

CAMBRIDGE TOWNSHIP MASTER PLAN



June, 2011

**A product of the
Cambridge Township Planning Commission**



Cambridge Township

Community Land Use Plan

Created by the Cambridge Township
Planning Commission

With assistance from:



**Region 2 Planning Commission
120 W. Michigan Avenue, 9th Floor
Jackson, Michigan 49201**

Adopted by the Cambridge Township Planning Commission: June 29, 2011

RESOLUTION OF MASTER PLAN ADOPTION

CAMBRIDGE TOWNSHIP PLANNING COMMISSION

WHEREAS, the Cambridge Township Planning Commission has the responsibility and is empowered by the Michigan Planning Enabling Act (P.A. 33 of 2008) to make and adopt a Master Plan for the physical development of the township and to amend the plan as needed from time to time, and

WHEREAS, the Cambridge Township Board of Trustees has created the Planning Commission for the purpose stated in the Michigan Planning Enabling Act, and

WHEREAS, the Cambridge Township Planning Commission undertook a thorough study of population and housing trends, existing land usage, natural features, transportation inventory, physical setting, and various public facilities, and

WHEREAS, the Cambridge Township Planning Commission held a public hearing on the proposed Master Plan on June 29, 2011 at the Cambridge Township Hall after the required comment period, and

WHEREAS, the Cambridge Township Planning Commission finds that the new Master Plan is necessary for the continued development of Cambridge Township,

NOW THEREFORE BE IT RESOLVED that the Cambridge Township Planning Commission hereby adopts this Master Plan for Cambridge Township along with the text, maps, charts, graphs, and other descriptive materials contained in the Plan, and hereby submits the Plan to the Cambridge Township Board for its approval, and

BE IT FURTHER RESOLVED that copies of the approved Master Plan shall be distributed to those entities to which were distributed copies of the proposed Plan during the comment period, and

BE IT FURTHER RESOLVED that the Master Plan is to be reviewed a minimum of every five years after the date of adoption in accordance with P.A. 33 of 2008.

Tom Van Wagner moved for adoption of this resolution, supported by Mike Albain.

AYES: 7

NAYS: 0

ABSENT: 1

RESOLUTION DECLARED ADOPTED ON June 29, 2011.

Ken Gidner, Chairman


Tanya Riley, Secretary

PARTICIPANTS

CAMBRIDGE TOWNSHIP PLANNING COMMISSIONERS

Kevin O'Mara, Chair
Thomas Van Wagner, Vice Chair
Michael Albain, Township Board Liaison
Theresa Friess
Kenneth Gidner
Mary Alice Kozemchak
Edward Plentz
Robert Matejewski
Tanya Riley

Bruce Nickel, Building Inspector
Ron Dzierzawski, Zoning Officer

CAMBRIDGE TOWNSHIP BOARD OF TRUSTEES

Harvey Hawkins, Supervisor
Rick Richardson, Clerk
Laurie Johncox, Treasurer
Michael Albain, Trustee
Jason Imm, Trustee

ADDITIONAL CONTRIBUTORS

Pat Steele, Office Manager

TABLE OF CONTENTS

SECTION		PAGE
Chapter 1	Introduction	9
Chapter 2	Background.....	13
Chapter 3	Issue Identification	17
Chapter 4	Goals, Objectives, and Strategies.....	21
Chapter 5	Land Use Plan	35
Chapter 6	Plan Implementation, Zoning Plan, and Capital Improvements Program.	39

APPENDICES

A.	Community Profile	53
	A1. Population	53
	A2. Housing.....	65
	A3. Natural Features Inventory.....	69
	A4. Current Land Use.....	75
	A5. Transportation and Circulation	79
	A6. Public Services	81
B.	Public Participation	85
C.	Comments Received from Plan Distribution	

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Comparative Migratory Patterns for Selected Communities, 2000	55
2. Cambridge Township Population Projections by Three Methods, 2000-2030	63
3. Comparison of Occupancy and Tenure Status for Area Communities, 2000	66

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Comparative Population Growth, 1930-2007	53
2. Population Growth Among Area Communities, 1930-2007	54
3. Age Distribution, 2000	57
4. Educational Attainment, 1990-2000	58
5. Household Income, 1990-2000	59
6. Income Type, 2000	60
7. Occupation, 2000	61
8. Population Projections, 2000-2030	63
9. Age of Housing Stock, 2000	66

LIST OF MAPS

<u>Map</u>	<u>Page</u>
1. Cambridge Township Vicinity	13
2. Productive Agricultural Soils	19
3. Future Land Use Plan	37
4. Zoning Map	42
5. Productive Agricultural Soils	70
6. Groundwater Recharge Areas	71
7. Soil Suitability for Septic Tank Absorption Fields	72
8. 1998 Land Use/Land Cover	75
9. Wetlands	77
10. Road Classification System	79
11. Sewer Service Areas	82

Chapter 1

INTRODUCTION

What is a Master Plan?

This community planning effort provided the Cambridge Township Planning Commission with an opportunity to consider the future course of development in the Township. Among the reasons for this was a desire to avoid a random and inefficient land development pattern. Other purposes for planning included the following:

- Improvements to infrastructure, emergency services, utilities, and other community facilities and services can be done in a more efficient manner when an up-to-date community plan is available for guidance.
- A plan provides a guide for zoning decisions.
- A land use plan directs future growth toward areas of the Township more capable of handling the specific nature and intensity of land uses.
- Planning and zoning help to identify and conserve areas of significant natural features.
- Planning is a continuous process that allows the adjustment of goals and objectives according to changing growth and demographic patterns.
- Adherence to the community land use plan reduces the potential for conflicting land uses.
- Plans are required to be kept up-to-date by Michigan planning and zoning enabling legislation.

The Land Use Plan and the Zoning Ordinance

The Land Use Plan is intended to guide the future growth and development of the Township. *It is not an ordinance and does not have the force of law.* The Plan takes a long-term view and provides a vision 20 years or more in the future. As such, the Plan represents a vision for the Township for the year 2030. Contained within this plan are goals, objectives, and policies, implementation measures, and a land use plan map. The land use plan map indicates appropriate areas for future land uses according to a vision for a desired future development pattern.

The Cambridge Township Zoning Ordinance is the principal tool that will be used to implement this plan. This Ordinance creates zoning districts in which permitted land uses are listed, prohibited land uses are omitted, and lot requirements including density,

building setbacks, maximum height, and maximum lot coverage percentages are provided. The Zoning Ordinance includes a zoning map indicating where zoning districts are located in the community.

The Zoning Plan that is included as part of this plan provides information on the relationship of the Land Use Plan to the Zoning Ordinance. The Zoning Plan “translates” future land use plan designations to existing and proposed zoning district designations.

In the State of Michigan, enabling authority for community planning is provided by the Michigan Planning Enabling Act, or P.A. 33 of 2008. The Michigan Zoning Enabling Act, or P.A. 110 of 2006 also requires that zoning be based on a plan that promotes health, safety, and general welfare.

Planning Process and Plan Organization

Work began on the Cambridge Township Land Use Plan with studies conducted as part of the community profile. In the months that followed, the Planning Commission reviewed data regarding population and housing trends, economy, natural features, infrastructure, land use trends, the transportation system, and more. The results of this research are summarized in Appendix A.

After gathering data about the Township, the Planning Commission participated in a visioning session on July 25, 2007. At that session, the Planning Commission responded to three questions which were intended to identify current issues related to land use planning, and to develop a 2030 vision for Cambridge Township.

In order to solicit public participation on the planning process, a survey of Township residents and businesses was conducted in the summer of 2008. The results of the survey helped the Planning Commission in the identification of strengths and issues to be addressed as part of the Master Plan. The results of the Public Participation Plan are found in Appendix B.

After gathering data from the community survey, the Planning Commission conducted a public workshop on October 29, 2008. This workshop proved useful in the development of issues related to land use and development.

Chapters 1 and 2 provide the plan introduction and background information regarding plan development.

After collecting, organizing, and digesting data from the community profile and the community survey, the Planning Commission developed a list of major issues to be addressed in the Plan. The issues that were identified fell into general categories of physical characteristics and demographic trends. A discussion on issue identification is found in Chapter 3.

Identification of planning issues was an important step in the development of goals, objectives, and strategies. The community goals, objectives, and strategies which comprise the heart of the Plan and can be found in Chapter 4.

Chapter 5 provides the Land Use Plan which reflects the Township guide for future land development. The land use plan contains a land use plan map which serves as a tool for the Planning Commission to use in making decisions regarding changes to the zoning map.

Finally, Chapter 6 identifies measures that will be taken to implement the master plan. Because the plan is not of value as a guide unless it is implemented, this chapter is an important element. Implementation measures include action steps that are needed if the goals of the plan are to be realized.

As required by the Michigan Planning Enabling Act, the final task in the planning process was to reach out to the citizens of Cambridge Township for additional public input through the public hearing process. The plan was distributed to surrounding communities, the Region 2 Planning Commission, and the Lenawee County Planning Commission for further input.

By working with residents, business owners, township officials, planners, surrounding communities, and other stakeholders, Cambridge Township has prepared a plan that balances the competing interests that affect land use decisions. These decisions include, for example, jobs and tax base on one side and protection of quality of life and natural resources on the other. Through careful implementation of the Plan, the Township is preparing to build its tax base and provide for high quality new growth, while preserving existing natural assets and protecting the overall health, safety, and welfare of its residents.

Planning and Zoning Responsibilities

Several committees, agencies, and individuals are involved in planning, zoning, and other aspects of township development. These entities are listed below with a brief description of their roles.

Township Board of Trustees

The Cambridge Township Board of Trustees is the legislative body that is elected to serve the residents of the Township. As the legislative body, the Board has the authority to formally adopt the zoning ordinance and amendments to the text and zoning map. The Board also sets the budget (including capital improvement projects), and appoints members to committees.

Planning Commission

The Planning Commission consists of a chairperson, vice chairperson, secretary, Township Board liaison, and a Zoning Board of Appeals representative. Their main duties include the following:

- Take action on requests for amendments to the Zoning Ordinance.
- Create and maintain the Township Plan.
- Review development proposals including site plan review, conditional uses, land division and subdivision, and site condominium proposals.

Though the Planning Commission is primarily a recommending body, it has the primary responsibility in development of the community master plan.

Zoning Board of Appeals (ZBA)

The Zoning Board of Appeals is the only body at the township level that hears appeals on zoning matters. When administrative decisions are made in connection with enforcing the ordinance, they can be appealed. When this occurs, the ZBA hears appeals and judges the merit of the request based on criteria listed in the Zoning Ordinance.

The ZBA also has the responsibility of interpreting the Zoning Ordinance when it is alleged that the zoning officer or other township official or agency is in error. The ZBA has the authority to provide the official interpretation of the Zoning Ordinance with appeals to their interpretation taken to Circuit Court.

Zoning Officer

The Township Zoning Officer is the primary official responsible for the enforcement of the Zoning Ordinance and other ordinances. The Zoning Officer has several responsibilities being the primary contact person for developers seeking project approval, site plan review, issuance of zoning compliance permits, scheduling and arrangement of committee meetings, issuance of citations and court appearances, and public hearing notification.

Building Inspector

The primary responsibility of the Building Inspector is to ensure compliance with building codes.

Region 2 Planning Commission Staff

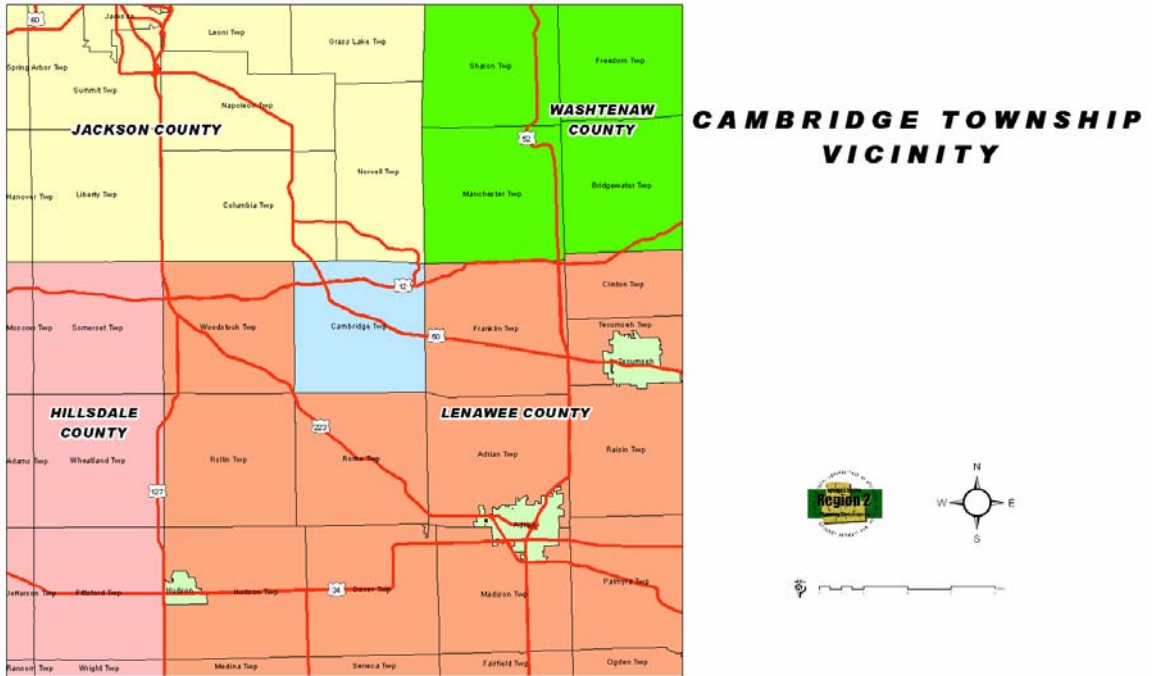
Staff of the Region 2 Planning Commission routinely advises the Planning Commission with rezoning recommendations and assists the Planning Commission in development of this Master Plan.

Lenawee County Planning Commission (LCPC)

The Lenawee County Planning Commission reviews and recommends on zoning ordinance amendments and community plans from Lenawee County communities.

Chapter 2 BACKGROUND

Cambridge Township is located in the northwest quarter of Lenawee County (see Map below). The Township is surrounded by Columbia and Norvell townships (Jackson County) to the north, Woodstock Township to the west, Franklin Township to the east, and the Rome Township to the south.



Several cities are located within one to two hours from Cambridge Township. Ann Arbor is 38 miles to the northeast of Onsted, Lansing is 68 miles to the north, Battle Creek is 75 miles to the west, and the City of Jackson is 26 miles to the west. The City of Adrian, the Lenawee County seat, is located 14 miles to the southeast, and the City of Tecumseh is located 15 miles to the east. Several important state trunk lines traverse the Township providing access to other parts of Lenawee County and neighboring counties. Several airports are also within one hour from the Township.

Cambridge Township has an area of 32 square miles, or approximately 20,500 acres. The density of the Township was 166 persons per square mile in 2000 which is higher than the overall Lenawee County density of 132 persons per square mile, and among the densest townships in Lenawee County.

The population of Cambridge Township was 5,299 in 2000 which represents an 18% increase above the 1990 population figure of 4,486. This significant population increase has primarily been in the form of low- and moderate-density residential

development as several hundred new homes were constructed during the decade. Growth slowed considerably in the latter half of the 2000's but, as population projections in Appendix A will indicate, growth is expected to resume when economic conditions improve.

Cambridge Township features a variety of residential land uses from the higher-density areas near the lakes to low-density residential areas in much of the remainder of the Township. The areas of the Township near the Village of Onsted are somewhat built-up and include moderate- and high-density residential and commercial uses. The Michigan International Speedway is dominant in the northwest corner of the Township and Walter J. Hayes State Park is located in the northeast corner. Commercial and industrial uses tend to be located along US-12 and M-50.

The existing settlement pattern was the result of decisions made by residents, entrepreneurs, utilities, transportation officials and governments. Some of these decisions were made many years ago. It is worthwhile to review the history of the Township in order to better understand the current landscape.

History of Cambridge Township

Consistent with the remainder of the State of Michigan, landforms in Cambridge Township were primarily created and shaped by glaciation. Thousands of years ago, glaciers scratched the surface of the Earth and carried sediments. When the glaciers melted, the sediments were deposited and the melting ice created rivers and lakes. The glaciers of the latest ice age receded approximately 10,000 years ago.

Cambridge Township is characterized by rolling and hilly undulating soils that were formed under well drained loamy sands mixed with imperfectly drained salty clay loams and clays. The moraine type geologic formations indicate the edges of glaciers during the last period of glaciation. The edges of glaciation are marked by the flat lake bed soils in the southeast corner of Lenawee County.

Most of the pre-settlement land cover was forested. The northern portion of the Township was characterized as mixed oak forest and the southern area was beech maple forest. The most prominent natural feature in Cambridge Township was and is the number of inland lakes and streams. There are a total of 23 lakes with a total area of 3.5 square miles.

Cambridge Township is located entirely within the Wolf Creek sub-watershed of the River Raisin. Wolf Creek drains from northwest to southeast through Loch Erin and eventually into Lake Adrian which is the drinking water supply for the City of Adrian.

The River Raisin is 135 miles long and has a watershed size of approximately 1,072 square miles. The River Raisin rises in the Irish Hills and flows east to Lake Erie at Monroe. The river is known as the most crooked river in the world.

Most of the early explorers and settlers used the River Raisin to gain access to the Michigan Territory. The Battle of the River Raisin was the largest battle ever fought on Michigan soil concluding a series of US setbacks in Michigan during the early months of the War of 1812.

A special meeting was called in 1835 at Abram Butterfield's of Springville and a resolution was passed naming the township Cambridge. On April 4, 1836 the first town meeting was held and Isaac Powers were the first supervisor of the Township. After that, Springville and Cambridge Junction quickly expanded adding taverns, a post office, and four stage coach crossings.

Subsequent to early settlement, Cambridge Township has evolved to become the center of the Irish Hills, home of the Michigan International Speedway and Walter J. Hayes State Park, and the location of many scenic views and lakes. This plan seeks to enhance these unique characteristics and to improve the quality of life for the residents of the Township.

Chapter 3 ISSUE IDENTIFICATION

After the development of the Community Profile, the Planning Commission identified a number of pertinent issues that this Plan should address. Limitations were created to ensure that identified issues are appropriate as to what can be feasibly addressed as part of the community plan. The Planning Commission reviewed the physical characteristics and demographic trends in the Township. Presentations were made at Planning Commission meetings and different perspectives on growth were considered. Citizen surveys and a public workshop provided an opportunity for township residents to provide their input on issues facing the Township.

The issue identification effort served three purposes: to focus the plan toward addressing community strengths and weaknesses, to provide guidance in the development of goals, and to get township residents involved early in the planning process.

The following points provide a list of issues which consistently emerged from the various public outreach methods as well as the community profile.

-Aging of the population. The average age of the population of the Township is growing older. The baby boom generation will begin to reach retirement age in approximately 2010 and will peak in the mid- to late-2020's. The aging population will have different lifestyle preferences and the Township should anticipate the need for services geared toward senior citizens. The Zoning Ordinance should be reviewed and, if necessary, amended so that it reflects that fact by allowing for uses such as accessory apartments and other senior housing opportunities. To the extent possible, the Plan should also attempt to accommodate the aging population.

-Increased blight. Blight is increasing in certain areas of the Township. Townships ordinances should be reviewed to ensure that they are adequate to deal with blight. Ordinances need to be strictly enforced. The possibility of tax incentives or property liens has also been mentioned as potential enforcement tools.

-Increase recycling opportunities. There are few recycling opportunities available to Township residents.

-Quality of surface and groundwater. While water quality was not identified as an existing issue, population growth around lakes poses a potential threat to water quality. Increased development around water bodies threatens the quality of surface and ground water in the Township.

-Protection of natural features. Cambridge Township has a variety of natural features including wetlands, woodlands, groundwater recharge areas, steep slopes, and bodies of water. Natural features should be preserved because they are an essential part of the remaining rural nature of the Township. They also can form part of a greenways system.

-Avoid strip commercial development. Fortunately, little strip commercial development has taken place to date in the Township. Strip development is inefficient, consumes natural resources, grows outward from the limits of existing development, and ruins sense of place. Consider using zoning to prevent strips, adopt architectural standards, and use plantings to soften the view, restrict signage, and deal with traffic congestion and pedestrian access.

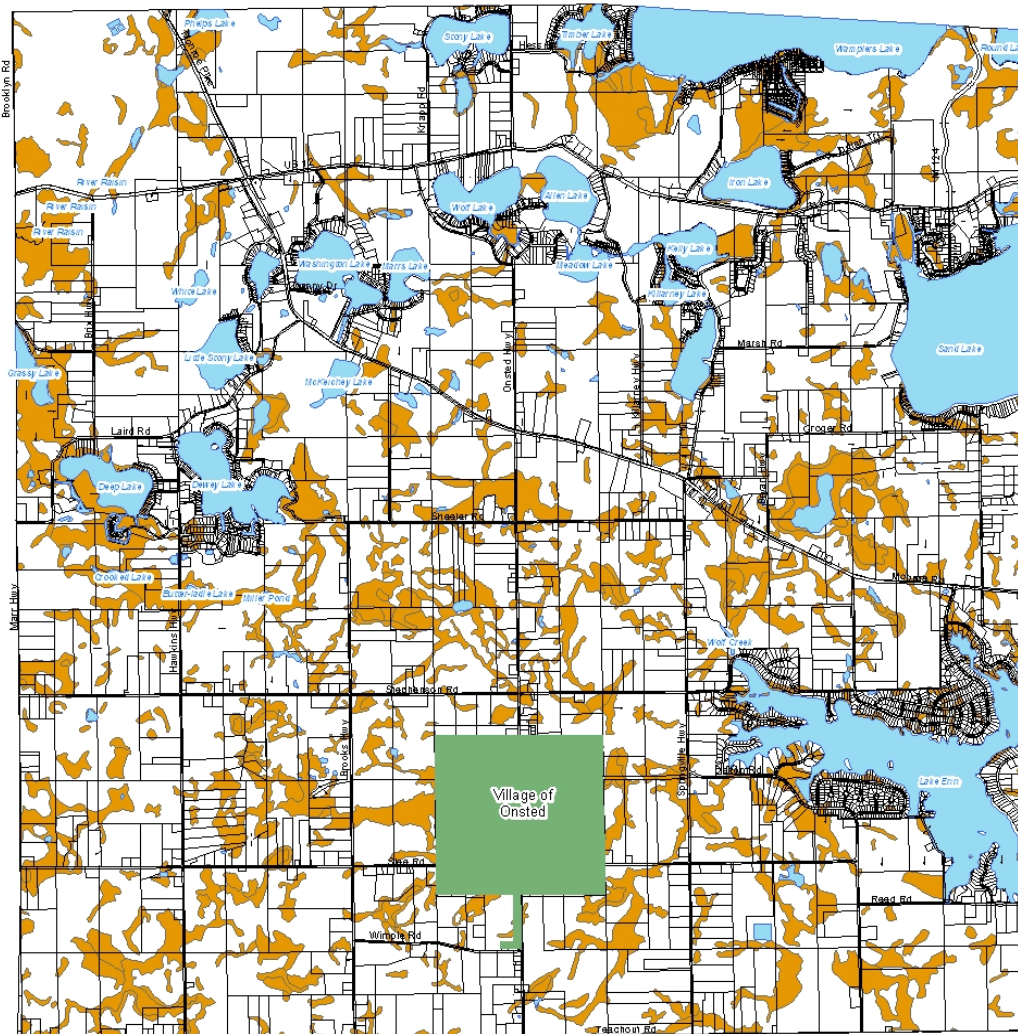
-Encourage a mix of land uses. Commercial and residential uses can be compatible and should be encouraged to mix when appropriate. This can help to reduce the number of vehicles on the road and provide for pedestrian access.

-Ensure the quality of commercial development. Encourage quality commercial development with the use of design standards, landscaping, reduction of conflicts between pedestrian and vehicles, pedestrian orientation, etc.

-Alternate energy sources not dealt with in Zoning Ordinance. Alternative energy sources are becoming more prevalent. The Zoning Ordinance may need to be amended to respond to requests for alternate energy systems such as solar power, wood, and wind energy systems.

-Lack of community identity. As the location of Michigan International Speedway, Walter J. Hayes State Park, and a significant portion of the Irish Hills, Cambridge Township has an opportunity to enhance its identity. The Township should take advantage of this opportunity to publicize itself as home to these features.

-Loss of agricultural land. Between 1978 and 1998, Cambridge Township lost more agricultural land than any other in Lenawee County. Prior to the recent economic downturn, much of the agricultural land that exists is being fragmented into smaller and smaller parcels. Among the factors that must be present for agriculture to remain viable, it must be free from encroachment from conflicting land uses, should be in large contiguous concentrated areas, and should not be fragmented into smaller parcels. Very few areas of the Township exist where this combination of factors is present (see map on next page).



CAMBRIDGE TOWNSHIP

Lenawee County, Michigan

PRODUCTIVE AGRICULTURAL SOILS EXISTING PARCELS

LEGEND

 Productive Agricultural Soils

Sources: Lenawee Co. Soil Survey/Lenawee Co. Comprehensive Land Use Plan



0 750 1,500 3,000 4,500 Feet

Map Created: June 21, 2007

Chapter 4

GOALS, OBJECTIVES, AND STRATEGIES

The goals, objectives, and strategies section are the culmination of the studies that were developed as part of the community profile, issue identification, and community input efforts. It brings together other plan sections regarding trends, alternative analysis, and visioning. It is important in creating the Township Land Use Plan Map, which is a reflection of adopted goals and objectives.

Goals, objectives, and strategies each serve different purposes. A *goal* is a general statement that is used to describe a desired end point. An *objective* is an effort directed toward achieving a goal. A *strategy* is a specific method employed to achieve a goal and objective. The Cambridge Township Master Plan lists goals, objectives, and strategies under the categories of Natural Features, Residential, Commercial, Office, Industrial, Infrastructure, Transportation, and Community Identity.

For the most part, the goals, objectives, and policies listed in this Plan do not represent a major overhaul from the previous plan. However, minor corrections and adjustments were seen to be appropriate in accordance with discussions held by the Planning Commission.

The land use goals, objectives, and strategies are presented on the following pages. After that, the future land use plan map is discussed in Chapter 5.

NATURAL FEATURES GOALS, OBJECTIVES, AND STRATEGIES

Goal: *Encourage the protection and preservation of the Township's natural resources for the purpose of maintaining the quality of the local environment.*

Objective: Require development site plans to conform to the topography, instead of the topography conforming to the site plan.

- Areas of poor soils should be discouraged for the purpose of development.
- Areas identified as environmentally sensitive on the soils, wetlands, and floodplain maps should be preserved from incompatible and unnecessary urban development.

Goal: *Encourage the preservation of wetlands.*

Objective: Inform Township residents about the value of wetlands and the need to obtain a wetland permit from the Michigan Department of Natural Resources and Environment prior to dredging or filling any protected wetland.

- Require that proper permits have been obtained prior to issuing a building permit for construction in a wetland in the site plan review of the Zoning Ordinance.
- Areas identified as environmentally sensitive on the soils, wetlands, and floodplain maps should be preserved from incompatible and unnecessary urban development.
- Explore other methods for using the Zoning Ordinance to regulate the use of wetlands.

Natural Features Overview

Cambridge Township has a variety of natural features including wetlands, woodlands, groundwater recharge areas, steep slopes, and waterways. One of the issues identified was the need to protect these natural features.

Natural features should be preserved because they are an essential part of the remaining rural nature of the township and they form links in a possible greenways system.

Goal: *High quality groundwater resources.*

Objective: Encourage the protection of the Township's groundwater resources.

- Encourage proper maintenance of on-site septic systems.
- Map LUST (Leaking Underground Storage Tank) sites as part of a township-wide improvement plan.
- Consider soil permeability and the affects of development on groundwater within identified groundwater recharge areas.

RESIDENTIAL GOALS, OBJECTIVES, AND STRATEGIES

Goal: *Protect existing residential neighborhoods from encroachment by incompatible land uses.*

Objective: Require landscaping or physical buffers where residential uses are adjacent to potentially incompatible commercial or industrial uses, and review zoning regulations to ensure the effectiveness of existing buffering techniques.

- Review existing commercial zoning areas in which the predominant land use is non-conforming residential for possible down-zoning.
- Prohibit commercial zoning districts from expanding on local residential streets.

Goal: *Encourage the development of residential areas to meet population increases, while conserving environmentally sensitive lands.*

Objective: Low-density residential developments should be located on sites having good physical characteristics including those conducive to on-site sewage disposal, appropriate soils, slopes, and water table.

- New residential development should be clustered in subdivisions, condominiums, and neighborhood areas located near appropriate shopping facilities, community services, and utilities or where these supportive services may be feasibly provided to promote efficient utilization of land and discourage dispersed strip development.

Residential Overview

Residential issues include the need for a more efficient development pattern. This could include clustering, PUD's, open space zoning. This can also occur outside areas with central sewer and water facilities at lower densities.

The potential for conflicts between residential and intensive land uses remains. While avoidance of conflicts is a worthy goal, the advantages of mixing of commercial, office, and residential land uses can be realized.

The Plan should seek ways to address this to achieve a more desirable balance.

RESIDENTIAL GOALS, OBJECTIVES, AND STRATEGIES (CONT.)

- High density residential land uses such as mobile home parks, and multiple-family developments should be located in areas having or expected to have necessary services and facilities including major roads and central sewer and water facilities. Zone for higher density housing near appropriate infrastructure.
- Residential areas should be developed in areas that will avoid potential conflicts with incompatible land uses. Non conforming lake lots are an issue to accommodate controlled residential development.

Goal: *Encourage the development of a variety of housing types and subdivision design which will promote an efficient use of space, and preserve the integrity of the area's rural character.*

Objective: Single-family and two-family subdivision developments should be encouraged in areas where adequate services exist or are expected to be provided in the near future.

- Subdivision development should be encouraged in areas adjacent to other existing subdivision developments that have sewer and water services to allow for the expansion of these services.
- Promote curvilinear subdivision design and cluster or planned unit subdivision layouts rather than "grid" plots.

Residential Overview

It is possible to allow for a mix of residential, commercial, and office uses. Separation of these uses results in a disconnect between interrelated uses resulting in the potential for sprawl, unnecessary use of roads, over-reliance on automobiles, idleness, loss of community identity, and strip commercial development.

Require buffering between conflicting uses, but encourage a reasonable mix of land uses.

While allowing additional rental housing to keep housing costs affordable, a way needs to be found to encourage home ownership. Site condominium, subdivision, and other forms of owner-based development should be encouraged.

Compact residential development should be encouraged. Such development is more efficient, reduces the length of utility lines, and allows for the preservation of open space.

RESIDENTIAL GOALS, OBJECTIVES, AND STRATEGIES (CONT.)

- Encourage continuous and coordinated platting of land through the state Land Division Act rather than piecemeal development scattered throughout the Township.
- Encourage residential development which would reduce the number of driveway and street access points along major roads.
- Separate low-density, mobile home, and multiple-family residential areas from other uses, and allow low and moderate density townhouse type development to associate more closely with single-family uses in transition areas.
- Provide alternatives such as cluster development and senior citizens housing in moderate and medium density areas.
- Multiple-family residential developments should be encouraged to locate in areas having adequate soils for development, available municipal or central water and sewer as well as adequate recreation and transportation facilities and services, and should be located where compatibility with other land uses can be assured.
- Prohibit commercial zoning districts from expanding on local residential streets.
- Discourage the rezoning of additional land to high-density residential zoning districts such as RM-1 until existing areas have been built out.
- Develop and/or enhance zoning standards which encourage innovative development patterns that result in open space buffers between residential and non-residential uses.
- Include zoning ordinance incentives to encourage the preservation of open space.
- Develop receiving zones for development rights that were purchased from other parts of the county for high density housing consistent with County Land Preservation Policies.
- Enhance the sense of community and improve pedestrian transportation options by connecting residential developments to schools, parks, cultural facilities, and other neighborhoods.
- Establish overlay zones specifically identified on non conforming lake lots.

RESIDENTIAL GOALS, OBJECTIVES, AND STRATEGIES (CONT.)

Goal: *Ensure that the housing needs of senior citizens are met.*

Objective: To the greatest extent possible, ensure that the needs of senior citizens are taken into consideration.

- Encourage existing and proposed land uses that serve senior citizens and provide for accessibility needs.
- Review zoning regulations to ensure that they do not inadvertently discriminate against senior citizens.
- Review new development proposals with an eye toward providing senior citizen access.
- Provide alternative types of housing (e.g. accessory apartments, Elderly Community Housing Opportunities) to accommodate senior housing needs.

COMMERCIAL GOALS, OBJECTIVES AND STRATEGIES

Goal: *Encourage the development of commercial uses to support the retail needs of the Township and to diversify the local economy. Commercial uses should be located in areas that will provide convenient shopping and office-related services to the Township residents and assure compatibility of commercial districts with other uses. Increase the number of commercial development opportunities*

Objective: Encourage clustered commercial development rather than sprawled development.

- Provide for commercial development along major thoroughfares, preferably at the intersections of such thoroughfares with controlled access to and from the development.
- Locate commercial uses as to avoid incompatible adjacent uses.
- Promote the grouping of commercial activities on sites sufficiently large to furnish adequate off-street parking.
- Promote commercial development in areas easily accessible to Township residents.
- Provide for adequate buffering requirements between conflicting land uses, and between parking areas and road right-of-ways.
- Encourage diversification in the type of commercial and business establishments in order to meet a greater range of citizens needs.
- Promote development of commercial establishments which will help retain local dollars rather than force residents to spend dollars outside the area.
- Control and limit advertising signs so as to control the size and type of billboards in all commercial districts.
- Maintain the aesthetics of the community through the regulation of signs.

Commercial Overview

Issues related to commercial land use include avoidance of strip development, encouragement of a mix of land uses, ensure the quality of commercial development, and address specific aspects of commercial development including signs, parking, design, site drainage, and pedestrian access.

COMMERCIAL GOALS, OBJECTIVES AND STRATEGIES (CONT.)

- Do not promote new commercial development in fringe areas or in a strip fashion.
- Encourage the use of existing commercially zoned property before rezoning new land.

Goal: *Ensure that commercial development continues to be of high quality.*

Objective: Design standards should be considered to minimize the negative impact on roads, adjacent land uses, and the environment.

- Consider implementation of access management techniques such as shared drives, service roads, internal connections, and proper driveway design, to maintain roadway safety and capacity.
- Consider amending the zoning ordinance to encourage parking in the rear and to the side of stores in order to create more pedestrian-friendly and aesthetically appealing retail developments.
- Commercial developments should be appropriately designed taking into consideration surrounding land uses and structures.

Objective: Prevent premature commercial development in outlying areas ahead of demand for new floor area and public infrastructure to support the development.

- Require all major commercial developments to locate where sewer and/or water service is existing or is extended.
- Work with road agencies and developers to provide shared driveways whenever possible, and locate new driveways in appropriate locations for safety and access.

OFFICE GOALS, OBJECTIVES AND STRATEGIES

Goal: *Increase the number of office, commercial, and industrial development opportunities surrounding the MIS area.*

Objective: Remove all barriers to development in the area surrounding MIS.

- Make area attractive for development.
- Review existing ordinances to determine whether barriers are created for commercial enterprises.
- Identify appropriate areas for development.
- Identify potential incentives for development in the area of MIS.
- Evaluate how using Conditional Use Permits could promote development.
- Identify on base map existing infrastructure including roads, sewer, water, electrical and gas.

INDUSTRIAL GOALS, OBJECTIVES, AND STRATEGIES

Goal: *Encourage the development of industrial uses to diversify the local economy and to provide a stable tax base for the Township, at locations that will allow the quality of the local environment to be maintained.*

Objective: Industrial areas should be encouraged in sections of Cambridge Township where a high degree of compatibility with surrounding land uses can be assured.

- Industrial areas should be encouraged along major thoroughfares having access to the surrounding region or state.
- Encourage industrial development in areas where soils are suitable and potential for groundwater contamination is minimized.
- Encourage redevelopment or expansion of existing industrial areas before considering new areas.
- Encourage location of industrial uses where sufficient infrastructure can support these uses.
- Encourage light, clean industrial development in industrial parks or subdivisions where there is sufficient room for growth and expansion.
- Buffer industrial uses from residential uses.
- Favor uses that do not pollute the air, soil, water or are offensive to neighboring land uses because of noise, sight, or odor.
- Plan additional industrial areas in the Township to assist in providing an employment base and tax base for the residents of the Township.
- Require appropriate landscaping of each industrial site.

Industrial Overview

More economic diversity is needed. The state is dependent on auto-related industries as part of the industrial base.

Because Cambridge Township is not isolated, it is subject to the same regional economic factors that face the remainder of the county, state, and Upper Midwest region.

Other economic development work is being conducted by the Lenawee Economic Development Committee, Michigan Economic Development Commission, and other agencies.

INFRASTRUCTURE GOALS, OBJECTIVES, AND STRATEGIES

Goal: *Provide for adequate public infrastructure.*

Objective: Maintain sewer, water, and transportation systems to protect the health, safety, and welfare of Township residents, provide needed services, and provide for efficient movement of people and goods.

- Identify target areas as first priority to receive water and sewer services.
- Recognize roadway conditions and traffic volumes in order to target areas which should receive priority for road improvements.
- Amend the Zoning Ordinance to require the use of access management techniques to reduce the potential for traffic conflicts along major roads.
- Additional development should be timed to coincide with adequate roadway, sewer, and water systems needed to service the development.
- To the extent that is practical, incorporate Complete Streets design considerations and practices as a routine part of infrastructure planning and implementation.

COMMUNITY IDENTITY GOALS, OBJECTIVES, AND STRATEGIES

Goal: *Establish a community identity.*

Objective: Establish a sense of community and belonging.

- Encourage unique new single-family developments that create a sense of community, provide pedestrian and emergency services connections between neighborhoods, and work with the natural features of the Township to preserve open space.

Objective: Provide for adequate design of commercial developments in the Township.

Objective: Improve the appearance of dilapidated properties which detract from the Township's image.

- Continue to enforce Township ordinances that control blight.
- Use zoning ordinance to preserve natural appearance and beautification.
- Work with other agencies to assist in roadside beautification.
- Consider tax incentive to clean up sites.
- Require landscape and beautification in site plans.
- Use conditional use permits to provide flexibility in site plan, reinforcing site plan must fit into natural beauty of the area.

Goal: *Allow the continuation of existing agricultural activities with minimal interference from residential development.*

Objective: Continue to allow agricultural activities to take place in the Township.

- Rezone non-conforming agriculturally-zoned properties to a conforming residential district.
- Discourage the location of dense residential development in the area of intensive agricultural uses.

COMMUNITY IDENTITY GOALS, OBJECTIVES, AND STRATEGIES (CONT.)

- If applicable, inform residents of the provisions of the Michigan Right-to-Farm Act.
- Woodlands, wetlands, lakes and hills are important contributors to the overall character of Cambridge Township.

GOAL: Preserve and protect the natural features of the Township

Objective: New development should build with existing natural features of the land

- Use open space development as a tool to preserve natural features.
- Require soil studies to be conducted as part of the site plan submittal.
- Use open space development as the tool to preserve natural features.
- Require groundwater recharge mapping information to be submitted as part of the site plan information.
- Ensure compliance with Lenawee County Soil erosion and sedimentation program.
- Develop around trees on woodlots instead of cutting all the trees down.
- Spread the word using media for preferences for development including preservation of natural features.

Chapter 5 LAND USE PLAN MAP

The policies presented in the previous section are reflected in the Cambridge Township Land Use Plan Map. The Planning Commission designated several categories to indicate the preferred locations for the various types of land use. The categories are described in the following sections.

Agricultural

The Agricultural land use designation is distributed throughout the Township with the largest portion located south of M-50. In terms of area, it is by far the largest land use category. While all agricultural-designated areas have features that are favorable for agricultural production, they are also suitable for other uses as well. Some of these uses include low-density residential development and other non-agricultural uses such as schools, golf courses, museums, open-air businesses, and parks.

Some farmland located in the southern tier of sections which border Rome Township may have the potential to be targeted for farmland preservation. This area possesses a number of factors that are favorable for preservation including:

- Large parcel sizes
- Productive agricultural soils
- Soils that are not well-suited for residential development
- Lack of public infrastructure
- Low levels of existing residential development
- Concentration of P.A. 116 Farmland Agreements

Residential

Low-Density Residential

Low-density residential areas are to be developed at densities ranging from 1-2 dwelling units per acre. The map includes several areas where low-density residential areas will be encouraged including areas close to dense residential development near lakes which coincide with the best soils for septic systems and a lack of prime agricultural soils. The land use plan map indicates that most of lower density housing is located close to lake residential areas. These areas are found in the northern half of the Township and small areas around the village of Onsted and Loch Erin.

Moderate-Density Residential

The desired residential density in moderate-density residential areas is 3-4 dwelling units per acre. The availability of central sewer facilities is preferred in these areas but not required. The moderate-density residential designation is often located in the vicinity of more intensive development including platted areas near lakes that have no direct lake access, and areas along Slee and Onsted Highway adjacent to the Village of Onsted. In addition, areas along Brighton Highway and Sports Park Drive have been identified as moderate-density residential.

Lake Residential

The lake residential classification takes in the moderate-density residential areas around the seventeen different lakes which are primarily located in the Irish Hills. The lake residential classification recognizes the unique characteristics and densities found in the area of the lakes. Many of the lake areas have several common characteristics including the availability of central sewer, unusual lot shapes and sizes, frequent zoning variance requests, and lake access issues.

In an attempt to reduce the number of variance requests, a lake overlay district has recently been created for areas with concentrations of existing non-conforming substandard lots in some areas in the vicinity of Wamplers and Sand lakes.

High-Density Residential

High-density residential areas are to be developed at densities above four dwelling units per acre. The high-density residential land use category is intended to accommodate existing and expansion of apartments and manufactured housing developments as well as lower-intensity residential developments and other compatible land uses. The availability of central sewer facilities is preferred for the high-density residential designation, but it is not required if the soils meet the requirements of the Lenawee County Health Department.

There are two areas that carry the high-density residential designation, both of which have already been developed. These areas are located off Laird Road north of Deep lake to accommodate an existing manufactured housing development, and a high-density housing development along the west side of Brighton Highway at the Irish Hills Golf Resort

Commercial




The Plan encourages commercial uses in limited areas along US-12 and M-50. These areas are highly-visible located in the vicinity of intersections with major roads and/or in proximity to population concentrations.

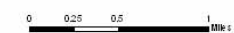
CAMBRIDGE TOWNSHIP

Lenawee County, Michigan

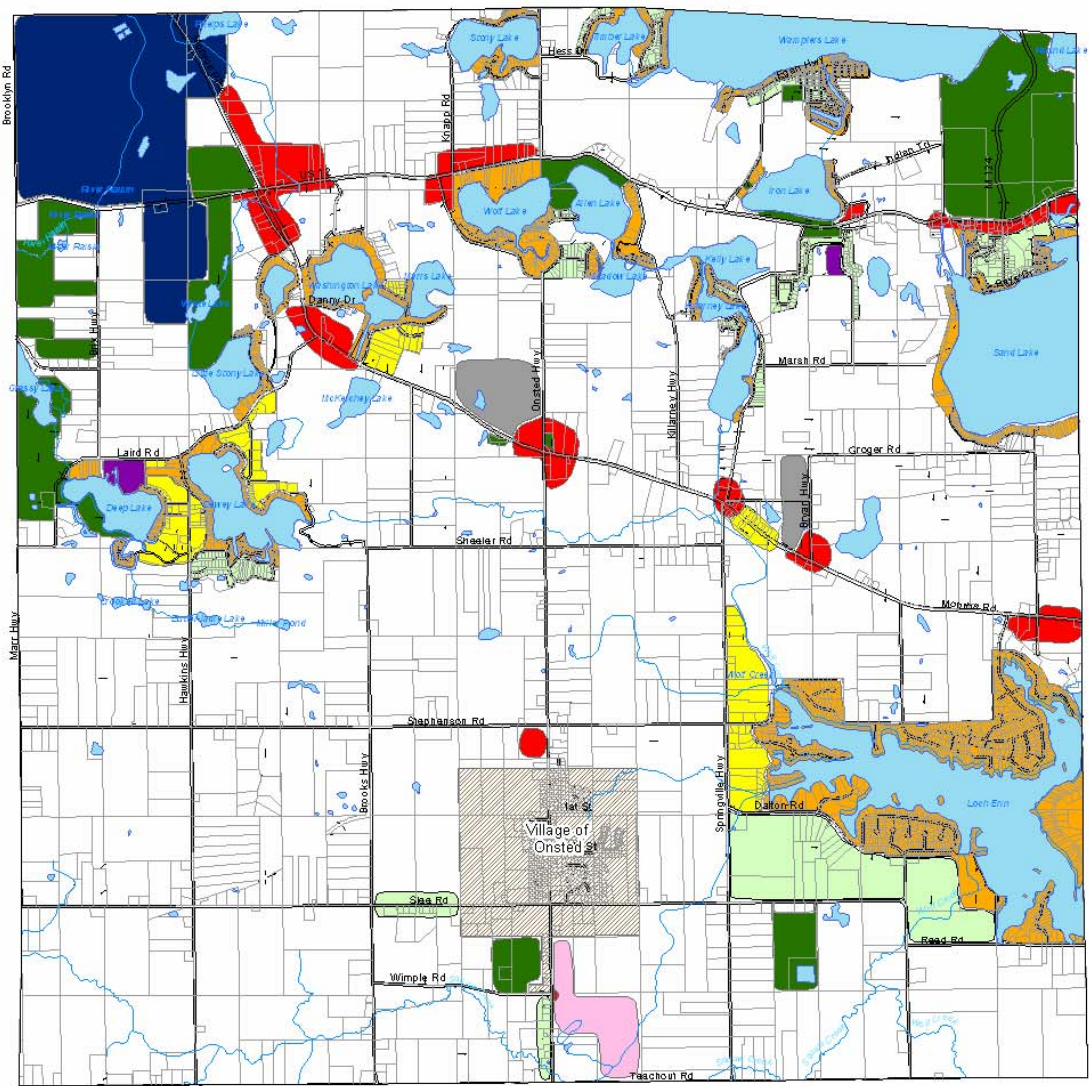
FUTURE LAND USE PLAN

Legend

-  Agriculture
-  Low-Density Residential
-  Lake Residential
-  Moderate-Density Residential
-  High-Density Residential
-  Commercial
-  Light Industrial
-  MIS and Related Uses
-  Mixed Use
-  Public/Semi-Public



Map Created: July, 2009
Revised: June 8, 2010



The commercial designations are found at the four corners of US-12/M-50, Onsted Highway/US-12, Onsted Highway/M-50, Springville Hwy/M-50, Bryan Hwy./M-50 and M-50 on the East Cambridge Township and the Franklin Township line.

Light Industrial

There are two areas designated for industrial use both of which are located on Class A roads. One area is on the west side of Bryan Highway north of M-50 and the other is located along the west side of Onsted Highway north of M-50.

MIS and Related Uses

This designation is intended to incorporate a mix of uses related to Michigan International Speedway. As such, the MIS designation is intended to accommodate a mix of recreational, commercial, office and industrial uses.

Mixed Use

This includes a combination of residential, office and commercial land uses. The designation is primarily reserved for areas where sewer lines and transportation corridors are present and/or where low-impact office and commercial uses are compatible with existing residential uses. The mixed use category does not include intensive land uses such as industry, mining operations, mobile home parks and similar uses that may not be compatible with the long term land use plan. One area is designated as mixed use on the land use plan map. It is located along the east side of Onsted Highway south of the village of Onsted.

Parks/ Semi-Public

There are three areas designated as parks/public land. These areas include Hayes State park, Michigan DNR land located (Allen and Wolf lake, Grassy lake, Deep Lake) Cambridge Historical Park, Onsted State Game Area), Weigh Station at the corner of US-12/M-50, Rest area; M-50/Onsted Hwy., Township Hall, Onsted Schools, Onsted Waste Water Treatment Plant, Church, and Cemetery.

Chapter 6 PLAN IMPLEMENTATION, ZONING PLAN, AND CAPITAL IMPROVEMENTS PLAN (CIP)

What is a Zoning Plan?

The Cambridge Township Master Plan is intended to provide the basis for zoning in the Township. To that end, the Plan contains a special element known as a “zoning plan”. According to the Michigan planning and zoning enabling acts, a zoning plan describes for the various zoning districts controlling area, bulk, location, and use of buildings and property. The legislation requires the Planning Commission to adopt and file with the Township Board a zoning plan for the areas subject to zoning in the Township. The zoning plan is to include an explanation of how the land use categories on the future land use map relate to the districts on the zoning map.

While the zoning plan is intended to promote zoning that is consistent with the Master Plan, it should be kept in mind that the zoning ordinance has a short-term focus of up to five years while the Master Plan has a long-range focus of 20 or more years in the future. Accordingly, not all areas on the future land use map should be rezoned until growth indicates the need for zoning changes and/or infrastructure is in place to service new development.

Zoning Districts

The Cambridge Township zoning ordinance currently divides the Township into the following zoning districts (see zoning map on following page):

Agricultural district (AG-1). The purpose of the Agricultural district is to protect land best suited for agricultural and related purposes from encroachment of incompatible land uses. Uses are generally limited to single-family homes, farms, schools, public and semi-public uses (cemeteries, churches), and recreational uses (golf courses, driving ranges, riding academies).

Rural Non-Farm Residential district (RNF-1). The purpose of the rural non-farm residential district is to provide single family dwellings at low densities to preserve rural character. Permitted uses include: Single family dwellings, public and semi-public uses (cemeteries, churches), and recreational uses (golf courses, recreation centers and parks).

Lake Residential district (RL-1). The purpose of the district is to design, preserve and enhance areas that are best suited for lake front residential. Permitted uses include: Single family dwelling at moderate densities, parks and churches.

Suburban Residential district (RS-1). The purpose of the Suburban district is intended to provide residential areas at moderate densities. Where necessary, RS-1 zoning is to be located in areas where urban services including central sewer and water supply systems can be feasibly provided. *Permitted uses include:* Single family dwellings, public and semi-public uses (schools, churches), and recreational uses (golf courses, recreation centers and parks).

Multiple-Family Residential district (RM-1). The Multiple-Family Residential district was designed to allow higher-density residential concentrations with a variety of housing types. *Permitted uses include:* Single family attached dwellings, townhouses, public- and semi-public uses (schools, parks, churches), hospitals, nursing homes, offices and garden apartments. These areas are intended to be served by central sewer and water systems.

Local Commercial district (C-1). The Local Commercial district is intended to encourage and provide for retail convenience goods and services to meet the needs of neighborhood resident populations. *Permitted uses include:* Personal services (barber shop, medical and dental clinics), professional offices, banks, restaurants, bars public and semi-public uses (churches, community owned buildings).

General Commercial district (C-2). The General Commercial district is intended to allow for retail and service uses conveniently located to the entire township and surrounding areas. C-2 generally allows uses that are more intensive uses than the C-1. *Permitted uses include:* Indoor retail sales, commercial amusement centers (arcade, batting cages), hotels, motels, service stations, communication towers and public and semi-public uses (churches, government buildings).

Highway Service Commercial District (C-3). *This district is intended to provide for commercial establishments and services to local and through traffic. These districts are to be located along major roads. Permitted uses include service stations, vehicle sales, motel, hotels and restaurants, indoor and outdoor commercial amusements (putt-putt golf, drive-in theaters), auto repair (garages) and open RV storage areas.*

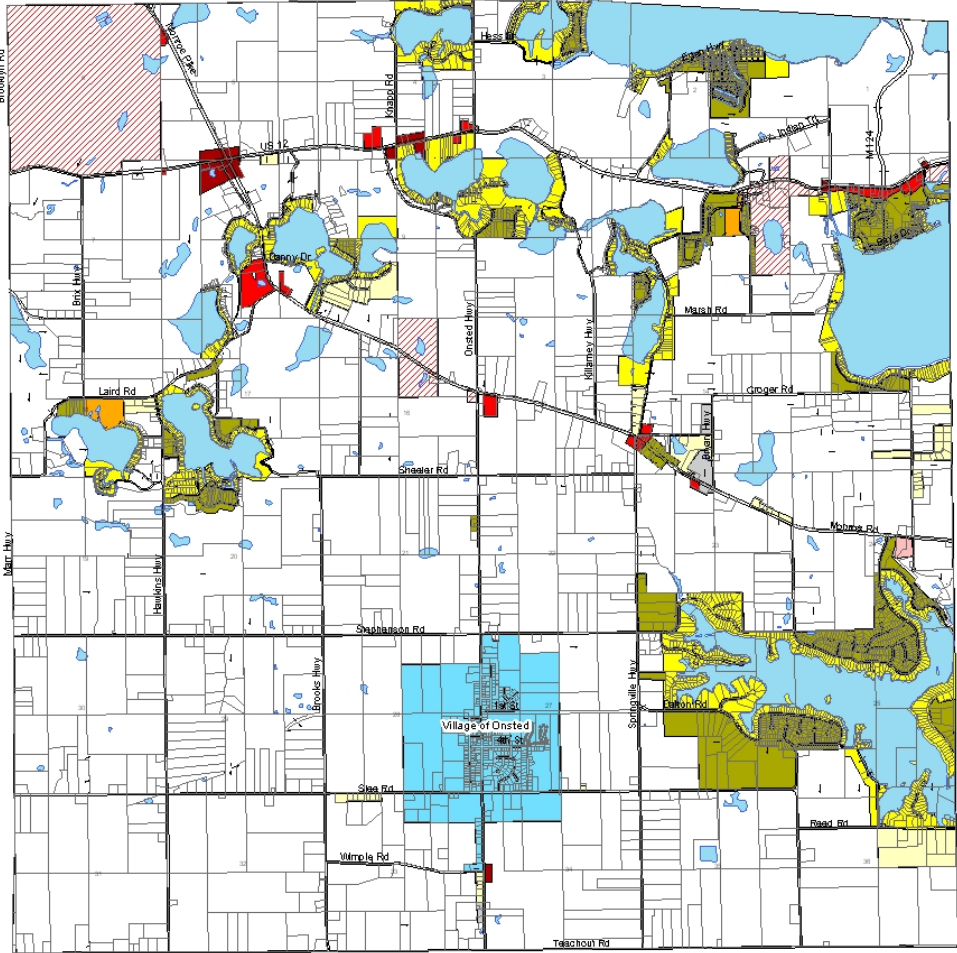
Commercial Recreation district (C-4). The purpose of the Commercial Recreation district is to provide for commercial recreational uses. These areas are located to quick access of highway facilities. Uses include: golf course, driving ranges, resorts, riding academies, observation towers, amusement parks and restaurants.

Light Industrial district (I-1). The light Industrial district is intended to permit industries to locate in planned areas. Industrial uses may be integrated with other types of land use but with limitations placed to reduce adverse effects on neighboring uses. The I-1 district allows a variety of manufacturing uses, lumber yards, trucking terminals warehousing, retail establishments, mining and processing, vehicle repairs.

Performance standards are provided to ensure that the effects of industrial use are reduced.

Dimensional Standards

Bulk, height, and setbacks for each district are included in the zoning ordinance. The following table summarizes the current bulk, height, and setback requirements.



Cambridge Township

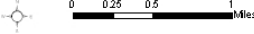
Lenawee County, Michigan

Zoning Map

Legend

- AG-1 Agricultural District
- RNF-1 Rural Non-farm Residential District
- RL-1 Lake Residential District
- RS-1 Suburban Residential District
- RM-1 Multiple Family Residential District
- C-1 Local Commercial District
- C-2 General Commercial District
- C-3 Highway Service Commercial District
- C-4 Commercial Recreation District
- I-1 Light Industrial District
- VO Village of Onsted

Updated: July 30, 2009



Bulk, Height, and Setback Requirements

Zoning District	Minimum Lot Area	Minimum Lot Width	Maximum Lot Coverage	Minimum Setbacks			Maximum Building Height		Minimum Transition Strip Requirements	Remarks
				Front	Side	Rear	Principal	Accessory		
AG-1, Agriculture	1 acres 5 acres	210'	10%	60'	30'	50'	35'	80'	None	1F detached dwellings All other uses
RNF-1, Rural Non-Farm Residential	1 acre 5 acres	150'	20%	35'	20'	35'	35'	25'	None	1F detached dwellings All other uses
RL-1, Lake Residential	12,000 sq. ft.	80'	30%	50'	10'	35'	35'	16'	None	1F detached dwellings w/central sewer/water
	15,000 sq. ft.	100'								1F detached dwellings w/o central sewer/water
RS-1, Suburban Residential	1 acre	120'	30%	35'	10'	20'	35'	16'	None	All other uses.
	12,000 sq. ft.	80'								1F detached dwellings w/central sewer/water
	15,000 sq. ft.	100'								1F detached dwellings w/o central sewer/water
RM-1, Multi-Family Residential	10,000 sq. ft.	80'	30%	35'	10'	25'	2 stories ½	16'	None	1F detached dwellings w/central sewer/water
	15,000 sq. ft.	100'								1F detached dwellings w/o central sewer/water
	10,000 sq. ft.	80'	25%	25'						2F dwellings with central sewer/water
	15,000 sq. ft.	100'								2F dwellings w/o sewer/water
	½ acre	120'								15,000 sq. ft. for first 3" well units, plus 2,000 sq. ft. for each additional dwelling unit. All other uses
C-1, Local Commercial	10,000 sq. ft.	75'	25%	20'	35'	35'	35'		15' wide and fence or hedge 4-6' if abutting	With sewer/water systems

Zoning District	Minimum Lot Area	Minimum Lot Width	Maximum Lot Coverage	Minimum Setbacks			Maximum Building Height		Minimum Transition Strip Requirements	Remarks
				Front	Side	Rear	Principal	Accessory		
	15,000 sq. ft.	100'							residential 20' wide and landscaped if fronting on a public street	Without sewer/water systems
C-2, General Commercial	10,000 sq. ft.	75'	25%	35'	20'	20'	35'		15' wide and fence or hedge 4-6' if abutting residential	With sewer/water systems
	15,000 sq. ft.	100'							20' wide and landscaped if fronting on a public street	Without sewer/water systems
C-3, Highway Service Commercial	15,000 sq. ft.	100'	25%	35'	20'	20'	35'		15' wide and fence or hedge 4-6' if abutting residential	
									20' wide and landscaped if fronting on a public street	
C-4, Commercial Recreation	1 acre	150'	25%	35'	20'	35'	35'		15' wide and fence or hedge 4-6' if abutting residential	
									20' wide and landscaped if fronting on a public street	
I-1, Light Industrial	20,000 sq. ft.	80'	25%	35'	20'	35'	35'		15' wide and fence or hedge 4-6' if abutting residential	
									20' wide and landscaped if fronting on a public street	

Rezoning Criteria

The most common zoning application of the land use plan is during the rezoning process. Accordingly, a rezoning should be required to meet set criteria in order to be considered consistent with the land use plan. The following standards satisfy this requirement:

- Is the proposed rezoning consistent with the policies and uses proposed for that area in the master plan?
- Will all of the uses allowed under the proposed rezoning be compatible with other zones and uses in the surrounding area?
- Will any public services and facilities be significantly adversely impacted by a development or use allowed under the requested rezoning?
- Will the uses allowed under the proposed rezoning be equally or better suited to the area than uses allowed under the current zoning of the land?

Relationship to the Future Land Use Map

The remainder of this chapter equates the various zoning districts included on the zoning map with the various categories included on the future land use map.

Agricultural areas. Areas indicated as agricultural are currently implemented with the use of the AG-1, Agricultural zoning district.

Residential areas. The following residential designations are included on the future land use map:

Low-Density Residential. Low-density residential areas are addressed generally on the future land use map. The following zoning districts can be used to implement the low-density residential future land use designations:

- RNF-1 Rural Non-Farm Residential
- RS-1 Suburban Residential District

Moderate-Density Residential. Moderate-density residential areas are located in appropriate transition areas between residential and other land use plan designations. The RS-1, Suburban Residential zoning district is recommended to carry out the moderate-density residential designation.

Lake Residential. Lake residential areas are located in the vicinity of the 17 lakes predominately located in the northern one half of the township where the Irish Hills prevail. One exception is Loch Erin and man-made development located in the southeast corner of the township. This designation is implemented using the RL-1, Lake Residential and RS-1 zoning districts as well as a new flexible overlay district that is intended to address legally non-conforming substandard lots in certain lakefront locations.

High-Density Residential. A high-density residential area is generally indicated on the future land use map. This plan designation is to be implemented with the RM-1, Multiple-Family Residential zoning district.

Commercial Areas. The following commercial plan designations are included on the future land use plan map.

Commercial. The commercial designation is indicated generally on the future land use plan map. These areas are generally to be implemented with the:

- C-1-Local Commercial
- C-2- General Commercial
- C-3- Highway Service Commercial
- C-4- Commercial Recreation

Industrial Areas. The industrial future land use plan designation is intended to be implemented with the I-1, Industrial zoning district.

Other Plan Designations. Other future land use plan designations include: MIS and related uses, mixed use and public/semi-public

MIS and Related Uses. To incorporate a mix of uses related to Michigan International Speedway. The MIS designation is intended to accommodate a mix of recreation, commercial and light industrial uses.

Mixed Use. Mixed use development includes a combination of residential, office, and commercial land uses. This designation is primarily reserved for areas where sewer lines exist or where they have the potential to be extended. Mixed use areas also should be located in areas where low impact office and commercial uses are compatible with existing residential uses. The mixed use category does not include intensive land uses such as industry, extractive operations, mobile home parks, and similar uses that may not be compatible with low-density residential uses or mixed-use developments.

Traditional zoning is static. It does not allow for changing trends that may have resulted from a shift in the economy or even from some type of development which alters the

demand for a new type of land use. Having districts with a list of permitted and conditional uses should make the ordinance easy to administer, however, this predetermined list of rules and regulations may not fit into a development plan and requests for zoning variances, conditional use permits, or rezoning may be necessary.

While the existing residential and commercial zoning districts can be used to implement the mixed use category in the short term, the plan recommends amendments to the ordinance that will allow for the flexibility needed to meet the intent of the mixed use designation. A few flexible zoning techniques used are mixed use development districts, floating zones, overlay zones, performance zoning, and planned unit developments. All of these alternatives allow developers to be more creative and respond to any special physical characteristics of the land. They also allow developers to respond to changing economic circumstances that may not be easy for the community to foresee or predict and allow for a shift in consumer preferences.

The plan map designates one area as mixed use. This area is on the east side of Onsted Highway south of the Village of Onsted at the site of Loar Field.

Public/Semi-Public areas. Several areas are designated as public/semi-public on the township land use plan map. These areas include land owned by the State of Michigan including Onsted State Game Area, Cambridge Historic State Park, Hayes State Park, Iron Lake boat launch, a weigh station, rest area, and other state-owned land. Other public/semi-public areas include the Onsted wastewater treatment plant, Onsted School, and cemeteries.

CAPITAL IMPROVEMENTS PROGRAM (CIP)

What is a Capital Improvements Program?

Capital improvements are investments in those physical facilities which involve a substantial investment and are of a more lasting nature, as opposed to the operating expenses which occur during the same year they are budgeted. Examples of capital improvements include: municipal buildings (e.g., township Hall, fire stations), parks and recreation facilities, streets and alleys, and utilities (e.g., water and sewer lines). A capital improvements program (CIP) is a six-year prioritized listing of those projects which often includes the following information: project location, date of construction, project cost, means of financing, sponsor, and relationship to other facilities. The CIP is updated annually with the first year being the current year capital budget.

Why Prepare a Capital Improvements Program?

The Michigan Planning Enabling Act (MPEA) requires planning commissions to annually prepare a capital improvements program upon the adoption of the Master Plan unless exempted by the Township Board. If the Planning Commission is exempted, the Township Board is required to prepare and adopt a capital improvements program separate from or as a part of the annual budget, or delegate the preparation of the capital improvements program to the township supervisor or a designee subject to final approval by the township board.

The CIP indicates those public structures and improvements, in the general order of their priority that in the judgment of the Planning Commission, will be needed or desirable and can be undertaken within the ensuing six-year period. The improvements are to be based upon the requirements of Cambridge Township for all types of public structures and improvements.

Among the benefits of creating a CIP is the coordination of seemingly disparate projects. For example, water and sewer projects can be coordinated with street paving projects eliminating the potential for streets to be repaved, only to be torn up to for a water or sewer project two or three years later. New public works projects that are identified in the Master Plan can come to fruition through the CIP process which is intended to ensure that new public facilities are built in locations and consistent with the public policy for development in particular areas or neighborhoods as spelled out in the Master Plan.

Developing a Capital Improvements Program

The following information should be used to develop the (CIP) upon the completion of the Master Plan:

Establishing Objective Criteria

Without objective criteria for rating proposed projects, the capital improvements review process can quickly break down. Simply ranking proposed projects with subjective labels such as “urgent”, “important”, or “desirable” can leave room for disagreement in determining priority. Rather, it is recommended that a set of objective criteria, such as the list that follows, be considered for examining the merit of each proposed capital improvements project:

- Does the project advance the goals of the Master Plan?
- Does the proposed facility address a risk to public safety or health?
- Is the current facility deteriorated or unsafe?
- Is the proposed facility part of a systematic replacement program?
- Will the proposed facility result in improvement of operating efficiency?
- Is the proposed facility necessary to:
 - Ensure the success of another capital improvement?
 - Meet a state or federal statutory or administrative requirement?
 - A court order?
 - A major public goal of the legislative body?
- Will the proposed facility result in the equitable provision of services or facilities to a part of the population with special needs?
- Will the proposed facility protect or conserve sensitive natural features or natural resources or the air or water quality of Cambridge Township?
- Will the proposed facility protect the investment in existing infrastructure from becoming over capacity?
- Will the proposed facility result in a new or substantially expanded facility to provide a new service or new level of service in Cambridge Township?

Those answers can then be used to place proposed facilities into groups based upon the following criteria:

- The proposed facility is urgent and fills a high priority need that should be met.
- The proposed facility is a high priority that should be done as funding becomes available.
- The proposed facility is worthwhile if funding is available (but may be deferred).
- The proposed facility is a low priority that is desirable but not essential.

Establishing a Process

Once the criteria are put in place, the Township could consider using the Planning Commission as-a-whole or establish an advisory committee to provide recommendations regarding capital improvement projects. Though the committee itself or the composition of the committee is not mandated by the MPEA, it might consist of members of the Planning Commission, township supervisor, other township board members, and representatives from the pertinent township departments. The role of the committee is to advise the Planning Commission which in turn advises the Township Board during the budget development process.

Appendix A – Community Profile

A1. POPULATION

This chapter examines demographic patterns in Cambridge Township. Information is presented on population trends; migration; household population; household size; age and sex; income; school enrollment; and a year 2025 population forecast.

Population Trends

Figure 1 shows the population of Cambridge Township and the surrounding townships from 1930 to 2007. The population of Cambridge Township has increased by over eight times during this period.

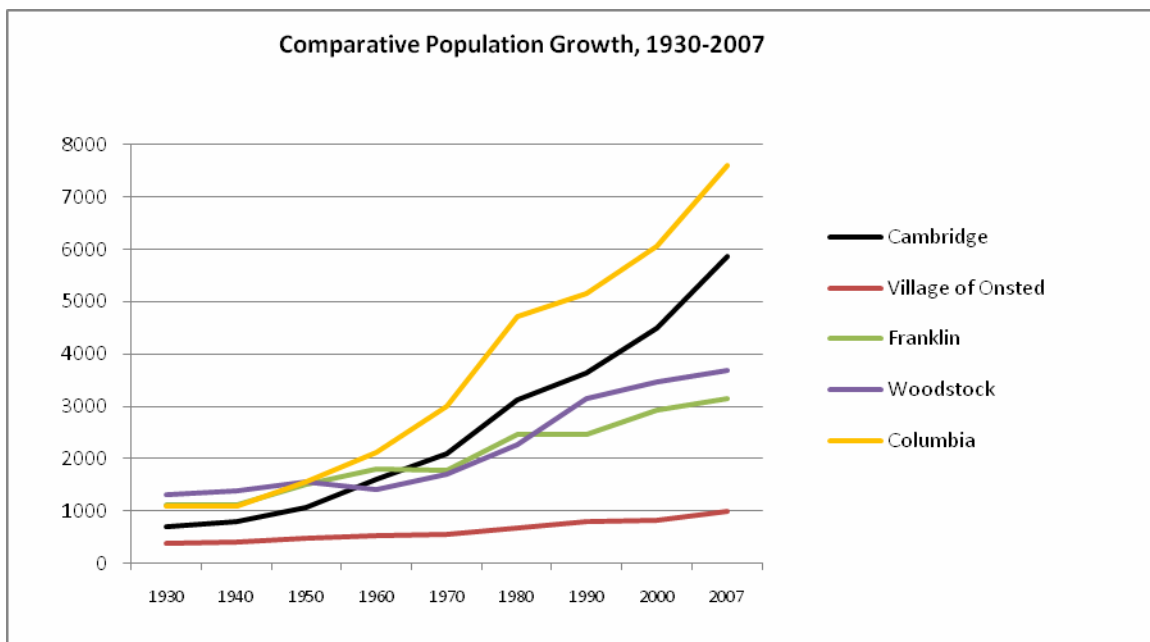


Figure 1

Cambridge Township has seen the greatest rate of growth of any community in the area. From 1930-2007, Cambridge Township saw the greatest percent increase in population (742%) among the five communities in the study area. Columbia Township was second among communities in its rate of growth (594%) while the communities of Franklin Township, Woodstock Township, and Onsted saw similar rates of growth. The greatest growth in Lenawee County since 1930 has been in the Irish Hills and the urban corridor between the Village of Clinton and Madison Township.

Cambridge Township's rate of population growth has also been significantly greater than area cities and villages. Figure 2 shows the relative growth rates by decade for Cambridge Township compared to the nearby villages of Brooklyn, Onsted, and Addison, and the City of Hudson. There does not appear to be a correlation among relative growth rates of the various communities, except that when the County gains population, growth appears to be distributed in varying degrees between the township and the city. While the population of Lenawee County grew 98% between 1930 and 2000 the population of Cambridge Township grew 743% and the City of Adrian grew 65%.

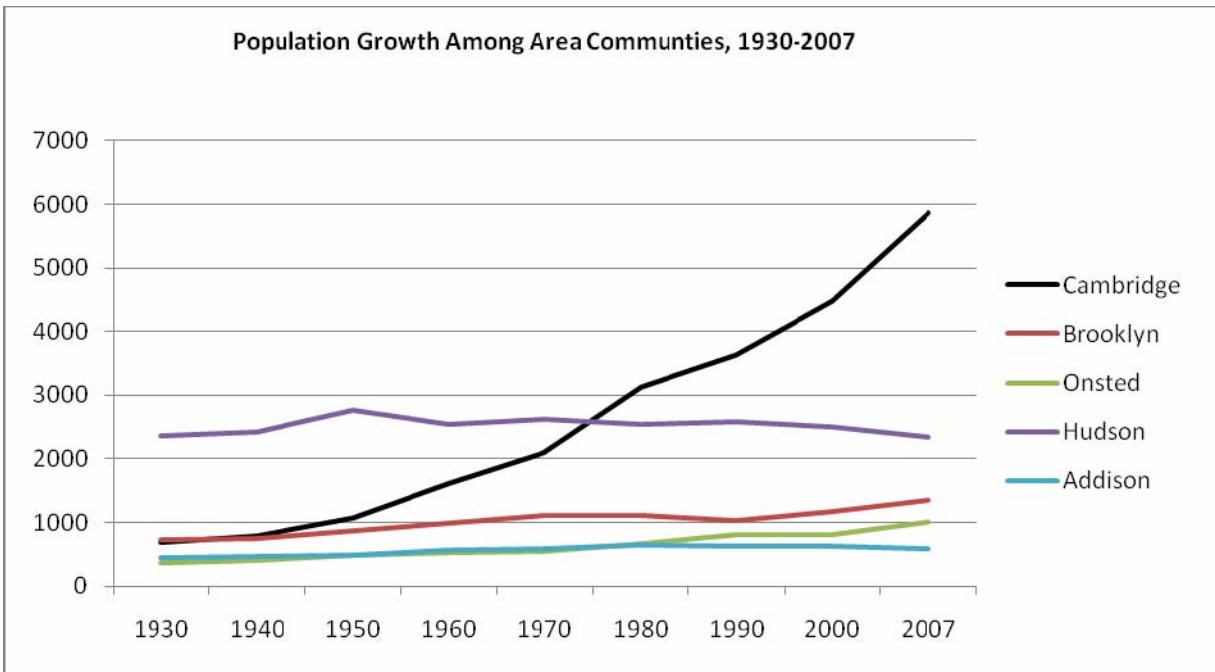


Figure 2

The growth in population in Lenawee County and Cambridge Township is partially the result of out-migration from the Detroit metropolitan area. In addition, some of the population growth in the Township and County is the result of internal population growth and increased mobility.

Migration

Due to the automobile and good roads, Americans easily move from place to place with ease. While it was once commonplace to spend an entire lifetime in one or two homes, it is now common to live in five or more homes during the course of a lifetime. Higher migration rates, combined with an increasing standard of living, have resulted in the construction of many new homes in rural parts of the United States.

Data from the 2000 Census show that of the 4,963 residents of Cambridge Township who were at least 5 years old in 2000, 2,210 (or 45%) lived in a different house in 1995. The majority (1,902) of these people moved to Cambridge Township from another place in Michigan, and a minority (759) of *those* people moved from somewhere else in Lenawee County. There were 1,418 people who moved to Cambridge Township from another county including 275 who came from another state.

A comparison with other communities in the vicinity shows that Cambridge Township is relatively stable in terms of migration. Among area communities, Cambridge Township had among the highest percentages of residents who lived in the same home in 1995.

Table 1

**COMPARATIVE MIGRATORY PATTERNS FOR SELECTED COMMUNITIES, 2000
PERCENTAGE PERSONS 5 YEARS OLD AND OVER**

Community	Same House in 1995	Different House in United States in 1995			
		In Michigan	From Same County	Different County in Michigan	Different State
Cambridge Township	2,753	1,902	759	1,143	275
Franklin Township	1,706	905	571	334	129
Manchester Township	2,524	1,417	954	646	183
Clinton Township	2,183	1,845	1,241	637	119
Tecumseh Township	1,268	479	247	232	71
Adrian Township	3,147	2,063	1,603	460	222
Lenawee County	53,883	32,427	22,603	15,592	5,768

Source: 2000 U.S. Census

Household Population

Households are made up of families and non-families. A family contains a head-of-household and others living in the same dwelling related to the householder. Families consist of married couples and other types of families such as female-headed. Non-family households contain a person living alone or a group of unrelated individuals. In 2000, 79% of Cambridge Township's households were family households and 21% were non-family households.

There were 429 non-family households in Cambridge Township in 2000, of which 356 were people living alone, 138 of whom were senior citizens. The remaining 291 non-families consist of people not living alone who are not married and not related.

Household Size

Like most other places in the United States, household size is decreasing in Cambridge Township. In 1970, the average number of people in a household in Cambridge Township was 3.4. By 2000, that number had fallen to 2.65. Cambridge Township follows county, state and national trends in reduced household size. There are several reasons for this decline in household size. Among them is that many people are choosing to remain or become single. Further, couples are often choosing to delay having children until their careers are well established, or not to have children at all. Increased longevity also contributes to decreased household size. Senior citizens often live in small households containing only one or two people.

The result of decreased household size is that more dwellings must be constructed to house the same number of people. As an illustration, while Cambridge Township's population grew 66% from 1970 to 2000, the number of households increased 105%. Therefore, an increasing amount of land is needed to house the equivalent number of people.

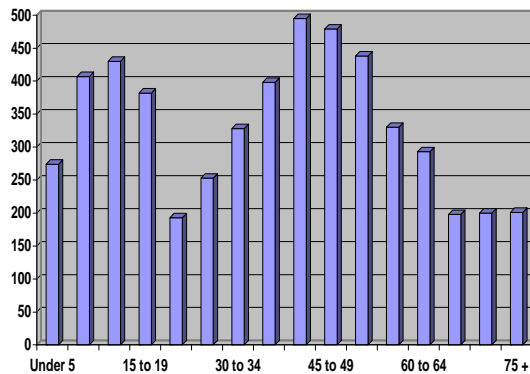
Age Structure

Figure 3 shows the age structure of Cambridge Township. The figure displays the number of people in Cambridge Township by age group in 2000. Since the Figure is based on data that is from the 2000 Census, the age brackets could be advanced to the current year to get an approximate idea of the present general age structure. However, caution should be used due to changing fertility rates, migration patterns, and life expectancy.

After World War II, the United States experienced a "baby boom" referring to the large increase in the number of births. The baby boom lasted throughout the mid-

1950's and resulted in the bulges in population between the ages of 35 and 54 as seen in Figure 3. The figure also shows a second bulge in the age brackets from 5 to 19. This "echo boom" represents the generation after the baby boom. Because baby boomers are delaying having children, or choosing not to have children at all, the echo boom, though large, is smaller than it might otherwise have been.

Age Distribution, 2000



In statistical terms, the median is the middle value of a collection of numbers. In other words, there are as many samples above as there are below the median value. The median age of Cambridge Township has been increasing and is expected to continue to increase as the baby boomers move up the age brackets. In comparison with Lenawee County and the United States, the median age in Cambridge Township increased at a relatively slow rate during the 1970's, but rose at a faster rate than the county and the nation during the 1980's and 1990's.

The age structure has implications for the future needs of the residents of Cambridge Township. The baby boomers will begin to reach retirement age at approximately 2010 meaning that there will be an increased need for services that cater to senior citizens. With medical improvements, the services will be needed for a longer period of time as people will live for a longer period past retirement age.

Education

As shown in Figure 4, higher levels of education are being achieved in Cambridge Township. The figure compares educational attainment for residents 25 years of age and older between 1990 and 2000.

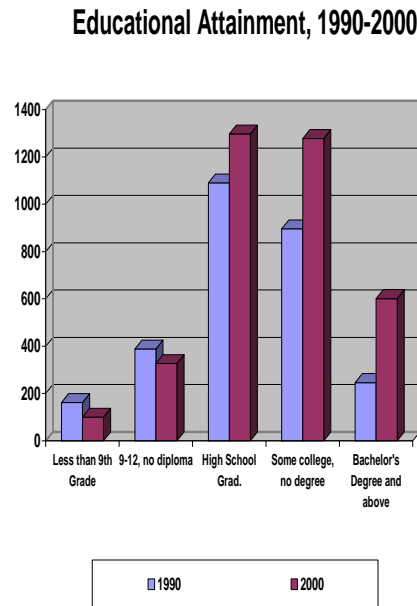


Figure 3

The figure shows a common pattern in that a larger percentage of township residents continued their education after completing high school. This is reflected in higher numbers of residents with some college or a college degree. A total of 88% of residents 25 years and older had at least a high school diploma, and 17% earned a bachelor's degree or higher.

The 2000 Census showed that there were 1,408 residents age 3 and above who were enrolled in school. Of these, 1,002 were enrolled in elementary or high school, and 222 were enrolled in college or graduate school. A total of 140 students were enrolled in a private school.

Income

Income levels are rising in Cambridge Township. This is common in rural areas of Lenawee County as levels of education rise resulting in higher salaries. It is likely that many of the new Cambridge Township residents also have relatively high incomes.

Household Income, 1990-2000

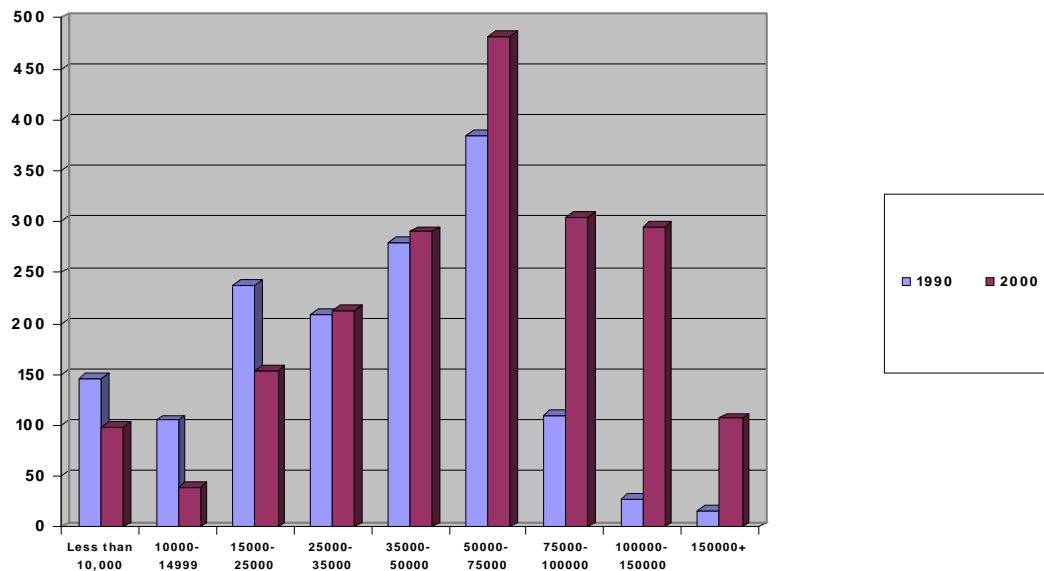


Figure 5

Income is often measured in terms of household income. Figure 5 shows the trend in household income in Cambridge Township from 1990 to 2000. It can be observed that income has risen substantially as the largest income groups were in the ranges in 1990 was from \$15,000 to \$75,000 while the largest groups in 2000 were from \$35,000 to \$150,000. The township median household income rose from \$38,465 in 1989 to be \$59,450 in 1999. This compares to \$51,661 in Clinton Township, \$60,640 in Adrian Township, and \$69,276 in Tecumseh Township.

Figure 6 shows the source of household income for the residents of Cambridge Township in 1999. Wages and salaries are the primary source of income in the township. The number of households with social security income also increased due to

the number of people approaching retirement age. The number of households with public assistance and supplemental security income are low while the number with retirement income is likely to increase.

Income Type, 2000

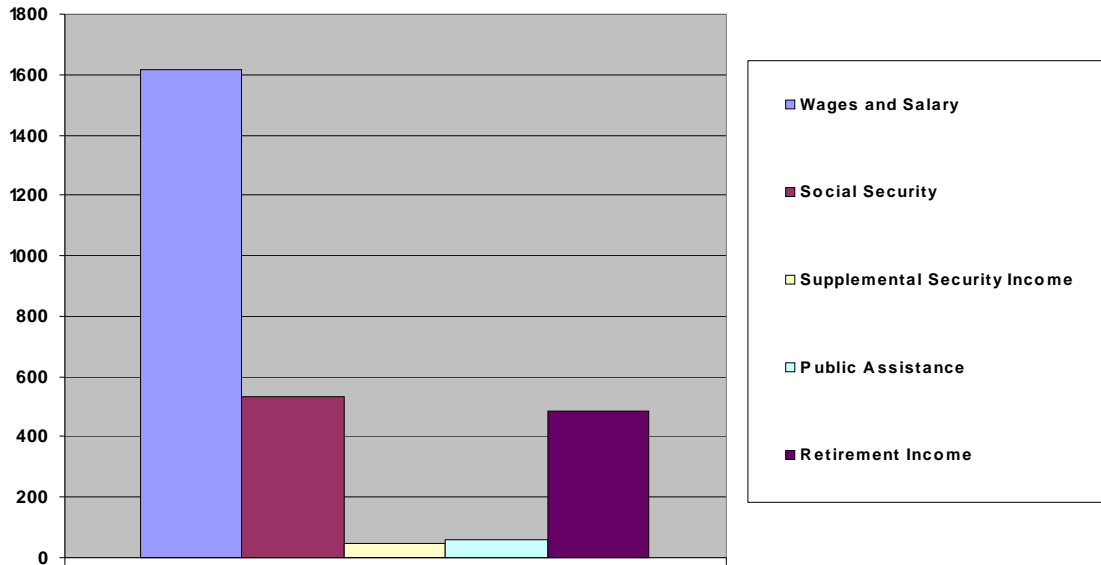
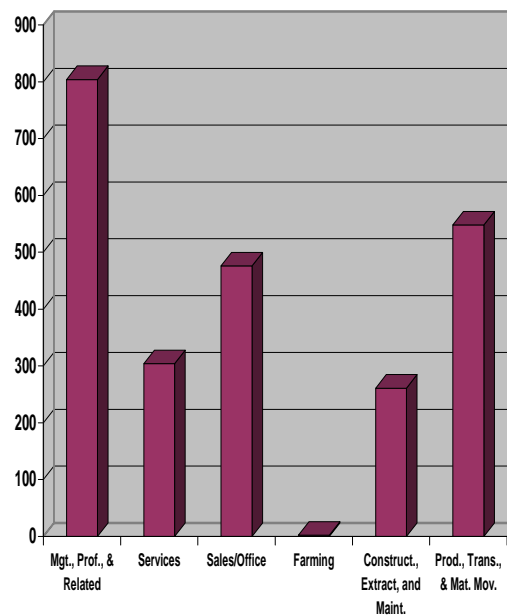


Figure 4

Employment

A worker's "occupation" is intended to describe the nature of a job, while the "industry" classification describes the type of firm or company employing that worker. Figure 7 provides employment by occupation and employment by industry for Cambridge Township workers in 2000. The figure indicates that the largest number of workers in Cambridge Township is employed as management, professional, and related occupations, followed by production, transportation, and material moving occupations, sales and office.

Occupation, 2000



Construction, extraction, and maintenance employment also contained a significant number of employees but due to the vulnerability of the housing market to changes in the economy, workers in construction are somewhat vulnerable to negative changes in the economy. (Note: The 2000 Census indicated only two workers in the farming, fishing, and forestry occupational category. However, it is known that several full-time farmers resided in the Township in that year. This is an illustration of the fact that some census information (e.g. occupation, education, income) is solely based on a one-in-six household sample and may not reflect actual totals.)

In 2000, 54% of Cambridge Township's workers were employed in Lenawee County. However, the average time spent commuting tends to increase. While most of the Township workers have a commute of less than one-half hour, the number greater than a half hour is increasing with an average commuting time of 36 minutes in 2000.

2030 Population Forecast

Predicting the future population of a community is difficult. This is made more difficult because projections are less likely to be accurate for small populations. However, a growing community should make an attempt to estimate how much growth it will see, and plan for some residential expansion. Most methods for projecting population make use of current trends and assume they will continue in the future.

Using three different methods, the population of Cambridge Township was projected to the future year 2030. The methods used are known as constant-share, arithmetic, and linear regression. Because projecting population is an uncertain proposition, all methods have their strengths and weaknesses.

The projection methods are described as follows:

The constant-share method assumes that the Township will maintain a consistent percentage of Lenawee County's population. This method has the advantage of using a larger population (Lenawee County) as a source of population projection. However, the constant-share method generally produces projections that are low for townships such as Cambridge that have grown at a slightly higher rate than the county. To illustrate this point, while Lenawee County grew 8.1% during the 1990's, Cambridge Township grew 23.6% during the same period.

The arithmetic method is a simple method that assumes that the Township will continue to grow by the same number of people as it averaged from 1990 to 2000, or about 86 people per year. This method can yield fairly accurate results but it fails to take into account the exponential growth that can occur with an increasing population.

Linear regression assumes that the Township will continue to grow at the same rate as it did between 1990 and 2000. The annual growth rate for that period was about 2.4%. This is generally more accurate than the arithmetic method because the Township grows more rapidly in number with an increasing population.

The following table presents the results from the three methods.

Table 2

Cambridge Township Population Projections by Three Methods, 2000-2030

Method	2000	2005	2010	2015	2020	2025	2030	Numerical Increase, 2000-2030
Constant-Share	4486	4627	4664	4750	4871	5016	5136	650
Arithmetic	4486	4916	5346	5776	6206	6636	7066	2580
Linear Regression	4486	5024	5627	6302	7058	7905	8854	4368

Note: The U.S. Census Bureau estimated the population of Cambridge Township to be 5,857 in 2007.

As was pointed out previously, the constant-share method tends to yield projections on the low side while the linear regression method tends to produce projections on the high side. If current trends continue, the growth in Cambridge Township is likely to be somewhere between these two extremes. The situation should be monitored using the 2010 Census data, population estimates, and building permit data. Since all the methods used depend on current trends, the trends should also be monitored carefully.

Population Projections, 2000-2030

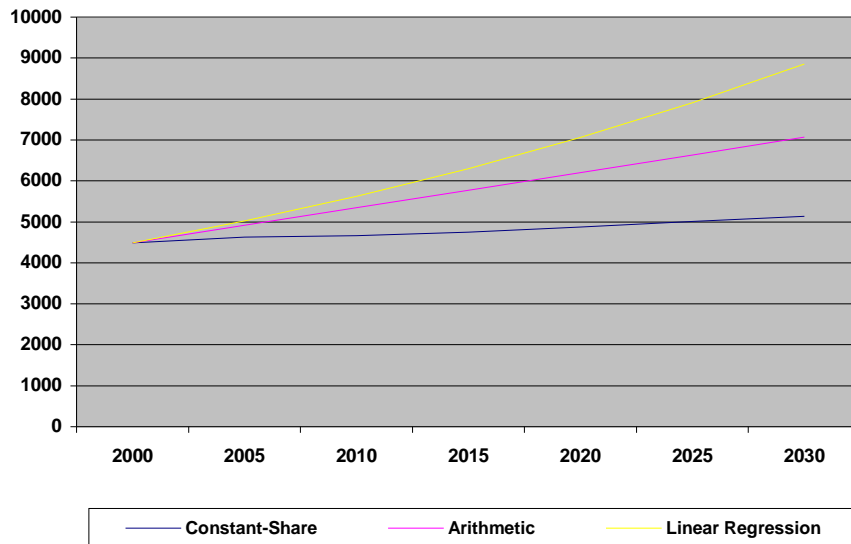


Figure 5

A2. HOUSING

The purpose of this Chapter is to determine housing trends and needs in Cambridge Township. Housing trends, age of housing stock, occupancy and tenure, general household characteristics, and housing costs are examined in detail.

Housing Trends

There were 2,686 housing units in Cambridge Township in 2000. This was an increase above the 1990 figure of 2,366 housing units. This represented a net annual increase of 32 dwellings units per year during the 1990's.

The economy greatly affects the pace of housing construction. Still, residential development is expected to continue in the future in Cambridge Township, likely at a slow rate in the near term.

Occupancy and Tenure

Of the 2,686 housing units in Cambridge Township in 2000, 1,996 were occupied and 690 were vacant. Of the occupied units, 1,761 were owner-occupied and 235 were renter-occupied. Of these vacant units, 610 were second homes occupied on a seasonal basis and the remaining 80 vacant units were either sold or rented, or available for sale or rent.

The percentage of seasonal dwelling units is high in Cambridge Township making up over 22.7% of total housing stock. Table 3 provides a comparison of Cambridge Township's occupancy and tenure rate with other communities in the area. Note that there is little variation among the townships on the percentage of renter-occupied and other vacant status. However, there are large variations in the percentage of units that are owner-occupied and used on a seasonal basis. The explanation is that townships that contain lakes tend to have a higher percentage of seasonally-vacant housing units. In some cases, summer cottages have been converted to full-time residences. When the areas around lakes are not sewered, such conversions can have a negative effect on the condition of the lake.

Table 3

**Comparison of Occupancy and Tenure Status for Area Communities, 2000
By Percentage of Total Housing Units**

Township	Owner-Occupied	Renter-Occupied	Vacant	
			Seasonal/ Recreational Use	Other Vacant
Cambridge	65.6	8.7	22.7	3.0
Adrian	86.0	10.5	0.4	3.1
Franklin	77.4	6.6	12.4	3.6
Rollin	54.5	11.2	29.3	4.9
Manchester *	77.1	17.0	2.5	3.4
Clinton **	79.8	16.6	0.6	3.0

*Includes Manchester village

**Includes Clinton village

Age of Housing Stock

Though growth has slowed during the current decade, a significant number of new homes were constructed in Cambridge Township during the 1990's. In fact, the 1990's were the greatest decade of housing construction during the study period.

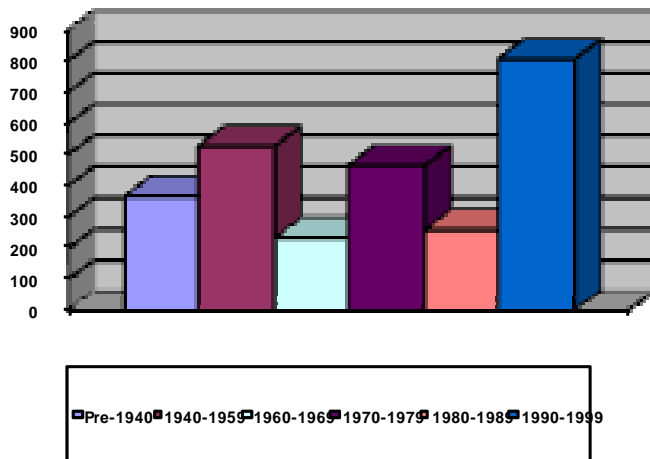


Figure 9 shows that the number of homes built in the township also was high during the 1970's when growth began to push out

beyond the suburbs to the rural countryside. The high level found in the pre-1940 category is the result of the accumulation of all of the existing rural dwellings that were in existence long before any significant building spurts occurred in the township.

General Household Characteristics

In 2000, the vast majority of homes in Cambridge Township were one-family detached dwellings. As of March, 2000, one-family dwellings made up 2,400 of the Township's 2,679 residential units. The other dwellings in the Township consisted of 18 attached single-family dwellings, 16 two-family units, 94 multiple-family units, and 151 mobile homes. Building permit data since the 2000 Census suggest that the percentage of single-family detached dwellings has grown larger.

Housing Costs

Like nearly everywhere else, housing values rose in Cambridge Township during the 1990's. In 1990, the median cost of a home was \$65,900 in the Township. By 2000, the median value had risen to \$159,000. Though more recent census data are not available, median home values have stabilized or declined since the 2000 Census. This is due to the poor economic conditions that are present in Michigan during the mid-to late-00's. Rental costs also increased from 1990 when the median contract rent was \$307 per month. The median monthly rent increased to \$486 per month in 2000.

Housing affordability is often measured in terms of housing costs as a percentage of income. Some housing agencies believe that housing is not affordable if the occupants are spending more than 30 percent of their income on housing costs. In 2000, there were 222 homeowners and 50 renters in Cambridge Township who paid more than 30 percent of their income on housing costs. These figures are likely to have increased in recent years.

A3. NATURAL FEATURES INVENTORY

As with the remainder of the State of Michigan, landforms in Cambridge Township were primarily created and shaped by glaciations. Thousands of years ago, glaciers scratched the surface of the Earth and carried sediments. When the glaciers melted, the sediments were deposited and melting ice created rivers and lakes. The glaciers of the latest ice age receded approximately 10,000 years ago. This chapter presents information on the effects of glaciations including topography, soils, rivers, and streams.

Topography

The topography of Cambridge Township ranges from flat to steeply sloping. Elevations decline from northwest to southeast with drainage toward Lake Erie. The entire township is in the Wolf Creek sub-watershed. The entire watershed drains to Lake Adrian which is the main drinking water supply for 21,000 residents of Adrian. The highest land is found near the northwest quarter of the township where Prospect Hill is located with elevations of 1,100 feet above sea level are found. The lowest elevations are found south of Loch Erin at 920 feet above sea level. Some areas that once in forest land have been cleared and slopes have been altered for agricultural purposes.

Soils

Soils were formed when receding glaciers deposited silt, loam, and sand on bedrock formed during earlier geologic times. The depth of the deposits ranges from a few feet to two-hundred and fifty feet. Cambridge Township is dominated by glacial drifts called moraines. The material is generally an unstratified, unconsolidated heterogeneous mixture of clay, silt, sand, gravel and some boulders. The northwest quarter of the township is gently rolling to rolling with hilly moraines made up of fine to coarse material. The southeast quarter of the township is made up of nearly level to gently rolling till plains made up of medium to fine textured material.

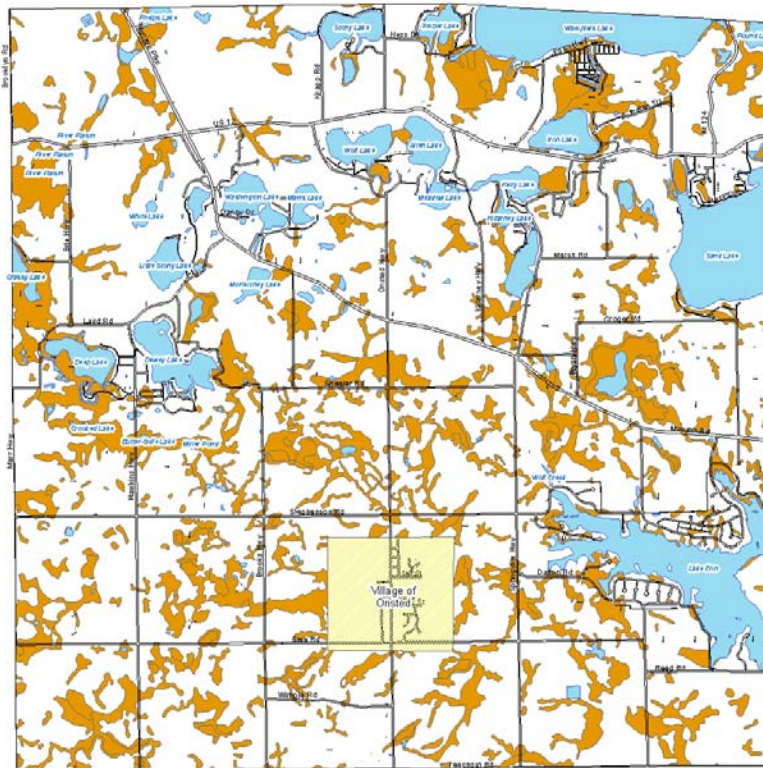
The suitability of Cambridge Township's soils was examined based on agricultural productivity, groundwater recharge, and on-site septic disposal suitability. The evaluation was based on the criteria used by the Lenawee County Soil Survey and the Lenawee County Health Department. The following sections present the findings of these examinations.

Agricultural Productivity

Agricultural productivity is based upon a number of factors and certain soils are deemed to be the most productive in a particular region. While management practices will allow practically any soil to be productive, some soils allow greater productivity with

less input. These productive soils are the ones that need to be preserved. What is the basis for selection of a particular soil for classification as a productive soil within a region? The most obvious criterion is the production of general field crops information regarding which is easily available from soil survey manuals. Certain crops may need special soils such as alfalfa or pasture grasses verses corn and soybeans. Agriculture is important to the character of the township even though only 41% of the township is currently in agricultural land. Agriculture land lends to the open space of the township which is important the character of the township. To maintain the agricultural economy of the county the most productive soils need to be preserved in the agricultural districts. The importance of the agriculture land becomes more important as it borders agricultural land in Franklin and Rome townships.

The map below reflects agricultural productivity in Cambridge Township. It is based on a ranking system which was developed from the Lenawee County Soil Survey using production figures for all the crops generally grown in Lenawee County. Yields of corn, corn silage, winter wheat, oats, soybeans, and alfalfa hay were used. The map shows that the best agricultural soils are randomly scattered around the township. It appears that about 30-40 % of the cropland acres are considered the most productive. The majority of the cropland found in the township is found in the south and east quarters of the township but there is some agricultural land scattered around the



CAMBRIDGE TOWNSHIP
 Lenawee County, Michigan
PRODUCTIVE AGRICULTURAL SOILS

LEGEND

 Productive Agricultural Soils

Sources: Lenawee Co. Soil Survey/Lenawee Co. Comprehensive Land Use Plan



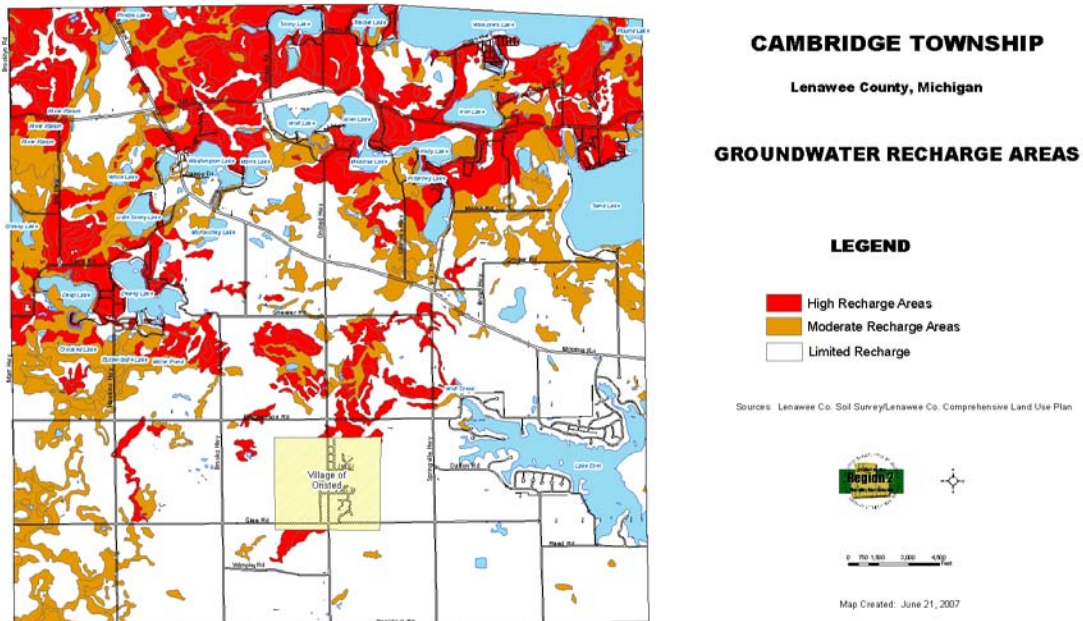
0 1000 2000 4000 Feet

Map Created: June 21, 2007

township. The importance of this productive farmland plays a bigger role when looked at in conjunction with Rome and Franklin Townships.

Groundwater Recharge

Ground water supplies are provided by absorption of surface waters into underground areas. Most of these recharge areas can be found on sandy and gravel glacial soils where rainwater and runoff quickly gain access to underground storage areas. These important recharge areas are significant since much of the county's drinking water comes from local groundwater supplies. Ground water is obtained from wells driven into the unconsolidated glacial material ranging from 25 to over 150 feet in depth. Water is generally plentiful in the sandy and gravel soils found throughout Cambridge Township.



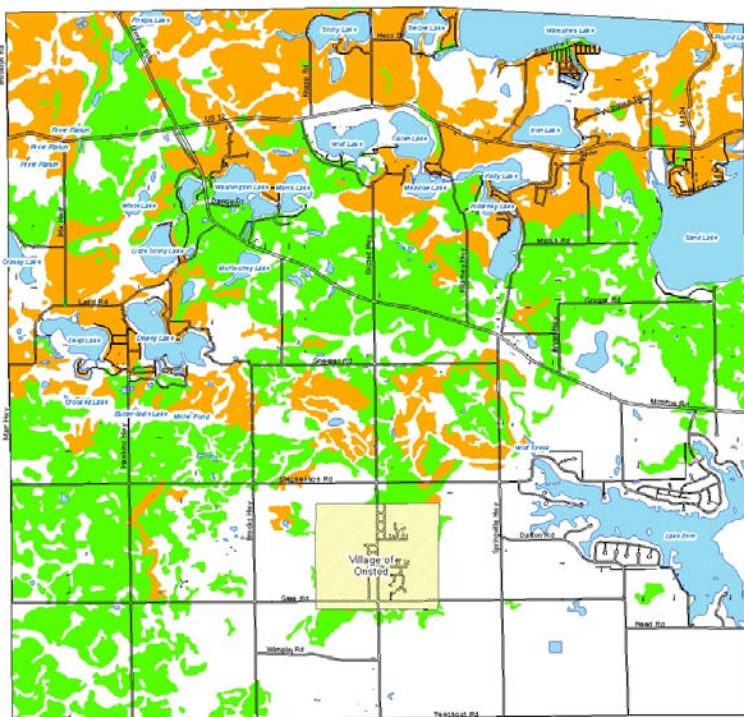
Groundwater recharge areas are shown on the previous map which is based on information contained in the Lenawee County Soil Survey. The two principal factors that were used to generate the map were soil permeability and clay content, but other factors were also considered including: natural vegetation, underlying material, seepage, and presence of hydric (wet) soils. Though the map is useful on a large-scale basis, it is no substitute for field testing and direct knowledge of the area. The map identifies areas that are subject to pollution of groundwater and, therefore, areas that could be targeted if there is a desire to maintain and protect rural water supplies. There seems to be a plentiful supply of quality ground water in Cambridge Township especially in the north half of the township where the soils are

more gravelly. This sometimes conflicts with the suitability for individual drain fields. Drain fields can work here but high housing density could put ground water at a higher risk of contamination. This is why there is a need for sewer systems around the high density lake areas.

Over 95% of the ground water recharge areas are found in the sandy gravelly moraines located in the north and west portions of the township. It is extremely important that these areas be protected from the loss of groundwater recharge in lieu of surface water runoff. Site plans for planned unit developments and commercial enterprises should take this into account. The availability of readily-accessible groundwater has been an important factor influencing development patterns in Cambridge Township.

Suitability for Septic Tank Absorption Fields

The Lenawee County Health Department (LCHD) developed a list of soils that are generally considered to be suitable, marginal and unsuitable for septic tank absorption fields. The percolation rate of these soils must be high enough to dispose of



CAMBRIDGE TOWNSHIP
 Lenawee County, Michigan
**SOIL SUITABILITY FOR
 SEPTIC TANK ABSORPTION FIELDS**

LEGEND

- Marginal Soils
- Suitable Soils

Sources: Lenawee Co. Health Dept./Lenawee Co. Comprehensive Land Use Plan



0 100 200 300 400 Feet

Map Created: June 21, 2007

waste at an acceptable rate, but it may not be so high as to contaminate the groundwater due to insufficient filtering.

The map on the following page is based on the LCHD's criteria for absorption fields. While this map should only be used on a general (not site specific) basis, it shows that the most of the suitable soils coincide with the grainy gravelly areas in the north and west part of the township. The silty clay soils of the southeast east part of the township really not conducive to standard residential drain fields.

Again, it is of little surprise that land development patterns have occurred in areas where groundwater is available, and where sewage can be disposed of. When these areas coincide, such as the case in Cambridge Township, dense residential development brings with it the possibility of groundwater contamination and the need for sewer systems.

Rivers and Streams

The most prominent natural feature in Cambridge Township is the number of in land lakes and streams found in the township. There are a total of 23 lakes totaling about 2,608 acres of water. This contributes to the beauty of the Irish Hills which is part of Lenawee and Jackson Counties. There are numerous open drains and streams that eventually drain into the River Raisin, a 135 mile long river that has a watershed size of over 1,072 square miles.

Most of the early explorers and settlers used the River Raisin to gain access to the Michigan Territory. The Battle of the River Raisin was the largest battle ever fought on Michigan soil concluding a series of U.S. setbacks in Michigan during the early months of the War of 1812. After Detroit's surrender in the War of 1812, U.S. troops sent to retake Frenchtown (present Monroe) were crushed by the British and their Indian allies. The Indians, after promising protection, attacked and killed the remaining Americans and "Remember the River Raisin" became the American rallying cry to the war's end. During the later 1900's numerous man-made earthen dams were constructed at the River Raisin settlements. Settlements were established at convenient points upstream for business and trade that enhanced land development.

The River Raisin rises in the Irish Hills and flows east to Lake Erie at Monroe. Known as "the most crooked river in the world", the river features at least 50 dams and impoundments and several major tributaries that mark the river at various points along its course. The river is also the major drainage line in Lenawee County and offers many recreational activities such as fishing and canoeing.

A number of environmental concerns have been raised regarding the River Raisin. Current preservation efforts include the following projects intended to help in the preservation and restoration of natural areas in the watershed.

- The River Raisin Greenway Project produced a plan in 2001 that identified feasible corridors for walking and biking trails.

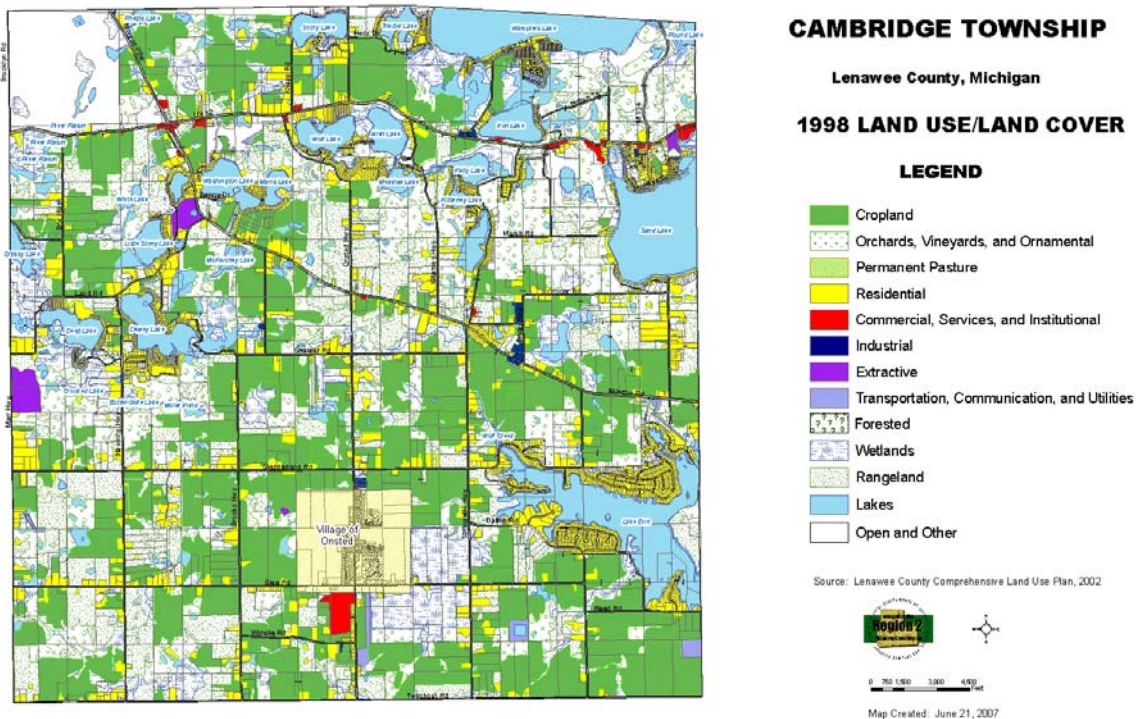
- The Conservation Reserve Enhancement Program provided funds to implement practices that minimized the impact of farming on water quality.
- The River Raisin Watershed Initiative is focused on non-point source pollution and raising public awareness about watershed.

In 2001, a grant was provided to begin the restoration of the river. The specific purpose of the grant was to address soil erosion and to prevent pollution. The funds received were to be used to create two detention basins and a new outlet structure. These projects should help to reduce the amount of sediment and other pollutants going into the river.

A4. CURRENT LAND USE

The land use pattern in Cambridge Township is characterized as a rural non-farm setting with a few productive farm operations. However, there are several concentrations of suburban-style development. The areas of high-density development include the area in and around the Village of Onsted, all of the lakes in the north half of the township, Loch Erin, and small clusters along M-50 and US-12.

The map below depicts the township land use pattern in 1998. The primary feature of the map is that a significant amount of low-density residential development has occurred throughout the township with higher densities around the lakes. For the most part, lakes with available sewer systems for residential development have been built out.



Residential Areas

Residential development in Cambridge Township is characterized by several concentrations including the incorporated Village of Onsted. Also included are Loch Erin, and Sand, Wamplers, Iron, Wolf, Big and Little Stony, Marr, Washington, Dewey, Deep, Killarney, and Kelly lakes.

In addition, residential uses are scattered throughout the township on small parcels of property containing one or more acres in agricultural areas. Data from 1998 indicate that 2,952 acres of land in Cambridge Township were dedicated to residential use. From 1970 to 2000, the number of housing units in Cambridge Township grew from 1,581 to 2,686. The majority of these units were constructed on small parcels of farming land and lake lots.

Commercial Areas

There are several clusters of commercial use in the township, primarily along US-12 and M-50, and the area that surrounds the Village of Onsted. The heaviest commercial development has occurred along the six miles of US-12. This is due to US-12 running through the Irish Hills and that US-12 is a historic through route from Detroit to Chicago.

Outdoor Recreation

Outdoor recreation is a subcategory of commercial use, but due to the large amount of land dedicated to outdoor recreation use in Cambridge Township, it is discussed as a separate category.

The largest single outdoor recreation establishment in Cambridge Township is Michigan International Speedway (MIS) which has an area of approximately 927 acres including parking and campgrounds.

Several other significant outdoor recreation areas exist in the township including activity areas within W. J. Hayes State Park, Walker Tavern Historic site, a camp area on Killarney Highway, and a golf course on Brighton Highway.

Industrial

Cambridge Township has very few industrial operations. Industrial uses consist of Honeytree, a honey processing establishment on M-50 near Bryan Highway, and Groeb Farms, another to the north of Honeytree.

Agriculture

Agricultural lands are found throughout the township. Large parcels once used for farming operations either have been or are being parceled off into smaller parcels making farming operations scarce in the township. There still remain some contiguous large productive agricultural parcels in the southern tier of sections in the township.

Transportation, Communication, and Utilities

There are several areas of the township designated as transportation, communication, and utilities. These are Loar Field south of Onsted, and sewage treatment facilities for the Village of Onsted and a private facility for Loch Erin, both in the southeast corner of the township.

Mining, Extractive

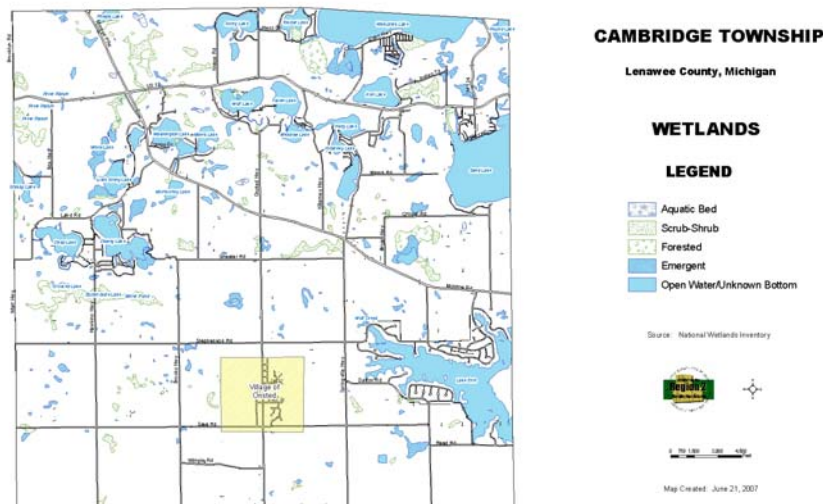
Three mining and extractive operations exist in the township. These are located on the west side of Laird Road, the east side of Marr Highway, and a small area west of Onsted.

Open Land, Grassland, Forest, Other

Much of the township is classified as open land, grassland, forest, and other low-intensity land uses. Some of the open land is fallow cropland reverted to grassland through the Conservation Reserve Program (CRP). This land could be converted back to cropland in the future.

Wetlands and Lakes

A considerable area is classified as wetlands or lakes. Wetlands are regulated by the State of Michigan if they are five acres or greater in areas or are contiguous to a lake or stream as regulated by Public Act 451.

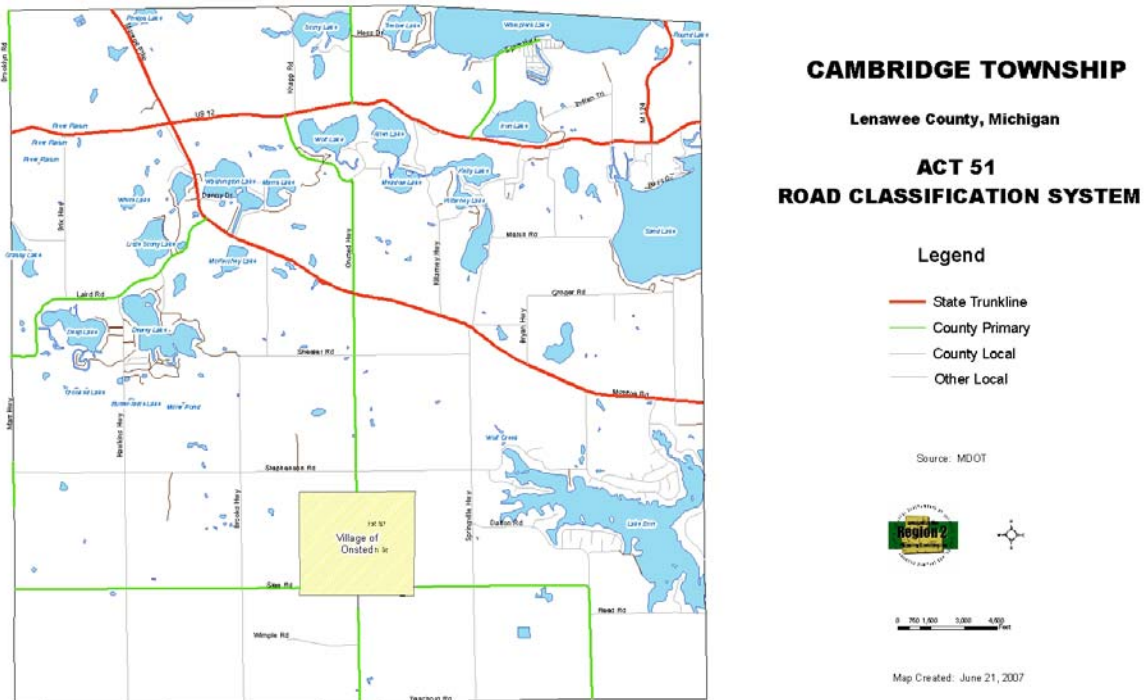


A5. TRANSPORTATION

Cambridge Township is tied to its region by transportation connections. Roads are a prime factor in area development and local economy. The principal forms of transportation are associated with automobiles, trucks, and airplanes.

Road Functional Classification

Roads serve a variety of functions depending on whether they are intended to provide access to property or to deliver traffic from one area to another. Accordingly, the Michigan Department of Transportation classifies roads as trunklines, primary roads, and local roads (*see map below*).



Trunklines carry traffic at high speeds between counties, regions, and states. They are principal arterial roads that carry long distance, through-travel movements. They also provide access to important traffic generators, such as major airports or regional shopping centers.

Primary roads generally carry lower volumes of traffic at lower speeds than trunklines. The purpose of primary roads is to funnel traffic from local streets to trunkline.

Local roads take in the remainder of streets and roads. Their primary purpose is to provide a link from arterials and collectors to individual properties. Local roads generally have little or no through purpose and have low traffic volumes.

Act 51 Road Classification System

The Lenawee County Road Commission classifies roads into five categories: trunk lines, primary black top, local black top, primary gravel and local gravel roads. In addition, the Road Commission applies weight limits and a class A designation for truck routes.

There are two trunk lines in Cambridge Township: US-12 runs east and west along the northern boundary, M-50 runs east and west through the center of the Township entering north of Cambridge Township. These are all major state Class A truck routes carrying relatively high volumes of traffic. The purpose of trunklines is to deliver traffic from one region to another.

Cambridge Township contains five primary black top roads: Onsted Highway, Egan Highway, and Person Highway which are all north-south roads. East-west primary black top roads are Laird Road and Slee Road. Primary blacktop roads are paved and carry traffic from one part of county to another as well as serving as collectors for trunk lines.

Primary gravel roads carry relatively high volumes of traffic and serve as collectors to higher classes of roads. There are no primary gravel roads in Cambridge Township.

The remainder of the roads in the Township is classified as local gravel roads. Their purpose is to provide access from properties in rural areas to higher classifications of roads.

Air Transportation

Lenawee County Airport in Adrian and Reynolds Field serves as an air connection to regions around the State and Nation. Both airports are undergoing runway extensions, and are able to accommodate small passenger jets and cargo planes. The region is also served by international airports in Detroit, Flint, and Lansing.

A6. PUBLIC SERVICES

The purpose of this chapter is to present information on public services provided by various government agencies to the residents of Cambridge Township. Information is presented on police, fire, ambulance, schools, central sewer, and transportation services.

Police

Cambridge Township has a police department with a staff consisting of the Township Police Chief, two full-time officers, four part-time officers, and a part-time dispatcher. Backup services are provided by the Lenawee County Sheriff's Department and the Michigan State Police.

The township zoning officer currently enforces township ordinances. The Township also has a constable who assists with enforcement of Township ordinances as needed.

Fire

Cambridge Township has two fire stations. Station #1 is located in Onsted and Station #2 is located on the south shore of Wamplers Lake.

There are nine trucks including three Class A fire engines, three brush trucks, one pumper truck to fill water tankers, and two rescue trucks.

Staff consists of two full-time employees including a chief and assistance chief with 35 paid on-call fire fighters.

Ambulance

There is one dedicated ambulance serving Cambridge and Franklin townships from Lenawee County Ambulance service.

Schools

Cambridge Township provides educational opportunities for grades K-12. Higher education is available in Lenawee County from Adrian College, Siena Heights, and Jackson Community College, all in Adrian.

There are two school districts in Cambridge Township. Though most school children attend Onsted schools, there are a few pupils who attend Columbia Central schools.

Onsted schools are located on the corner of Onsted Highway and Slee Road in the township. The schools consist of a high school, middle school, and elementary school.

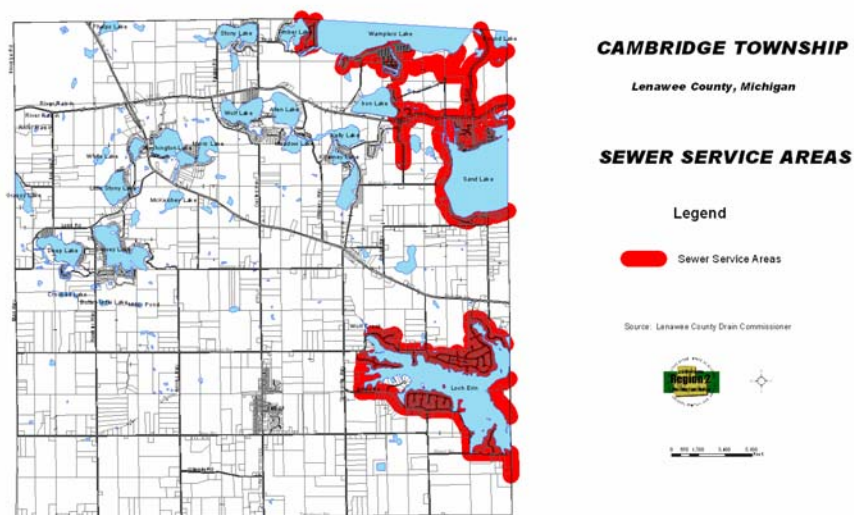
Central Sewer

There are three public sewer facilities serving Cambridge Township. These are the Loch Erin, Village of Onsted and the Wamplers Lake facilities.

The Loch Erin wastewater facility serves only residential uses on Loch Erin. It has a capacity of 1,000 dwellings of which 960 units have been allocated. Recent residential development near the lake will bring the system close to capacity.

The Wamplers Lake wastewater treatment facility serves Wamplers Lake, Sand Lake, and Iron Lake in Cambridge Township. The sewer lines run along US-12 and provide to several commercial establishments as well as residential uses.

The Onsted wastewater treatment facility is located on Slee Road between Springville and Gilbert highways. The Onsted primarily serves the Village of Onsted and does not service township residents.



Utilities

Gas and electric power are currently supplied by Consumers Energy and Citizens Gas. Several other private utilities and providers have been investigating alternative sources of energy in Lenawee County. These alternative energy sources have included wind, solar and petroleum-based facilities. In order to prepare for the future, it is important to recognize that other power generating facilities may locate in Lenawee County, and possibly Cambridge Township, in the future. These facilities may vary in scope, require certain resources, or may be sensitive to surrounding land uses and have varying infrastructure and resource needs. Each type of facility may require different design criteria or placement criteria depending on the scope of the project, impacts or cumulative impacts to the surrounding area.

Cambridge Township sees the need to monitor developments in alternative energy and sees the need to formulate amendments as they impact the health, safety, welfare, and environment of the residents of Cambridge Township.

Complete Streets

Complete streets are defined as roadways designed (or redesigned) and operated to enable safe access for all users. Pedestrians, bicyclists, motorists, and other users of all ages and abilities must be able to safely move along and across a complete street.

Public Acts 134 and 135 of 2010 amended the Michigan Planning Enabling Act and the Act 51 to require that community plans take into account the development of complete streets to the extent that is reasonable and feasible. While some of the implementation of such roadway improvements has been left to P.A. 51 agencies such as cities, villages, road commissions, and the state department of transportation, Cambridge Township can play a part in implementation of the program as well.

To the extent that that is practical, the Township Planning Commission recommends that the needs of all types of users be taken into account when roads and streets are added or improved within the Township and Village of Onsted.

Appendix B – Public Participation

Appendix B provides a summary of the Planning Commission's efforts to involve the residents of Cambridge Township in development of this plan. The Planning Commission believed that rather than presenting the public with a draft plan near the end of the process, the public should be involved as early as possible to identify issues and participate in the development of goals, policies and strategies.

The public participation plan was a three-pronged effort including a public workshop, citizen survey, and a public hearing. The results of these efforts are provided on the following pages.

1. On October 29, 2008, the Township conducted a public workshop with residents of the township invited to participate. Participants were first provided with a summary of the findings of the Planning Commission from the inventory portion of the plan. The inventory included a presentation on demographics, housing, employment, land use, and natural features.

Five groups were formed in order to identify area strengths, weaknesses, threats, potentials, etc. The results are presented in the following pages.

Cambridge Township Citizen Participation Workshop

October 29, 2008

Group Input Results

Group 1

Threats/Needs

- Increasing blight
- Need for zoning enforcement
- Property tax assessments too high
- Need for ordinance (non-zoning) enforcement
- Need better township communication with residents
- Need for industrial park
- Need for recycling opportunities
- Preserve the historic buildings and sites/heritage
- Deterioration of appearance of scenic areas
- MIS identified with Brooklyn rather than Cambridge Township
- Tax incentive to clean up property needed

Strengths

- Recreational community (need to enhance)
- Lakes areas
- Irish Hills
- MIS

Group 2

Threats

- Septic/sewer systems
- Lake quality
- Disappearance of trees and vegetation
- Health issues
- Sprawl – sparse population, 10 acre parcels
- Infrastructure – roads wider and loss of trees
- Bond assessments (new developments to pay for their own infrastructure)
- Historical preservation

Strengths

- History – Irish Hills area
- MIS
- Developability – businesses, historic area, recreational, etc.
- Lakes
- Small community lifestyle
- Beauty of land, trees, and vegetation

Group 3

Areas of Concern/Threats

- Blight, dilapidated buildings
- Unfriendly outdated ordinances
- Lack of water and sewer
- Overbuilding of areas and lots
- Water quality and weed/invasive species
- Cost of maintaining infrastructure
- DDA/village
- Location of essential services
- Relatively low industrial base, high residential tax base
- High concentration of seasonal business

Specific Strengths and Opportunities

- Lakes
- MIS
- Scenic beauty
- Better than average roads
- Public safety (fire and cops)
- Historical heritage
- School
- New township hall
- Diverse business opportunities
- State and county parks
- Variety of churches
- Central location and major artery access
- Low crime
- Favorable tax structure
- Efficient regulatory environment and staff
- US-12 flea market
- Snowmobile races

Group 4

Threats

- Learn from past mistakes
- Hold developers accountable – infrastructure
- Identify commercial and industrial districts
- Address lot sizes
- Preserve and restore area
- High traffic –adverse effect
- Attract educated people – jobs
- Change “bedroom” community
- Develop appropriate land
- “Mall” – economic development
- Address issues on US-12
- Chicken and egg

Strengths

- Lakes
- Beauty

- Zoned community
- MIS
- Good school
- Police and fire
- Ambulance services

Group 5

Challenges

- Keep beautification
- More commercial development opportunities
- Continued road maintenance
- Opportunities for public use natural trails – bike trails, dangerous
- Education – job demands
- Improve image of public servants (police, fire, communication, etc.)
- Improve township communication with the people
- Marketing plan
- US-12 condition of properties is negative
- Open space development
- Water quality – lakes, runoff from agricultural land, chemical use, fertilized lawns

Strengths

- Lakes, hills, wetlands
- Public access to lakes for recreation
- Camping
- Race – MIS
- Good quality groundwater
- What is township web site?

2. Resident Survey Summary - A summary of the resident survey is provided on the following pages. The comments were drawn upon the Planning Commission in the development of issues.

The survey results are summarized on the following pages.

CAMBRIDGE TOWNSHIP

2008 CITIZEN SURVEY PRELIMINARY RESULTS

Prepared for the Cambridge Township Planning Commission
as part the Cambridge Township Master Plan

October, 2008

CAMBRIDGE TOWNSHIP CITIZEN SURVEY RESULTS

1. Please check a box for each question:

Question	Very Good	Good	Average	Poor	Very Poor	No Comment / No Response	Weighted Score
1. Are the roads in Cambridge Township adequate?	26	134	193	43	23	15	2.23
2. Are you satisfied with the quality and quantity of drinking water in Cambridge Township?	54	151	74	24	17	114	2.63
3. Are air and water quality levels acceptable?	81	214	89	7	2	41	2.93
4. Are recycling opportunities adequate in the township?	26	70	66	95	65	112	1.68
5. Are existing public sewer and water services adequate?	36	115	73	18	28	164	2.42
6. Does Cambridge Township have an adequate park system to meet your recreational needs?	52	112	119	36	18	97	2.43

Notes: Highest weighted score given to the *quality of air and water* at 2.93. Lowest score to the *availability of recycling opportunities*. Questions 2 and 3 both deal with water quality. High non-response rates for some questions especially *sewer and water facility adequacy*. Various reasons for non-response rates possibly including unfamiliarity with utilities and recycling program (i.e. some residents are not connected to sewer and do not use recycling facilities).

2. Rank each of the following in order of importance to you.

Land Use	1	2	3	4	5	No Comment / No Response	Weighted Score
<i>Open space preservation</i>	184	134	45	19	14	38	3.15
<i>Farmland protection</i>	170	143	50	22	14	35	3.09
<i>Commercial development</i>	58	109	78	82	67	40	2.02
<i>Recreational development</i>	71	152	92	51	21	47	2.52
<i>Providing affordable housing</i>	58	120	78	80	55	43	2.12
<i>Extending public sewers</i>	80	85	100	66	52	51	1.99
<i>Increase tax break</i>	218	103	51	19	10	33	3.25
<i>Improving roads</i>	129	188	47	22	8	40	3.04
<i>Natural beauty preservation</i>	195	132	44	14	13	36	3.21
<i>Historic landmarks</i>	123	144	68	38	15	46	2.83
<i>Fire and police protection</i>	261	104	19	4	15	31	3.47
<i>Keeping things as they are</i>	49	60	81	35	45	164	2.12

Notes: Highest weighted scores for *increase tax break* and *fire and police protection*. Otherwise higher priority given to *natural beauty preservation*, *open space preservation*, *farmland preservation*, and *improving roads*. Weighted scores indicate relatively low priority for *extending public sewers*, *commercial development*, and *providing affordable housing*. Non-response rate highest for extension of public sewer but no non-response is particularly high.

3. To what extent should the following contribute to the character of our township?

Land Use	1	2	3	4	5	No Comment / No Response	Weighted Score
Woodland	201	134	39	9	9	42	3.30
Orchards	117	152	78	26	10	51	2.89
Lakes	301	84	5	6	5	33	3.67
Wetlands	170	139	46	20	14	45	3.11
Farms	158	157	48	15	10	46	3.13
Hills	184	124	54	11	9	52	3.21
Sparse Development	113	92	114	33	17	65	2.68
Gravel and mining operations	11	42	101	102	119	59	1.26
Recreational development	83	173	73	38	19	48	2.68
Historic areas	121	148	60	40	14	51	2.84
Commercial development	40	104	92	71	71	56	1.92
Hiking/walking trails	114	158	57	32	27	46	2.77

Notes: Lakes easily the lead defining township character. Other high rated scores include woodland, hills, farms, and wetlands. Lowest scores given to gravel and mining, and commercial development (as with previous ranking question). Highest non-response from sparse development issue.

4. To what significance are the following conditions a problem?

Land Use	1	2	3	4	5	No Comment / No Response	Weighted Score
<i>Over-development on lakes</i>	178	106	60	24	16	50	3.06
<i>Increased housing development and growth</i>	60	124	103	58	34	55	2.31
<i>Loss of rural character</i>	168	119	59	23	17	48	3.03
<i>Mixing of commercial and residential areas</i>	104	96	114	42	25	53	2.56
<i>Loss of farmlands</i>	158	125	58	20	17	56	3.02
<i>Water quality of lakes and streams</i>	277	72	28	4	9	44	3.55
<i>Lack of commercial businesses</i>	53	95	73	79	54	80	2.04
<i>Lack of recreational areas</i>	57	119	86	69	36	67	2.25
<i>Traffic</i>	94	116	58	66	25	75	2.52

Notes: Being a lake community, highest weighted score given to *water quality*. Other high priorities given to *loss of rural character*, *overdevelopment on lakes*, and *loss of farmland*. Lowest weighted scores given to *lack of commercial businesses* (once again), *increased housing development*, and *lack of recreational areas*. Highest non-response given to *lack of commercial business* and *traffic*.

5. Rank each of the following facilities and services as importance to you.

Land Use	1	2	3	4	5	No Comment / No Response	Weighted Score
<i>Parks</i>	83	155	72	47	28	49	2.57
<i>Water/sewer</i>	162	109	51	37	35	40	2.83
<i>Police</i>	259	101	18	14	16	26	3.40
<i>Fire</i>	295	89	11	6	7	26	3.62
<i>Emergency services</i>	300	86	11	2	5	30	3.67
<i>Road maintenance</i>	183	177	26	5	13	30	3.06
<i>Code enforcement</i>	97	137	102	27	27	44	2.64
<i>Sidewalks/walking/biking trails</i>	74	120	91	60	43	46	2.27

Notes: *Emergency services, fire, and police* all given very high weighted scores. *Sidewalks/walking/biking trails* given lowest score though no score is particularly low. Non-response rate low for all categories of land use.

6. How long have you lived in Cambridge Township?

Term of Residency	Number of Responses	Percentage of Response
Less than 5 years	60	15
6-9 years	59	15
10-14 years	79	20
15-19 years	43	11
20+ years	154	39
No response	39	

Note: Though long-term residents had the highest percentage, all categories received are represented. Non-response rate low for this question.

7. What is your age?

Term of Residency	Number of Responses	Percentage of Response
20-29	4	1
30-39	19	5
40-49	55	14
50-59	103	25
60+	225	55
No response	28	

Note: As is common, response definitely skewed toward the higher age brackets. Random survey may have helped. Non-response rate is low due to provision of age brackets.

8. Which best describes your place of residence?

Term of Residency	Number of Responses	Percentage of Response
Lakefront	235	57
Farm	17	4
Rural < 10 acres	46	11
Rural > 10 acres	23	6
Subdivision	57	14
Other	36	9
No response	20	

Note: Majority of responses from lakefront property owners. Uncertain as to the actual breakdown among township residents.

9. How much land do you own?

Term of Residency	Number of Responses	Percentage of Response
<1 acre	253	64
1-10 acres	99	25
10-40 acres	26	7
40> acres	15	4
No response	41	

Note: Highly representative of owners of smaller parcels. Reflective of the high number of lakefront owners. Uncertain as the the actual breakdown among township residents.