

**SHARON  
TOWNSHIP  
MASTER  
PLAN**

**2011**

**SHARON TOWNSHIP  
WASHTENAW COUNTY, MICHIGAN**

# **SHARON TOWNSHIP MASTER PLAN**

Adopted by the Sharon Township Planning Commission  
on February 10, 2011

Prepared By The  
**SHARON TOWNSHIP  
PLANNING COMMISSION**

**SHARON TOWNSHIP  
WASHTENAW COUNTY, MICHIGAN**

# TABLE OF CONTENTS

|                                                      |            |
|------------------------------------------------------|------------|
| <b>Chapter One</b>                                   |            |
| <b>OVERVIEW .....</b>                                | <b>1-1</b> |
| Introduction                                         | 1-1        |
| What is the Plan?                                    | 1-1        |
| Importance and Application of the Land Use Plan      | 1-2        |
| How the Plan Was Prepared                            | 1-3        |
| Sharon Township Overview                             | 1-4        |
| <br><b>Chapter Two</b>                               |            |
| <b>PLANNING ISSUES, GOALS &amp; OBJECTIVES .....</b> | <b>2-1</b> |
| Introduction                                         | 2-1        |
| Planning Issues, Goals, and Objectives               | 2-1        |
| Growth Management                                    | 2-2        |
| Community Character and Environment                  | 2-4        |
| Farmland                                             | 2-5        |
| Residential Development                              | 2-7        |
| Commercial and Industrial Development                | 2-8        |
| Mineral Extraction                                   | 2-9        |
| Roads                                                | 2-10       |
| Community Services                                   | 2-11       |
| <br><b>Chapter Three</b>                             |            |
| <b>FUTURE LAND USE STRATEGY .....</b>                | <b>3-1</b> |
| Introduction                                         | 3-1        |
| Overview of the Future Land Use Strategy             | 3-1        |
| Land Use Areas                                       | 3-2        |
| Agricultural                                         | 3-2        |
| Resource Conservation and Floodplains                | 3-5        |
| Residential                                          | 3-5        |
| Mobile Home Park                                     | 3-6        |
| Commercial                                           | 3-6        |
| Industrial                                           | 3-7        |
| Mineral Extraction                                   | 3-7        |
| Phased Zoning                                        | 3-7        |
| Zoning Plan                                          | 3-8        |
| <br><b>Chapter Four</b>                              |            |
| <b>COORDINATED PUBLIC SERVICES .....</b>             | <b>4-1</b> |
| Introduction                                         | 4-1        |
| Guidelines                                           | 4-1        |
| <br><b>Appendix A</b>                                |            |
| <b>CULTURAL FEATURES .....</b>                       | <b>A-1</b> |
| Geography                                            | A-1        |
| Road Network                                         | A-1        |
| Land Use and Development                             | A-2        |
| Community Facilities and Services                    | A-3        |
| <br><b>Appendix B</b>                                |            |
| <b>ENVIRONMENTAL FEATURES .....</b>                  | <b>B-1</b> |
| Geology and Topography                               | B-1        |
| Soils                                                | B-2        |
| Groundwater                                          | B-2        |
| Surface Drainage and Water Courses                   | B-4        |
| Wetlands and Woodlands                               | B-4        |

**Appendix C**  
**DEMOGRAPHIC FEATURES** ..... **C-1**  
    Population Trends and Projections ..... C-1  
    Social and Economic Characteristics ..... C-3

**Appendix D**  
**CITIZEN SURVEY RESULTS** ..... **D-1**

**Appendix E**  
**BUILDOUT ANALYSIS** ..... **E-1**

**Appendix F**  
**MAPS** ..... **F-1**  
    Map 1: Base  
    Map 2: Zoning by Parcel  
    Map 3: Land Use/Land Cover  
    Map 4: Groundwater Recharge Area  
    Map 5: Septic Field Absorption Limits  
    Map 6: Soil Permeability  
    Map 7: Natural Features  
    Map 8: School District  
    Map 9: Historic Sites  
    Map 10: Future Land Use  
    Map 11: Agricultural Preservation  
    Map 12: Build Out Analysis

# Chapter One

# OVERVIEW

## Introduction

Welcome to the Sharon Township Master Plan, hereinafter referred to as the Plan or the Master Plan.

This chapter provides an overview of Sharon Township and the role, importance, and preparation process of the Plan. It presents the framework for what follows by defining what the Plan is and what it is intended to accomplish. Understanding the fundamentals of the Plan will enable the residents and officials of the Township to appreciate the role it plays in insuring the future welfare of the Township, its residents and its resources. Embracing this Plan as a vital tool in preserving and enhancing the public health, safety, and welfare of the Township is essential if this Plan is to be effective.

## What is The Plan?

### Purpose

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

The Plan is a policy document that identifies how growth and associated land development is to be guided to best insure the future welfare of Sharon Township. The following key words and phrases can generally describe the Plan:

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

***GENERAL:*** The Plan establishes broad principles and policies to address future land use.

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

***A PLAN:*** The Plan is a specific tangible document that consists of both text and maps which present and illustrate the Township's policies regarding its planned future land use patterns.

*DYNAMIC:* The Plan is intended to evolve in light of the aspirations of local residents, changing conditions in the Township, and new strategies to manage growth.

The Sharon Township Planning Commission, under the authority of the Michigan Planning Enabling Act, (P.A. 23 of 2008) and the Michigan Zoning Enabling Act, (P.A. 110 of 2006) prepared this Master Plan. The Acts provide for the development of plans by a Planning Commission for the purposes of, in part:

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

This Plan is not a regulatory document. It is a "policy plan" to be implemented through regulatory tools. For example, though the Plan is not a zoning ordinance, The Plan's recommendations and policies will serve as a basis for updating the current Sharon Township Zoning Ordinance. In fact, the Michigan Zoning Enabling Act which provides the Township with the statutory authority to adopt zoning regulations, stipulates that a municipality's zoning ordinance "shall be based upon a plan..." This Plan addresses this statutory requirement and maintains a strong legal foundation for the Township's zoning regulations.

## **Elements of The Plan**

In addition to this introductory chapter, the Plan has four important components:

- 1) A discussion of important planning issues facing the Township today, and associated goals and objectives that address these issues (Chapter Two).
- 2) The planned future land use pattern for the Township (Chapter Three).
- 3) Coordinated Public Services (Chapter Four).
- 4) Background studies that provide a review of existing conditions and trends in the Township (Appendix).

## **Importance and Application of The Plan**

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

### **Long Term Interests**

There are a number of interests shared by residents and officials of Sharon Township today that can be expected to continue for years to come and be similarly shared by new future residents and township officials. (See 2008 Citizen Survey Results, App. D) Some of these important interests are:

- Maintain a sense of community identity and civic appearance.
- Protect property values.
- Minimize tax burdens.
- Protect open spaces, natural resources, and rural character.
- Insure appropriate land use and adequate services.
- Provide opportunities for economic development within an environmentally sound context.

Managed growth and development can ensure the public's health, safety, welfare, quality of life, and the protection of property values. The Plan supports these long-term interests by providing a future-oriented strategy that aggressively seeks to protect them. Chapter Three establishes specific future land use strategies to secure these and other long-term interests.

## Day-To-Day Administration

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

- Advisory Policies: The Plan is an official advisory policy statement which should be readily shared with existing and prospective landowners and developers to inform them of the long term intentions of the Township regarding land use and thus, more closely integrate development proposals with the policies of the Plan.
- Regulatory Programs: The Plan establishes a practical basis for the Township to revise, update, or otherwise prepare regulatory programs intended to insure that the policies of the Plan are implemented, including zoning and land division regulations.
- Review of Rezoning Requests: Chapter Two includes a list of township goals and objectives which should be used as a basis for review of future proposed rezoning requests to further establish a record upon which the rezoning request can be evaluated. Equally important, Chapter Three provides policies regarding the planned future land use pattern in the Township. It also provides valuable reference points upon which such rezoning requests should be evaluated.
- Public Services Improvements: The effective use of Sharon Township's tax dollars requires the identification of a planned land use pattern to pinpoint future population centers and areas for commercial and/or industrial growth. With new development some Township areas may need improvements to public services and infrastructure, such as fire protection and roads. Population centers and commercial/industrial areas typically require higher levels of public services. This Plan provides the Township with the ability to identify areas of future need, rather than always playing "catch-up" while the Township's health, safety, and welfare may be at risk. Chapter Three is beneficial in this regard.
- Intergovernmental Coordination: The Plan provides the basis for Sharon Township to communicate and cooperate effectively with its neighbors with regard to the effects of neighboring and regional planning and zoning issues. Opportunities for mutual gain by coordinated efforts will be multiplied.
- Factual Reference: The Plan includes a factual overview of relevant trends and conditions in Sharon Township. This factual profile can educate local officials and residents and aid in the review of development proposals, encourage constructive discussion of planning issues and policies, and serve as a base line for future studies.

## How The Plan Was Prepared

Planning is an on-going, cyclical process that strives to answer a series of important questions:

*What Do We Have?* The answer requires research and analysis of existing conditions, such as roads, land use, and environmental resources, and the identification of critical issues raised by these conditions.

*What Do We Want?* The answer is a function of local aspirations, and the "future vision" residents have for their community.

*How Do We Get There?* This requires the exploration of alternative strategies to reach the future vision, and the implementation of the preferred strategies.

*Is The Plan Working?* Periodic assessment of the effectiveness of the strategies and implementation measures must be undertaken.

Sharon Township has been actively involved in long-range planning for several decades. The first Land Use Policy Plan was proposed in the mid-1970's and updated in 1992. In 1996, the policy plan was further updated with the assistance of Dr. Robert Ward, professor of urban and regional planning at Eastern Michigan University, and his students. Shortly thereafter, the Township grew increasingly concerned about the strength and clarity of the Plan in light of issues that arose in the community since the Plan's adoption in 1996. In 2001, the Township embarked on an initiative to prepare a wholly new Plan, incorporating many of the basic tenets of the 1996 Plan. The Township sought the expertise and experience of a professional planner to assist them with the preparation of the document. In 2009 the Sharon Township Planning Commission updated the Plan

in light of changing conditions and new statutory requirements. This was accomplished with the assistance of the Washtenaw County Office of Strategic Planning.

A citizen survey was administered in 2008 (See Appendix D). Dominant issues that surfaced from the survey included:

- Rural character preservation
- Natural resources/farmland preservation
- Managed growth and development
- Limited commercial and industrial expansion
- Predominantly low-density residential development
- No new taxes for services.

The revised Plan was assembled and reviewed by local officials. Revisions to the draft plan were undertaken and a revised plan was assembled for presentation to the residents of the community. The Planning Commission held a public hearing on the draft Plan on \*\*\*\*\*T.B.D.\*\*\*\*\*, and the Plan was finalized and adopted by the Planning Commission on \*\*\*\*\*T.B.D.\*\*\*\*\*.

## Sharon Township Overview

The following is a brief overview of Sharon Township today. A more detailed review of trends and conditions can be found in Appendix A, B, and C.

Sharon Township is a quiet rural community located in the western region of Washtenaw County in the south-east area of Michigan within an agriculturally dominated region. There are many small towns and settlement areas nearby. The closest, the Village of Manchester, abuts the south-central border of the Township, the City of Chelsea is three miles to the north. Larger urban centers, such as Jackson to the west and Ann Arbor to the east, are less than half an hour away. Access to these and other regional centers, including Detroit, is enhanced by the presence of M-52 in the Township and the Township's close proximity to Interstate 94. Marked rural character and abundant open spaces, and ease of access to regional urban centers makes the Township an attractive place to live. The Township's estimated December 2008 population of 1,854 reflects a 10.5% growth since 2000<sup>i</sup>.

Aside from M-52 and several other paved primary roads, most of the local road network is unpaved.

The Township's overall land use pattern shows a comparatively low level of development and expansive areas of open spaces and natural resources (See Land Use Map and Natural Features Map). Farming operations dominate the landscape along with abundant wetlands and woodlands. The wetlands and woodlands are most prominent along a corridor extending through the center of the community in a southwest-northeast configuration. The Sharon Short Hills area is also one of the primary groundwater recharge areas for the Township. The Township relies on its groundwater resources for potable water. The course sand and gravel soils that prevail throughout the Township make this resource particularly vulnerable to contamination from surface pollutants. This condition has been well documented by studies undertaken by the Southeast Regional Groundwater Education Center at Eastern Michigan University.

The topography of the Township can be described as level to very steep, with the northwest portion comparatively flat and the southern regions more rolling. The central area of the Township exhibits very steep grades and these special topographic conditions, along with the associated woodlands and wetlands, comprise the unique Sharon Short Hills area.

Approximately 5% of the Township area is developed for residential, commercial, industrial and/or related urban uses. As of 2008, SEMCOG (Southeast Michigan Council of Governments) estimates that there are 715 housing units in Sharon Township: most of the housing units are single family detached dwellings on comparatively large parcels along the frontage of section line roads. Nearly 70% of all parcels are ten (10) acres or

more; parcels of 40 acres and more account for nearly half of the acreage in the Township. There are several small neighborhood developments.

Sharon Township has a handful of commercial and industrial establishments, the majority situated along the south half of M-52. These include, but are not limited to, a convenience store and service station, livestock auction yard, restaurant, hardware store, electronic assembly factory, mini-storage, tooling shop, and sand/gravel extraction operations.

Public services in Sharon Township are limited. There are no public sewer or water facilities. Residents rely on private on-site septic drain fields for sewage disposal and private wells for potable water. This is of particular concern as the majority of the Township exhibits comparatively high vulnerability to groundwater contamination due to dominant coarse-textured soils. The nearest public sewer and water system is in the Village of Manchester. The Michigan State Police provide protection services to Sharon Township on a per call basis. The Township maintains a contract agreement with the Manchester Fire Department for fire protection. The Village of Grass Lake and City of Chelsea fire departments assist on an as-needed basis.

---

<sup>i</sup> SEMCOG December 2008 Population Estimates

## Chapter Two

# PLANNING ISSUES, GOALS & OBJECTIVES

### Introduction

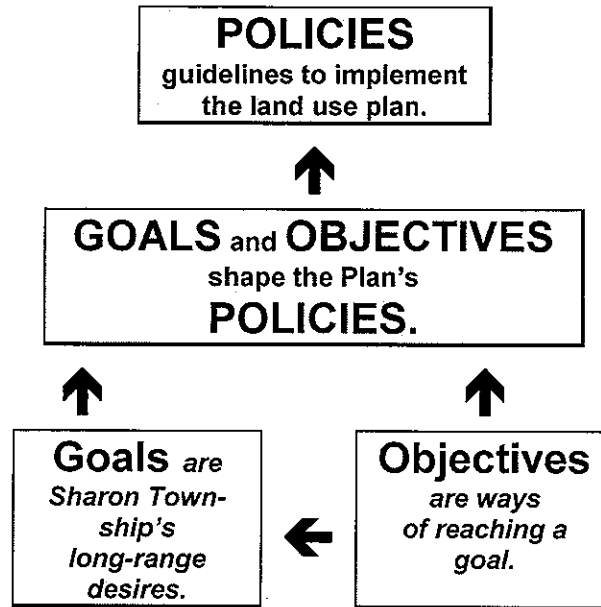
A fundamental purpose of this Plan is to establish a basis for future land use in the Township. Sharon Township adopted the position that it wanted to be actively involved in guiding and shaping future growth and development in the community and not allow the community to evolve by chance. To effectively plan for the Township's well being, it is necessary to identify the important planning issues facing the Township and clarify its long-term goals and objectives. The following is a presentation of these planning issues and related goals and objectives.

### Planning Issues, Goals & Objectives

A number of key planning issues are apparent today. These issues vary in scope but are clearly interrelated. The future quality of life and character of the Township will be largely shaped by the Township's strategy in dealing with these land use issues. Each planning issue presented in this chapter is followed by a set of goal and objective statements. Planning goals are statements that express the long-range desires of the Township. Each goal has accompanying objectives that are the general strategies that the Township can pursue to attain the specified goal. For example, a goal of the Smith family may be to establish a commercial stable in Sharon Township. Two of the family's objectives may be to make additional savings deposits for the land purchase and visit a real estate agent for information.

The goals and objectives presented in this chapter are important for several reasons:

- Goals and objectives provide current and future residents of Sharon Township with an overview of the intended future character of the Township.
- Goals and objectives identify and outline the basic parameters that should be used in guiding land use in the Township.
- Goals and objectives serve as references upon which future rezonings and land development decisions can be evaluated.



**Goals, Objectives, and Policies of the Plan**

The planning issues, and associated goals and objectives are divided into these major categories:

- Growth Management
- Community Character and Environment
- Farmland
- Residential Development
- Commercial & Industrial Development
- Roads
- Mineral extraction
- Community Services

The planning issues presented in the following pages are not intended to be all-inclusive. They are presented as the primary issues that the community must address as it establishes a future plan for itself. These issues will evolve over time. They should be reexamined periodically and modified as needed.

## **Growth Management**

The past 38 years have witnessed significant population growth in Sharon Township. The Township's population grew by 102% between 1970 and 2000. Based on 2008 SEMCOG population estimates the growth for the last eight years is 10.5%. The average ten-year growth rates nearly doubled that of the County as a whole. Despite the recent economic downturn, it is reasonable to anticipate continued growth in the coming years. Sharon Township offers a very desirable place to live, abundant with natural resources and open spaces, easy access to highways and employment centers, an overall rural character, and nearby retail and other urban amenities. Based on the trends of the last 30 or 40 years it is not unreasonable to anticipate that the population of the Township may increase by 500 to 1,000 persons during the next 20 years (see Appendix C). Based upon an average household size of 2.8 persons, such a population increase would yield approximately 180 to 360 new households. The character and quality of life will be impacted by the way the Township chooses to manage future growth and development. Managed growth can minimize unnecessary loss of natural resources including farmland; preserve the Township's existing character and environmental integrity;

encourage orderly land development; assure adequate public services and wise expenditures of Township funds; and limit traffic hazards and nuisances.

Tax revenues dictate, in part, the extent and quality of public services. Although development will increase the Township's tax base, that same development will place additional demands upon public services. Contrary to traditional planning wisdom and thought, recent research has shown that development does not necessarily "pay its way," particularly as it applies to traditional single family residential development. *Development patterns that minimize new public costs should be sought where practical.*

In this regard, it is advantageous to maintain a compact form of growth and development and, to the extent it is practical, locate higher density and concentrated development near or adjacent to areas currently being served with higher levels of public services or anticipated to be served by such services in the future. Current police and fire protection services, and the road network appear to be meeting the present needs of area residents. Higher growth rates that may be brought on by changing market conditions and zoning provisions will necessitate greater expenditures of Township funds. Maintaining the current quality of public services, let alone the pursuit of improvements, can be very difficult in the face of unmanaged growth and development.

This Plan must provide a strategy for effectively shaping and guiding future growth and development in an orderly manner, consistent with the aspirations of the residents of the Township and the opportunities and constraints presented by its natural and cultural characteristics. Such a strategy must recognize that Sharon Township exists within a regional network of communities, none of which are islands unto themselves. The Township abuts the Washtenaw County townships of Sylvan, Freedom, Manchester, and the Jackson County townships of Norvel and Grass Lake, is close to the Village of Manchester, and lies about 3½ miles south of the City of Chelsea. All can greatly benefit by cooperatively pursuing common goals in the areas of land use and public services. Similarly, the regional planning initiatives called the Chelsea Area Planning Team and the Manchester Community Joint Planning Commission affect Sharon Township. The extent to which Sharon Township and other local planning efforts support a common regional vision as embodied in the Chelsea Area Planning Team further strengthens the stability of the local and regional area.

Individual properties and land uses exist within a network of adjoining and nearby properties and land uses. This weave of uses helps to establish the character of the Township. A township-wide land use pattern should strive to assure compatibility between land uses. This is accomplished by appropriately locating new land uses, managing development densities and the rate of growth; utilizing buffer areas between uses, and reviewing site development proposals to minimize land use and vehicular conflicts.

***GOAL:*** *Manage future growth and development to assure that it is consistent with the natural limitations of the land, the availability and provision of public services in a cost-effective fashion, the protection of the Township's natural resources and rural character, and the protection of the natural resources and character of neighboring townships and villages.*

### **Objectives**

- 1) Preserve the Township's natural resources and features through a coordinated future land use strategy and related regulations that permit reasonable use of land while prohibiting unnecessary destruction or loss of natural resources or features.
- 2) Identify a planned future land use pattern that delineates targeted and compact growth and development areas as well as areas where preservation of important natural resources and rural landscapes are stronger themes.
- 3) Where practical, identify a planned future land use pattern that seeks to assure compatibility among land uses along borders with adjacent communities.
- 4) Prohibit public service improvements that will encourage excessive growth and development, or encourage growth and development at a rate such that the Township can not assure adequate public health, safety, and welfare.

- 5) Prohibit the introduction or expansion of public sewer or water in areas not designated for growth except where the intensity of existing development requires such services, or where the public health, safety, or welfare is at risk.
- 6) Guide development into areas where public facilities and services can accommodate growth and increased development, and where the provision or expansion of public facilities is cost-effective.
- 7) Prohibit new growth and development that requires levels of public facilities and services unavailable in the Township.
- 8) Review and revise zoning regulations, as applicable, to assure that permitted growth and development are coordinated with the planned land use pattern and that authorized uses within each zoning district support the intent of the district and this Plan.
- 9) Establish effective land development review procedures to assure new land uses are designed to minimize negative effects upon existing uses, protect important natural resources, and assure public health, safety, and welfare.
- 10) Wherever legally permissible, require developers to pay for the direct and indirect public service costs associated with that development. These costs should not be imposed on existing residents. Exceptions may be made where public interests and benefits may be endangered.
- 11) Recognizing that the Township is a critical link in a regional network of communities, the Township should maintain meaningful communication with area municipalities and county agencies to discuss contemporary planning issues, local and area-wide public facilities and services needs, and alternative strategies for mutually improving local public services and land use conditions.
- 12) Provide regular and numerous opportunities for public input and education on growth and development issues facing the Township, including community-wide forums on agricultural and other land use issues.

## **Community Character and Environment**

Protection of the rural character of Sharon Township is extremely important to its residents. *"Rural character"* is a subjective quality, but is typically associated with an overall perception of limited urban development, and open spaces comprised of farmland and/or other open landscapes including woodlands, wetlands, and fields. Not only are these elements important in shaping the character of the Township, they provide vital environmental roles including wildlife habitats, flood control, water purification, groundwater recharge, and improved air quality. The Township has abundant natural resources and sensitive environmental features, including the Sharon Short Hills area. Preservation of these resources can be very difficult because encroachment can occur slowly. Substantial damage to an entire rural region and/or ecosystem frequently occurs over an extended period.

Effective protection of Sharon Township's rural character and environment does not require the prohibition of growth and development. Managed growth and development encourages the continuation of the overall rural character of the Township and the integrity of its environment and natural resources. The preservation of rural character and natural resources in the face of growth and development depends on managing development densities and encouraging site development practices that purposely protect these assets.

An important component in the protection of the environmental resources of the Township is the appropriate management of the Sharon Short Hills area. This area's unique mix of woodlands, wetlands, rolling topography and steep grades create a special character unlike the balance of the Township. Equally important is the recognition of the vulnerability of the Township's ground water resources to surface contaminants and the community's reliance on this resource for potable water.

Increased knowledge of the environment, when incorporated into a comprehensive planning strategy, can minimize the potential for environmental degradation. Establishment and protection of interconnected systems of natural/environmental areas, including wetlands, woodlands, stream corridors, and open fields will provide a diverse and viable habitat for wildlife and native plants. Where large-scale residential development

is permitted, zoning regulations should require real protection of the Township's natural resources and rural character. Multiple lot residential developments such as platted subdivisions that do not protect open spaces and natural resources undermine the community's commitment to environmental integrity and rural character.

***GOAL:*** *Preserve, protect, and enhance the rural, historic, and environmental character of the Township including its scenic and aesthetic features, the integrity of its natural resources, and its historically and architecturally significant areas, buildings, and sites.*

### **Objectives**

- 1) Develop and maintain an accurate record of important natural features in the Township including floodplains, wetlands, water recharge areas, steep slopes, and forestlands.
- 2) Encourage development that actively preserves open spaces by incorporating on-site woodlands, wetlands and fields, and by tools such as conservation easements, land trusts and clustered development.
- 3) Assure that development does not increase air, noise, land, and water pollution, or degrade land and water resource environments, including groundwater.
- 4) Limit development intensity in environmentally sensitive areas and insure that all development complies with applicable local, county, state, and federal regulations.
- 5) Review proposed development in light of its potential impact upon wetlands, woodlands, and other natural resource areas.
- 6) Recognize the high infiltration rates of local soils and the groundwater's vulnerability to contamination, and minimize negative effects upon this resource by appropriate development densities and site development practices.
- 7) Recognize the special environmental resources and ecosystems of the Sharon Short Hills area and the constraints it places on development, and manage development density and site development practices to protect the environmental integrity of this area.
- 8) Insure that future development be designed in scale with existing developed areas by setting standards that address density, building size, height, and other development features.
- 9) Separate incompatible land uses by distance, natural features, and/or man-made landscape buffers to screen or mitigate adverse impacts.
- 10) Encourage the maintenance of a structurally sound housing stock, and the rehabilitation or removal of blighted structures and yard areas.
- 11) Adopt State of Michigan criteria for evaluating historic and architectural areas, buildings and sites, and coordinate inventory activities with the Washtenaw County Historical Commission, Michigan Bureau of History, and the historical societies of Manchester and Chelsea.
- 12) Develop and maintain a comprehensive inventory of historic and architectural resources in the Township.
- 13) Maintain and protect the historic and architectural resources in the Township.
- 14) Develop educational programs to enhance the public's understanding and appreciation of the Township's historical resources.
- 15) Encourage owners of eligible historic structures and sites to apply for inclusion in the National Register of Historic Places.
- 16) Explore the adoption of a plan or ordinance to protect the historic resources of the Township.

### **Farmland**

Sharon Township was settled by European immigrants, starting in the 1830's. Many of them were attracted to the area because the environment and the landscape reminded them of the Black Forest region in Germany. A typical family homesteaded 160 acres and was self sufficient, raising small grains, corn, hay,

vegetables and various livestock. The alluvial soils and terrain created by several moraines proved well adapted to pasturing sheep and Sharon Township became a leading producer of lambs and wool in the state. This agricultural pattern persisted into the 1940's. In the '50's and early '60's some farmers were enticed by feed companies to erect large hen houses to mass-produce eggs, and the first glimpse of "factory farming" appeared. Beginning in the 1970's worldwide competition in agribusiness intensified, forcing producers to continuously cut costs and search for more efficient (and intense) production methods. Less than 20% of the agricultural land in Sharon Township is classified as prime while the balance is highly susceptible to drought due its coarse textured sandy loams. These factors combined to force more producer consolidations and increased pressure to convert marginal, less efficient lands to other uses such as tree farms and large residential lots.

Active livestock operations dramatically dwindled between the mid '70's and the present. The Michigan Livestock Exchange moved from Detroit's Eastern Market to Sharon Township in the late '60's to be closer to its producer members. Once prosperous, it has since declined. While approximately two-thirds of Sharon Township's land mass remains in active cultivation, the work is performed by fewer and fewer independent producers.

The Township's farmland resources provide important food and fiber to local and regional populations. They are an important source of income, contribute to the stability of the local economy, contribute to the preservation of open spaces and rural character, and protect important groundwater recharge areas. The state's economic stability is directly linked to agriculture – it being the second largest industry in the state. A significant portion of the large township population increase from the mid-'80's to the present is a result of conversion of farmland to residential use. Published studies completed in the past ten years, in Michigan and throughout the country, have consistently demonstrated that agricultural land generates more revenue than its corresponding municipal operating costs. Traditional single-family residential development, on the other hand, has been consistently identified as generating less revenue than the cost to provide services.

Permitting comparatively high levels of residential development in a community's agricultural areas encourages encroachment into farmland areas, increases conflicts between farm and non-farm residents, and increases demands for more public services leading to higher property assessments. All of these factors impinge on the long-term economic viability of the farm operations.

It is important that the Township recognize both the benefits of local farming and the challenges it faces. Increasing agricultural competition appears inevitable, and will intensify the pressure to convert less productive lands to other uses. Development pressure will intensify as demand for rural residential lots increases and large landowners seek to convert lands to other more profitable uses. The Township should actively encourage the continuation of farming operations while similarly providing options to convert farm acreage into alternative uses, in coordination with the Township's planned future land use pattern and density guidelines.

***GOAL:*** *Encourage the continuation of local farming operations and the long-term protection of farmland resources.*

### **Objectives**

- 1) Identify areas considered appropriate for farming and implement zoning provisions that complement local farming interests.
- 2) Minimize conflicts and nuisance problems (destruction of crops, complaints about legitimate day-to-day farming operations, etc.) in designated agricultural areas by limiting the encroachment of incompatible land uses and providing buffering between incompatible uses.
- 3) Discourage agriculturally designated areas from evolving into residential growth zones by placing limitations on development densities and encouraging cluster development.
- 4) To the extent that low-density residential development occurs in agricultural areas, provide opportunities for the development to be compact, or clustered on just a small portion of the undeveloped parcel, and thereby discourage the wasteful consumption of farmland acreage for each dwelling site.

- 5) In addition to providing clustering opportunities, consider other innovative zoning techniques to retain and preserve farmland resources and agricultural activities including those presented in the Washtenaw County Agricultural Lands and Open Space Preservation Plan (1997).
- 6) Support Part 361, Farmland and Open Space Preservation, of the Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended, (formerly known as the Farmland and Open Space Preservation Act, PA 116 of 1974, as amended).
- 7) Pursue zoning and other measures designed to facilitate agricultural support services including outlets for feed, seed, farm equipment sales and repair, and similar services where not environmentally threatening.
- 8) Support regional and state efforts to establish purchase of development rights (PDR) or transfer of development rights (TDR) programs as a means of allowing a farmer to continue farming operations while receiving a reasonable financial return on the development potential of farmland property.
- 9) Encourage public and private land trusts' efforts to permanently protect the open spaces and natural resources of the Township.

## Residential Development

Residential development will be the major land use change in the coming ten to twenty years. Sharon Township is an attractive place to live for many prospective residents. The Township has abundant open spaces, an overall rural character, and close proximity to desirable employment opportunities, urban services and retail areas. Principal limitations to this residential development are the need to balance growth with conservation of farmland and other natural resources, development limitations of environmentally sensitive areas, the inability of some area soils to accommodate septic drain fields, the limited public services and the inability of the Township to meet the demands of the increased residential development while preserving the very amenities that make Sharon Township a desirable environment.

It is the manner in which the new residential development will be accommodated that will be most decisive in affecting the Township. For example, maintaining the Township's rural character in the face of residential growth requires a purposeful program to preserve the qualities of the Township that support its rural character during the development process. As previously stated, subdivisions without any semblance of the previous open spaces and natural resources that characterized the undeveloped parcel detract from the community's environmental integrity and character. In addition, incremental land divisions along existing road frontages can have the same effect. Appropriate setback, lot width and density standards, and incentives to preserve the existing character of road corridors, are several opportunities available to encourage rural-friendly development. In fact, advantages and disadvantages can be associated with nearly any form of residential development. Sharon Township is not interested in dictating specific development forms, but rather encouraging preferred development patterns and providing reasonable options.

The Township must carefully consider development density. The Township wants to provide reasonable opportunities for the varied housing needs of its present and future residents. Opportunities for low-density single family development are plentiful and are the preferred development pattern in the face of limited public services (including the lack of public sewer and water) and limited road infrastructure, and sensitive environmental resources (including high ground water vulnerability). These same conditions severely limit opportunities for medium and high development densities and emphasize the benefit of coordinating more intensive development with more appropriate opportunities that may be available in nearby communities.

***GOAL:*** *Accommodate new residential development in a manner which recognizes the Township's natural and cultural constraints; preserves its overall rural character and natural resources; and accommodates a range of densities and lifestyles.*

### **Objectives:**

- 1) Encourage the continued dominance of low density housing as the principal housing option in recognition of natural and cultural constraints including ground water vulnerability, wetlands, topography, and limited road infrastructure.
- 2) In recognition of the natural and cultural constraints to residential development, development densities should be based, in part, on land capacity including such factors as potable water, soil conditions, and road infrastructure.
- 3) Identify limited areas in the Township where higher density residential development can be adequately accommodated. Priority should be given to locations that have greater access to improved thoroughfares and improved public services, such as those in close proximity of the Village of Manchester.
- 4) Discourage strip residential development along the frontage of existing state and county roads to minimize traffic safety hazards, the "land-locking" of interior acreage, and the loss of rural character.
- 5) Encourage innovative residential development that incorporates the preservation of natural resource systems, open spaces, and the Township's rural character, including the clustering of lots on only a small portion of the undeveloped parcel and preserving the balance in open space.
- 6) Prohibit residential development densities in areas where public services and/or natural conditions are inadequate to support the proposed density.
- 7) Provide residents and prospective developers with information about the Township's planning goals, objectives and policies, and encourage communication between local officials and prospective developers, to facilitate the type and character of development that is appropriate for Sharon Township.

### **Commercial and Industrial Development**

Sharon Township has limited commercial and industrial development. Constraints in the establishment of such uses are significant. These include the lack of public water and sewer, a comparatively small population base, and the competition from nearby urban centers such as Manchester, Chelsea, Jackson and Ann Arbor. These and other nearby cities satisfy many of the day-to-day consumer needs of area residents as well as providing opportunities for comparison shopping and professional services. Residents have expressed strong satisfaction with the current status of commercial and industrial development in the Township and do not generally support expansion. The principal opportunity for new commercial development is the improved road infrastructure of M-52 and the visibility it provides.

Sharon Township wants to provide a reasonable mix of land uses to address the needs of present and future residents. Commercial and industrial uses strengthen the Township's economic stability and improve employment opportunities, including close-to-home employment, and access to retail and other services. While limited commercial and industrial development may be the preferred position for Sharon Township at this time, care must be exercised in accommodating such development. To minimize land use conflicts and increased public costs, key guidelines to be followed in accommodating future commercial and industrial development include: 1) discourage random encroachment by such development in residential and agricultural areas; 2) coordinate development with available public services; 3) coordinate development with existing development of similar character, both within the Township and along its periphery; and 4) assure such development is sensitive to the desired character of the community.

***GOAL:*** *Provide opportunities for limited expansion of commercial and industrial uses that minimize negative impacts upon adjacent land uses, respond to the predominant rural and agricultural character of the community, and are compatible with available public services and infrastructure.*

### **Objectives**

- 1) Identify locations considered appropriate for commercial and industrial land uses, taking into account the constraints and opportunities presented by the Township's natural features, such as topography and soils,

and its cultural features including the availability of public facilities and services and neighboring conditions.

- 2) Provide opportunities for new commercial and industrial land uses that assure such uses are in scale and character with surrounding land uses and the Township as a whole including such features as building size and height, setbacks, and open space areas.
- 3) Limit commercial and industrial uses to those that require limited public services and do not cause environmental degradation.
- 4) Limit industrial uses to those which are predominately characterized by assembly activities and similar "light" operations that do not require higher levels of public services, large truck traffic, or otherwise negatively impact nearby uses or the community as a whole.
- 5) Limit commercial uses to those that primarily address the day-to-day service needs of the local population.
- 6) Require landscaping and screening measures to assure commercial and industrial uses do not adversely impact the normal use and enjoyment of adjoining land uses.
- 7) Recognize the significance of M-52 as a potential opportunity for the location of the limited new commercial and industrial development contemplated by this Plan.
- 8) Future commercial and industrial land uses should not be permitted to indiscriminately encroach into residential and agricultural areas but should be clustered in appropriately identified locations.
- 9) Provide opportunities for home-based occupations within residential dwellings but under conditions that support the residential character, appearance, and quality of life experienced by surrounding residential properties and neighborhoods.

## Mineral Extraction

Sharon Township's topography is primarily the result of glacial activity. When the glaciers melted, the southern, southeastern, and northwestern portions of the township were covered with deposited rock, sand and clay known as ground moraines, kames (rounded hills), outwash plains and wetlands. The central portion of the township extending northeast to southwest received sand, rock, and gravel piled high into ridges known as terminal or recessional moraines. This area is called the Sharon Short Hills. The Hills range in elevation above sea level from 900 feet in the southwest portion of the township (Sections 19) to 1,117 feet in (Section 9), (See Map 7). The result is a hilly, scenic topography that is a significant contributor to the township's rural character that is attractive to prospective residents.

Sand and gravel are important construction materials especially for new developments and roadways. Some of these deposits in Sharon Township are commercially recoverable. There are currently numerous sand and gravel extraction operations in Washtenaw County, and three are active in Sharon Township. As these resources elsewhere are consumed Sharon Township may be faced with additional gravel extraction pressures. The extraction of sand and gravel from the Sharon Short Hills may potentially cause irreparable damage to the environment, including adverse effects on recreational and scenic land, water quality, agricultural soils, woodlands, wildlife habitat, and roadways.

Despite their negative effects, mineral extraction operations can be revenue producing entities for the Township. Although Mineral extraction is often considered a property right and is not prohibited, it is subject to regulation that can mitigate the negative effects. Currently Sharon Township allows mineral extraction as a Special Use in both the resource conservation and agricultural districts. The township may consider eliminating this conditional activity from the agricultural district, since it does not contribute to the goal established for agriculture in this plan. Extraction operations are further supervised by the Mineral Licensing Board established under the Township's police powers.

***GOAL:*** *Maintain and preserve land identified as suitable for mineral extraction for the production of mineral deposits, including but not limited to sand and gravel. Allow development of these resources only in a manner friendly to the Township's environment and character.*

## Objectives

- 1) Identify and preserve land most conducive to mineral extraction that meets, at a minimum, the following criteria: a) source for sand and/or gravel as evidenced by Washtenaw County Metropolitan Planning Commission Planning Map(s)<sup>1</sup>; b) located in an area(s) of large land parcels (minimum 40 acres); c) located in close proximity to an all season road that may be used as a haul route or, alternatively, located in close proximity to a hard surface road that may be upgraded and used as a haul route; d) located so as to maximize distance from large concentration of residences; e) a designated mineral extraction area must not be less than 40 acres in size; and f) area does not contain environmentally sensitive and/or endangered species of plants and/or animals, irreplaceable natural features and is not a wetlands.
- 2) Encourage informal meetings between prospective resource developers and Township planning officials to discuss the design, location and other related information of proposed mineral extraction projects.
- 3) Develop and maintain information services for those interested in developing property in this district.
- 4) Plan and maintain within the Zoning Ordinance and Mineral Extraction Ordinance provisions for mineral extraction including sand and gravel.

## Roads

Roads and land use are closely related. A road network impacts access to abutting properties. The degree of access, and the road infrastructure, can affect the feasibility and appropriateness of certain land uses along or near the road. Similarly, the land uses that evolve along a road corridor can affect the visual character of the corridor and the road's ability to function according to its intended purpose. As new residential and non-residential land uses are introduced, demands upon the roadway network will increase. Even low-density residential development can significantly increase local traffic levels. This increased traffic may diminish the level of service along some of the Township's roads. Conversely, it must be recognized that road improvements may attract development which, in turn, will place additional demands on the roadway network. The Township is interested in assuring that roads are adequately maintained and improvements are coordinated with the planned future land use pattern and the designated growth and development areas.

Opportunities for successfully accommodating growth and development are presented by the improved infrastructure of some of the Township's road segments. Appropriate land use management can maximize these opportunities. The closer higher density and intensity land uses (such as commercial and industrial uses) are to key thoroughfares, the greater will be the savings in future maintenance costs on other roads, as well as reduced traffic levels and congestion. To this extent, the M-52 corridor and/or other important roads should be considered in an effort to identify a practical and beneficial future land use pattern for the community. However, the principal function of these important corridors – the movement of vehicles over comparatively long distances – should not be undermined by development patterns along their frontage that unnecessarily heighten congestion and traffic hazards through excessive driveways, conflicting turning patterns, and related site development considerations.

The M-52 corridor is heavily used by Township citizens, visitors, and commuters. This roadway is particularly vulnerable to strip development for residential and commercial uses. This development pattern will undermine the function of these state highways, encourage congestion and traffic hazards, and alter the essential perception of the rural character of the Township.

The future pattern of residential lot splits and subdivisions in Sharon Township will have an important impact on Township roads and the future quality of life in the Township. Much of the residential development today is a strip pattern – residences are “stripped” along the existing county road frontages. This pattern of lot splits can be debilitating to Sharon Township because: 1) the increased number of driveways directly accessing the state and county roads increases the level of congestion and safety hazards along these corridors;

---

<sup>1</sup> Washtenaw County Metropolitan Commission no longer exists. The Commission prepared the relevant maps in 2006.

2) travel times are increased; and 3) the Township's previously rich rural panoramic open space views, as seen from the roadway, are reduced to images of never ending driveways, cars, garages, and front yards.

***GOAL:*** *Maintain a transportation network throughout the Township that moves vehicular and nonmotorized traffic in a safe and efficient fashion, and is coordinated with the planned future land use pattern.*

### **Objectives**

- 1) Develop a planned future land use pattern that maximizes the benefits of important thoroughfares in providing improved access to those land uses that generate comparatively high traffic volumes.
- 2) Discourage high traffic generating land uses and development patterns along road segments until such roads are improved to accommodate the development.
- 3) Minimize the potential for traffic congestion, traffic hazards, and loss of rural character along road corridors, by limitations on the number, size, and shape of new land divisions and the frequency of curb cuts, and the discouragement of "strip" development.
- 4) Encourage the development of landscaped buffers to reduce the impact of traffic nuisances on adjacent land uses.
- 5) Encourage visual corridors along important thoroughfares that support the Township's overall rural character.
- 6) Discourage road improvements that will increase growth and development pressures in areas of the Township not specified for such growth.
- 7) Identify priority road segments for maintenance and improvement based upon the planned future land use pattern and existing and projected traffic patterns, and systematically undertake these projects.
- 8) Inventory and assess potential traffic hazard locations and pursue measures to minimize the public safety threat.
- 9) Maintain communication, and work in conjunction with the Washtenaw County Road Commission and the Michigan Department of Transportation to address road and bridge issues including long-range planning, maintenance, curb cuts, and safe access, such as service drives and shared driveways.
- 10) Develop driveway standards to assure emergency vehicle access and which minimize environmental degradation in environmentally sensitive areas.

### **Community Services**

Tax revenues dictate, in part, the extent and quality of public services. Residents do not readily support increases in taxes. Though development can be expected to increase the Township's tax base, the development will place additional demands upon the need for public services. Contrary to traditional planning wisdom and thought, recent research has shown that development does not necessarily "pay its way," particularly as it applies to single family residential development. Development patterns that minimize new public costs should be sought where practical.

To this end, it is advantageous to maintain a compact form of growth and development and, to the extent it is practical, locate higher density and intensity development near or adjacent to areas currently being served with higher levels of public services or anticipated to be served by such services in the future. Current police and fire protection services, and the roadway network, appear to be meeting the needs of area residents. This is due, in large part, to the limited population of the Township. High growth rates which may be brought on by market conditions and zoning provisions will necessitate the expenditure of increased levels of Township funds much sooner just to maintain the current quality of public services, let alone pursue improvements.

***GOAL:*** *Maintain and improve public facilities and services in coordination with the Township's planned future land use pattern and to assure public health, safety, and welfare, in a cost-effective manner.*

## Objectives

- 1) Maintain current police, fire and rescue contracts with public agencies and adjacent communities as long as they adequately serve Township residents and businesses.
- 2) Discourage development that will threaten the Township's ability to deliver emergency services in a cost-effective manner.
- 3) Discourage public services improvements that will have the effect of encouraging excessive growth and development, or encouraging growth and development at a rate such that the Township can not provide adequate public health, safety, and welfare.
- 4) Prioritize public service improvements that are coordinated with designated growth and development areas.
- 5) Discourage the introduction of public sewer and water, and the expansion of future service areas, except in coordination with existing or planned development areas.
- 6) Continually monitor local attitudes toward the acquisition of public land for recreational facilities or other public facilities, and take appropriate planning and capital improvement actions to acquire and develop such land should a demonstrated need arise.
- 7) Maintain regular meaningful communication with adjoining municipalities and regional agencies to discuss and investigate public facilities and services needs, opportunities for new or additional shared facilities and services, and alternative strategies for improving local public services, including contracted services, shared services, and Township-operated services.

# Chapter Three

# **FUTURE LAND USE STRATEGY**

## **Introduction**

Sharon Township's principal planning components are embodied in the Plan's Future Land Use Strategy, as discussed in this Chapter, and the Coordinated Public Services discussion in Chapter Four. The Future Land Use Strategy identifies the desired pattern of land use and development throughout the Township. Chapter Four presents guidelines regarding future infrastructure and public services improvements to better assure that future public services are coordinated with the future land use pattern, and the Plan's goals and objectives.

The Future Land Use Strategy consists of policies regarding future land use and development in the Township. Implementation of these policies rests with the regulatory tools of the Township – most importantly the Sharon Township Zoning Ordinance. The Zoning Ordinance will be the primary implementation tool of the Plan. The Township's zoning ordinance generally regulates the type, location, bulk, and intensity of land development throughout the Township.

The Township may also adopt other supporting regulatory tools to further the implementation of the policies of the Plan. Land division and private road regulations are important tools to implement the Plan and Future Land Use Strategy. Land division regulations are intended to assure efficient land division patterns, the avoidance of non-buildable lots, and adequate public access to public roads. Private road regulations are intended to provide opportunities for road circulation networks restricted from general public use, in response to the local housing market. At the same time, these regulations assure such roads are built and maintained to minimum public health, safety, and welfare standards. Related ordinances, such as the Mineral Extraction Ordinance, and a capital improvement program, may, from time to time, be adopted or amended to carry out this Plan.

## **Overview of the Future Land Use Strategy**

The Future Land Use Strategy establishes the planned future land use pattern for the next 10 to 20 years. The Future Land Use Strategy calls for a land use pattern characterized predominantly by agricultural and low-density residential development, and natural open spaces. Opportunities for new higher density residential development are limited to areas in close proximity to the Village of Manchester. Future commercial and industrial development is primarily limited to segments of the southern half of M-52. However, no new land uses should be established, or land rezoned, unless adequate public facilities and services are available to meet the needs of the proposed uses and such development does not outpace the Township's ability to effectively manage the rate of development and insure public health, safety, and welfare.

The foundation of the Future Land Use Strategy is based on the goals and objectives presented in Chapter 2:

- ◆ Protect the environment and its natural resources.
- ◆ Provide opportunities for limited commercial and industrial expansion.
- ◆ Accommodate residential development at comparably low densities.
- ◆ Preserve rural character.
- ◆ Encourage the preservation of agricultural resources.
- ◆ Minimize public service costs.
- ◆ Ensure compatibility between land uses.

The future land use pattern is based upon an analysis of the Township's natural and cultural characteristics including community attitudes, existing roadway network, soil conditions, existing and nearby public infrastructure, and environmentally sensitive areas. The opportunities and constraints presented by these characteristics were evaluated within the context of the goals and objectives in Chapter 2 to arrive at a planned future land use pattern.

## Land Use Areas

The Future Land Use Strategy divides the Township into “areas” and identifies the predominant land use pattern planned for each. These land use areas collectively form the planned future land use pattern in the Township. These areas are divided as follows:

- ◆ Agricultural
- ◆ Resource Conservation
  - Agricultural Preservation Overlay
- ◆ Floodplains
- ◆ Residential
- ◆ Mobile Home Park
- ◆ Commercial
- ◆ Industrial
- ◆ Mineral extraction

It is not the intent of this Plan to identify each individual land use that should be permitted in each of these areas. This Plan makes broad recommendations regarding the dominant land use(s) to be accommodated in each area. Specific permitted land uses will be determined by the zoning provisions of the Township, based upon considerations of compatibility. There may be certain existing land uses that do not fit in with the planned future land use pattern for the area in which they are located. This should not be necessarily interpreted as a lack of Township support for the continuation of such uses. Updates to the Township's zoning ordinance will specify the full scope of uses permitted within in each area of the Township.

The approximate limits of these areas are illustrated on the Future Land Use Map in Appendix F.

### Agricultural

Areas designated as Agricultural account for the majority of the Township and nearly all lands currently farmed. This designation is intended to encourage the long-term protection of the farmland resources and provide opportunities for low-density residential development that preserves the community's overall rural character, natural resources, and open spaces.

This Plan recognizes that farming plays an important role in the history and character of Sharon Township, contributes important food and fiber to local and regional populations, and is an important source of income. The Strategy encourages the continuation of all current farming activities as well as the introduction of new farming activities. All typical farming activities, including the raising of crops, the use of stables, silos, and barns are encouraged provided that they meet Department of Agriculture requirements as *“generally ac-*

cepted agricultural land management practices." However, in light of the increasing level of residential development in the Township, the introduction of new large concentrated livestock operations should be permitted only after special review to assure compatibility with neighboring land uses and adequate parcel area and site development features.

term agricultural economic viability including: 1) classification by the U.S. Department of Agriculture as "prime farmland"; 2) minimum parcel sizes of 40 acres; 3) limited encroachment by non-agricultural land uses; 4) enrollment in the P.A. 116<sup>1</sup> Farmland and Open Space Protection Program; 5) enrollment or participation in PDR/TDR programs; and 6) adjacency to other farmland parcels.

Lands designated as Agricultural are not intended to serve as significant residential growth zones. Agricultural operations are intended to be the primary use of land. At the same time, this Plan recognizes that farming, as an industry, is facing challenges due to a number of factors, including economic conditions. Ongoing measures are being pursued on the state level to pass legislation improving the economic viability of farming in Michigan. The Plan also recognizes that the ability of a farm owner to split off residential lots has certain merits and a place within the Township. It is the intent of the Strategy to provide opportunities for residential development on Agricultural designated lands, but that such development be low density in support of the preservation of farmland resources, management of growth and development, and the preservation of important natural resources, open spaces, rural character, and road safety.

Maximum development densities of one dwelling per ten or more acres are recommended. This policy should not be interpreted as a proposal for *only* large lot zoning (such as 10-acre parcels) across the Township. In fact, this form of development can increase the rate at which farmland is converted to alternative uses, and thus undermine the environmental and rural character protection efforts. To provide landowners with increased flexibility and minimize the consumption of farmland acreage for individual dwellings, opportunities for the creation of divisions less than ten acres in size are possible through "Open Space Community Developments" ("clustering").

The Strategy strongly supports special development measures to protect the integrity of the Township's roadway network, rural character, and farmland and/or other natural resources as part of the development process. Key measures include "clustering" and the use of interior roads.

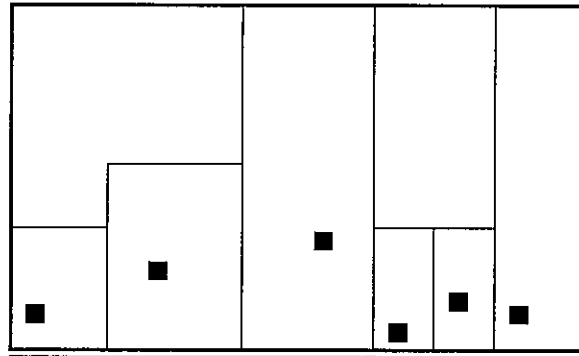
- ◆ "Clustering" is the creation of new building lots limited to one or several portions of the project parcel, and designation of the balance and the remaining portion of the parcel as open space by way of conservation easements, deed restrictions, or similar tools.
- ◆ Interior roads allow for the creation of new building lots that gain access by way of a new road into the interior of the development project, rather than each lot having direct access to the existing county road network in a strip development manner.

More traditional strip residential development along the Township's major roads is illustrated in Example A. This is the easiest form of development but it negatively affects public safety because of the many driveways directly accessing the roads and can affect the rural character of the Township. Example B, illustrates the use of "clustering" with one internal road that improves public safety along the road and more effectively preserves the existing character of the community, farmland resources, and other natural resource areas.

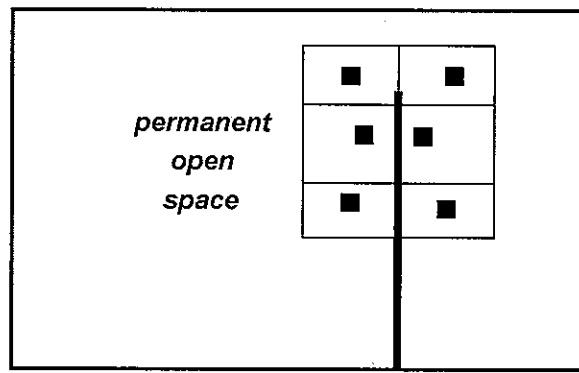
---

<sup>1</sup> "P. A. 116" is a conventional reference. It is replaced by Part 361, Farmland and Open Space Preservation, of the Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended.

**Example A (Strip Development)**



**Example B (Clustering and Interior Roads)**



Potential new residents in the Agricultural area should expect that the traditional smells, noises, pesticide applications, and generally recognized agricultural activities associated with responsible farming will continue on a long term basis. The Township does not consider such activities and operations as nuisances. Rather, the Township supports the long-term continuation of responsible farming. Local developers and real estate agents should disclose this information to prospective buyers of land in these areas.

**Agricultural Preservation Overlay**

Sharon Township has four (4) large areas of actively farmed land contained within the township that are suitable for Agricultural Preservation (See Maps). However, the township's farmland is under increasing pressure for residential development. Intrusion of residences on scattered lots would quickly destroy the sustainability of these areas for farming operations. Within these areas, agricultural preservation will be a priority. These regions were selected because of suitable soils and farmland characteristics.

- A. The lands in the Agricultural Preservation Areas have all the characteristics deemed necessary for long term agricultural use, namely:
  - 1. The parcels of land within each of the 4 areas are contiguous.
  - 2. Nearly all the parcels in the areas are zoned A-1; the remainder are zoned R-C.
  - 3. Most of the tillable land is currently farmed.
  - 4. Most of the designated areas do not have significant areas of natural features.
  - 5. These four (4) areas contain the township's prime agricultural soils.

## **Resource Conservation and Floodplains**

The Future Land Use Strategy designates a significant portion of the Township as Resource Conservation, and a significantly lesser amount as Floodplains. The Resource Conservation area is characterized by an array of conditions that require a strong conservation theme. These lands include abundant and sensitive natural resources including woodlands, wetlands, and steep slopes. The Floodplains area includes certain lands along the River Raisin that are subject to flooding and consist nearly entirely of wetlands. In addition to presenting severe limitations to development, these resources provide important environmental benefits including habitats for wildlife, flood control, groundwater recharge and discharge, and surface water purification. In addition, they provide special opportunities for passive recreation and contribute to the Township's overall rural character.

Further, these lands pose special environmental risks. Most of the land designated Resource Conservation or Floodplains is characterized by soils that present severe limitations to on-site sewage disposal. Areas that are most susceptible to groundwater contamination are also identified as Resource Conservation.

Because of the critical roles these resources play and the severe limitations they present to development, the Resource Conservation and Floodplains designation provides for their protection and long term viability by limiting the introduction and intensity of new land uses that are not of a similar character. Development in close proximity to these sensitive resources will threaten their quantity and quality. Future use and development of land designated Resource Conservation and Floodplains should be limited to open space and natural resource based land uses such as farming and wildlife management, and low density residential development (excluding in the Floodplains area). In light of the sensitive environmental character of these lands, large concentrated livestock operations are strongly discouraged.

Maximum residential development densities should not exceed one dwelling per ten acres. Land uses requiring state and/or federal permits (especially for wetland or floodplain alterations) should not receive final Township approval until satisfactory evidence has been submitted verifying the acquisition of all necessary permits. Where only a portion of a single parcel falls within a Resource Conservation designated area, future development should occur on only those portions which are not characterized by such environmental limitations.

While the geographic limits of lands designated as Resource Conservation or Floodplains on the Future Land Use Map include primarily wetland areas of a large nature, it is a basic tenant of the Future Land Use Strategy that wetland areas of all sizes be preserved and protected from the negative impacts of land development.

## **Residential**

Areas designated as Residential are intended to provide opportunities for residential development of a more suburban character. These lands include both existing residential development of a suburban character as well as vacant land where new development of similar character is considered appropriate.

The Residential area is located along the Township's southern periphery, just north of the Village of Manchester. This location is based on a number of supporting factors including its close proximity to M-52, fire protection services, Village retail areas, and local schools. Future extension of public sewer or water is likely to come from the Village, and the Residential area is strategically positioned to benefit from such an extension.

Development density of approximately one dwelling unit per one acre is considered appropriate in the Residential area provided adequate potable water and on-site sewage disposal exists. Higher density is considered reasonable only where public sewer is provided. Development density approaching four or more dwellings per acre, including multiple family dwellings, may be reasonable uses in the Residential area but only with the presence of public sewer and after special review proceedings to determine if such a project is appropriate on

the proposed property. Factors such as available infrastructure, public services, the surrounding land use pattern, and the specific characteristics of the site should be considered.

## **Mobile Home Park**

Mobile home development in Sharon Township raises a number of important issues. Mobile home park development provides certain benefits to a community and future residents. Most particularly, mobile home parks allow growth to be accommodated in a compact area rather than encroaching into more agricultural and rural areas. Mobile home parks can provide attractive residential environments at more affordable prices, and permit ownership of a home without the need to maintain large yard areas. These benefits can be particularly attractive for individuals who are less mobile or possibly frail, do not have the time or interest in maintaining a conventional residence, and/or do not have or care to spend the financial resources necessary today to own a more traditional home and lot. Yet Sharon Township presents unique challenges in the identification of future locations for mobile home park development. There is no existing higher density node in the Township to direct such developments; the road network is largely unpaved except for several key thoroughfares; there is no public sewer or water; and the Township relies on other governmental units to provide police and fire protection.

Still, the Township is interested in providing varied housing opportunities for its current and future residents. For these reasons, the Future Land Use Strategy identifies 40 acres as a Mobile Home Park area at the northwest corner of Parr Road and the Township's southern border. This location benefits from a number of factors including its proximity to: 1) the urban character of the Village of Manchester; 2) the Village's retail area; 3) police and fire protection services; 4) existing mobile home development; 5) public school and associated recreation facilities; and 6) potential public sewer and/or water extension. This location is within the River Raisin watershed. As compared to the Huron River, the River Raisin is less prone to flooding and exhibits considerably lower phosphorous levels.

However, any future mobile home park development should be based upon a demonstrated need for such housing in this regional area. Further, such development should be of such scale so as to be compatible with the limited population base and public services of the Township, and the Township's rural and environmentally sensitive character.

## **Commercial**

Commercial development typically requires a higher level of road infrastructure, access, visibility, and, in many cases, public services. These factors directly affect the identification of future commercial areas in the Township along with other concerns including minimizing conflicts between existing and proposed land uses and encouraging compact development. The Future Land Use Strategy identifies three particular locations where commercial development is considered appropriate – the southwest and southeast corners of Pleasant Lake Road and M-52, the southwest area of the Bethel Church Road and M-52 intersection, and the northwest area of M-52's crossing of the Township's southern border. The Township projects this area to be more than adequate to meet the commercial needs of the Township over the planning horizon.

These locations are characterized by excellent access, visibility, and existing commercial uses. M-52 is the most heavily traveled road in the Township, and Pleasant Lake is the primary thoroughfare providing east-west movement. These areas are conveniently located to address some of the day-to-day consumer needs of area residents.

Future commercial development should fit harmoniously in the Sharon Township fabric. Recognition of its limited public services and population base, and extensive and vulnerable natural resources is necessary. Accordingly, commercial uses should cater to the consumer needs of the local population and travelers along M-52. Commercial uses that draw from a regional market and are typically characterized by comparatively large buildings and parking areas, and high traffic volumes, are not considered appropriate in the Township at this time. Limitations on signage, building heights, size, bulk, and related architectural qualities should be

established to insure compatibility of new commercial uses with the desired character of the surrounding areas.

However, no development should occur unless public sewer and water are available, or adequate measures are provided for on-site sewage disposal and potable water. New commercial uses that are adjacent to residential property should be permitted only if adequate buffer yards and screening are provided to minimize negative impacts.

## **Industrial**

Like commercial development, industrial uses frequently require higher levels of road infrastructure, access, and public services. These factors directly affect appropriate locations. Other factors include minimizing conflicts between existing and proposed land uses and encouraging compact development. The Future Land Use Strategy identifies a single industrial node – west of M-52 immediately south of the Bethel Church Road commercial area. The Township projects this area to be more than adequate to meet the industrial needs of the Township over the planning horizon.

The limited public services available in the Township and its sensitive environmental resources, including the increased susceptibility of groundwater contamination, dictate that future industrial uses be of comparatively limited intensity. Uses characterized by the manufacture of products from raw materials, the generation of heightened levels of wastes, reliance on heavy freight transport, and similar operational characteristics are strongly discouraged. The light industrial development that does evolve in the Township should compliment the existing character of the community with adequate provisions for environmental protection, open spaces, screening, and related site development features.

## **Mineral Extraction**

The Township recognizes that one of its special resources is its mineral deposits, including sand and gravel. These deposits are useful and necessary in many construction and manufacturing industries. However, the extraction of these deposits can result in considerable environmental damage if not properly managed during operations, and properly reclaimed following the termination of extractive operations. In recognition of these mineral deposits, the Future Land Use Strategy establishes a Mineral Extraction area, and the Sharon Township Zoning Ordinance and the Mineral Extraction Ordinance establish a basis for permitting and regulating the orderly extraction, processing and utilization of such mineral deposits. All extraction operations must incorporate reclamation and restoration of extraction and processing sites to a useful, environmentally stable condition. Reclamation subsequent to the useful life of the resource deposit will provide for the ultimate conversion of extraction areas to appropriate land uses and zoning categories consistent with Sharon Township's long range planning objectives.

## **Phased Zoning**

This Plan recommends the rezoning of vacant land to a more intensive zoning district in a phased or incremental manner. For example, while the Plan may identify township areas that may be appropriate to accommodate higher density residential development, the Plan does not recommend “across the board” or immediate rezoning of such vacant land. The Plan recommends that rezoning to more intensive use districts occur on a case-by-case basis to ensure the Township can meet any increased public service demands, to manage township-wide growth and development, to assure that each rezoning is in response to a demonstrated need, and to minimize unnecessary hardships upon the landowner as a result of property assessments and/or resulting nonconforming uses and structures.

## Zoning Plan

Per the requirements section 33 (2) (d) of the Michigan Planning Enabling Act (Act 33 of 2008), this section describes the relationship between land use categories on the Future Land Use Map and the zoning districts in the Township. The table below shows future land use categories and the corresponding zoning districts for which they are intended.

| <b>Future Land Use Category</b> | <b>Zoning District(s)</b>                                                                                                                                      | <b>Notes</b>                                                                                                                                                       |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Agricultural</b>             | A-1 Agriculture<br>PUD Planned Unit Development                                                                                                                |                                                                                                                                                                    |
| <b>Commercial</b>               | C-1 Retail Commercial<br>C-2 Office Commercial<br>PUD Planned Unit Development                                                                                 |                                                                                                                                                                    |
| <b>Floodplains</b>              | RC Recreation Conservation<br>PUD Planned Unit Development                                                                                                     | Little to no development should take place in these areas, although floodplains may be included in cluster developments or developments with appropriate setbacks. |
| <b>Industrial</b>               | I-1 Light Industrial<br>PUD Planned Unit Development                                                                                                           |                                                                                                                                                                    |
| <b>Mobile Home Park</b>         | R-MHC Manufactured Housing Community                                                                                                                           |                                                                                                                                                                    |
| <b>Residential</b>              | R-1 Low Density Residential<br>R-2 Medium Density Residential<br>R-3 High Density Residential<br>R-MF Multi-Family Residential<br>PUD Planned Unit Development | R-3 and R-MF Districts not to be established except upon evidence of public sewer availability                                                                     |
| <b>Resource Conservation</b>    | RC Resource Conservation<br>PUD Planned Unit Development                                                                                                       | Development should be clustered to preserve sensitive natural features in this district                                                                            |

Development in any of the above future land use districts shall take place in accordance with the phased zoning principles outlined above and in the presence of adequate infrastructure (including roads, water and sewer service where applicable).

# Chapter Four

# **COORDINATED PUBLIC SERVICES**

## **Introduction**

Chapter Three described the planned pattern of land use throughout the Township. Since the character and feasibility of land use and development is directly influenced by the extent to which public services are available, special attention should be directed to the manner in which public service improvements occur in the Township. An important principle of the Future Land Use Strategy is that no new development should occur in the Township unless public services are adequate to meet the needs of that new development. Similarly, public service improvements, and the increased development that may result from such improvements, should not jeopardize the Township's interest in managing growth and development. Thus, it is very important that future public service improvements be coordinated with the planned pattern of future land use.

## **Guidelines**

As new residential and nonresidential land uses are introduced in the Township, demands upon the road network will increase. The additional residential development anticipated in this Plan, despite its overall low density, will result in higher traffic levels. This increased traffic may lessen the level of service along some of the roads. This is particularly true of the Township's unpaved road segments. Conversely, it must be recognized that road improvements may well attract new development which, in turn, will place additional demands on the road network.

Excepting emergency conditions, such as an impassable road, the functional classification of roads should dictate the priority of improvements when all other conditions are generally equal. Priority improvements should be assigned to county primary roads, particularly those segments serving the Future Land Use Strategy's Residential area, followed by county local roads serving the Agricultural areas. Paving of existing gravel roads should be discouraged except where there is broad support by residents along the road segment and adequate financial resources.

There is no public sewer or water in Sharon Township. Township residents rely upon septic systems for sewage disposal. Improperly operating septic systems can contaminate potable groundwater resources, ponds and streams. This poses a public health threat. As land development densities increase, so does the need for public sewer and water. Industrial, commercial, and higher density residential land uses generally have greater sewage disposal and potable water needs. Failure to provide adequate sewer and water facilities to these land uses can lead to severe health and environmental problems, while the premature provision of these services can lead to accelerated and unmanaged growth and development. Many of the Township soils present severe limitations to on-site sewage disposal and facilitate groundwater contamination. This condition highlights the

critical relationship between land use, development intensities, and on-site sewage disposal and potable water.

All on-site sewage disposal and potable water facilities should be constructed and maintained in accordance with the requirements and standards of the Washtenaw County Environmental Health Department and other applicable local, county, state or federal agencies. Any future decision by the Township to provide or expand public sewer and/or water services should be based on an in-depth analysis of all available options, including services provided by cooperative agreements with neighboring municipalities. Such services should be closely coordinated with the Future Land Use Strategy and should occur in a phased and incremental manner so that an overly large geographic area should not be intensely developed at a rate beyond the Township's ability to effectively manage growth and development. Introducing public sewer service into Agricultural areas for reasons other than to address a serious health risk is not considered prudent. It will undermine efforts to preserve farmland resources and responsibly guide growth and development.

As buildings, parking lots and other impermeable surfaces associated with new development cover more of the Township's land surface, the quantity of stormwater runoff increases. The vegetated landscape that previously absorbed and slowed much of the water associated with storms is replaced by urban surfaces. Unless specific preventive measures are taken, this condition encourages flooding, soil erosion, sedimentation and pollution of area water resources. Although these conditions originate from site-specific circumstances, their impact can extend to adjacent properties and to more regional areas including other communities within the same watershed.

Increased quantities of runoff as a result of property development should be detained on site, if necessary, to avoid placing excess demand on the capacity of the stormwater system into which the runoff would otherwise be discharged. Proposed land uses should not be permitted if the level of service currently provided by existing stormwater management infrastructure and/or existing drainage patterns will be decreased, unless necessary improvements to such infrastructure or natural drainage courses are first made. New and existing land uses should comply with all county, state, and federal regulations regarding stormwater management and soil erosion, including the regulations of the Washtenaw County Water Resources Commissioner.

As community growth and land development increases, so does the demand for emergency services. It is important that the Township ensure that adequate fire and police protection services are available to existing and future residents and property. To prevent emergency services deficiencies, the Township should continually monitor police and fire protection needs and service, and explore the improvement of service levels. Considerations for improved services should include the expansion of joint services with neighboring municipalities, and the establishment of additional fire and police stations as service levels dictate.

# Appendix A

# CULTURAL FEATURES

## Geography

Sharon Township is located in the west central region of Washtenaw County in the southeast area of Michigan. Located along the western county line, the Township abuts Jackson County to the west and is within seven miles of Lenawee County to the south. The Township has the traditional six-mile by six-mile congressional area typical of townships throughout the lower half of Michigan's Lower Peninsula. Surrounding townships are Sylvan to the north, Freedom to the east, Manchester to the south, and Norvel and Grass Lake (Jackson Co.) to the west.

Sharon Township is an agricultural community within an agriculturally dominated region. However, there are numerous small towns and settlement areas within ten miles. The closest, the Village of Manchester, is one-quarter mile south of the Township, covers approximately 1.5 square miles, and includes approximately 2,222 persons. The City of Chelsea is three miles to the north along M-52, covers approximately 1.6 square miles, and includes approximately 5,000 persons. The nearest incorporated municipality approaching 10,000 persons or more is the city of Ann Arbor (population of approximately 115,200), 20 miles east. Approximate distances between Sharon Township and other major regional urban centers are: 1) Detroit, 55 miles east; 2) Toledo, 50 miles southeast; 3) Jackson, 15 miles west; 4) Battle Creek, 55 miles west; and 5) Lansing, 55 miles northwest.

Though the Township's activity patterns are meshed with those of the Village of Manchester and City of Chelsea, the Township is approximately midway between the cities of Jackson and Ann Arbor, and, with easy access to I-94, is less than an hour's drive to the Greater Detroit Area. The Township's location within the regional area, including ease of access, makes the Township a very desirable location for those seeking "town and country" living.

## Road Network

Interstate 94 and M-52 facilitate regional access to Sharon Township. I-94 travels in an east-west direction across Michigan and within three miles of the northern border of the Township. M-52 travels in a north-south direction through the eastern half of the Township. The M-52 interchange at I-94 facilitates easy access.

Sharon Township's roadway network contrasts with the typical grid pattern that characterizes the vast majority of townships in most parts of Michigan (see Base Map). The less than regular road pattern is, however, similar to that of neighboring communities and is a result of a number of factors including topographic and wetland limitations. These constraints have resulted in nearly one-half the amount of road construction compared to the typical rural township in southern Michigan. Except for a number of roads under private ownership (recorded as private easements) and M-52, under the jurisdiction of the Michigan Department of

Transportation, the roadway network is comprised of roads under the jurisdiction of the Washtenaw County Road Commission (WCRC).

In compliance with the requirements of Michigan Act 51 of 1951, the WCRC classifies all roads under its jurisdiction as either "primary" roads or "local" roads. Primary roads are considered the most critical in providing regional circulation throughout the County.

Public roads classified by the WCRC as "primary" are:

- ◆ Below Road.
- ◆ Easudes Road., between Jacob and Sharon Hollow Roads.
- ◆ Grass Lake Road.
- ◆ Jacob Road., between Washburne and Easudes Road.
- ◆ Pleasant Lake Road.
- ◆ Sharon Hollow Road., south of Pleasant Lake Road.
- ◆ Sharon Valley Road., west of Sharon Hollow Road.
- ◆ Struthers Road., between Grass Lake and Washburne Roads.
- ◆ Sylvan Road., north of Grass Lake Road.

The classification of roads in the Township by the WCRC has important financial implications regarding maintenance and improvements. Under Michigan law, townships have no responsibility for funding public road improvements and maintenance. On the other hand, while County Road Commissions must maintain and improve primary roads at their expense, state law limits the participation of County Road Commissions to no more than 50% for improvements to local roads. In reality, there are very few counties in Michigan where local townships are not actively involved in funding road improvements.

The WCRC periodically records traffic counts along heavier traveled road segments. 1995 and some 2005 traffic counts exist for the following Sharon Township roads:

| Road Segment                        | Trips Per Day<br>2005 / 1995 |       |
|-------------------------------------|------------------------------|-------|
| M-52, northbound from Pleasant Lake | N.A.                         | 5,192 |
| M-52, southbound from Pleasant Lake | N.A.                         | 5,849 |
| Pleasant Lake Road, west of M-52    | 3,148                        | 2,569 |
| Pleasant Lake Road, east of M-52    | 2,717                        | 2,970 |
| Bethel Church Road, west of Meyers  | N.A.                         | 127   |
| Grass Lake Road, west of M-52       | 1,137                        | 1,019 |

Most of the local road network is unpaved. The paved roads are limited to the Township's principal circulation routes – M-52, Pleasant Lake Road, and parts of Grass Lake, Sharon Hollow, and Sharon Valley Roads. The Washtenaw County Road Commission has no plans at this time to pave additional road segments in the Township.

## Land Use & Development

Sharon Township's overall land use pattern shows a comparatively low level of development and expansive areas of open spaces (see Land Use Map). The majority of the Township is farmland and, to a lesser degree, woodlands and wetlands. Less than 5% of the Township area is developed for residential, commercial, industrial, and/or related urban uses. A review of some of the more significant characteristics of land use and development in the Township follow. See the Sharon Township Zoning Map for existing zoning districts and their respective boundaries.

### Agriculture

Agriculture accounts for approximately two-thirds of the acreage in Sharon Township. Of this acreage, the vast majority is used for crop production. Agricultural lands are located in nearly all areas of the Township

except where precluded by woodland, wetland, and/or excessively sloped areas. Farming is most prevalent in the Township's southeast quarter and least visible in its central regions.

## **Residential Development and Land Division**

The 2000 U.S. Census recorded 609 housing units in Sharon Township, 593 of which were occupied. The 609 housing units represents a 21.5% increase over the 478 units recorded by the 1990 Census. Nearly all housing units in the Township are single family detached dwellings and approximately 92% are owner-occupied.

Residential development in Sharon Township is dominated by single-family dwellings on comparatively large parcels along the frontage of section-line roads. This reflects a combination of factors including the agricultural history of the community, local market conditions, and local zoning. Nearly 70% of parcels are ten acres or more and parcels of 40 to 160 acres or more account for approximately 57% of the acreage of the Township. There are several neighborhood developments.

## **Commercial / Industrial Development**

Sharon Township has a handful of commercial and industrial establishments. The majority of such activities are located along the M-52 corridor in the southern half of the Township. Commercial businesses include a convenience store and service station, electronic assembly, livestock auction yard, restaurant, hardware store, and a mini-storage. The majority of the commercial sites in the Township cater to the day-to-day consumer needs of the local population and the highway (M-52) traveler. Industrial uses are limited to a tooling shop and mineral extraction operations.

# **Community Services and Facilities**

## **Local Government Administration**

A five member Township Board governs Sharon Township. The Township Hall is located on Pleasant Lake Road and consists primarily of a large meeting room and restrooms. As with many rural communities, the majority of the day-to-day government administrative activities take place in the homes of the elected officials.

## **Sewage Disposal and Potable Water**

There are no public sewer or water facilities in Sharon Township. Residents rely on private on-site septic drain fields for sewage disposal and private wells for potable water. The nearest public sewer and water system is in the Village of Manchester.

## **Emergency Services**

The Michigan State Police provide police protection services to Sharon Township on a per call basis. Service is paid for by Township residents through taxes. Response time for each call is based upon the availability of officers within the area.

Sharon Township currently contracts with the Manchester Township Fire Department for fire protection. The Village of Grass Lake and the City of Chelsea also provide backup fire protection. Each fire department is a volunteer agency operating from a single fire station located within its respective district. Most of Sharon Township lies within a 15-minute response time to one of the three fire-fighting agencies.

The majority of the calls to the Manchester Township Fire Department from Sharon Township residents are for medical reasons. The department has first-response medical vehicles that have the ability to begin patient transport to meet the better-equipped Huron Valley Ambulance.

## **Education**

Four public school districts serve Sharon Township (see School District Map). Nearly the entire township is served by Manchester Public Schools. Chelsea Public Schools serves most of the northern periphery of the Township. Grass Lake Community Schools and Napoleon Public Schools serve limited areas along the western periphery of the Township.

As of 2008, enrollment in the K–12 grades in the Manchester Public Schools was approximately 1,274 students. Manchester completed construction of a new high school in 2004. The district now has one high school, one middle school and one elementary school.

Chelsea Public Schools recently completed the construction of a new elementary school and high school. Chelsea now has one high school, one middle school and three elementary schools. 2008 enrollment in the District is approximately 2,600.

# Appendix B

# ENVIRONMENTAL FEATURES

## Geology and Topography

During the Paleozoic era of geological history, Washtenaw County and the entire state were inundated by successive warm, shallow seas during which large amounts of sediment were deposited. These deposits were subsequently lithified to form bedrock. Sharon Township sits upon bedrock composed of Marshall Sandstone and Coldwater Shale. The Marshall Sandstone formation predominately underlies glacial deposits in Sections 1 through 11 and Section 18, while the Coldwater Shale formation underlies the glacial deposits in the remaining sections of the township.

The Ice Age brought four successive continental glaciers across the Great Lakes area. As these ice sheets moved southward from Canada, they scoured and abraded the surface of the land leaving behind deeper valleys and more rounded hilltops. The advancing glaciers carried large quantities of rock materials scraped and gouged from the surface of the land. As the glacier melted, these materials were deposited to form drift materials covering the bedrock below. The bedrock geology of Michigan can be generally described as bowl shaped in that the depth to the bedrock generally increases as one moves toward the center of the state. Depths to bedrock in portions of Michigan exceed 700 feet. The depth in Sharon Township generally ranges between 75 to 200 feet. The drift generally deepens in the southeast and central areas of the Township. The drift is characterized predominantly by course-textured material, including sand and gravel.

The topography of the Township can be described as level to very steep (see Natural Features Map). The northwest portion of the Township is comparatively flat while the southern regions are of a more rolling character. The central area of the Township, extending northeast to southwest, exhibits grades as high as 40%. Referred to as Sharon Short Hills, this area resulted from glacial deposits in ridge formations.

Elevations across the Township range from approximately 850 feet to 1,120 feet above sea level. The lower elevations are evident in Section 34 and 36, while the higher elevation are in Section 9 and part of the Sharon Short Hills area.

The character of an area's geology and topography has bearing on development and land use planning. While hilly areas are frequently sought as housing sites because of their unique character, vistas, and frequently wooded nature, they also present obstacles to development including increased construction costs, slope failure, erosion and sedimentation, and decreased water quality and flood control. Land use planning guidelines recommend that development be generally discourage in areas dominated by 12% – 18% slopes, and severely limited in steeper areas.

## Soils

According to the Soil Survey of Washtenaw County, published by the U.S. Department of Agriculture, Washtenaw County exhibits 12 general soil associations. Four of these associations are found in Sharon Township and these associations are comprised primarily of loam, sandy loam, and loamy sand soils. "Soil associations" refer to the classification of broad patterns of soils, topography, and drainage. A soil association generally consists of one or more major soils and other minor soils. It is the pattern of the major and minor soils (including topography and drainage) which differentiates one association from another. An association often includes individual soils of varying character.

Soil conditions can dramatically influence land development practices. Soil conditions affect the suitability of septic drain fields, the cost and stability of roads and buildings, potential for groundwater contamination, and farm productivity. The soil associations identified by the U.S. Department of Agriculture are very general in character. It is of benefit to establish a more detailed understanding of the opportunities, and constraints presented by the individual soil units.

According to the Soil Survey, approximately half of the Township is characterized by soils that present severe limitations to septic fields (see Septic Field Absorption Limits Map). Protection of the groundwater for drinking purposes requires that the septic drain field's leachate be fully broken down in the underlying soils prior to reaching potable water sources. The soils presenting "severe" limitations are located throughout the Township but are somewhat more prevalent in its northeast quadrant. The limitations can be due to a number of factors including soil wetness, slow or excessive percolation, and/or excessive slope. Much of Michigan is characterized by soils that present "severe" limitations to septic systems. Soils that present septic system limitations can often be accommodated with specially engineered systems at additional costs. The Washtenaw County Department of Environmental Health is responsible for issuing permits for on-site sewage disposal. It will not issue a permit unless all county requirements for the septic system have been met. Typically, lots must approach one acre or more to comply with the Department's standards. Development at higher densities typically requires some form of public sewer.

It should be noted that while a site may be classified by the Department of Agriculture as presenting a certain level of limitation to septic systems, on-site investigation may show the classification to be less than fully accurate and/or show that the deeper soils (more than five feet deep) present different characteristics than the upper layer soils and thus, varying limitations. On-site investigations should be carried out before specific development projects are initiated.

The Soil Survey also identifies the vast majority of the Township as presenting "moderate" or "slight" limitations to residential development. Such limitations are typically a result of slope conditions.

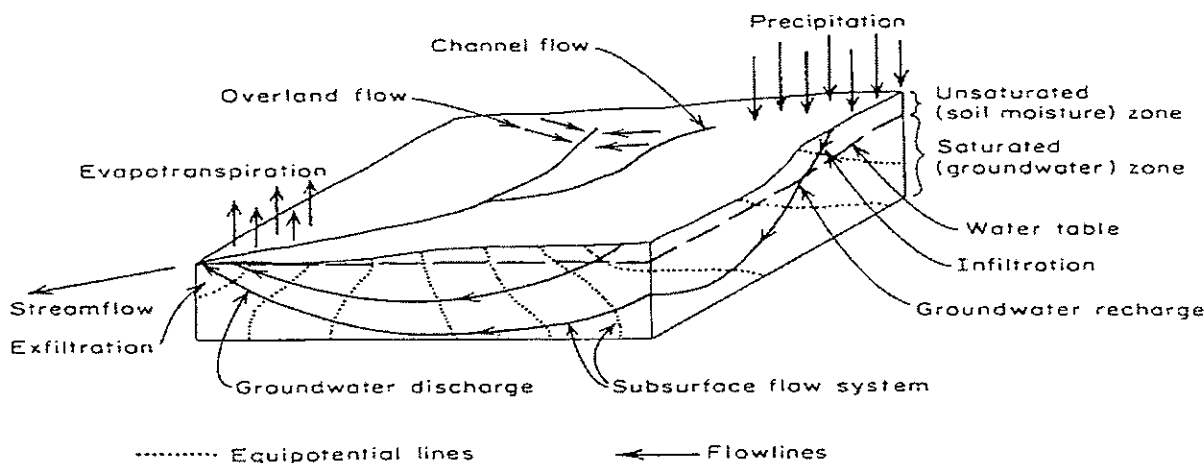
The Department of Agriculture has classified approximately one-fifth of the Township as being "prime farmland" in that, under proper management, the land is particularly well suited to food, feed, forage, fiber, and oilseed crops and is capable of producing sustained high yields. The majority of those areas classified as prime farmland are situated in the eastern third of the Township. These prime farmland soils generally overlap those soils identified as producing improved corn yields.

## Groundwater

Generally, precipitation that does not evapotranspire or run off into surface water bodies infiltrates the land surface and is pulled by gravitational forces into subsurface soil and bedrock formations and eventually becomes groundwater. *Groundwater* is a term that is usually reserved for the subsurface water that occurs below the water table in soils and geologic formations that are fully saturated. The process by which water is added to the groundwater system, whether natural or artificial, is called *recharge*.

Aquifers are geological formations that are capable of yielding a significant amount of water to a well or spring. There are typically two types of aquifers, which are called *unconfined* or *confined* aquifers. An unconfined aquifer is an aquifer in which there are no confining (e.g. clay or shale) geologic formations between the ground surface and the zone of saturation. A confined aquifer is an aquifer that is overlain by a confining geologic formation. In Sharon Township aquifers exist in both the unconsolidated soils deposited by glaciers and the underlying bedrock formations.

Generally, groundwater flow within an aquifer is typically from an area where groundwater is being recharged, *recharge area*, (e.g. upland area) toward an area where groundwater is being discharged (e.g. stream, river, or lake). Following is a simplified illustration of the hydrologic cycle on a watershed.



Many factors influence the rate at which water will infiltrate the ground surface and flow through an aquifer. Of these, the permeability of the soil or bedrock is an important factor. Water recharge into or through an aquifer is generally greater when the soil or bedrock formations are highly permeable. Sands and gravels, and fractured bedrock are materials that are generally considered to have a high permeability. The Soil Permeability Map illustrates those areas in Sharon Township where the soil permeability is greatest, and therefore, the potential for water to recharge an unconfined aquifer is greater. The Groundwater Recharge Area Map illustrates those areas of Sharon Township where the potential for groundwater recharge is the greatest. As a whole, much of Sharon Township is considered a significant recharge area, particularly the Sharon Short Hills region. Those areas where the potential for groundwater recharge is the greatest are also the most susceptible to groundwater contamination attributable to improper agricultural, commercial, industrial and household practices, including poorly designed and/or malfunctioning septic systems.

Groundwater for residential, agricultural, commercial, and industrial use is derived from the aquifers within the unconsolidated glacial deposits and bedrock formations. The thickness of the glacial deposits in Sharon Township ranges from approximately 50 feet to slightly more than 200 feet. These glacial deposits generally consist of interbedded layers of coarse permeable materials (e.g. sand and gravel) which form aquifers and finer more impermeable materials (e.g. silt and clay) forming confining layers or aquitards. In much of Sharon Township the uppermost confining layers are below the land surface. Water availability in glacial deposits within Sharon Township is generally favorable to adequate for domestic wells and most large-diameter high-capacity wells; however, an area around Sharonville may be unsatisfactory for large-diameter high-capacity wells. Water quality from wells in these glacial deposits is generally acceptable for potable use.

Of the Marshall Sandstone and Coldwater Shale formations, the Marshall Sandstone formation is the most productive bedrock aquifer. Most wells yield as much as 60 gallons per minute. The water quality of the Marshall Sandstone formation is generally acceptable. However, there are some areas where arsenic is present in the water from this formation at concentrations of concern. Washtenaw County Environmental Health Division of the Department of Public Health has issued an advisory requiring water from newly installed wells in this area to be sampled and analyzed for arsenic. The Coldwater Shale is relatively impermeable and wells installed into the formation generally do not supply water of a sufficient quantity and quality.

Since Sharon Township has extensive areas where the surface soils are suitable for allowing recharge into underlying aquifers and where the uppermost aquifer is considered unconfined, much of Sharon Township's groundwater resources are vulnerable to surface pollutants from improper agricultural, commercial, industrial and residential development and practices. It is extremely important to the township and the region that this resource is protected. Due to the vulnerability of the groundwater resource in Sharon Township and the prospect of growth and development, appropriate land-use and water-use planning is essential. Planning programs and implementation measures, including regulatory tools, should aim to promote pollution prevention practices and minimize disturbances to the quality and quantity of groundwater and recharge areas.

## **Surface Drainage and Water Courses**

Sharon Township is at the headwaters of Mill Creek, and near the headwaters of the Raisin River. Mill Creek flows through the northwest quadrant of the Township and the River Raisin flows through the southwest (see Base Map). These water courses, and their tributaries and associated wetlands, drain nearly the entire township. Mill Creek is part of the Huron River watershed, and flows into the Huron River in Dexter. Both the Huron River and River Raisin subsequently empty into Lake Erie.

The Township includes approximately 60 lakes and ponds. Nearly all are less than three acres in size. The largest water body, covering approximately seven acres, is located along the west side of Sharon Hollow Road in Section 8. River Raisin widens in the southern half of Section 29 where it extends over 15 acres in area.

Lands abutting or in close proximity to drainage courses, including streams, ponds, and lakes, are subject to flood conditions if the drainage courses do not have the capacity to accommodate the rate of runoff from a single or numerous rainfalls over a relatively short period of time. Improperly managed land development practices can exacerbate flood conditions. Improper land development patterns or practices can exacerbate local flood conditions and contribute to flood conditions in communities further downstream. The lower extremities of Mill Creek already experience flash flooding.

The floodplain surrounding the River Raisin is the natural extension of the river and serves a vital function of handling runoff that exceeds the capacity of the primary river channel. In addition to its ability to limit flooding, it provides an environment for numerous wildlife and plant species.

## **Wetlands and Woodlands**

There are approximately 2,700 acres of wetlands in Sharon Township, comprising nearly 12% of its landscape (see Natural Resources Map). The wetlands of the Township generally coincide with the Mill Creek and River Raisin corridors and their respective tributaries. The longest continuous stretch of wetlands follows the headwaters of Mill Creek, extends more than four miles, and covers more than 700 acres. However, an expansive area of smaller wetland pockets extends from the Township's southwest corner in a north-eastward direction through the Sharon Short Hills area and into the northeast quadrant. The vast majority of local wetlands are forested.

Wetlands present severe building and on-site sewage disposal limitations due to soil instability, soil saturation, poor filter qualities, and standing water. Wetlands have a significant environmental role including flood