facilities Programs				
Tax Abatement/Credits/Exemptions				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
23	Commercial Rehabilitation Act	To freeze the taxable value and exempt new investment from local taxes (except school and education taxes) -- for "commercial property" and on certain residential development improvements. (Not for land and personal property.)	Any city, village, or township may grant this abatement. Building (s) must be 15 years or older, or allocated for a new markets tax credit, or a qualified retail food establishment (does not include professional sports stadium or casino, and does not require obsolescence or eligible distressed area).	State of Michigan Public Act 210 of 2005
24	Industrial Property Tax Abatement	Establishes a district (new project-Industrial Development District, rehabilitation project-Plant Rehabilitation District) for abatement on property taxes (real and personal) for up to 12 years. The firm pays an Industrial Facilities Exemption instead of the property tax, that reflects the abatement savings. The exemption applies to buildings, building improvements, machinery, fixtures, equipment, and furniture. Real and personal property are eligible whether owned or leased. Land is excluded.	Any city, village, or township can offer the abatement. Must be approved locally and by the State. Eligible industrial plants are those that primarily manufacture or process goods or materials by a physical or chemical change. Related facilities may also be eligible. R&D, high-tech, and large communications centers also qualify. Warehousing, distribution, or logistics facilities can be eligible if they locate in specific border counties (Chippewa, Dickinson, Gogebic, Iron, Menominee, etc)	State of Michigan Public Act 198 of 1974

25	Tool & Die Recovery Zones	Companies located in a recovery zone do not pay the Michigan Business Tax, state education tax, personal and real property tax, local income tax. They do have to pay federal taxes, local bond obligations, school sinking fund, or special assessments, and Michigan sales tax. Taxes abated up to 15 years, phased out in 25% increments over the last three years of the zone designation.	Business must lease or own property included in the zone; use the property for tool and die business operations; have fewer than 75 full-time employees; be particular NAICS codes; have a written collaborative agreement with other tool & die manufacturers	MEDC-MI Renaissance Zone Act, MI Public Act 376 of 1996
Tax or Revenue Sharing/Other Revenue Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
26	Private Activity Bond Program	Provide profitable private firms with capital cost savings from tax-exempt interest rates. The government unit borrows money from private capital markets, secured by the project's revenues, and then finances a project with demonstrated public purpose for a private company. The project is exempt from federal, state, and local income taxes, reducing the cost of capital.	For manufacturing projects, nonprofit projects ,and solid or hazardous waste disposal facilities. For manufacturing, 95% of bond proceeds must be used to acquire land, building and equipment directly related to the manufacturing process. Not for working capital or inventory.	Michigan Strategic Fund
Other				
27	Certified Business Parks	A voluntary program used as a marketing tool, including a MEDA adminstered web page. To be certified, a Business Park must meet standards which may include protective covenants for compatible zoning uses, type and style of building, landscaping, parking, screening, setback, sign control, and park management. Uses include all activities typical for a business/industrial park setting with the exception of residential and retail.	Any municipality, owner, developer. Certifications are reviewed every 3 years.	MEDA and MEDC
28	Michigan Manufacturing Technology Center--located at Northern Initiatives, Marquette	Broad range of assistance services including initial evaluation, assessment, lean business solutions, quality systems, growth planning, environmental management, costing, management skills, technical skills, interpersonal and communications skills, organizational development, and e-commerce consulting.	Small and medium size manufacturers	MEDC

Business Development and Entrepreneurship Programs				
Tax Abatement/Credits/Exemptions				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
29	Personal Property Tax Relief in Distressed Communities	Program to abate personal property taxes on NEW investments made by eligible businesses. Businesses apply for the abatement through their local government unit, must be approved by the State Tax Commission. The State Treasurer determines if it is necessary to reduce unemployment, promote economic growth, and increase capital investment. Reduces property taxes by the full millage rate, including state and local levies). May also be exempted in an Industrial Development District (PA 198 of 1974), Renaissance Zone, Enterprise Zone, Brownfield Redevelopment Zone, Empowerment Zone, Tax Increment Financing District, Local Development Financing District, or a Downtown Development District. Time period of abatement can be negotiated.	Cities, villages, and townships that contain distressed areas (as defined by MSHDA) and all county seats (as defined under the NEZ act) are eligible to participate. Some eligible businesses in border counties may receive approval. Also businesses authorized under MEGA. Eligible projects include manufacturing, mining, R&D, wholesale trade and office operations. Retail and casinos are not eligible. Businesses must locate in a municipality served by at least 4 of the following: water, sewer, police, fire, trash, or recycling.	MI Public Act 328 of 1998
30	Geographic Renaissance Zones	Zones that are virtually tax free within communities. Certain municipalities with zones designated through the original Public Act 376 of 1996 can designate new subzones or extend the duration of time through December 31 of 2011. Companies and residents in the zone do not pay the Michigan Business Tax, Michigan personal income tax, Michigan 6-mill state education tax, local personal property tax, local real property tax, or local income tax. State sales/use taxes, Federal taxes, local bond obligations, school sinking fund, or special assessments still apply.	New subzones and time extensions should result from new investment or job creation in the zone. No boundary expansions are allowed. Tax benefits are phased out in 25% increments during the last 3 years of zone designation.	MEDC-Michigan Strategic Fund

31	Michigan Economic Growth Authority (MEGA) High-Tech and High-Wage Tax Credits	For businesses expanding or locating in Michigan that are primarily engaged in a "high-technology" activity. These include advanced computing, advanced materials, biotechnology, electronic and medical devices, R&D, advanced vehicles, tool and die manufacturing, homeland security or defense, alternative energy, digital media, music production, and film and video production.	Five new jobs must be created by the time the company collects the credit for the first year, and 25 jobs by the 5th year, along with maintenance of base employment. High-Wage MEGA are available to eligible businesses creating jobs paying a minimum of 300% of the Federal Minimum Wage.	MEGA
32	MEGA Tax Credits (also includes Anchor Company Tax Credits PA 92 of 2008, Anchor Zone Tax Credits PA 88 of 1008, and Film and Digital Media Tax Credits)	Refundable tax credit against the Michigan Business Tax to companies expanding or relocating to Michigan. To assist companies engaged in manufacturing, R&D, wholesale and trade, office operations. Depending on the investment, each credit may be awarded for up to 20 years and up to 100% of an amount equal to the personal income tax generated by new workers. Anchor companies receive tax credits for wages paid for jobs created by suppliers or customers attracted to Michigan by their presence, and receive credit equal to 5% of the taxable value of the real and personal property of the clustered industries drawn to within a 10-mile radius of the anchor company)	Standard MEGA credits for in-state companies creating at least 50 new jobs, or out-of-state creating at least 100 new jobs within one year, with maintenance of employment. Rural MEGA tax credits for companies in counties with populations less than 90,000, with 5 new jobs in the first year, and 25 by the fifth year. Municipality must make a financial or economic commitment to the project.	MEGA
33	MEGA Retention Tax Credits	To assist companies engaged in manufacturing, mining, R&D, wholesale and trade, film and digital media, office operations, or certain tourism projects that are considering a business closure. Depending on the investment, each credit may be awarded for up to 20 years and up to 100% of the wages and employer-paid health care benefits multiplied by the personal income tax rate.	Must retain not fewer than 50 jobs, make new capital investment equal to $50,000 or more per retained job, pay at least 150% of the Federal Minimum Wage for each retained job (35 hours a week or more), etc.	MEGA

34	MEGA Standard and Rural Job Creation Tax Credits	A refundable tax credit against the Michigan Business Tax to companies expanding or relocating their operations in Michigan. Eligible companies include manufacturing, mining, R&D, wholesale and trade, film and digital media, office operations, or certain tourism projects, but not retail. Each credit is awarded for up to 20 years and up to 100% of an amount equal to the salaries and wages and employer-paid health care benefits multiplied by the personal income tax rate.	Standard MEGA credits for companies creating at least 50 new jobs by the first year of the credit. Rural MEGA tax credits are available to companies in counties with populations less than 90,000, creating 5 new jobs by the first year of the credit and 25 new jobs by the 5th year of the credit. Must pay at least 150% of Federal Minimum Wage (35 or more hours per week).	MEGA
35	Defense Contracting MBT Tax Credit	Refundable tax credit against the Michigan Business Tax to Michigan companies who successfully win a contract and create new jobs from the Department of Defense, Department of Energy, or the Department of Homeland Security.	Company must create a minimum of 25 Qualified New Jobs and maintain a level of full-time jobs equal to or greater than the number of full-time jobs (at least 35 hours) it maintained prior to the federal contract.	MEGA
36	Nonrefundable Business Activity Tax Credit	Non-refundable tax credit against the Michigan Business Tax. Credit equal to the lesser of the 1) amount by which a business's tax liability attributable to qualified business activity for the tax year exceeds the business's baseline tax liability attributable to qualified business activity, or 2) 10% of the amount by which the business's adjusted qualified business activity performed in Michigan outside of a Renaissance Zone for a tax year exceeds such activity for the 2001 tax year.	Commercial and Industrial sectors engaged in alternative energy research, development, and manufacturing, as certified by the Michigan Next Energy Authority. Qualified activity includes research, development, or manufacturing of an alternative energy marine propulsion system, alternative energy system, alternative energy vehicle, alternative energy technology, or renewable fuel.	MEDC

37	Refundable Payroll Tax Credit	Credit for qualified payroll amount. If the credit exceeds the tax liability, the difference will be refunded. Eligible alternative energy technologies include fuel cells, PV, biomass, solar thermal heating and cooling, wind energy, CHP, microturbines, miniturbines, Stirling engines, electricity storage systems, and clean fuel energy systems powered by methane, natural gas, methanol, ethanol, or hydrogen.	Commercial and Industrial sectors--businesses certified by the Next Energy Authority that locate in the Next Energy Zone to develop "alternative energy technologies" as defined by the Michigan Next Energy Authority Act.	MEDC

Grant Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
38	Rural Business Opportunity Grants	Grant to pay costs of providing economic planning for rural communities, technical assistance for rural businesses, or training for rural entrepreneurs or economic development officials. Max amount of $50,000.	Public bodies and non-profit corporations apply to rural development--applies to rural communities with exceptional needs.	USDA
39	Rural Business Enterprise Grants	Grant to buy and develop land, construct buildings, plants, equipment, access streets and roads, parking areas, utility and service extensions, and rural distance learning networks. Recipients can make loans to third parties to finance and facilitate the development of small and emerging private businesses. When grant funds are used for revolving loan fund, the intermediary makes loans to businesses with terms consistent with security offered.	Public bodies and non-profit corporations apply to rural development--applies to all areas except cities of more than 50,000 and their immediately adjacent urban or urbanizing areas.	USDA
40	Michigan Emerging Technologies Fund	A program to provide matching dollars for Small Business Innovation Research/Small Business Technology Transfer Program match. Must leverage third party commercialization funding. Through the SBTDC, will pay for purchase of equipment, legal costs, commercialization costs, or fund raising costs.	Michigan companies in technology sectors including life sciences; homeland security and defense; advance automotive, manufacturing and materials; and alternative energy	MEDC
41	Michigan's Economic Development Job Training Program (EDJT)	Employee training assistance for employers meeting 2 of the following conditions: demonstrate a need for high-skill training; equipment or property investments in Michigan; create and/or retain high-wage/high-skill jobs; training needed to compete in 21st Century industries such as advanced manufacturing or materials, life sciences, technology, homeland security and/or defense, alternative energy.	Most awards to nonprofit training institutions, but can be given directly to companies creating at least 100 jobs, or 50 jobs if grant is less than $20,000. May also be awarded to manufacturers seeking aerospace certification. Training for Michigan residents only-may require match.	MEDC

Loans				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
42	Intermediary Re-lending Program Loans	Direct loan for community development projects, establishment or expansion of businesses, creation or saving of rural jobs. The intermediary makes loans to businesses from its revolving loan fund on terms consistent with security offered. Intermediary pays 1% for 30 years.	Public bodies, nonprofit corporations, tribes, and cooperatives apply to rural development-applies to rural areas and places with populations of less than 25,000.	USDA
43	Rural Economic Development Loans and Grants	Direct loan for business startup or expansion projects that create rural jobs. The intermediary, electric, or telephone cooperatives make loans or grants to profit or nonprofit business and public bodies for rural economic development and/or job creation projects. Loans are 0% for 10 years.	RUS financed electric and telephone cooperatives apply to rural development in rural areas with populations of 50,000 or less.	USDA
44	Capital Access Program (CAP)	Loans to finance most types of business (with the exception of rental housing or rental property). Negotiated through participating banks, including the Upper Peninsula State Bank, to provide fixed asset and working capital financing.	Participating banks work directly with companies that meet their qualifications	MEDC
45	Charter One Job Creation Loan Program	Loans to finance investments in equipment, machinery, or buildings to expand operations. Minimum loan size $500,000 and max is $10 million. Michigan companies or those relocating to Michigan. Serviced through Charter One locations in 12 counties.	Public or privately held businesses in diverse sectors including manufacturing, distribution, Emerging Sectors, 21st Century Job Fund technologies, etc. Minimum of 1 new job must be created within 3 years for every $50,000 borrowed. Loans may not exceed 75% of project cost or appraised value.	MEDC and Charter One

46	Choose Michigan Loan Enhancement Program	Loan allowing businesses who have received MEGA, Brownfield, or Renaissance Tax Credits to get upfront funding.	Companies who are awarded MEGA, Brownfield, or Renaissance Tax Credits. Minimum loan amount of $500,000, at interest rate not less than 1%.	MEDC
47	SBA Certified Development Company (504) Loans	Provides small and medium sized businesses with long-term fixed rate financing for the acquisition or construction of fixed assets. Private lenders provide up to 50%, a certified development company (SBA agent) provides up to 40%, and the small business invests at least 10%. Under the Recovery Act, fees for both borrowers and lenders are temporarily eliminated. Can be used for purchase of land, building, machinery, or equipment; land improvements; renovations or additions; leasehold improvements. Not for working capital, goodwill, inventory, venture capital, or rolling stock like vehicles.	Businesses must have a tangible net worth of less than $7.5 million and an average net profit of less than $2.5 million for the past two years. They can be for-profit corporations, partnerships, and proprietorships. They cannot be passive income projects, financial institutions, or nonprofit businesses.	SBA
48	Small Business Administration (SBA) Programs	**7 (A) Loan Guarantee Program**-used to expand or renovate facilities; purchase machinery, equipment, fixtures, and leasehold improvements; finance receivables; augment working capital; refinance existing debt and seasonal lines of credit; construct commercial buildings; purchase land or buildings. **SBA Express**-SBA guarantees 50% of the loan, and loans under $25,000 do not require collateral. Also revolving lines of credit. **CAPLines**-revolving line of credit to help small business owners meet short-term and cyclical working capital financing needs. **Export Working Capital Program**-pre- or post-shipment working capital financing for export activities, not for refinancing, fixed assets, marketing or setting up operations abroad.	Qualified borrowers.	SBA

49	Small Business Loans	Loans to promote community economic development including businesses such as day care centers, florist, restaurant, deli, coffee shop, cyber café, lawn service, clothing design/manufacturing, etc. For acquisition, construction, or renovation of a building, inventory, cash flow to fund expansion, pre-development costs, and purchase of land. Also facilities for the delivery of services to low and moderate income people, such as counseling centers, community centers, community mental health office, community newspaper, and food cooperatives.	Small businesses in the State of Michigan that do not qualify for conventional bank loans. Also non-profit organizations.	Michigan Interfaith Trust Fund
50	Mixed Use Loans	One-stop financing for developers of mixed use projects involving both commercial and residential space. Combine affordable housing with qualifying commercial real estate development. Includes real estate option/acquisition, pre-development costs, construction or rehabilitation financing, bridge loan, permanent financing.	Short term loans of 6 years or less with interest rates from 6 to 9%.	Michigan Interfaith Trust Fund

Tax or Revenue Sharing/Other Revenue Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
51	Taxable Bond Financing	Provide small- and medium-sized companies access to public capital markets normally available to larger companies, and gives access to long-term (10-20 years) fixed-rate or variable rate financing. Interest received from a federally taxable bond issued by MI is exempt from state and local taxes.	Project must be compatible with Michigan Strategic Fund's economic development mission.	Michigan Strategic Fund
52	ARC-Agricultural and Rural Community Bond Program	To finance rural community businesses and organizations located in communities with populations less than 50,000. Funds agriculture and agribusiness, rural infrastructure, rural housing, essential community facilities and equipment, rural business concerns, community revitalization and development. Examples include independent or assisted living facilities, multi-family housing projects, community buildings, educational facilities, waste-water or water treatment facilities, fire stations or major equipment, healthcare facilities, municipal, township or county facilities, hotel/convention facilities, communication towers and broadband faculties, industrial development parks, agribusiness facilties. (Does not fund gambling or gaming, religious projects, large corporations or big box retailers, or individuals)	Greenstone purchases bonds from any "rural" legal entity, rural being an area outside a standard MSA or within a community with population of 50,000 or less. Includes private/public-profit/non-profit organizations. Maturity of 15 years or less, 30 years if guaranteed. Minimum bond size is $500,000. Can partner with USDA and banks.	Greenstone Farm Credit Services (government sponsored entity with a cooperative structure)
Other				
53	Michigan SmartZones	Creates geographic clustering of technology-based firms, entrepreneurs, and researchers in close proximity to community assets that assist their endeavors. Resource collaborations between universities, industry, research organizations, government and other community institutions, technology businesses, and jobs. Include Technology Accelerators to facilitate commercialization and mine technology, develop products, and help companies secure start-up financing. Includes incubation facilities.	Located in Houghton/Hancock and Sault Ste. Marie.	MEDC

54	Accelerating Michigan Entrepreneurs	A virtual incubator providing business assessment, counseling, pro-bono services, financial projections, lender referrals, connections to investors, benchmarking, leadership assessment, coaching, training/webinars, market research, and product development.	Fee service	MEDC and Michigan Small Business & Technology Development Center (SBTDC)

Economic Development/Redevelopment Programs (Downtowns, Blight, etc)				
Grant Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
56	Signature Building Initiative	Assist a community in acquiring vacant or underused traditional downtown signature building(s) for rehabilitation purposes.	Must result in job creation and 51% of the jobs must be held by low-moderate income persons. The project should be located within a traditional downtown and within a Downtown Development Authority (DDA), Principal Shopping District (PSD), or Business Improvement Zone (BIZ). Requires 25% local match.	MSHDA
58	Historic Preservation Fund	Pays for an archaeological survey, prepare nominations, develop design guidelines for local historic districts, administer a local historic district ordinance, prepare a local preservation plan, restoration feasibility study, restoration of national register-listed properties, public education, and planning.	60/40 matching grant-in-aid program. Federal funds must be matched with private funds, local government funds, in-kind services, state funds, certain federal funds, donated services, and/or donated equipment or material. Must become a certified local government unit (Menominee), adopting a local historic preservation ordinance complying with PA 169 of 1970.	National Park Service of the U.S. Department of the Interior

Loans				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
59	Urban Land Assembly Program	Loans to eligible municipalities for the acquisition of certain real property for economic development purposes, including industrial and commercial, to revitalize the economic base of cities experiencing distress and decline. Preference to those who leverage non-state funds, maximize job creation per dollar investment, increase local tax base, and constitute a major element in a citywide economic development strategy.	Local unemployment rate more than 70% of annual average state unemployment rate; growth in local population less than 75% of the state's population growth rate; change in local state equalized value less than 50% of the state's five-year average. Eligible projects include direct costs of land acquisition, demolition, relocation, and site improvements. Appraisals, feasibility, planning, and administration costs are not eligible.	MEDC

Tax or Revenue Sharing/Other Revenue Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
60	Downtown Development Authority (DDA)	The DDA financing mechanism allows for the capture of the incremental growth of local property taxes over a period of time to fund public infrastructure improvements. A community can capture property taxes which would otherwise have been paid to entities such as the library, community college, and county and use them for public improvements in a targeted area. By borrowing against future tax increments, the DDA is able to fund large-scale projects that can lead to development opportunities. DDA's are financed by donations, proceeds from the levy of a millage, revenue bonds, revenues from buildings owned or leased by the DDA, tax increments, special assessment, and grants. Their public board is dedicated solely to the improvement of downtown.	Any city, village, or township which has an area in the downtown of a municipality zoned and used principally for business.	MI Public Act 197 of 1975
61	Corridor Improvement Authority	Assist communities in funding improvements in commercial corridors outside of their main commercial or downtown areas. May hire a Director, establish a TIF financing plan, levy special assessments, and issue revenue bonds and notes. Municipality must agree to expedite the local permitting and inspection process and modify its master plan to provide for walkable non-motorized connections including sidewalks and streetscapes throughout the area. Different from DDA in that more than 1 authority is permitted, the authority cannot levy an ad valorem tax, but the authority may enter into interlocal agreements with adjoining municipalities.	Any city, village, or township. The corridor must be at least 51% first floor commercial, be in existence 30 years or more, be adjacent or within 500 feet of FHA arterial or collector road, contain at least 10 contiguous parcels or at least 5 contiguous acres, and be zoned for mixed use and high density residential.	MI Public Act 280 of 2005

62	Business Improvement District/Principal Shopping District/Business Improvement Zone (BID/PSD/BIZ)	To promote economic development by collecting revenues, levying special assessments, and issuing bonds (BID/PSD) to address the maintenance, security, and operation of that district. Special assessments can be implemented to finance activities and projects outlined in a zone plan (BIZ). Through the BID/PSD, activities can be undertaken to improve roads and pedestrian walkways, regulate vehicular traffic or parking, operate city off-street parking lots, construct public interest buildings such as bus stops and info centers, acquire property, promote economic development, administer the district. BIZ activities include park and landscape development, streetscaping, security services, and economic development.	PSD-Cities, villages, urban townships (located in a county with a population greater than 750,000, none in the U.P.) Must have a minimum of 10 retail businesses and a **master plan that includes an urban design plan designating a PSD or the development of a PSD**. BID-cities, villages, urban townships, can comprise one or more portions of an eligible municipality or combinations of contiguous portions of two or more municipalities, mostly commercial or industrial in use. BIZ is created by petition of at least 30% of the property owners within a zone plan.	MI Public Act 120 of 1961
63	Neighborhood Improvement Authority (NIA)	Fund residential and economic growth in residential neighborhoods. Can be used for public facilities such as housing, roads, streetscapes, parks, parking, recreation, bridge, utilities, and public access. Need a development and TIF plan (can't capture school and library millages). May have multiple authorities	Any city or village, but cannot include properties in a Historic Neighborhood TIFA (2004 PA 530).	MI Public Act 61 of 2007
64	Local Development Financing Act (LDFA)	Utilize tax increment financing to fund public infrastructure improvements, promote economic growth, and create jobs. Must have a development and TIF plan. Will fund public infrastructure improvements that directly benefit the district, including roads, bridges, storm water or sanitary sewer, sewage treatment facility, water line, water tower, railroads, and utility lines, acquisition of land, demolition and site prep, administrative costs.	City, village, or urban township (defined as 1 of 4 options-none in the U.P.) Eligible properties include those whose primary use is manufacturing, high-technology, or value-added agricultural processing.	MI Public Act 281 of 1986

65	Tax Increment Financing Authority (TIFA)	Help eligible cities to stop the decline of property value in a specific area by utilizing tax increments of property improvements to fund public facilities within the boundaries of the TIFA district.	Communities that have a TIFA as of Januray 1, 1987-no new TIFA's are to be created--see LDFA. **Must have a development and TIF plan,** which can be amended provided that new developments and projects can be identified to support the use of the tax increment.	MI Public Act 450 of 1980
66	Historic Neighborhood TIFA	To fund residential and economic growth in local historic districts. Can be used for improvements to public facilities such as housing, streets, parks, parking, recreation, utility line, and public access routes. Can issue revenue bonds, collect tax increments, and levy special assessments. (School and library millages are exempt from capture) The municipality may have multiple authorities.	Any city or township that contains a local historic district. **Need a development and TIF plan.**	MI Public Act 530 of 2004

Other				
67	Conditional Land Use Transfer (PA 425)	Voluntary agreements for conditional land transfer from one municipality to another to assist in economic development. Agreements can be 1 - 50 years, and include specific arrangements for sharing the tax revenue or any other revenue. One municipality may provide needed land, and the other the ability to fund infrastructure or other services, but both benefit from increased revenues, jobs, and residents.	Cities, villages or townships	MI Public Act 425 of 1984
68	Redevelopment Liquor Licenses	Applicants in a business district must be engaged in dining, entertainment, or recreation, have a seating capacity of at least 50 people, have spent or be committed to spend at least $75,000 before issuance of the license on rehabilitation of the building, be open to the general public. Applicants in a City Redevelopment Area must be engaged in the same activities, be open to the general public at least 10 hours per day, 5 days per week, seat at least 50 people, and go through steps to establish the redevelopment project area. Other monetary threshholds exist for the district.	Business located in either a Business District such as a Tax Increment Finance Authority, Corridor Improvement Authority, Downtown Development Authority, or Prinicpal Shopping District, or a City Redevelopment Area. Must show a regular liquor license was not available. Fees apply.	MI Public Act 501 of 2006

Housing Programs				
Tax Abatement/Credits/Exemptions				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
69	Neighborhood Enterprise Zone (NEZ)	Provides a tax incentive for the development and rehabilitation of residential housing in areas where it might not otherwise occur. Reduces property taxes for up to 15 years in designated areas. For new construction, the new home is taxed at half of the statewide average. For rehabilitation, the assessment is frozen at pre-improvement levels. Land is not abated. The NEZ must be platted, compact, and contiguous. Must be consistent with the master plan, neighborhood preservation, and economic development goals of the local governmental unit. Must pass a housing inspection ordinance to meet local codes.	A qualified local government unit (as defined under Section 2 of the Obsolete Property Rehabilitation Act 2000 PA 146) or a county seat may designate one or more areas as a NEZ. Three types of projects qualify: homestead facility (primarily residential, 1-2 units, one owner occupied principle residence, within platted subdivision); rehabilitated facility (current true cash value of $80K or less per unit with primary purpose as residential, 1-8 units), new facility (primary purpose residential, 1-2 units, one owner occupied principle residence, includes condominiums); apartments (only those that are in a mixed use building with retail at street level and located in a qualified downtown district)	MI Public Act 147 of 1992
70	Property Tax Relief for Manufactured Housing		Manufactured homes in a licensed mobile home park are exempt from property taxes and subject instead to a $3/month fee. The land rented by the homeowner is subject to property tax. The homes are subject to sales or use tax on the full value of the structure.	Michigan

Grant Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
71	Housing Preservation Grants	Grant to finance the repair and rehabilitation activities for single family and small rental properties.	Public bodies and nonprofit corporations apply to Rural Development-applies to rural areas and communitites of 20,000 or less population.	USDA
72	Homebuyer Programs	Utilizes the Housing Resource Fund to promote homeownership for low-income families through down payment and moderate rehabilitation assistance to help with purchase of affordable units, or housing development programs to support acquisition, rehabilitation, or new construction of affordable units for resale.	Community-based nonprofits or local units of government.	MSHDA
73	Rental Development 1-24 units	Utilizes the Housing Resource Fund to fund small scale rental development projects of affordable multifamily rental housing to be owned, developed, or sponsored by community-based nonprofit organizations.	Community-based nonprofits.	MSHDA
74	Rental Rehabilitation	Utilizes the Housing Resource Fund to encourage the rehabilitation of affordable rental units. Allows the community to loan property owners up to 75 percent of rehabilitation costs, not to exceed $15,000 per unit. Funds may be combined with MSHDA's Community Development Property Improvement Program (PIP).	Local units of government	MSHDA
75	Homeowner Assistance	Allocates Community Development Block Grant (CDBG) funding to county governments through the County Allocation program. Counties use these funds to implement countywide homeowner rehabilitation programs by making deferred loans available to low-income homeowners with an income at or below 80 percent of the area median. Nonprofit organizations or small communities may also be eligible for homeowner rehabilitation funds as part of an approved Neighborhood Preservation Program application.	County governments	MSHDA

76	Hope VI Main Street Grants	Provides assistance to smaller communities in the development of affordable housing undertaken in connection with a Main Street revitalization effort, such as those that convert obsolete commercial offices or buildings into rent producing affordable housing.	Local units of government in communities with populations up to 50,000 with 100 or less physical public housing units.	US HUD
77	MSHDA Michigan Housing and Community Development Fund (MHCDF)	Support project designed to fuel strategies leveraging public and private resources to meet the affordable housing needs of low income, very low income, and extremely low income households and to finance projects located in a downtown area or adjacent neighborhood. Grants and loans to finance acquisition of land/buildings, rehabilitation, new housing construction, predevelopment and development costs, preservation of housing, public infrastructure, economic development, address blight, provide operating and replacement reserves, downpayment assistance, security deposit, foreclosure prevention, end homelessness, predatory lending prevention or relief.	Nonprofit corporations, for-profit corporations, municipalities, and Land Bank Fast Track Authorities, and partnerships or special purpose entities approved by MSHDA. Can get low/no interest loans. At least 20% of rental units must set aside at least 20% of units for households earning no more than 60% of area median income. 20% of homeowner units must be for households earning no more than 60% of area median income.	MSHDA

Loans				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
78	Single-Family Home Ownership Loans	Direct loan to buy, build, improve, repair, or rehabilitate rural homes as the applicant's permanent residence. Up to 100% of market value or cost, whichever is less. Loan amortized for 33 years, and payment assistance may be available.	Families and individuals apply to Rural Development-applies to rural areas and communities of 20,000 or less population.	USDA
79	Single-Family Home Repair Loans and Grants	Direct loan and grant to winterize, purchase or repair heating systems, structural repair, water/sewage connect fees, etc. Terms to 20 years at 1%. Assistance may not exceed $20,000. Grants avail. To applicants 62 years or older with limited income, with max grant of $7,500.	Families and individuals that currently own their home apply to Rural Development-applies to rural areas and communities of 20,000 or less population.	USDA
80	Single-Family Home Ownership Guaranteed Loans	Guarantee loans from private lenders to purchase new or existing homes. 30 year, fixed rate interest negotiated between lender and borrower, to 100% of market.	Families and individuals apply to a private lender-applies to rural areas and communities of 20,000 or less population.	USDA
81	Rental housing for families and elderly direct loans and loan guarantees.	Direct loan or loan guarantee for new construction or substantial rehabilitation of rental housing. Up to 100% of market value (non-profits); 97% (for profit), 30 year term with up to 50 years amortization.	Individuals, profit, and non-profit organizations. For guarantees, apply directly to intermediary; for direct apply to RD-applies to rural areas and communities of 20,000 or less population.	USDA
82	Farm Labor Housing	Direct loan and grant for new construction or substantial rehabilitation of farm labor housing. Up to 100% of market value, up to 33 years at 1% interest.	Individuals, profit, and non-profit organizations apply to rural development--no population limit.	USDA
83	Pre-Development Loan	Pre-development loan related to a specific housing project to fund up-front project expenditures (like a line of credit). Pays for feasibility studies, architectural plans and specification, zoning and engineering studies, environmental assessments, attorney fees, site control expenses, and title clearance costs. Acquisition costs are considered on a case-by-case basis.	Non-profit housing developers of affordable housing projects.	MSHDA

Environmental Protection/Remediation Programs (Land, Water, Air)				
Tax Abatement/Credits/Exemptions/Public Acts				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
84	Brownfield Redevelopment Authority (Public Act 381)	Reviews proposals for the redevelopment of eligible property and determines what financial incentives are necessary to assist the redevelopment. Prepares a plan to identify brownfield projects and eligible activities, and TIF and SBT approaches to be taken to support the redevelopment.	Any local governmental unit (city, village, township, or county)	MI-Allows the local unit of government to create a local brownfield financing resource.
85	Brownfield Tax Increment Financing (Brownfield TIF)	The TIF allows a community to pay for eligible environmental and in some cases public infrastructure expenditures, and to create its own remediation fund through excess TIF capture to address long-term issues. This program captures the increases in property tax revenues (including local and school) from an eligible property and uses the captured funds to reimburse those who incurred eligible Brownfield expenses on that site. A Local Site Remediation Fund created by a Brownfield Authority may also cover eligible expenses on other eligible properties. Eligible expenses in *Core* and *Non-Core Communities* include costs for baseline environmental assessments, due care obligations, and additional response activities. *Core Communities* additional eligible expenses include costs for infrastructure improvements, site preparation, demolition, and lead and asbestos abatement.	In a *Non-Core Community,* eligible property is commercial, industrial or residential property, identified in a Brownfield plan that is contaminated. In a *Core Community,* eligible property is commercial, industrial, or residential property identified in a Brownfield plan that is contaminated, blighted, or functionally obsolete.	MI-Allows the local unit of government to create a local brownfield financing resource.

86	Brownfield Single Business Tax Credit (Brownfield SBT)	To assist in brownfield redevelopment by providing a significant financial incentive that increases the rate of return and reduces the risk of a development project. Eligible investment includes demolition, construction or improvement of a building (restoration, alteration, renovation), addition of machinery, equipment or fixtures to the property and site improvements.	A qualified taxpayer of eligible property with a project included in a duly approved Brownfield plan. In a *Non-Core Community,* eligible property is commercial, industrial or residential property, identified in a Brownfield plan that is contaminated. In a *Core Community,* eligible property is commercial, industrial, or residential property identified in a Brownfield plan that is contaminated, blighted, or functionally obsolete, and the tax credit can go in excess of the $1 million maximum.	MEGA
87	Michigan Business Tax (MBT) Credit	The Michigan Business Tax is a three-part tax levied on all entities that do business in Michigan, and includes incentive credits. This credit is for up to 12.5% of the eligible investment hard costs made on an eligible property by a qualified taxpayer. For projects designated as **Urban Development Area** projects (UDAP), a credit of up to 20% of eligible investment hard costs is available until 12/31/10, then 15% thereafter. This includes site improvements, demolition, construction, restoration, alteration, building renovation or improvement, and addition of machinery, equipment, and fixtures. These projects are multi-story which increase density, mixed-use, and walkable communities; sustainable and green redevelopment; and addresses area wide redevelopment with multiple parcel redevelopment and underserved markets of commerce. The property must be in an approved Brownfield Plan.	A qualified taxpayer of eligible property, which is property in a qualified local governmental unit (QLGU) that is a facility, blighted or functionally obsolete, including adjacent or contiguous parcels. Also property not in a QLGU that is a facility, including adjacent or contiguous parcels. Also tax reverted property owned or under the control of a land bank fast track authority. UDAP includes projects on eligible property located in a downtown or traditional central business district or along a traditional commercial corridor of a QLGU or county seat, as determined by MEGA.	MEGA

Grant Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
88	Brownfield Redevelopment Loans and Grants	To investigate and remediate suspected or known sites of environmental contanimation for redevelopment. Low interest loans are given when there is redevelopment potential but no identified developer; grants can only be used for projects with an identified developer and without a liable party. Most projects are funded through a combination of grant and loan. Grants pay for 100% of eligible costs, loans carry very low interest rates, and the first five years are interest-free and payment-free. Loans can be repaid with TIF through a Brownfield Redevelopment Authority. Grants must result in economic benefit greater than the amount of the grant through job creation, private investment, and/or property tax increase.	Any county, city, township, or village, Brownfield Authority, DDA, etc. Projects must have the support of the local governing body, including commitment of full faith and credit for loans.	MDEQ/Clean Michigan Initiative Bond Fund (part 196 of the 1994 PA 451)
89	Waterfront Redevelopment Grants	To revitalize waterfronts, create economic benefit, and provide waterfront access for the public. Funds property acquisition, demolition, response activities, public infrastructure, and public facility improvements. Also restoration of lighthouses. Includes eligible activities described in a waterfront redevelopment plan, which must include how the project will significantly contribute to the local economy and community redevelopment, or the revitalization of adjacent neighborhoods, and how it will provide public access and recreational opportunities. Eligible activities include environmental response, demolition, acquisition. public infrastructure and facility improvements.	Any local unit of government, including a county, city, village, township, or agency of the local unit of government, or an authority or public body created pursuant to state law. **Must have a waterfront development plan**. Does not include land or facilities for gaming, stadium, or arena used by a professional sports team, or a private or municipal marina.	MDEQ/Environmental Protection Bond Fund of 1988

90	Abandoned Well Management Grants	Grants to locate and plug abandoned wells inside community public water supply wellhead protection areas, to prevent the contamination of drinking water aquifers through old, deteriorated, abandoned well casings, to educate the public concerning hazards associated with abandoned wells, and to protect the health of the public.	Applicants may be a community, township, or a non-profit organization, the projects must be affiliated with a community water supply that uses groundwater as its source and **must have an approved Wellhead Protection Area.** Requires 25% local match.	DEQ-Michigan Clean Water Fund within the Clean Michigan Initiative (CMI), contact Water Bureau
91	Beach Monitoring Grants-Inland Lakes	Funding for monitoring of public bathing beaches to determine levels of bacteria; notify the public; evaluate effectiveness of state programs, and develop methods that can differentiate sources of bacterial contamination.	Local county health departments, universities, and non-profit organizations-requires 25% local match, can include in-kind services).	DEQ-Michigan Clean Michigan Initiative (CMI)
92	Brownfield Redevelopment and Site Reclamation Grants	To investigate and remediate known sites of environmental contamination, to ensure safe reuse of abandoned, vacant, or underutilized properties that are known to be contaminated, and to promote redevelopment of brownfields.	Any county, village, township, Brownfield Redevelopment Authority, or other authority or public body created pursuant to state law. Eligible activities include environmental investigations and assessments, interim response, and due care response activities. No local match required.	DEQ-Michigan Clean Michigan Initiative (CMI), and Environmental Protection Bond Fund.

93	Coastal Zone Management Grants	To protect, manage, and restore coastal communities and habitats; restore historic structures; revitalize urban waterfronts; and increase recreational opportunities along Michigan's Great Lakes coast. Criteria also includes reducing development in coastal hazard areas.	Coastal units of government including counties, cities, villages, and townships. Also area-wide agencies, including regional planning commissions and conservation districts, universities, school districts, non-profit organizations, and Tribal governments. Required match is 1:1. Local match can be cash, in-kind services, and other non-federal grant funds.	DEQ-US Department of Commerce, NOAA by the Federal Coastal Zone Management Act
94	Community Pollution Prevention (P2) Grant Program	To promote local P2 initiatives that foster partnerships and sustainability, focusing on achieving measurable reductions in waste, and resulting in long-term improvements or protection of the environment.	County governments, local health departments, municipalities, and regional planning agencies. 25% match as cash, in-kind goods and services, and/or third party contributions	Department of Environmental Quality (DEQ), Community P2 Fund
95	Emerging Issues-Water Quality Monitoring	To identify new chemicals/issues impacting water quality in Michigan, to collect water quality data to identify unrecognized issues in order to prevent serious problems; to support local decision-making; and to generate local interest in water quality.	Local governments (city/townships), county health departments, Tribal governments, watershed councils, conservation districts, and academia. Requires 25% local match (can be in-kind services)	DEQ-Clean Michigan Initiative bond funds, Section 8808 of 1994 P.S. 451
96	Local Water Quality Monitoring Grants	To implement water quality monitoring programs for the collection of water quality data to support local decision making; to identify sources of pollution; and to generate local interest in water quality. May collect chemical, physical, and/or biological data as appropriate based on local issues and concerns.	Local governments (city/townships), county health departments, Tribal governments, watershed councils, conservation districts, and academia. Requires 25% local match (can be in-kind services)	DEQ-Clean Michigan Initiative bond funds, Section 8808 of 1994 P.S. 451

97	Michigan Great Lakes Protection Fund	New research and demonstration projects to preserve, enhance, and restore the Great Lakes and component ecosystems. To further the objectives of the U.S./Canada Great lakes Water Quality Agreement and the Great Lakes Toxic Substances Control Agreement.	Local, state, and federal governments, universities, non-governmental organizations, and profit and non-profit organizations. No local match.	DEQ-State of Michigan, Part 324, Section 32910 of Act 451 of 1994
98	Nonpoint Source Pollution Control Grants-Clean Michigan Initiative	To implement physical improvements in approved watershed management plans, to address specific sources of nonpoint source pollution as identified by DEQ. Physical improvements are structural and vegetative best management practices. Long-term solutions on a watershed basis.	County or local units of government and non-profit agencies. **A DEQ-approved watershed plan is required,** including Remedial Action Plans and Lakewide Management Plans. Requires 25% match. The watershed management plan should meet the USEPA's nine planning elements.	DEQ-Clean Michigan Initiative bond funds, Part 196, Section 19607 (e) of Act 451
99	Nonpoint Source Pollution Control Grants-Federal Clean Water Act Section 319	To develop watershed management plans to address nonpoint sources of pollution and implement nonpoint source activities identified in DEQ-approved watershed management plans. To reduce, eliminate, and prevent nonpoint source pollution with long-term solutions on a watershed basis. Provides for physical improvements as well as information/education strategies, land use planning, and installation of easements and related activities.	County or local units of government and non-profit agencies. **A DEQ-approved watershed plan is required**, including Remedial Action Plans and Lakewide Management Plans. The watershed management plan should meet the USEPA's nine planning elements. Watershed planning requires min. 10% match. Watershed implementation require min 25% match.	DEQ-Federal Clean Water Act Section 319 and Federal Clean Water Act Section 604 (b)

100	Targeted Watershed Grants Program	Implement watershed protection and restoration efforts at the community level and determine if those approaches: 1) produce short-term environmental results; 2) have the potential for long term maintenance in a watershed; and 3) have national applicability. To encourage successful community-based approaches to restore, preserve, and protect the nation's watersheds. To provide resources to organizations with watershed plans to implement projects that achieve quick, yet tangible environmental change.	State and tribal water pollution control agencies, interstate or inter-tribal agencies, local units of government, and nonprofit entities. **The project must be consistent with a watershed plan.** Nominated by the Governor as the most meritorious Michigan watershed projects to USEPA. Requires 25% non-federal match.	DEQ-Federal Clean Water Act Section 104 (b) (3).

101	Wellhead Protection Program Grants	To provide funding to community public water supplies and nonprofit noncommunity public water supplies for the development and implementation of wellhead protection programs. A wellhead protection area represents the surface and subsurface area within a ten-year time of travel for groundwater surrounding a water well or well field.	Community public water supply or a nonprofit noncommunity water supply. Requires 50% local match.	DEQ-Michigan Drinking Water Revolving Loan Fund
102	Conservation Security Program (CSP) (Farm Bill, 2002)	A voluntary conservation progarm that supports ongoing stwardship of private agricultural lands by providing payments for maintaining and enhancing natural resources. Financial and technical assistancy to promote conservationand improvement of soil, wate, air, energy, plant and animial life on tribal and private working lands.	In selected watersheds, must perform to eligibility and contract requirments.	USDA Natural Resource Conservation Service

Loans				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
103	Revitalizing Revolving Loan (RRL)	Low interest loans used to evaluate contaminated or potentially contaminated properties, demolish dangerous or hazardous buildings that obstruct redevelopment, and to conduct interim response actions necessary to investigate a property or demolish a building. The proposed project must have redevelopment potential, and the municipality must pledge full faith and credit to secure the loan. Approved by MI Dept of Treasury. Loans at 2% interest with no payments or interest due for the first 5 years. TIF funds can be used to repay the loan. Cannot be used for site cleanup activities.	Any county, city, township, or village, or Brownfield Authority. Projects must have the support of the local governing body, including commitment of full faith and credit for loans.	State of MI

104	State Revolving Fund	Low-interest loans for pollution control projects; to assist municipalities in funding wastewater treatment system improvements, stormwater treatment projects, and nonpoint source pollution control projects.	Any city, village, township, county, or related authority as defined in Section 5301 (h) of Part 53, Act 451 of the Public Acts of 1994. Federal Requirements from the Clean Water Act also apply. Project must be drawn from Project Priority Lists administered by the Environmental Science and Services Division.	DEQ
105	Strategic Water Quality Initiatives Fund	Low-interest loans for water pollution control projects involving the on-site upgrade or replacement of failing septic systems or for the removal of found water or storm water from sanitary or combined sewer leads. To assist municipalities in funding wastewater treatment improvements that cannot qualify for assistance from the SRF.	Any city, village, township, county, or related authority as defined in Section 5301 (h) of Part 53, Act 451 of the Public Acts of 1994. Projects must be drawn from Project Priority Lists administered by the Environmental Science and Services Division.	DEQ

Tax or Revenue Sharing/Other Revenue Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
106	Water Resource Improvement TIFA (WRIA)	TIFA established around an inland lake to enhance water quality, water dependent natural resources, and access. Can be used to eliminate causes of aquatic nuisance (with no chemical treatment), replace failing on-site disposal systems with sewer systems, provide storm water systems to service existing infrastructure, and aid in access to the lake. (exempts school and library millages from capture). Cannot be created or expanded after December 31, 2011.	Any city, village, or township may establish a district around a natural or artificial inland lake, pond, or impoundment with a surface area greater than 5 acres. Municipalities may jointly administer the WRIA. Does not apply to the Great Lakes. **Must prepare a development and TIF plan.** With access, the TIFA can extend up to 1 mile from the lakeshore. Capture district includes only lakefront properties for private lakes.	MI Public Act 94 of 2008
Other				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
107	Environmental Assistance Center	Assistance on the Clean Corporate Citizen (C3) program; brownfield redevelopment; compliance assistance (federal and state); environmental audit privilege and immunity; financial assistance for clean drinking water, site reclamation and assessment, wastewater treatment plants; development, protection, and conservation of geological resources; management of solid, liquid industrial, medical, and hazardous waste; land and water use and protection; licensing, certification, and inspection of camp grounds, drinking water, dry cleaners, mobile home parks; environmental permits; pollution prevention, waste reduction and recycling; radon; Retired Engineering Technical Assistance Program (RETAP); Superfund; water quality, and wellhead protection	Aid for small- and medium-sized businesses and municipalities for solving environmental issues.	MDEQ

Recreation Programs				
Grant Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
108	Michigan Land and Water Conservation Fund (LWCF)	Reimbursement program at 50% of costs up to the grant amount (50% fixed match). Land acquisition costs and land donations not eligible as match, but can use CDBG and RTP (Recreational Trails Program) federal funds as match. Acquisition and development of public outdoor recreation areas and facilities, especially on meeting the priorities of the 2008-2012 State Comprehensive Outdoor Recreation Plan (SCORP). Specifically trails, community recreation, green technology, coordination and communication, and universal access. Examples of use: trailways, picnic areas, beaches, campgrounds, boating access, fishing areas, winter sports areas, playgrounds, ball fields, tennis courts, skate parks, and facilities needed to support outdoor recreation such as restrooms, interpretive centers, and storage buildings. Also renovation or redevelopment of existing facilities. No indoor facilities except sheltered ice rinks and swimming pools according to the NPS cold climate restrictions.	State agencies; local units of government (cities, villages, townships, and counties); and any combination therof in which an authority is legally established to provide public recreation. Also federally-recognized Native American Tribes; regional recreation authorities formed under the Recreational Authorities Act, 2000 PA 321; and trailway commissions formed under Part 721, Michigan Trailways Act, 1994 PA 451. Also school districts that meet the requirements. **Must have a current, five-year community recreation plan** and own the project site or have perpetual easements for access to a project site. Requires 50% match.	DNR-Federal funding

109	Michigan Natural Resources Trust Fund	Reimbursement program with minimum 25% match. To purchase land or rights in land for public recreation or protection of land because of its environmental importance or its scenic beauty. Assist in appropriate development of land for public outdoor recreation. Majority of funding for acquisition. Funds fishing and hunting facilities, beaches, boating access, picnic areas, campgrounds, winter sports areas, playgrounds, ball fields, tennis courts, and trails. Also outdoor recreation support facilities, such as nature interpretive buildings, park visitor centers, restrooms, and storage buildings for park equipment, and renovation or redevelopment of existing facilities. Must comply with federal and state accessibility standards.	State agencies; local units of government (cities, villages, townships, and counties); and any combination therof in which an authority is legally established to provide public recreation. Also regional recreation authorities formed under the Recreational Authorities Act, 2000 PA 321; and trailway commissions formed under Part 721, Michigan Trailways Act, 1994 PA 451. Also school districts that meet the requirements. **Must have a current, five-year community recreation plan.**	DNR-State owned mineral resources funding
110	Boating Infrastructure Grants	To provide construction of recreational boating facilities that create dockage for transient recreational boats 26 feet or larger; provide navigational aids; enhance access to recreational, historic, cultural, natural, and scenic resources; strengthen ties to boating community; promote public/private partnerships and entrepreneurial opportunity; continuity of public access to the water; and awareness of transient boating opportunities.	Local units of government (city, village, township, county), public universities, and private facilities. Covers 75% of total approved project costs.	DNR-US Fish and Wildlife Service
111	Waterways Program grants	Provide design and construction of recreational boating facilities, including engineering studies and infrastructure improvement projects at state-sponsored harbor/mooring and boating access site/launch facilities.	Local units of government (city, village, township, county), and public universities, and private facilities. Covers 50% of total approved project costs.	DNR-Michigan State Waterways Fund
112	Clean Vessel Act-Boat Pumpout Grants	Provide new or upgraded marine sewage disposal facilities, pumpouts, and dump stations.	Private and public boating facilities. Funds 75% of projects costs, 25% match required.	DNR-Sport Fish Restoration Account

113	Recreational Trails Program Grants	Fund the maintenance and development of recreational trails and related facilities.	State projects and state/local government partnership projects--a DNR division must always be the applicant, and the trail must be located on or linked to a trail on DNR land.	DNR-Federal Department of Transportation-Highway Administration (federal gas tax) funding
114	Recreation Improvement Fund Grants	Fund the operation, maintenance, and development of recreation trails and restoration of lands damaged by off-road vehicles and inland lake cleanup.	State projects and state/local government partnership projects--a DNR division must always be the applicant, and the trail must be located on or linked to a trail on DNR land.	DNR-Recreation Improvement Fund

115	Snowmobile Trail Improvement Program	Provide funding to maintain snowmobile trails as part of the designated statewide trail system, and for seasonal grooming and general maintenance of snowmobile trails; special maintenance projects that improve the condition and/or access to trails; and replacement of equipment used for maintaining trails.	Trail sponsor with trail right-of-way that is open to public snowmobiling on a trail that receives adequate snowfall from December through March each year. Trail sponsors must have their own maintenance equipment. Includes local units of government and nonprofit, incorporated snowmobile clubs and organizations, not individuals.	DNR-Snowmobile Trail Improvement Fund
116	Off Road Vehicle (ORV) Trail Improvement Program	Provide funding for maintenance of established ORV trails and facilities as part of the designated statewide trail system, and for development of new trails and facilities, and restoration of natural resources damaged by ORV use.	Must be for facilities that are open to the public. Damage restoration must be for lands in public ownership. Includes government agencies, and nonprofit, incorporated clubs and organizations, not individuals. Up to 100% of cost, not to exceed grant allocation.	DNR-ORV Trail Improvement Fund
117	Marine Safety Grants to Counties	Promote safety in the use of recreational watercraft through law enforcement. Pays for patrol time, safety instruction, inspection of boat liveries, operating costs, and purchase of necessary equipment.	All Michigan counties. Reimbursement up to 75% of actual expenditures not to exceed grant allocation.	DNR
118	Snowmobile Law Enforcement Grants	Promote safety in the use of recreational snowmobiles through law enforcement and education. Pays for patrol of state designated snowmobile trail system and routes connecting with the state designated trails.	County sheriff departments and other local law enforcement agencies. Reimbursement up to 85% of actual expenditures not to exceed grant allocation. 15% local match required.	DNR-Snowmobile Registration Fee Fund
119	Off Road Vehicle (ORV) Law Enforcement Grants	Promote safety in the use of off-road vehicles through law enforcement and education. Pays for patrol of state designated ORV trails for law enforcement and law enforcement equipment purchases.	County sheriff departments. Reimbursement up to 100% of actual expenditures not to exceed grant allocation. 15% local match required	DNR-ORV Trail Improvement Fund

120	Off Road Vehicle (ORV) Safety Education Grants	Promote safety in the use of off-road vehicles through education. Funding for certified ORV Safety instructors to teach safety classes.	County and local government agencies, school districts, colleges, and universities. $ award per student.	DNR-ORV Trail Improvement Fund

Wildlife/Fisheries Programs

Grant Programs

	Program Name	Program Description	Qualifying Factors	Funding Agency
121	Inland Fisheries Grants	To protect, maintain, or enhance inland aquatic environments supporting a significant public fishery; to rehabilitate degraded inland fish communities on waters supporting a significant public fishery; to provide additional or more diverse fishing opportunities on inland waters that support a significnt public fishery; to foster educational and interpretive communications and interest in inland fish, fishing and fisheries management.	50% match.	DNR-Game and Fish Protection Fund

Forestry Programs

Tax Abatement/Credits/Exemptions

	Program Name	Program Description	Qualifying Factors	Funding Agency
122	Forest Products Processing Renaissance Zones (FPPRZ)	Forest Products Processing Facility means one or more facilities or operations that transform, package, sort, recycle, or grade forest or paper products into goods that are used for intermediate or final use or consumption or for the creation of biomass or alternative fuels through the utilization of forest products or forest residue, and surrounding property. Does not include an existing facility or operation that is located in this state that relocates to a renaissance zone, and does not include a facility or operation that engages primarily in retail sales. Companies and residents in the zone do not pay the Michigan Business Tax, Michigan personal income tax, Michigan 6-mill state education tax, local personal property tax, local real property tax, or local income tax. State sales/use taxes, Federal taxes, local bond obligations, school sinking fund, or special assessments still apply. Taxes can be abated up to 15 years, and will be phased out in 25% increments over the last three years of zone designation.	The city, village, or township must approve a resolution for abatement of taxes, and applicants must demonstrate the positive economic impact the project will have on the local unit of government and the state.	MEDC-MI Renaissance Zone Act, MI Public Act 376 of 1996

123	Commercial Forest Reserve	Landowners agree to develop, maintain, and manage the land as commercial forest through planting, natural reproduction, or other silvicultural practices. The lands in the program are open to the public for hunting, trapping, and fishing only.	Enrolled land is exempt from general property taxes and are instead taxed at $1.10 per acre. The State of Michigan also pays $1.20 per acre to each county where land is listed in the program.	Michigan

124	Qualified Forest Property	Landowners must manage their land with a DNR-approved forest management plan or certified plan, and must annually report the amount of timber produced.	Landowners approved for this exemption are exempt from some school operating taxes, and are not required to allow public access on their land. Must be a minimum of 20 contiguous acres (no buildings or structures are allowed) and are limited to exempting 320 acres per taxing unit.	PA 206 or 1893 as amended in 2006
125	Forest Legacy Program	Encourages partnerships with local governments and land trusts, and requires the rights of public access be conveyed to the State on all land or interests in land that is acquired with Forest Legacy Program Funding.	A voluntary program for private landowners to protect privately owned and environmentally significant forest lands from being converted to non-forest uses through acquisition of conservation easements. Landowners must prepare a multiple resource management plan.	Michigan
Grant Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
126	Community Forestry Grants	Information and technical assistance to municipal governments, schools, nonprofit organizations, and volunteer groups for urban and community forest activities such as tree inventories, management plans, planting, and other maintenance activities.	Local units of government, schools, tribes, and nonprofit organizations.	DNR
127	Forest Stewardship-Plan Writing Grants	To encourage certified plan writers to write management plans for non-industrial private forest landowners. Plans provide silvicultural, hydrological, recreational, and ecological information to assist landowners in making informed choices for the long-term protection and management of the forest ecosystem.	Applicants must be a Forest Stewardship program-certified plan writer. Covers 50% of the plan cost.	DNR

128	Forest Stewardship-Outreach and Education Grant	Encourage private forest land owners to actively manage their forest ecosystems and develop long-term, sustainable management plans. Includes proposals for management plans for school and municipal forests, outreach and education, demonstration areas and ecosystem projects.	Local units of government, individuals, nonprofit organizations, and school districts with school forests. Must target the non-industrial private landowner. 50% match required.	DNR-USDA-Forest Service
129	Forest Stewardship Program	Provides assistance to private forest owners and citizens for the preparation of comprehensive forest management plans, education on sustainable forest management, and the Working Forest Carbon Trading Project.	Cost share assistance. The forest stewardship plans are written by professional foresters or certified natural resource professionals and reviewed by a DNR Service Forester. To participate in the carbon market, landowners must have a forest management plan, a baseline inventory, an agreement with an aggregator, and a means of trading the additional carbon sequestered.	USDA Forest Service Part 501 of Act 451, P.A. 1994, and the US Cooperative Forestry Assistance Act of 1978, CFDA 10.664
130	Arbor Day Mini Grants	Provide information and technical assistance to municipal governments, schools, nonprofit organizations and volunteer groups for urban and community forest activities related to Arbor Day, such as tree planting on public land, Arbor Day celebrations, and purchasing library reference materials.	Local units of government, schools, tribes, and nonprofit organizations.	DNR-USDA-Forest Service

Agriculture Programs				
Tax Abatement/Credits/Exemptions				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
131	Agricultural Processing Renaissance Zones (APRZ)	Agricultural Processing Facility means one or more facilities or operations that transform, package, sort, or grade livestock or livestock products, agricultural commodities, or plants or plant products, excluding forest products, into goods that are used for intermediate or final consumption including goods for nonfood use, and surrounding property. Companies and residents in the zone do not pay the Michigan Business Tax, Michigan personal income tax, Michigan 6-mill state education tax, local personal property tax, local real property tax, or local income tax. State sales/use taxes, Federal taxes, local bond obligations, school sinking fund, or special assessments still apply. Taxes can be abated up to 15 years, and will be phased out in 25% increments over the last three years of zone designation.	The city, village, or township must approve a resolution for abatement of taxes, and applicants must demonstrate the positive economic impact the project will have on the local unit of government and the state.	MEDC-MI Renaissance Zone Act, MI Public Act 376 of 1996
132	Biomass Gasification and Methane Digester Property Tax Exemption	Property tax exemption includes equipment used to generate electricity from methane digester systems and equipment used to generate heat or electricity from biomass gasifiers. 100% exemption from real and personal property taxes.	Exempted property are certain methane digesters, biomass gasification equipment, and equipment used to harvest crop residues or dedicated crops used for energy production. The methane digester equipment must be certified by the Michigan Department of Agriculture and the farm must be verified as compliant under MAEAP.	Michigan Department of Agriculture

Grant Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
133	Value-Added Producer Grants	Grant used to conduct feasibility analyses, develop business and marketing plans and conduct other types of studies to help establish a viable value-added business venture. Can also be used to establish working capital accounts. Feasibility studies, business plans, and possibly other studies will be required before grant funds can be used as working capital. A matching grant program.	Agricultural producers and producer organizations, no population limit.	USDA
134	Biomass Crop Assistance Program	Supports establishment and production of eligible crops for energy. Non-industrial forest owners may qualify to receive up to 75% cost recovery to establish.	Must have a Forest Stewardship Plan or equivalent. Not available till 2010.	USDA Natural Resource Conservation Service
135	Conservation Reserve Program (CRP)	Producers enrolled in CRP plant long-term, resource-conserving covers to improve water quality, control soil erosion, and enhance wildlife habitat. Receive annual rent payments for 10 - 15 years (15 year plan required for tree planting) and cost share of up to 50%. Tree planting, replanting, and thinning for purposes of windbreaks, shelterbelts, and wildlife corridors qualify for 50% cost-share payments for at least 2 years but no more than 4 years.	Eligible producers just have owned or operated the land for at least 12 months. Requires farmed land (at least 4 of the last 6 years) or certain marginal pastureland that is suitable for use as a riparian buffer or other water quality purpose.	Farm Services Agency (FSA), DNR FMFM (tree planting practices) and NRCS

136	Conservation Security Program (CSP)	Voluntary program that provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, plant and animal life, and other conservation purposes.	Within selected watersheds. Tribal and private working lands, which include cropland, grassland, prairie land, improved pasture, range land, and forested land that is an incidental part of an agricultural operation.	USDA Natural Resource Conservation Service
137	Conservation Stewardship Program (CSP)	Provides incentives for adopting, improving, and maintaining practices that have positive impacts on the environment.	Eligibility requires producers are already addressing a priority environmental concern and apply to address a second one. Forest land is eligible but only as "an incidental part of an agricultural operation". Non-industrial private forest land is specified as subject to a "Special Rule" in which participation may not constitute more than 10% of the annual total acres enrolled in the Program.	USDA Natural Resource Conservation Service
Loans				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
138	Farm Labor Housing	Direct loan and grant for new construction or substantial rehabilitation of farm labor housing. Up to 100% of market value, up to 33 years at 1% interest.	Individuals, profit, and non-profit organizations apply to rural development--no population limit.	USDA

Energy Programs				
Tax Abatement/Credits/Exemptions				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
139	Michigan Next Energy Authority	To promote the development of alternative energy technologies and provide tax incentives for business activity and property related to the research, development, and manufacturing of these technologies. The credit is made against the Michigan Business Tax and/or exemptions from the General Property Tax Act.	Alternative energy personal property may include an alternative energy system or vehicle, the personal property of an alternative energy technology business, or the personal property of a business that is used solely for the purpose of researching, developing, or manufacturing an alternative energy technology.	MEDC-Department of the Treasury
140	Renewable Energy Renaissance Zones (RERZ)	Renewable energy system means one that creates energy from a process using residues from agricultural products, forest products, paper products industries, and food production and processing; trees and grasses grown specifically to be used as energy crops; and gaseous fuels produced from solid biomass, animal wastes, or landfills. Companies and residents in the zone do not pay the Michigan Business Tax, Michigan personal income tax, Michigan 6-mill state education tax, local personal property tax, local real property tax, or local income tax. State sales/use taxes, Federal taxes, local bond obligations, school sinking fund, or special assessments still apply. Taxes can be abated up to 15 years, and will be phased out in 25% increments over the last three years of zone designation.	The city, village, or township must approve a resolution for abatement of taxes, and applicants must demonstrate the positive economic impact the project will have on the local unit of government and the state.	MEDC-MI Renaissance Zone Act, MI Public Act 376 of 1996

141	Alternative Energy Personal Property Tax Exemption	Commercial/Industrial Sectors. Exempt property includes: alternative energy systems less than 2 megawatts, or integrated combinations of alternative energy systems of no more than 10 megawatts; alternative energy vehicles; personal property of an alternative energy technology business; personal property of a non-alternative energy business that is used solely for the purpose of researching, developing, or manufacturing alternative energy technologies. Alternative Energy includes: solar water heat, solar space heat, solar thermal electric, solar thermal process heat, photovoltaics, wind, biomass, renewable transportation fuels, renewable fuel vehicles, fuel cells, CHP/Cogeneration, Miniturbines, Stirling engines, hybrid vehicles, batteries, storage, thermoelectric energy, solar pool heating, anaerobic digestion, renewable fuels, microturbines	Property tax exemption available to companies engaged in the manufacturing or research and development of alternative energy technologies and nonresidential alternative technology owners. Property must be new to Michigan and be certified by the Michigan Next Energy Authority.	MEDC
142	Energy Efficient Home Improvements Tax Credit	Credit for 10% of the installed cost of each improvement, with $75 maximum incentive for single tax filers, $150 for joint filers.	Residential, Multi-Family residential, Low-Income residential. Eligible efficiency technologies include clothes washers/dryers, dishwasher, refrigerators/freezers, water heaters, furnaces, building insulation, windows. Equipment must carry Energy Star criteria. Single filers must have annual income of less than $37,500, and marrried couples filing jointly must have annual income of $75,000 or less.	Michigan Department of the Treasury
Grant Programs				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
143	Renewable Energy & Efficiency Grants	Grant pays up to 25% of project costs including wind, solar, biomass, geothermal, or other renewable energy sources. Also can be used to make energy efficiently improvements. A matching grant program.	Small businesses, farmers, and ranchers in all areas except cities of more than 50,000 and their immediately adjacent urban or urbanizing areas.	USDA

144	Biomass Energy Program Grants	Funding for state bioenergy and biofuels projects on a regular basis, including education, biofuels infrastructure, and biomass technology development and demonstrations.	Nonprofit, schools, local government, state government.	US DOE (State Energy Program)

145	Energy Efficiency Grants	Supports the implementation of energy-efficiency projects and renewable-energy projects, including solar, wind, anaerobic digesters, fuel cells, and biofuel applications.	Businesses, nonprofit organizations, government agencies, schools.	Michigan Public Service Commission
146	Energy Efficiency and Conservation Block Grants	Program to spur economic growth, decrease total energy consumption, create and/or retain jobs, improve energy efficiency in the transportation, buildilng, and other energy-consuming sectors.	Eligible local governments, Indian tribes, states, and US territories	US DOE
147	MichCon Residential Energy Efficiency Rebate Programs	Utility rebate program for eligible efficiency technologies. Receive $250 for furnaces with an efficiency rating of at least 93%, $250 for a home energy audit on homes built prior to 12/31/99 when at least one of the recommended measures are performed from the audit.	MichCon residential gas customers. Licensed builders working in the residential sector.	MichCon
148	WPPI Energy - Renewable Energy Rebates (offered by 6 MI utilities)	Rebates for renewable energy systems including residential solar water-heating systems, solar-thermal heating systems, photovoltaic (PV) systems, small wind-energy systems, site assessments, and repair of existing systems.	Residential and small commercial customers of Alger Delta CEA, Baraga Electric Utility, Gladstone Power & Light, L'Anse Electric Utility, Negaunee Electric Department, and Norway Power & Light. Projects must be approved before installation. Customers must live in the service area of the utility and own the property.	WPPI Energy

149	Green Communities Charrette	Funds an intense working session bringing together housing development professionals, funders, policymakers, and community stakeholders to integrate sustainable green design principles into affordable housing developments during the schematic design phase. Results in a Green Development Plan. Covers the pre-qualified consultant fee for facilitation, consultant travel costs not to exceed $1,000, meeting preparation costs, meeting materials, venue, etc.	501 C (3) nonprofits, tribally designated housing entities, and for-profit entities, with the nonprofit as the applicant. Need site control, cost of $3,000 or more per unit. Maximum grant around $5,000. Green Communities grant guidelines.	Green Communities - Enterprise
150	Green Communities Planning & Construction Grants	Integrate green building practices throughout affordable housing developments. Grants and below-market-rate acquisition and predevelopment loans and tax credit equity. For planning expenses including architecture, charrette, engineering, site surveys, analysis of energy use, and environmental reviews. Green construction items, costs of construction review and performance testing, energy services costs, costs of architect's certification that Green Communities Criteria have been met, resident education.	501 C (3) nonprofits, public housing authorities, tribally designated housing entities, and for-profit entities, and others cooperating with qualified applicants. Need site control, cost of $3,000 or more per unit. Rental housing for incomes at or below 60% of area median income, and homeowners with incomes at or below 80% of area median income. Must meet Green Communities Criteria and performance testing. Grants range from $20,000-$75,000 per project, planning costs may not exceed $25,000.	Green Communities - Enterprise

Loans				
	Program Name	**Program Description**	**Qualifying Factors**	**Funding Agency**
151	Section 9006-Guaranteed Loan Program	USDA guaranteed loan for 85% of the loan amount. Encourages the commercial financing of renewable energy (bioenergy, geothermal, hydrogen, solar, and wind) and energy efficiency projects. $5,000 is offered to six licensed builders who build an all natural gas Energy Star Home in 2009, being served by MichCon gas. (Home to be inspected to meet EPA Energy Star guidelines)	Project developers work with local lenders.	USDA Rural Development
Other				
152	Interconnection Standards	Provides standards for several levels of interconnection, and requirements for utilities to accept these interconnections. These will be mandated by the Michigan Public Service commission. This creates a mandatory statewide net metering program.	Eligible technologies include photovoltaics, landfill gas, wind, biomass, hydroelectric, fuel cells, municipal solid waste, CHP/Cogeneration, Microturbines, other distributed generation technologies. Applicable sectors include commercial, industrial, residential, nonprofit, all levels of government.	State of Michigan Public Act 295 Renewable Portfolio Standards (RPS)