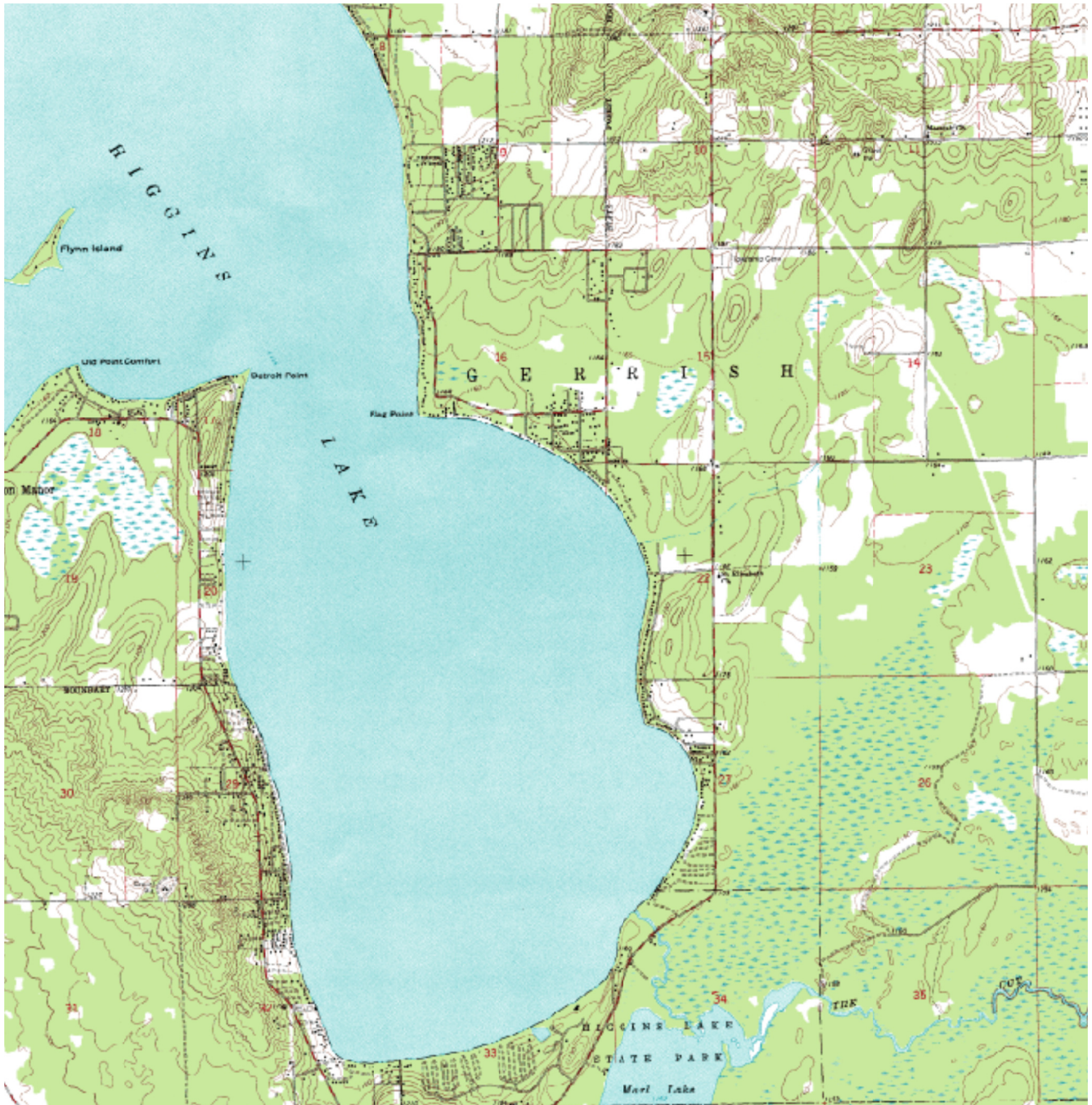


GERRISH TOWNSHIP MASTER PLAN

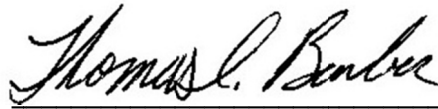


**Gerrish Township
Roscommon County, Michigan**

Statements of Approval

Planning Commission Approval

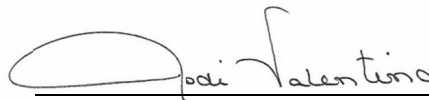
This is to certify that this Master Plan comprises the 2007 Gerrish Township Master Plan approved by the Gerrish Township Planning Commission on September 6, 2007, and revised by the approval of amendments by the Planning Commission on January 14, 2010.

A handwritten signature in cursive script, reading "Thomas L. Barber", written in black ink.

Tom Barber, Chairperson
Gerrish Township Planning Commission

Township Board Approval

This is to certify that this Master Plan comprises the 2007 Gerrish Township Master Plan approved by the Gerrish Township Board on September 11, 2007, and revised by the approval of amendments by the Township Board on February 9, 2010.

A handwritten signature in cursive script, reading "Jodi Valentino", written in black ink.

Jodi Valentino, Clerk
Gerrish Township Board

GERRISH TOWNSHIP MASTER PLAN

Prepared By The
**GERRISH TOWNSHIP
PLANNING COMMISSION**

With The Assistance Of The
GERRISH TOWNSHIP BOARD

and
**Mark A. Eidelson, AICP
LANDPLAN Inc.**

Original Approval

Gerrish Township Planning Commission: September 6, 2007
Gerrish Township Board: September 11, 2007

Approval of Amendments

Gerrish Township Planning Commission: January 14, 2010
Gerrish Township Board: February 9, 2010

**GERRISH TOWNSHIP
ROSCOMMON COUNTY, MICHIGAN**

GERRISH TOWNSHIP MASTER PLAN

ACKNOWLEDGEMENTS

Gerrish Township Board

**Frank Homola, Supervisor
Jodi Valentino, Clerk
Leasa Tulgetske, Treasurer
Mary Link, Trustee
Gary Long, Trustee**

Gerrish Township Planning Commission

**Tom Barber, Chairperson
Mary Ann Russom, Secretary
William Case, Vice-Chairperson
Robert Hoffman
Rick Mordue
James Ostling
Gary Long, Trustee**

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Chapter One

INTRODUCTION

Introduction

This Chapter provides an overview of the Gerrish Township Master Plan and the Master Plan's role, importance, preparation process, and principal policies. It presents the framework for what follows by defining what the Master Plan is and what it is intended to accomplish. Understanding the fundamentals of the Master Plan will enable township residents and officials to appreciate the role it plays in ensuring the future welfare of the community, its residents and its resources. Embracing this Plan as a vital tool in preserving and enhancing the public health, safety, and welfare of the township is essential if this Plan is to be effective. This Plan is intended to serve all township residents, landowners, and visitors, including seasonal and year-round residents. This Plan supports equal recognition of the needs of seasonal and non-seasonal residents.

What is the Master Plan?

Purpose

Just as individuals and families plan for their future well being, so must municipalities. Just as individuals may open savings accounts to save for an addition to their house for a growing family, municipalities must look to the future and take specific actions to address current and future needs. Such actions may involve improvements to the roadway network, improvements to the level of emergency services, and the rehabilitation of deteriorating buildings.

This Master Plan is a policy document that identifies how growth and associated land development should be guided to enhance the future welfare of Gerrish Township. The following key words and phrases can generally describe the Master Plan:

FUTURE ORIENTED: The plan concerns itself with long-range planning to guide and manage future growth and development. The plan is a picture of the township today and 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 and public services.

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 which consists of both text and maps, a key portion of which presents and illustrates the township's policies regarding its planned future land use pattern and associated public services.

DYNAMIC: The Plan is intended to be continually evolving in light of the aspirations of local residents, changing conditions in the township, and new strategies to manage growth.

The Gerrish Township Planning Commission, under the authority of the Michigan Township Planning Act, P.A. 168 of 1959 (as amended), prepared this Master Plan. The 2009 amendments to the Plan were prepared and adopted under the Michigan Planning Enabling Act (P.A. 33 of 2008) which repealed the Township Planning Act in 2008. Section 7(2) of the Act (MCL 125.3807) provides:

(2) The general purpose of a master plan is to guide and accomplish, in the planning jurisdiction and its environs, development that satisfies all of the following criteria:

(a) Is coordinated, adjusted, harmonious, efficient, and economical.

(b) Considers the character of the planning jurisdiction and its suitability for particular uses, judged in terms of such factors as trends in land and population development.

(c) Will, in accordance with present and future needs, best promote public health, safety, morals, order, convenience, prosperity, and general welfare.

(d) Includes, among other things, promotion of or adequate provision for 1 or more of the following:

(i) A system of transportation to lessen congestion on streets.

(ii) Safety from fire and other dangers.

(iii) Light and air.

(iv) Healthful and convenient distribution of population.

- (v) *Good civic design and arrangement and wise and efficient expenditure of public funds.*
- (vi) *Public utilities such as sewage disposal and water supply and other public improvements.*
- (vii) *Recreation.*
- (viii) *The use of resources in accordance with their character and adaptability.*

This Master Plan is not a law or regulatory document, but a "policy plan" to be implemented through, in part, zoning and other regulatory tools. For example, though the Master Plan is not a zoning ordinance, the Master Plan's recommendations and policies serve as a basis for updating the current Gerrish Township Zoning Ordinance. In fact, the Zoning Enabling Act, which provides Michigan townships with the statutory authority to adopt zoning regulations, stipulates that a municipality's land development regulations "...shall be based upon a plan designed to promote the public health, safety, and general welfare, to encourage the use of lands in accordance with their character and adaptability, to limit the improper use of land, to conserve natural resources and energy,..." This Master Plan addresses this statutory requirement and ensures a strong legal foundation for the Township's zoning regulations.

Elements of the Master Plan

This Master Plan consists of the following key components:

- 1) Chapter One – Introduction presents an overview of the purpose and role of the Plan, the process followed in its preparation, key planning policies, and a summary of township conditions.
- 2) Chapter Two – Planning Issues, Goals and Objectives presents a discussion of important planning issues facing the township today, and associated goals and objectives that address these issues.
- 3) Chapter Three – Future Land Use Strategy presents policies addressing the planned future land use pattern for the township and coordinated public services.
- 4) Chapter Four – Coordinated Public Services presents policies addressing the coordination of public services with the planned future land use pattern and the township's overall welfare.
- 5) Chapter Five – Implementation presents implementation measures to effectuate the policies of the Plan.
- 6) The Appendices present an overview of existing conditions and trends in the township,

addressing cultural features such as roads, land use, and public services (Appendix A); natural features such as soils, topography, and water resources (Appendix B); and demographic features such as population, housing, and income (Appendix C).

Importance and Application of the Master Plan

The importance and application of the Gerrish Township Master Plan are demonstrated in: 1) the long-term interests of the township; and 2) 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 today that can be expected to continue for years to come and be similarly shared by future residents and new officials. Some of these important interests include:

- Protecting the township's rural and resort atmosphere.
- Protecting the quality of life.
- Protecting the township's natural resources, including Higgins Lake and its shorelines, state forest lands, other woodlands and wetlands, and wildlife.
- Minimizing tax burdens.
- Ensuring appropriate land use and adequate services to protect the public health, safety, and welfare of residents and visitors.
- Ensuring compatibility with the use and development of neighboring properties.

The Master Plan supports these long-term interests by providing a future-oriented strategy that aggressively seeks to further these interests. Chapter Two establishes goals and objectives, and Chapter Three establishes future land use and public services strategies, to secure these and other long-term interests.

Day-To-Day Administration

In addition to furthering the long-term interests of the township, the Master Plan also plays an important role in the day-to-day planning and zoning efforts of the township:

- Advisory Policies: The Plan is an official advisory policy statement that should be readily shared with existing and prospective landowners and developers. The Plan informs them of the long term intentions of the township regarding land use and encourages development proposals more closely integrated 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, including zoning and land division regulations, intended to ensure that the policies of the Plan are implemented.
- Review of Land Development Proposals: Chapter Two includes a list of township goals and objectives which should be reviewed when consideration is given to future proposed rezoning requests, site plans, and related land use proposals, to further establish a record upon which the proposal can be evaluated. Equally important, Chapter Three provides policies regarding the planned future land use pattern in the township –valuable reference points upon which land use proposals should be evaluated.
- Public Services Improvements: The identification of a planned future land use pattern enables the township to pinpoint areas that may be in need of current or future public services improvements. The identification also enables the township to better determine areas of future need, rather than playing "catch-up" while the township's health, safety, and welfare may be at risk. Chapters Four and Five provide important guidance in this area.
- Intergovernmental Coordination: This Plan provides the basis for township officials to communicate effectively with nearby communities regarding both the impact of their planning and zoning actions and opportunities for mutual gain through coordinated efforts in the areas of land use and public services.
- Factual Reference: The Plan includes a factual overview of relevant trends and conditions in the 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

Gerrish Township adopted a master plan in 1996. The township undertook the development of a wholly new Plan in 2005 as part of its commitment to actively guide the evolution of the community and maintain responsive and effective land use, preservation and public service policies.

The Planning Commission's initial efforts were directed at establishing a database about the Township for use during the planning process. This involved a review of physical and cultural conditions in the township including soils, topography, road

network, existing land use patterns, public services, and demographic characteristics.

A mail survey was administered to gain insight into local attitudes on land use, development, preservation and public services. Some of the dominant attitudes expressed by the survey respondents included:

- manage growth and development.
- maintain rural/resort character.
- protect natural resources.
- limit commercial and industrial development.

The Planning Commission then directed its efforts to identifying the important planning issues facing the community and established a set of goal and objective statements to address these issues and guide the policies of the Plan.

Several alternative future land use patterns and strategies were then developed based upon the data collected to date and the goals and objectives statements. The Planning Commission studied these alternatives and selected the most preferable. Based upon the selected alternative, the Planning Commission assembled a complete draft of the Plan suitable for presentation to the community. The Planning Commission held a public hearing on the draft Plan on May 3, 2007 and, after making refinements to the Plan, approved the Plan for adoption by the Township Board. The Township Board adopted the Plan on September 11, 2007.

Throughout the development of the Plan, the township followed the procedural requirements of the Township Planning Act including notification of neighboring communities of the township's intent to prepare a plan, and the township's subsequent solicitation for input from neighboring communities on the draft plan. The consideration of and adoption of subsequent amendments similarly complied with the statutory requirements of the Planning Enabling Act.

Overview of Planning Policies

This Plan presents a coordinated strategy that addresses growth, development and preservation. The Plan supports the continuation of Gerrish Township as a rural resort community characterized predominantly by seasonal and year-round residences and abundant resource-based recreational opportunities including Higgins Lake, state forest land and state park recreation facilities.

The Plan supports single family residences as the predominant character of future housing. The Plan supports the protection of the character and stability of the Higgins Lake residential areas, and provides

opportunities for comparably higher density living arrangements (small lot subdivisions, apartments, townhouses, and retirement centers) northeast of I-75 and in the southwest corner of the township. The lowest development densities are proposed in the balance of the township including in areas characterized by abundant state forest land and areas more distant from Higgins Lake.

The Plan supports the township's existing commercial nodes and proposes commercial development be limited to such locations including the CR 100/103 intersection area, CR 100/101 intersection area, E. Higgins Lake Rd./Federal Highway intersection area, CR 200–Detroit Point area, and CR 200–W. Pine intersection area. All of these areas are intended to accommodate commercial development of a local character, catering to the day-to-day needs of the local population including vacationers.

Industrial uses are proposed to be accommodated along limited segments of Federal Highway as part of planned mixed commercial-industrial locations, in addition to a proposed industrial node along CR 103 near the I-75 interchange.

The Plan recognizes Gerrish Township is characterized by abundant forests and wetlands, and the special water resources of Higgins and Marl Lakes, and embodies a strong preservation theme.

Gerrish Township Overview

The following is a brief overview of Gerrish Township. A more detailed review of the township's trends and conditions can be found in Appendix A, B, and C.

Gerrish Township is located in the northwest quarter of Roscommon County in the upper central region of Michigan's Lower Peninsula. I-75 travels through the northeast corner of the township and US-127 travels within three miles of its west boundary. The Village of Roscommon, with a 2000 population of 1,133 persons, is located one mile east of the Township's northeast border and is the nearest urban center. The nearest major regional urban center of 8,000 population or more is Cadillac, 40 miles southwest (2000 population of 10,000). Aside from the scattered small urban centers in the 40-mile radius of Gerrish Township, the regional landscape is dominated by agriculture, scattered residential development, and state forest lands. Located centrally within the upper half of Michigan's Lower Peninsula, the Higgins and Houghton Lakes area is one of Michigan's most popular water-based recreation and tourism area.

The township's topography can be generally described as level to rolling. Drainage is facilitated in large part by the rapid permeability of the sandy soils. Much of the surface and groundwater flow that does occur finds its way into Higgins Lake. The lake is the most dominant and unique natural feature of the community. Higgins Lake covers approximately 10,300 acres (15.6 square miles), two-thirds of which is located in Gerrish Township. The lake is more than six miles in length and three miles in width, and includes nearly 21 miles of shoreline. The lake's considerable depth, clear water, water quality and sandy bottom make it one of the state's most popular fishing, boating and recreation-based water bodies. State forest lands comprise approximately 6,600 acres of the township's 17,680 land-based acres, or just over one-third of the township's land area. Higgins Lake and the abundant state forest lands, and the South Higgins Lake State Park at the south end of the lake and North Higgins Lake State Park nearby, make Gerrish Township a major tourism area. The population of the community drops significantly during the winter months and increases with the coming of the warm months.

Residential development comprises approximately 14% of the land acreage in Gerrish Township. The 2000 Census recorded 3,347 dwelling units, many of which are vacant through much of the year as part of the seasonal character of the community. Residential development can be divided into two principal forms – subdivision development of comparatively high density along the Higgins Lake shoreline and randomly scattered home sites of varying acreage beyond the Higgins Lake area, many of which are dispersed among the state forest lands and 5 – 10 acres in size.

Commercial development in Gerrish Township covers approximately 75 acres. The majority of commercial uses address consumer needs and services of local populations as well as uses that cater to the seasonal tourism. Some of the uses include a beauty parlor, auto collision shop, restaurant, sports accessory sales, bank, laundromat, insurance company, hardware sales, real estate sales, service station, gift shop, and mini-storage facilities. Commercial areas are of a strip development pattern and limited to three principal locations: a) along Federal Highway in the northeast corner; b) along CR 100 in the township's central region; and c) along CR 200 near its west boundary directly south of Higgins Lake. Industrial activity is not present in the township except for a gravel extraction operation.

A five member Township Board governs Gerrish Township. Township offices are located in the Township Hall on the west side of CR 100 approximately one-half mile south of Robinson Lake Road (between the fire and police station). The Hall includes the offices of local officials and staff and a large meeting room. Government services are funded through several measures including fees, special assessments, and a tax levy.

Gerrish Township provides fire protection to area residents through the Gerrish Township Fire/EMS Department. The Township operates two fire stations, one on each side of Higgins Lake. Gerrish Township provides police protection services through the Gerrish Township Police Department. The township's single police station is located directly north of the Township Hall on CR 100. Aide is also provided by the Roscommon County Sheriff's Department and State Police in times of need. The fire department also operates the township's ambulance/EMS program. There is no public sewer or water service in the township.

With the presence of Higgins Lake, the state forest lands and state parks, recreation is a fundamental part of Gerrish Township. In addition to these recourses, local residents and visitors are also able to enjoy local parks operated by Gerrish Township, the facilities of the Gerrish-Higgins School District, private local enterprises (including campgrounds, country clubs and golf courses, canoe liveries, and boat clubs), and the many local parks managed by area-wide municipalities.

Chapter Two

PLANNING ISSUES, GOALS & OBJECTIVES

Introduction

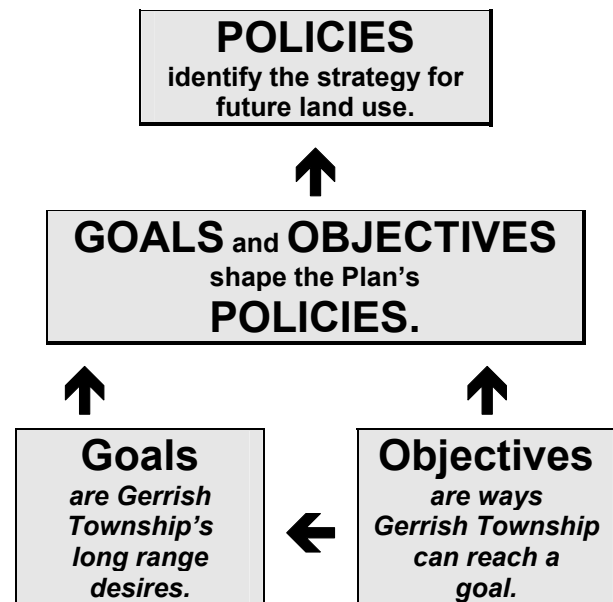
The primary goal of this Plan is to establish a basis for future land use and public services. Through the development of this Plan, the township chose to be actively involved in guiding and shaping future growth and development in the community and not allow the community to evolve merely by chance. To effectively plan for the township's well being with regard to future land use and public services, it is necessary to identify important planning issues facing the community and clarify its long term goals and objectives. 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 and are clearly inter-related. The future quality of life and character of the township will be largely shaped by the township's strategy in dealing with these issues. Each issue presented in this Chapter is followed by a set of goal and objective statements. Planning goals are statements that express the township's long range desires. Each goal has accompanying objectives that are general strategies that the township will pursue to attain the specified goal. For example, a goal of the Robinson family may be to open a "bed and breakfast" in Gerrish Township, while two of the family's objectives may be to seek a loan and meet with a real estate agent to look at properties.

The goals and objectives are important for several reasons:

- The goals and objectives provide current and future residents with an overview of the intended future character of the community.
- The goals and objectives identify and outline the basic parameters which should be used in guiding land use and public services policies.
- The goals and objectives serve as references upon which future rezoning 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 the following major categories:

- Growth Management, Economic Development and Public Services
- Community Character
- Natural Resources and the Environment
- Housing
- Commercial Services
- Industrial Development
- Circulation
- Regional Coordination

The planning issues presented in the following pages are not intended to be all inclusive. Rather, they are presented as the primary issues that the community must address as it establishes a future for itself. These issues will evolve over time and should be reexamined periodically and the appropriate modifications made.

The objectives listed on the following pages should not be interpreted as limitations on the township's efforts to reach its goals. The township's commitment to the following objectives does not preclude it pursuing other objectives that it determines are beneficial. In addition, the objectives listed are not time specific. The township may choose to act on certain objectives within a shorter time frame than others.

Growth Management, Economic Development, and Public Services

Gerrish Township is a very desirable place to live with abundant natural resources and open spaces and land and water-based recreational opportunities; easy access to highways and employment centers; an overall rural character; and nearby retail and other urban services. It is reasonable to expect the township's strong growth rate over the past 30 years will continue for the next 10 years or more, with the addition of 1,000 persons and 500 dwellings (or more) by 2020 (see Appendix C). 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 or degradation of natural resources including woodlands and water resources, 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, the 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. Commercial and industrial development has been shown to typically have a more positive impact upon the economic stability of a community. Based on survey respondents, current police, fire protection, ambulance, and recreation services, and the roadway network, appear to be meeting the present needs of area residents. High growth rates that may be brought on by market conditions and/or 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. Development patterns that minimize new public costs should be sought where practical. Further, economic development can minimize tax burdens as efforts to maintain and improve public services are pursued.

However, economic development interests should not be at the cost of a healthy natural environment.

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 Gerrish Township. The accommodation of growth and development should assure compatibility between land uses and the preservation of the dominant rural character of the community.

GOAL: *Guide future development in a manner that assures land use patterns compatible with public facilities and services and the cost-effective use of tax dollars, preserves the township's natural resources and rural character and minimizes conflicts between differing land uses.*

Objectives

- 1) Identify locations in the township by sound planning and zoning that are appropriate for residential and non-residential use, taking into account the constraints and opportunities presented by the township's natural features and the availability of public facilities and services, including road infrastructure.
- 2) Encourage forms of growth and development that minimize public service costs and adverse impacts to the community's natural resources, including compact forms of development that adhere to reasonable limitations on the intensity of development.
- 3) Preserve the township's natural resources through a coordinated future land use strategy and related implementation tools that permit reasonable use of land while discouraging unnecessary destruction or loss of natural resources, including woodlands, wetlands and water resources.
- 4) Apply effective land use and development review regulations to ensure development is compatible with the policies, goals and objectives of this Plan.
- 5) Separate incompatible land uses by distance, natural features, or man-made landscape buffers that adequately screen or mitigate adverse impacts.
- 6) Guide development into areas where public facilities and services have adequate capacity to accommodate the growth and increased development intensities, and where the provision or expansion of public facilities is cost effective.
- 7) Discourage growth and development that requires levels of public facilities and services not available.

- 8) Discourage public services improvements that will have the effect of encouraging excessive growth and development, or development at a rate beyond the township's ability to ensure adequate public health, safety, and welfare, or development in areas of the township not designated for such growth.
- 9) Wherever legally permissible, local regulations should require new developments to pay to the township for the direct and indirect public services costs associated with that development. These costs should not be imposed on existing residents, except where public interests and benefits may be at stake.
- 10) Continually monitor local attitudes about public facilities and services, including police and fire protection, potable water and sewage disposal, and recreation, and provide regular opportunities for substantive public input on growth and development issues.
- 11) Recognize that recreational opportunities are a fundamental component and asset of the township, and continually explore and undertake steps to maintain and enhance this asset including services that address year-round and accessible opportunities for all age groups.
- 12) Evaluate rezoning petitions, site plans, and other development decisions according to the policies, goals and objectives of this Plan.
- 13) Update zoning and other regulatory tools to implement the Plan's policies, goals and objectives.
- 14) Encourage economic stability, including the maintenance of a healthy tourism industry, in a manner that balances economic development with the preservation of the township's natural resources.

Community Character

The character of Gerrish Township can be described on many levels. The visual character is defined, in part, by Higgins Lake, abundant state forest lands, rural residential areas and more suburban lakeshore development, and several commercial areas. Higgins Lake and the state forest lands, and the tremendous recreational activities and tourism that evolves around these resources, provide a resort atmosphere for many. The township is defined by its sense of peacefulness and, like many other "up-north" communities, a place of excitement and leisure in the midst of nature's beautiful treasures. It is a community that is defined by the wisdom of its many retirees while also serving as a place of nourishment for young persons and families. It is a community of year-long residents and residents and visitors who make the community their home for only weeks and

months at a time. The protection of the township's character is very important to the residents of Gerrish Township.

Most of the township is very rural in character. "*Rural character*" is a subjective quality, but is typically associated with an overall perception of limited development, and extensive open spaces. Recognition of the more suburban/urban areas of the community, such as the abundant subdivisions along Higgins Lake and several commercial centers, is equally important. Though these areas occupy a comparatively small portion of the community, they significantly contribute to the overall fabric of the township and its character.

Residents strongly support the existing character of the community including its visual features and natural resources, atmosphere, and way of life. Managed growth and development encourages the continuation of the township's character. The preservation of community character is, in part, dependent upon site development practices that encourage compatibility in regard to building scale, architecture, lighting, landscaping and screening, signage, and related development issues.

GOAL: *Maintain Gerrish Township as a beautiful and quiet "up-north" rural community dominated by abundant natural resources and recreation opportunities, creating a resource-rich resort setting and appealing to all age groups and family cycles.*

Objectives

- 1) Encourage land development designed in scale with existing developed areas and the dominant rural character of the community, through reasonable standards addressing density, building size, height, and other development features.
- 2) Encourage land development which actively strives to preserve natural open spaces (woodlands, wetlands, and fields) as part of a development project.
- 3) Encourage the maintenance of historically significant structures and a structurally sound housing stock, and the rehabilitation or removal of blighted structures and yard areas.
- 4) Encourage the preservation of Higgins Lake and the state forest lands as dominant defining features of Gerrish Township, including their visual character, environmental integrity, and recreation value.
- 5) Update zoning and other regulatory tools to implement the "Community Character" goal and objectives.

See also “Natural Resources and the Environment” below for additional objectives addressing community character.

Natural Resources and the Environment

One cannot speak of community character preservation in Gerrish Township without acknowledging the tremendous impact its natural resources play in defining the community's character. These resources include the magnificent Higgins Lake, abundant state forest lands that include upland and lowland ecosystems, wetlands including lengthy wetland corridors, the Cut River and lesser streams, and fields. These elements are important in shaping the character of Gerrish Township but also provide vital environmental roles including wildlife habitats, flood control, water purification, groundwater recharge, and air quality enhancement. These same resources play a fundamental role in recreation in the community, particularly Higgins Lake and the state forest lands. Preservation of these resources can be very difficult because encroachment and degradation can occur slowly. Substantial damage to an entire ecosystem frequently occurs over a long period of time. Increased environmental knowledge, awareness, and education, when incorporated into a comprehensive planning strategy, can minimize the potential for environmental degradation.

Residents strongly support the preservation of the township's natural resources. Managed growth and development encourages the long-term integrity of its natural resources. The preservation of environmental resources in the face of growth and development is dependent upon complimentary planning policies and land use regulations, and site development practices that actively incorporate the protection of open spaces, natural resources and environmental ecosystems into the development plan. While the presence of the state forest lands and Higgins Lake seem to assure future generations of abundant open space, the preservation of the integrity of these resources will none the less require appropriate practices and action in the present.

GOAL: *Preserve the integrity of the township's natural resources including Higgins Lake and its other water resources, wetlands, woodlands, other open spaces, and groundwater.*

Objectives

1) Document and periodically update resource inventory data such as water bodies and drainage courses, wetlands, woodlands, and sites of contamination, for use in land planning studies and land use and development decisions.

- 2) Encourage land development which actively strives to preserve natural open spaces (woodlands, wetlands, and fields) as part of the development plan.
- 3) Ensure that the quantity and quality of new development does not unreasonably create increases in air, noise, land, and water pollution, or the degradation of land and water resource environments including groundwater.
- 4) Recognize the special environmental role of Higgins Lake, Marl Lake, Cut River, and the abundant state forest lands, and discourage development that will disrupt their natural character and environmental integrity.
- 5) Discourage land use and development patterns along the Higgins Lake shoreline, and near wetlands and other special resource areas, that will undermine the environmental integrity of such resources.
- 6) Maintain regular communication and cooperative efforts with public and private agencies with special interests in the preservation of Higgins Lake's environmental integrity and recreational value, including surrounding townships, county health officials, Higgins Lake watershed preservation groups, and the various lake associations and foundations.
- 7) Regularly monitor surface and groundwater resources in association with Higgins Lake to identify conditions, trends, action plans, and the effectiveness of such plans and preservation efforts.
- 8) Educate the public about critical measures that help to protect the environmental integrity and recreation value of Higgins Lake including management of yard waste and fertilizer use, minimizing impervious surfaces, maintenance of shoreline vegetation, avoidance of erosion and sedimentation, and properly operating septic systems.
- 9) Encourage development plans that recognize the importance of preserving environmental corridors across multiple parcels and the community as a whole.
- 10) Maintain regular communication and cooperative efforts with the state to encourage the preservation of the integrity and long-term presence of the state forest lands in the community.
- 11) Limit development densities in environmentally sensitive areas.
- 12) Guide more intensive land uses away from environmentally sensitive areas and important natural features.

- 13) Ensure that all development is in compliance with applicable local, county, state, and federal environmental regulations.
- 14) Discourage the expansion of public utilities into areas dedicated to conservation and resource protection.
- 15) Review proposed development in light of its potential impact upon Higgins Lake, state forest lands, wetlands, and other natural resource areas.
- 16) Educate the public about waste management and the township's fundamental reliance upon groundwater resources for potable water supplies and the potential detrimental effects of irresponsible land use and development practices including improperly functioning septic systems.
- 17) Update zoning and other regulatory tools to implement the "Natural Resources and the Environment" goal and objectives.
- 18) Encourage the enjoyment of Higgins Lake in a manner that balances recreation and lakefront living with the preservation of the lake's environmental quality.

Housing

Residential development will likely be the major land use change in the coming ten to twenty years. Gerrish Township is a very attractive place to live for many prospective residents, as demonstrated by the extensive Higgins Lake shoreline development and the increasing level of residential development elsewhere in the community.

Rural and suburban residential lifestyles are readily available in Gerrish Township. The township is interested in providing reasonable options for additional and varied housing opportunities. Opportunities for rural and suburban residential lifestyles are plentiful and will continue to be so. Soil conditions do not typically preclude home sites of approximately one acre or more in size. The lack of municipal sewer and water significantly limits opportunities for more varied and affordable housing. However, recent changes in the MDEQ's rules and regulations facilitate the development of community sewer systems that serve individual subdivision developments. Thus, it is important to recognize the feasibility of higher-density development options in the township.

Establishing suburban and urban development areas is important as part of the township's efforts to provide varied housing opportunities for current and future residents and limit the extent of residential encroachment into less prudent areas such as within or near state forest lands and wetlands. In addition, public studies during the past 10 years have

consistently documented that multiple family development, unlike low-density residential development, typically generates more municipal revenue than the cost to provide it with services.

While residential growth is commonly viewed as a more positive feature than commercial or industrial expansion, it too should be based on sound planning principles. It will be the future residential development that will have the greatest long-term impact on the township's natural resources, demand for public services, and overall community character. In addition, the proper placement and design of residential development of a more urban character, including multiple family dwellings, is critical if such development is to have limited impact upon the character of existing residential areas, the community's dominant rural character, and the cost-effective delivery of public services.

Future residential development can be efficiently accommodated and need not consume unnecessary natural resources and open spaces. The actual land area needed for future residential development is comparatively small. If Gerrish Township's population grows by 1,000 persons by 2020, approximately 500 acres of undeveloped land would require conversion to residential use to accommodate the additional 435 dwellings (based on an average lot size of 1.0 acres and a household size of 2.3 persons). However, the same 435 dwellings can consume as much as 2,500 acres (approximately one third of the remaining private vacant land acreage in the township) or more if located on large lots of five to ten acres or more in size. This less efficient development pattern can dramatically accelerate the rate at which undeveloped lands are converted to residential use or otherwise disturbed. It must also be recognized that small acreage zoning across the township without any density limitations, such as one acre zoning, provides for a build-out population (the population resulting from all land being developed at a density of 1 dwelling per acre, exclusive of wetlands and future road rights-of way) approaching 6,000 dwellings and 15,000 persons. Such a growth pattern will have dramatic effects on community character, natural resources, taxes, and public services demands.

GOAL: *Provide a healthy residential environment in which persons and families can grow and flourish, and which responds to the opportunities and constraints of the township's public services and natural features, and preserves the overall rural and single family housing character of the community.*

Objectives:

- 1) Encourage the continued dominance of rural single family housing on lots of one-half acre or greater as the principal housing option.
- 2) While maintaining single family housing on lots of one-half acre or greater as the primary housing option, provide opportunities for alternative housing to meet the varying preferences of current and future residents, including small lot single family dwellings and multiple family housing.
- 3) Correlate permissible land uses and development intensities with the presence, or lack thereof, of important environmental features.
- 4) Limit development densities in environmentally sensitive areas.
- 5) Identify limited areas in the township where higher density residential development, including multiple family development, can be adequately accommodated. Priority should be given to locations that have greater access to improved thoroughfares and necessary public services, and within walking distance of business districts.
- 6) Discourage strip residential development along the frontage of existing state and county roads such as CR 100, 104, and 200, to minimize traffic safety hazards and congestion and preserve the existing rural character of the principal thoroughfares.
- 7) Encourage innovative residential development that incorporates in the site planning process the preservation of natural resource systems and open spaces, and the preservation of the township's rural character.
- 8) Encourage opportunities for special housing for senior citizens to enable their continued stay in the township, including apartments, assisted living arrangements, retirement centers, and nursing homes.
- 9) Encourage a housing stock that ensures affordable housing to all, including starter homes, manufactured homes, and multiple family dwellings, while also ensuring all dwellings are of appropriate design and scale to complement nearby conditions and the community as a whole.
- 10) Discourage uses and structures in residential areas that undermine the residential character and peacefulness of such areas, or increases conflicts between landowners such as accessory buildings of excessive size or inappropriate location.
- 11) Discourage commercial encroachment into residential neighborhoods.
- 12) Encourage the rehabilitation of blighted homes and residential properties.
- 13) Encourage a tourism industry that minimizes negative impacts upon residential areas including the maintenance and management of rental properties.
- 14) Update zoning and other regulatory tools to implement the "Housing" goal and objectives.

Commercial Services

Commercial development in Gerrish Township covers approximately 75 acres and consists of predominantly retail and service-based uses. Commercial development is principally limited to Federal Highway, along CR 100 near CR 103, and along CR 200 east of the township line.

Addressing commercial development includes considerations of need, location and character. Determining "need" can be examined on multiple levels. Studies have been undertaken to identify guidelines that may address appropriate land use ratios, although they do not specifically address rural communities such as Gerrish Township. Further, each community is unique, with its own set of circumstances including infrastructure, existing land use pattern, growth, and public perceptions. Still, their findings provide insight.

Studies in the 1980s by the American Planning Association, focusing on both large and small cities, found that an average of approximately 8% of a community's developed land area was devoted to commercial use. Direct comparison to Gerrish Township is not realistic as the township is far from an urbanized community. Still, it must be noted that Gerrish Township's current 75 acres of commercial land comprises approximately 2.5% of its total developed land area, or nearly one-third of the proportion typically found among cities in the study. A 1989 study by David Van Horn, focusing on four counties in Florida, California, and Tennessee (including rural areas), found that the average number of commercial acres on a county-wide basis was 7.2 acres per 1,000 population (Urban Land, 1989). It is reasonable to expect that a significant lower ratio exists if all cities and villages are excluded. Gerrish Township's current 75 acres yields a ratio of 24.2 acres of commercial development per 1,000 population. According to the 1985 Shopping Center Development Handbook, published by the Urban Land Institute, the township's population of approximately 3,100 is considered generally adequate to support the smallest of the classifications of commercial centers – the *neighborhood* center. The neighborhood center is considered to require a base population of 3,000 – 4,000 persons and approximately 5 – 10 acres in size.

These studies suggest that, based on land use and population, the level of commercial development in Gerrish Township is adequate today and will continue to be adequate for some time. Public sentiment also suggests that commercial expansion should not be a goal of the township at this time. However, it must also be recognized that Gerrish Township has a strong tourism economy and is home to a major state park and is within a half mile of a second state park. Many visitors to the township bring consumer needs as well. In addition, if the township desires to more aggressively pursue the long-term economic stability of the community, some commercial expansion may be advantageous. While survey respondents were not supportive of new commercial development, those consumer services that respondents were most desirous of were similar to common tourist interests including restaurants, grocery stores, and retail shops.

The viability of future commercial development within a community is directly linked, in part, to access, visibility, activity areas, and improved levels of public services such as road, sewer and water infrastructure. Locating future commercial development with recognition of these factors will improve its long term viability, minimize additional public costs, have less negative impacts upon residential areas, and avoid inefficient development patterns. To this end, and to the extent additional commercial development is accommodated in the community, special attention should be directed toward the I-75/Federal Highway interchange and CR 100, 103, 104, and 200.

Commercial uses can vary significantly in character, ranging from retail to office, professional and other services, and ranging in size and scale from a small local hardware store to large department stores or multi-plex movie theaters. As commercial uses are of varying character, so are their impacts upon abutting land uses, the community as a whole, and neighboring municipalities.

GOAL: *Provide for a range of commercial services that cater to the needs of local residents and visitors in a manner that supports the predominant rural character of the community, minimizes new public service costs, and protects the viability and desirability of the Township's residential areas.*

Objectives

- 1) Recognize the significance of key thoroughfares such as CR 100, 103, 104, and 200, and the I-75 interchange as potential opportunities for the location of new commercial development.

- 2) Ensure new commercial development is in character and scale with surrounding land uses, considering such features as building size and height, architectural design, setbacks, signage, landscaping and screening, and open spaces.
- 3) Future commercial development should be clustered in appropriately identified locations rather than be permitted to indiscriminately encroach into residential areas.
- 4) Focus new commercial development toward existing commercial areas and encourage consolidated commercial centers rather than strip development patterns.
- 5) Provide opportunities for a mix of commercial uses that predominantly target local day-to-day consumer needs, and discourage "big box" and other large scale retailers that cater to a more regional population.
- 6) Encourage landscaping and screening to insure commercial development is sensitive to the dominant rural character of the community and minimizes adverse impacts on the normal use and enjoyment of adjoining land.
- 7) The intensity of commercial development should be coordinated with available public facilities and services.
- 8) Provide opportunities for home-based occupations within residential dwelling units under conditions which will preserve the surrounding residential character, appearance, and quality of life.
- 9) Update zoning and other regulatory tools to implement the "Commercial Development" goal and objectives.

Industrial Development

Industrial development is presently limited to a cement manufacturing operation on the north side of Federal Highway and a gravel extraction operation on Pine Drive. The township is largely void of any traditional industrial activity such as assembling or manufacturing.

According to Planning Design Criteria (DeChiara and Koppleman, 1969), a general guideline for the ratio of industrial acreage to a community's population is 12 acres of industrial land for each 1,000 population. This ratio would yield approximately 36 industrial acres for Gerrish Township's current 3,100 residents, and approximately 50 acres in 2020 if the township grows by an additional 1,000 persons. These guidelines suggest the need for industrial expansion. However, the current absence of assembling, manufacturing, and related industrial activities is not surprising. The township lacks some of the key conditions that support such development including

public sewer and water, immediate proximity to a highway interchange, and a strong year-round population base. In addition, other regional urban centers present more appealing opportunities, and public sentiment does not support industrial expansion. However, it must be recognized that not all industry requires heightened levels of public services, infrastructure, and access. In addition, industrial development can improve the community's overall economic stability and provide additional local employment opportunities. As the intensity of industrial development increases, so typically does its reliance on public infrastructure including water, sewer, and roads. Locating future industrial development in recognition of these factors will minimize additional public costs.

Industrial development can vary from low to high-intensity, and its impacts upon adjoining and near-by land uses can similarly vary. As its intensity increases, greater distance from residential areas is favored. Existing conditions in the township suggest any future industrial development be of a comparatively limited and light character.

GOAL: *Establish a limited industrial component in the township that is sensitive to predominant rural character of the community, characterized by light intensity operations of limited public services demands and impacts upon neighboring land uses.*

Objectives

- 1) Recognize the significance of key thoroughfares such as CR 100, 103, 104, and 200, and the I-75 interchange, as potential opportunities for the location of new industrial development.
- 2) Assure new industrial development is in character and scale with surrounding land uses, considering such features and building size and height, architectural design, setbacks, signage, landscaping and screening, and open spaces.
- 3) Future industrial development should be clustered in appropriately identified locations rather than be permitted to indiscriminately encroach into residential areas.
- 4) Limit industrial uses to those which are predominately characterized by assembly activities and similar "light" operations that do not require the processing of raw materials or added levels of public services, nor negatively impact surrounding land uses and the community as a whole.
- 5) Encourage industrial uses to locate within industrial parks, characterized by ample open spaces, landscaping, and buffering.
- 6) Update zoning and other regulatory tools to implement the "Industrial Development" goal and objectives.

Circulation

As new residential and non-residential land uses are introduced into the township, demands on the roadway network will increase. Even low density residential development can significantly increase local traffic levels. This increased traffic may lessen the level of service along some of the township's roads. Conversely, it must be recognized that road improvements may attract new development which, in turn, will place additional demands on the roadway network. Increased traffic demands can be minimized through adequate road maintenance and the coordination of road improvements with the planned future land use pattern and designated growth and development areas.

Opportunities are presented by the township's improved thoroughfares and appropriate land use management can maximize their potential and minimize adverse impacts to other road segments. The extent to which higher density and intensity land uses, including commercial and industrial land uses, are in comparatively close proximity to these key thoroughfares will minimize future maintenance costs and traffic levels along the township's other roads.

The future pattern of residential lot splits and subdivisions will have a significant impact upon the township. Much of the residential development in the township today is of a strip pattern – residences are "stripped" along the existing county road frontages. This pattern of lot splits can be debilitating because: 1) the increased number of driveways directly accessing the county roads increases the level of congestion and safety hazards along these corridors; 2) travel times are increased; and 3) the township's rich rural panoramic views of woodlands, fields, and other open spaces, as experienced from the roads, may be reduced to images of driveways, cars, and garages.

The busiest thoroughfares today are CR 100, 104, and 200. These roads are used extensively by local residents, visitors, and commuters. They are particularly vulnerable to strip development by both residential and commercial uses. Improperly managed, these thoroughfares have the potential to evolve into corridors of strip malls and homes, signage, and expansive parking areas and parking lighting. This development pattern will undermine the function of these corridors, encourage congestion and traffic hazards, and alter the essential perception of the dominant rural character of the community.

Providing bicycle and pedestrian access within and between communities has long been identified as an important goal in improving quality of life. The past 20 years have witnessed an unprecedented surge in interest in trail systems on the local, state, and federal level as their value gains greater understanding. These trails can limit the reliance on the automobile, improve the health of local residents, and improve the quality of leisure time.

GOAL: *Maintain a transportation network throughout the township that encourages efficient and safe travel, consistent with the rural character of the community and coordinated with the planned future land use pattern.*

Objectives

- 1) Identify priority road segments for systematic maintenance and improvement, based upon the planned future land use pattern and existing and projected traffic patterns.
- 2) Discourage high-traffic generating land uses and development patterns along the township's secondary roads.
- 3) Pursue access management measures to minimize the potential for traffic congestion and safety hazards along adjacent roadways, including limitations on the number, size, and shape of new land divisions, the discouragement of "strip" development, and limitations on curb cuts.
- 4) Encourage future residential lot split patterns that maintain the integrity of the township's roadway network and rural character.
- 5) Work with the Roscommon County Road Commission to discourage road improvements that will increase growth and development pressures in areas of the township not specified for such growth.
- 6) Encourage the inclusion of pedestrian/bicycle paths in association with new residential subdivisions and non-residential development to facilitate safe and convenient non-motorized movement.
- 7) Encourage the linking of residential and commercial centers through pedestrian, bike and snowmobile trails.
- 8) Maintain communication and cooperative efforts with the Roscommon County Road Commission to improve opportunities for safe non-motorized travel.
- 9) Encourage incremental improvements to road segments that do not permit adequate access including emergency vehicles.

Regional Coordination

Gerrish Township exists within a regional network of communities, none of which are islands unto themselves. Gerrish Township abuts the townships of Markey, Beaver Creek, Higgins, and Lyon, and the Village of Roscommon is one mile east. Gerrish Township and nearby municipalities can greatly benefit by cooperatively pursuing common goals in the areas of land use and public services where mutually beneficial. Planned land uses, public services and preservation efforts should take into consideration conditions in these abutting communities. Land use planning efforts should seek to establish a land use pattern compatible with surrounding conditions provided the goals of the township are not undermined.

GOAL: *Guide future development and public services in a manner that recognizes the position of Gerrish Township within the larger region and the mutual impacts of local planning efforts.*

Objectives

- 1) Where practical, identify a planned future land use pattern that seeks to ensure compatibility among land uses along municipal borders.
- 2) Maintain a meaningful communication program with area municipalities and county agencies to discuss local and area-wide public facilities and services needs, land use conditions and trends, preservation goals and objectives, contemporary planning issues, and other mutually beneficial strategies to address short and long-term needs.

Chapter Three

FUTURE LAND USE STRATEGY

Introduction

Gerrish Township's principal planning components are contained in the Future Land Use Strategy, as discussed in this Chapter Three, and the Public Services Strategy discussed in Chapter Four. The Future Land Use Strategy identifies the desired pattern of land use, development and preservation throughout the Township. Chapter Four presents guidelines regarding public services to help ensure that future public services are coordinated with the planned land use pattern, and the achievement of 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 Gerrish Township Zoning Ordinance. The Zoning Ordinance generally regulates the type, location, bulk, and intensity of land development. The Township may also adopt other supporting regulatory tools to further the implementation of the policies of this Plan. Chapter Five discusses implementation strategies in more detail.

The foundation on which the Future Land Use Strategy is rooted are the goals and objectives in Chapter Two, based in part on public input. These include the desire to guide future development in a manner that ensures land use patterns compatible with public facilities and services, the cost-effective use of tax dollars, the preservation of natural resources and the rural/resort character of the community, and compact development where it is of a higher intensity. The Future Land Use Strategy is based upon an analysis of the Township's natural and cultural features such as community attitudes, existing roadway network, existing and nearby public infrastructure, and environmentally sensitive areas. Also considered are nearby conditions in neighboring municipalities. The opportunities and constraints presented by these characteristics were evaluated in the context of the goals and objectives in Chapter Two 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 areas collectively formulate the planned land use pattern. These areas are as follows:

- Lakeshore Residential Area
- Rural Residential / Conservation Areas
- Suburban Residential Areas
- Commercial Areas
- Industrial Area
- Commercial/Industrial Mixed-Use Areas

It is not the intent of this Plan to identify the specific land uses that should be permitted in each of these Areas. This Plan presents broad-based policies regarding the dominant land use(s) to be accommodated in each. 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" with the planned future land use pattern. This should not be necessarily interpreted as a lack of township support for the continuation of such uses. Zoning regulations will clarify this matter.

The approximate borders of these Areas are illustrated on the Future Land Use Map at the end of this chapter. The map depicts the boundaries in more detail than the explanatory text in this chapter. The boundaries are described as approximate. There is frequently room for discretion at the exact interface between the boundaries of two planning areas and appropriate uses at these points of interface. However, the approximate boundaries presented in this Plan have been considered carefully. Significant departures are strongly discouraged except for unique circumstances and only when the public health, safety and welfare will not be undermined. It is also important to understand that neither the Future Land Use Map nor the explanatory text is intended to stand on its own. Both the policy discussions and map are inseparable and must be viewed as one.

Lakeshore Residential Area

The Lakeshore Residential Area extends approximately 500 feet from Higgins Lake in addition to encompassing the numerous historical platted subdivisions whose boundaries include substantial frontage along the lake. The Lakeshore Residential Area is established in recognition of the existing lake-based residential development that has occurred along and near Higgins Lake, and the township's interest in protecting the character and stability of these residential areas and their property values. Higgins Lake is the defining feature of Gerrish Township and the majority of residential development in the community is centered around the lake. However, the Plan recognizes the extremely fragile environment of Higgins Lake, the environmental, recreational, and aesthetic role the lake plays, and the particular challenges the lake presents for land use management. Past and future development along the lake will continue to place pressure on the lake. It is widely recognized that development along the shores of a lake increase the potential for degradation of its character and water quality due to shoreline erosion, septic field leaching (where sanitary sewer is not available), sediment discharge, and excess use of surface waters by water craft. While the Lakeshore Residential Area is largely built-out, the lake is still vulnerable to redevelopment efforts and continued disturbances to its environmental character and integrity.

In addition to the above, key policies of the Lakeshore Residential Area are:

1. The primary use of land should generally be limited to seasonal and year-round single family residences.
2. Secondary uses should be limited to those that directly support and enhance desirable residential areas such as schools, religious institutions, and recreation facilities such as parks and marinas. However, all secondary uses should be subject to a comprehensive review to determine if the proposed use is appropriate on the subject site (based on, in part, compatibility with surrounding land uses, road infrastructure, and public services).
3. Maximum development densities should not exceed approximately two dwellings per acre, and in no case should residential development be authorized on a site on which the site's area, soils, or other characteristics do not support the issuance of public health permits for potable water and sewage disposal.
4. The development of the limited existing vacant land (infill) for subdivision or similar development forms should be based upon a plan that

encourages compatibility with surrounding properties and development patterns.

5. All new development and redevelopment should incorporate measures that protect the environmental integrity of Higgins Lake including, but not limited to, lake setbacks, preservation of native shoreline vegetation, proper yard waste disposal (leaves, grass cuttings, etc.), effective and well maintained septic systems, and effective management of storm water to minimize pollutants and debris entering the lake.
6. The use of a waterfront lot as common open space for waterfront access for dwelling units located away from the waterfront, and commonly referred to as keyhole or funnel development, should be discouraged. Such development should be subject to comprehensive review procedures and standards to minimize disturbances to neighboring land uses and the overuse of any portions of Higgins Lake.
7. Land and water activities at the end of local roads which terminate at Higgins Lake should be monitored so as not to undermine public health, including water safety.

Rural Residential /Conservation Area

The Rural Residential / Conservation Area comprises the majority of the Township not otherwise included in the Lakeshore Residential Area or the Suburban Residential Areas. The Rural Residential / Conservation Area is comprised predominantly of woodlands and wetlands, state forest and recreation land, low density residential development, vacant land and limited farming activities. The Area is intended to encourage the preservation of the abundant woodland and wetland environments of the township; provide opportunities for low-density residential development that encourages the preservation of the community's overall rural/resort character, natural resources, and open spaces; and protect the economic and recreational attributes of the state's forest and tourism industry.

The Rural Residential / Conservation Area recognizes that the state forest lands have played an important role in the history and character of Gerrish Township, contribute to the economic stability of the township, support important environmental habitats and wildlife, and contribute to the "up-north" feel of the community and desirable atmosphere within which to live and recreate. Public input received during the preparation of this Plan strongly supported the preservation of the township's existing character including open spaces and natural resources.

It is intended that development densities in the Rural Residential / Conservation Area be comparatively low. Low development densities are supported by a number of factors including: 1) the lack of public sewer and water in this Area; 2) interest in minimizing land use conflicts between timber operations and neighboring land uses; 3) the township's commitment to managing growth, providing cost effective public services, and limiting urban development densities to specific and compact portions of the community; 4) the township's commitment to protecting its natural resources and rural character; and 5) the presence of a market for low-density rural home sites.

Potential new residents in this Area should recognize that the traditional noises and truck traffic associated with responsible timber production are a significant component of the Rural Residential / Conservation Area and will continue on a long term basis. Gerrish Township does not consider such activities and operations as nuisances. Rather, the township supports the long term continuation and protection of the state's forest lands and associated timber production and harvesting. Local developers and real estate agents should disclose this information to prospective buyers of land.

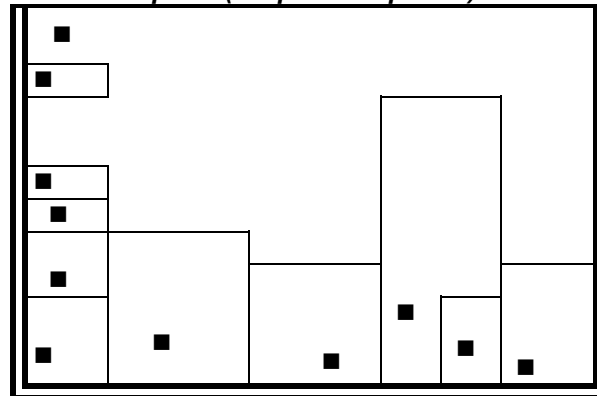
There are some existing small settlements in the Rural Residential / Conservation Area, including scattered subdivisions. The Plan recognizes the viability and desirability of these settlement areas, and that some may be of a higher density than recommended for this Area. On the other hand, these settlement areas are not to serve or be interpreted as future growth and expansion zones and for this reason, are not included in the Suburban Residential Areas discussed on page 3-5.

Open Space Developments: Residential development of appropriate density and design in the Rural Residential / Conservation Area can facilitate the opportunity for rural lifestyles that minimize the loss of the township's rural/resort character and important environmental resources and habitats. Residential development patterns that incorporate the preservation of natural resources, open spaces, rural character, and traffic safety are strongly encouraged. To this end, the Rural Residential / Conservation Area supports opportunities for what is frequently referred to as "clustering" or "open space developments." This form of development provides for the clustering of smaller lots than what is normally required, on only a portion of the development parcel, so that the balance of the parcel can be retained as open space and for the preservation of important environmental resources. These "open space" areas can be reserved by the use of conservation easements, deed restrictions, or similar tools. A

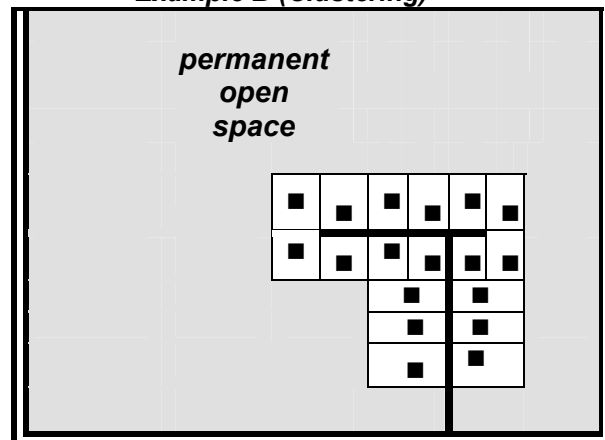
critical component of clustering should be the inclusion of new interior roads to serve the new lots, rather than stripping new dwellings along existing road frontages such as CR 100, CR 103, Pinewood Dr., Birch Rd., and Maplehurst Dr., and the many other existing public roads.

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 impacts public safety due to the many driveways directly accessing the road and it can significantly undermine the rural/resort character of the township. Example B, illustrating the use of clustering, improves public safety along the road, and more effectively preserves the existing character of the community, and its open spaces and environmental resources and habitats.

Example A (Strip Development)



Example B (Clustering)



In addition to the above, key policies of the Rural Residential / Conservation Area are:

1. The primary use of land should generally be limited to single family residences, agriculture, forest conservation including timber production, and resource-based public recreation facilities including the South Higgins Lake State Park and recreation opportunities associated with the state's forest lands.
2. Secondary uses should be limited to those that directly support and enhance residential areas such as schools, religious institutions, and recreation facilities, or uses that are uniquely compatible with the environmental and/or rural character of the Area such as kennels, stables, golf courses, and bed and breakfasts. However, all secondary uses should be subject to a comprehensive review to determine if the proposed use is appropriate on the subject site (based on, in part, compatibility with surrounding land uses, road infrastructure, and public services).
3. Maximum development densities should generally not exceed approximately one dwelling per 2.5 acres in the southwest portion of the Rural Residential / Conservation Area (west of Higgins Lake) and to the northeast (generally north of Robinson Lake Rd.), except parcels characterized by extensive wetlands or otherwise part of the state forest lands. Maximum development densities should generally not exceed approximately one dwelling per five acres in the balance of the Rural Residential / Conservation Area). However, higher development densities should be made available where the development plan incorporates substantive measures to minimize disturbances to the community's rural character, protect important open spaces and environmental areas, and minimize traffic hazards and congestion along existing public roads (see "Open Space Developments" on page 3-3). In no case shall residential development be authorized on a site on which the site's area, soils, or other characteristics do not support the issuance of public health permits for potable water and sewage disposal.
4. The reliance on private "community sewer systems", established as part of and to only serve a new subdivision (or similar development), should not serve as a basis for development patterns and densities contrary to the density policies presented in (3) above.

Suburban Residential Areas

The Suburban Residential Area provides for residential development of a more suburban and urban character than planned elsewhere in the Township, including comparatively higher density living arrangements. These Areas include existing residential development of a suburban/urban character as well as vacant land where new residential development of a similar character is considered most appropriate. These higher density development opportunities should ensure healthy living environments including sufficient open space and safe pedestrian and vehicle circulation.

The Northeast Suburban Residential Area is located in the northeast quarter of the Township and includes the majority of the township northeast of I-75 that is not otherwise part of Commercial Areas and Conservation/Rural Residential Areas. This Area is designated as the primary location in the township for the accommodation of new suburban/urban residential development that exceeds development densities of approximately one dwelling per acre.

The Southwest Suburban Residential Area is located southwest of the far south end of Higgins Lake. The Southwest Suburban Residential Area is established largely in recognition of the existing developed character of this area and only limited opportunities for expansion are available, although redevelopment of portions of this Area is certainly an option.

The Northcentral Suburban Residential Area extends approximately one-half to one mile to either side of CR 100, west of I-75 and north of Robinson Lake Road excluding state forest lands and lands included in Commercial Areas and Conservation/Rural Residential Areas. This Area is designated as a lower density Suburban Residential Area than that of the Northeast and Southwest Suburban Residential Areas. This Area is intended to accommodate more affordable housing than that of the Conservation/Rural Residential Area while, at the same time, providing homeowners with housing opportunities that are of lower densities than available in the Northeast and Southwest Suburban Residential Areas.

The Suburban Residential Areas are characterized by conditions that support their appropriateness for higher density residential development than planned for the Conservation / Rural Residential Area. These conditions include: 1) improved access via county primary roads and/or the I-75/Federal Highway interchange; 2) proximity to existing compact development patterns; 3) proximity to the urban services of Roscommon, including opportunities for the potential extension of public sewer and water; 3)

proximity to township emergency services; 4) proximity to public education facilities along with important support facilities including library services and recreation fields; and/or 5) proximity to basic day-to-day retail services.

In addition to the above, key policies of the Suburban Residential Area are:

1. The primary use of land should generally be limited to single family residences, including opportunities for comparatively higher density small-lot single family dwelling subdivisions.
2. Secondary uses should be limited to non-single family living arrangements such as duplex subdivisions, apartments, retirement centers, and similar living arrangements, and for uses that directly support and enhance desirable residential areas such as schools, religious institutions, and recreation facilities such as parks. All secondary uses should be subject to a comprehensive review to determine if the proposed use is appropriate on the subject site (based on, in part, compatibility with surrounding land uses, road infrastructure, and public services).
3. Maximum development densities should generally not exceed approximately one dwelling per acre in the Northcentral Suburban Residential Area and two dwellings per acre in the Northeast and Southwest Suburban Residential Areas, and in no case should residential development be authorized on a site on which the site's area, soils, or other characteristics do not support the issuance of public health permits for potable water and sewage disposal.
4. Development densities approaching three or more dwellings per acre in the Northeast and Southwest Suburban Residential Areas may be reasonable but only after special review proceedings to determine if the project is appropriate on the proposed property. Minimum guidelines that should be considered are as follows:
 - a. Infrastructure and services should be capable of meeting the public services needs of the new development, including sewage disposal and potable water.
 - b. Environmental impacts should be limited.
 - c. Negative impacts upon existing residential development and/or neighborhoods should be minimized by appropriate design measures.
 - d. Developments involving densities of three or more dwellings per acre should be of such size, or developed in phases, to ensure that the desired character of the community is

preserved and public health, safety and welfare will be maintained.

5. As development densities increase, so too should the emphasis on the effective preservation of a site's special natural resources such as woodlands and wetlands, and the provision of conveniently located open space for outdoor leisure and/or recreation. To this end, the accommodation of higher density developments through "open space developments" should be encouraged (see page 3-3).
6. The development of the limited existing vacant land (infill) in the Southwest Suburban Residential Area for subdivision or similar development forms should be based upon a plan that encourages compatibility with surrounding properties and development patterns.

Commercial Areas

The Future Land Use Strategy identifies particular locations where commercial centers are considered appropriate. Commercial centers typically require a heightened level of road infrastructure, access, public services and visibility. These factors directly impact the identification of future commercial areas along with other concerns including minimizing conflicts between existing and proposed land uses and encouraging compact development. 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.

The following locations are considered most appropriate to function as commercial centers. All of these locations are existing commercial centers of varying size. The Plan recommends the establishment of no new commercial centers.

CR 100/103 Intersection Area, extending approximately one-half mile north and south along CR 100, and extending approximately one-half mile east along CR 103.

CR 100/101 Intersection Area, extending approximately one-quarter mile out from the intersection.

CR 100/Marl Lake Area, limited to an approximately 500' frontage width along the south side of CR 100 (due to wetland constraints) from the Cut River south to Marl Lake.

CR 104 East Area, limited to the several adjacent commercially developed properties on the north side of the road approximately one-quarter mile west of Marl Lake.

CR 104 West Area, limited to the several adjacent commercially developed properties on the north side of the road just west of N. Flint Road.

E. Higgins Lake Rd./Federal Highway Intersection Area, extending along Federal Highway east of E. Higgins Lake Road, for approximately one-quarter mile.

CR 200 – Detroit Point Area, limited to the existing commercially-zoned land at the time of adoption of this Plan.

CR 200 – W. Pine Area, limited to the immediate several commercially-developed properties on the west side of CR 200 and south side of W. Pine Dr.

The boundaries of these areas, as described above, are purposeful. None of these designated commercial centers are intended to incrementally evolve beyond the boundaries specified. For example, the CR 100/103 Intersection Area is intended to function as a clearly identifiable commercial node with definite limits – this Area is not intended to serve as a seed for the growth of commercial development all along either of these thoroughfares. The same can be said about the CR 100/101 Intersection Area and the CR 200 – Detroit Point Area. Any expansion of the CR 200 – Detroit Point Area should be limited to parcels immediately adjacent to existing commercially developed land. All of the above centers are intended to accommodate commercial development of a local character, catering to the day-to-day needs of the local population including vacationers.

In addition to the above, key policies of the Commercial Areas are:

1. The primary use of land should generally be limited to commercial services that address day-to-day needs of the local population and seasonal visitors to the township.
2. Secondary uses should be limited to uses that provide important consumer or other commercial services benefits but which may not address day-to-day needs and/or may undermine the overall intended character of these commercial areas if not reviewed before hand to determine if a particular proposal is appropriate on the specific lot. Such uses may include, but not necessarily be limited to, auto repair, mini-storage, and drive-through establishments. Criteria for such uses should include, in part, compatibility with surrounding land uses, road infrastructure, and public services.
3. Site layout, principal buildings and accessory facilities should be of a character and design that encourages compatibility with adjacent and nearby land uses and the desired rural/resort character of the area. Such compatibility should be based on, in part, appropriate signage,

building height, size, and bulk, and landscaping/screening.

4. New commercial uses that are adjacent to residential property should be permitted only when adequate buffer yards and screening are provided to minimize negative impacts.

See “Commercial/Industrial Mixed Use Areas” for additional opportunities for commercial development.

Birch Road Industrial Area

There are only limited desirable locations for industrial development in the township due to such factors as road infrastructure, existing land use patterns, environmental constraints, and the lack of public sewer and water. The preferred locations are included in the “Commercial/Industrial Mixed Use Areas” presented later in this chapter. However, in the interest of providing additional opportunities for industrial uses and the benefits that industry provides (including increased employment opportunities and tax base), the Future Land Use Strategy establishes an industrial area along Birch Road just west of M-18. M-18 provides excellent access and affords convenient access to I-75 just one-half mile northeast. There is minimal residential development in this area, thereby minimizing land use conflicts. The most dominant land use in this area is state forest lands, and it is likely that industrial activity in this area will not jeopardize the function of these lands. Cooperative efforts between the state and Gerrish Township may open opportunities for industry in this area.

This industrial area is intended to be comparatively small, recognizing that public sentiment does not support extensive industrial expansion, and that there are other regional urban centers that present more appropriate and appealing opportunities.

In addition to the above, key policies of the Birch Road Industrial Area are:

1. The primary use of land should generally be limited to industrial uses that are of a low intensive character such as the assembly of pre-manufactured products and communication and information technologies. Manufacturing operations that involve the manipulation of raw materials to produce new products, and which typically require levels of public services unavailable in the township, should be discouraged.
2. Secondary uses should be limited to those that are of a somewhat higher intensity such as trucking terminals and warehousing.

3. The Birch Road Industrial Area is not to extend more than approximately ¾-miles from the township's east boundary.
4. Site layout, principal buildings and accessory facilities should be of a character and design that encourages compatibility with adjacent and nearby uses and the rural/resort character of the community. Such compatibility should be based on, in part, appropriate signage; building height, size, and bulk; and landscaping/screening.
5. Industrial development that is to be adjacent to residential property should be permitted only when adequate buffer yards and screening are provided to minimize negative impacts.
6. No industrial uses should be introduced unless adequate measures are provided for sewage disposal, potable water, access and the storage and disposal of all operational wastes. To this end, improvements to Birch Road may be necessary to accommodate certain industrial uses due to the anticipated amount and/or type of vehicular traffic.

See also "Commercial/Industrial Mixed Use Areas" for additional opportunities for industrial development.

Commercial/Industrial Mixed Use Areas

In addition to differentiating between areas of the township for industrial, commercial, residential, and conservation purposes, the Future Land Use Strategy establishes several planned "Commercial/Industrial Mixed Use Areas." As the phrase implies, these areas are recognized as being potentially appropriate for both commercial and industrial development depending upon market conditions, the particular needs of the business owner, and the character and merits of specific development proposals. The two mixed use areas are:

I-75 Interchange Area, extending west along Federal Highway approximately one-half mile and south along CR 101 approximately one-half mile, and extending east approximately 500'.

CR 106/Federal Highway Area, extending along Federal Highway approximately one-half mile east and west of CR 106.

Both of these areas, including development patterns to the north in Beaver Creek Township, reflect an existing mixed use pattern with vacant parcels dispersed within. Federal Highway, and the presence of I-75, provide excellent access. These conditions support a heightened degree of development flexibility. The east side of the interchange is characterized by an abandoned gas station and redevelopment of the parcel for commercial or industrial use, versus residential development, is

practical. In light of the potential mixed-use development of these areas, special care must be exercised during all phases of the review and approval of specific development proposals. This will ensure that the arrangement of such uses and the interface between them enhances their compatibility and the viability of each.

The policies presented in the previous pages for commercial and industrial development apply equally to the Commercial/Industrial Mixed Use Areas, except for the recognition that commercial uses that cater to a more regional population may be reasonable in the immediate I-75 interchange area and along Federal Highway due to the improved access.

Conservation of Natural Resources and State Forest Land

Gerrish Township is characterized by large areas that require a strong conservation effort. These include abundant forests and wetlands, Higgins and Marl Lake, and the water courses that feed these lakes. These resources can present severe limitations to development and 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 recreation and contribute to the township's overall rural/resort character.

In light of the significance of these resources, the Plan strongly supports their protection. Preservation should take precedence over the unnecessary disturbance and/or destruction of these resources by residential, commercial, or industrial development. The presence of such resources in areas designated for development should be recognized in the deliberation of rezoning, site plan, and similar zoning requests. 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 a portion of a parcel contains environmentally sensitive areas, development should be directed elsewhere on the site. Public input received during the preparation of this Plan consistently identified the Township's natural resources as a vital feature of the community that must be preserved.

There are instances where the Future Land Use Strategy may designate an area for development but which is presently part of the state forest land system as in the case of the CR 100/103 Commercial Area. While Gerrish Township is blessed with abundant

state forest lands and the many benefits that they provide, the presence of the forest lands also presents special challenges in identifying a preferred future land use strategy. Those instances in which the Future Land Use Strategy designates an area for development, but which is presently part of the state forest land system, are purposeful. These locations are considered the preferred locations for development. The Plan supports on-going communication, coordination and cooperation with the state to advance the township's interest in a sound community-wide land use plan and the state's interest in securing and preserving forest land. This Plan supports the conversion of limited areas of state forest land for development purposes, in coordination with the Future Land Use Strategy, and the addition of new state forest land to mitigate that which is converted to non-forest use.

In addition, the Future Land Use Strategy supports the development of a reasonable management plan for the entire Higgins Lake watershed. The goal of such a plan should be to establish a strategy to ensure the environmental and economical health of the watershed in a manner that benefits all who have a stake in it. Development of the plan should include the involvement of all interest groups, the identification of watershed concerns including collection and analysis of land use and water data, the evaluation of alternative strategies and the development of a preferred strategy, and the implementation of the preferred strategy along with follow-up evaluations and refinements of the plan to address trouble areas. Effective watershed planning and management requires the expertise and authority of multiple agencies and organizations, and measuring success through monitoring.

Phased Zoning

This Plan recommends the rezoning of land to a more intensive zoning district be done in a phased or incremental manner. For example, while the Plan may identify township locations that are appropriate to accommodate suburban residential development, the Plan does not recommend “across the board” or immediate rezonings of such land. The Plan recommends that rezonings to more intensive districts occur incrementally over time to ensure the township is capable of: 1) meeting the increased public service demands; 2) managing township-wide growth and development; 3) adequately reviewing rezoning requests as they apply to the specific subject property; 4) insuring rezonings are in response to a demonstrated need; and 5) minimizing unnecessary hardships upon the landowner as a result of property assessments and/or resulting nonconforming uses and structures.

Map Legend

Future Land Use

- Rural Residential/Conservation Area
- Lakeshore Residential Area
- Suburban Residential
- Commercial Area
- Commercial/Industrial Mixed Use Area
- Industrial Area

Planning Commission Approval

This is to certify that this is the Future Land Use Map approved by the Gerrish Township Planning Commission on September 6, 2007, and revised by the approval of amendments by the Planning Commission on January 14, 2010.

Thomas L. Barber

Tom Barber, Chairperson
Gerrish Township Planning Commission

Township Board Approval

This is to certify that this is the Future Land Use Map approved by the Gerrish Township Board on September 11, 2007, and revised by the approval of amendments by the Township Board on February 9, 2010.

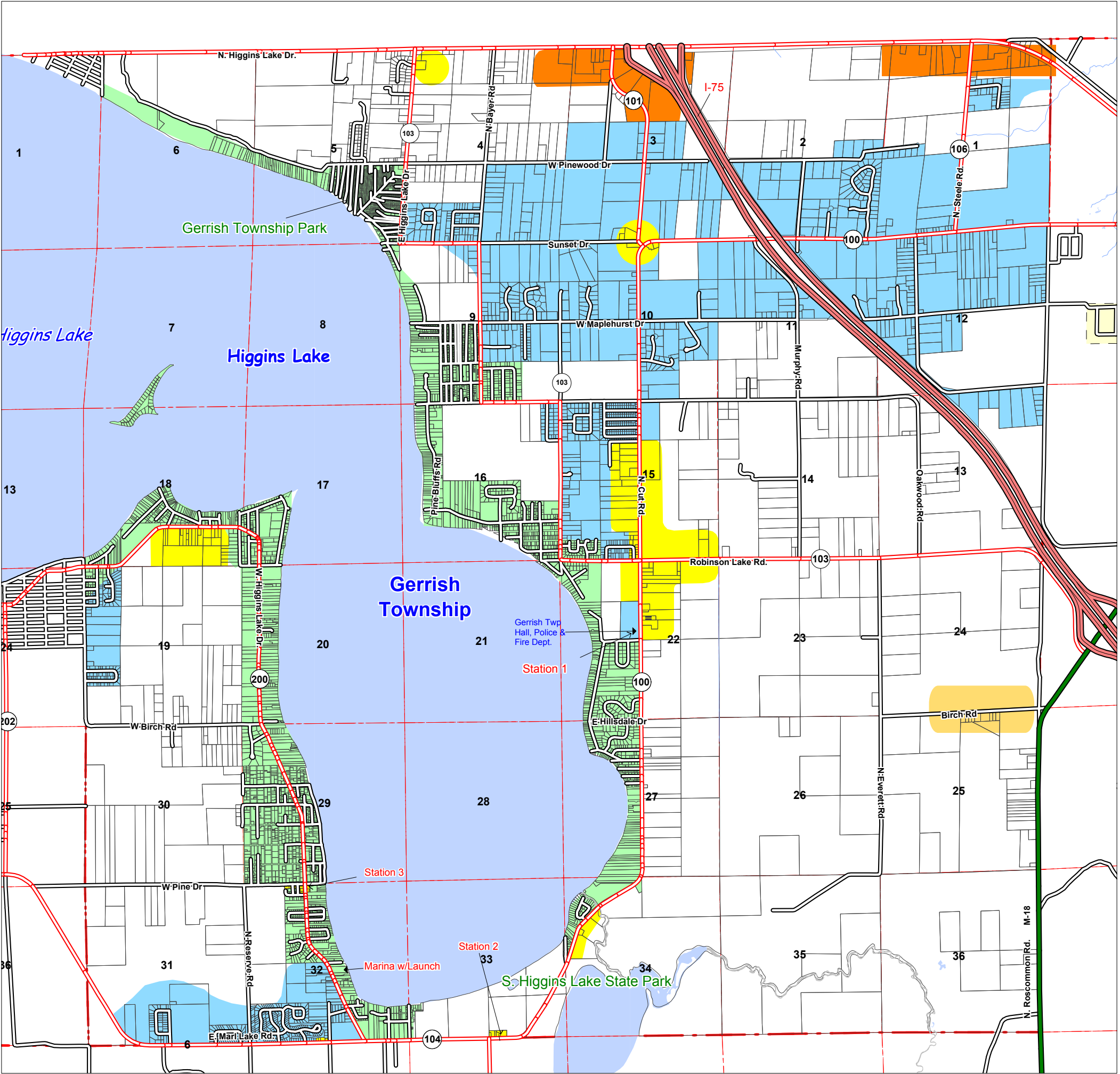
Jodi Valentino

Jodi Valentino, Clerk
Gerrish Township Board



August 6, 2009

These maps are intended to depict spatial relationships only. They are no substitute for legal surveys or deeds. The County of Roscommon does not warrant these maps for positional accuracy.



Gerrish Township
Master Plan

Future
Land Use

Scale: 1" = .60 mi.

Roscommon County
M I S Dept.

GIS Mapping System

Roscommon County Courthouse
500 Lake St.
Roscommon, MI 48653
(989) 275-7648
mapping@roscommoncounty.net

Chapter Four

PUBLIC SERVICES STRATEGY

Introduction

Chapter Three describes the planned pattern of land use throughout the township. This chapter discusses the public services strategy to coordinate with the planned pattern of land use. The character and feasibility of land use and development is influenced by the extent to which public services are available. For example, opportunities for affordable housing increase with the presence of sanitary sewer. The extent of public services also impacts the perceived quality of life within a community. For example, response times by a local fire department and the availability of recreation opportunities can affect the quality of life experienced by local residents. Accordingly, attention should be directed to the manner in which public services are provided and improved.

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. On the other hand, 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.

Circulation

As new residential and non-residential 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 township's roads. Conversely, it must be recognized that road improvements may well attract new development which, in turn, will place additional demands on the road network. In regard to vehicular circulation, the township's roadway infrastructure currently fulfills its function fairly well. This is due, in large part, to the existing low development density throughout most of the

township, the paved status of important thoroughfares such as CR 100, 101, 103, 104, and 200, and the presence of I-75 and its local interchanges. However, there are comparatively limited opportunities for safe pedestrian and non-motorized trails and linkages to accommodate pedestrian and bicycle travel. This is not uncommon in a township of a low and dispersed population such as Gerrish Township.

Policies:

- 1) Functional classification of roads should dictate the priority of improvements when all other conditions are generally equal. The functional importance of the roads in the township, from highest to lowest, is as follows: 1) county primary roads, particularly those segments servicing the Future Land Use Strategy's Lakeshore Residential and Suburban Residential Areas; 2) county local roads, particularly those segments servicing the Lakeshore Residential and Suburban Residential Areas, but excluding roads in a platted subdivision or similar neighborhood developments; and 3) minor roads, such as local neighborhood roads in platted subdivisions.
- 2) The paving of public gravel roads will generally be discouraged except where: a) the cost to maintain such roads does not justify their long-term gravel status; or b) such roads are located in planned Lakeshore Residential or Suburban Residential Areas.
- 3) All future roads will be designed and constructed to Roscommon County Road Commission standards except upon a finding that, in specific instances, such standards do not justify the impact on the natural environment and rural character of the community or are otherwise unnecessary, and lesser standards will not undermine public safety and welfare.
- 4) All proposed future road construction will be evaluated carefully for local and regional impacts on traffic flow, congestion, and public safety. New road construction should be coordinated with other local and regional road improvements to address traffic movement in a unified and comprehensive manner.

- 5) No new roads or road extensions should be undertaken at this time, nor should any be taken in the future, except upon a finding of need to ensure public safety and welfare or to provide access to lots in new neighborhoods and similar new land development.
- 6) The township will monitor development patterns and periodically explore the development of a non-motorized circulation plan to facilitate the provision of trails and linkages throughout the township, with particular focus on linkages within and between neighborhoods and commercial and other activity centers such as the Township Hall.

Sewage Disposal and Potable Water

There is no public sewer or water service in Gerrish Township. Residents rely upon private wells for potable water and septic systems for sewage disposal. Improperly operating septic systems can contaminate potable groundwater resources, lakes and streams. This poses a public health threat and has been a source of concern for the township. As development intensities increase, so does the need for public sewer and water. Intensive industrial, commercial, and residential development generally have greater sewage disposal and potable water needs than can often be met by traditional on-site facilities. Failure to provide adequate sewer and water facilities to these land uses can lead to 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. This condition highlights the critical relationship between land use, development intensities, and on-site sewage disposal and potable water.

Policies:

- 1) All on-site sewage disposal and potable water facilities shall be constructed and maintained in accordance with the requirements of the Central Michigan Health District and other applicable local, county, state and federal agencies.
- 2) The township will explore alternative means for ensuring septic systems are maintained in an effective working manner.
- 3) The township will periodically monitor local attitudes on the introduction of public sewer and water service.
- 4) No public sewer or water will be introduced by the township except upon a finding that it is necessary to maintain the public health, safety and welfare in response to a demonstrated existing or anticipated large scale contamination threat, or that it will

address a demonstrated demand for residential densities in excess of those available relying on safe on-site sewage disposal and potable water measures. Such services should be limited to the Lakeshore Residential and Suburban Residential Areas, and funding should be borne by those who benefit from such services.

- 5) Any future decision by the township to provide public sewer and/or water services is to be based on an in-depth analysis of all available options by professionals of appropriate credentials and expertise, including services through cooperative agreements with neighboring municipalities.
- 6) Any future introduction or expansion of a public sewer and/or water service will be in a phased and incremental manner so that an overly large geographic area will not be intensely developed at a rate beyond the township's ability to effectively manage the rate of growth and development and ensure the public health, safety and welfare.

Storm Water Management

As buildings, parking lots and other impermeable surfaces associated with new development cover more of the township's land surface, the quantity of storm water runoff increases. The vegetated landscape that previously absorbed and slowed much of the water associated with rainfall is replaced by impervious surfaces. Unless specific preventive measures are taken, this condition encourages flooding, soil erosion, sedimentation and pollution of area water resources. The township's water resources, including Higgins and Marl Lake and their respective wetlands, are vulnerable to degradation. Though flooding, soil erosion, sedimentation and pollution may originate from site-specific circumstances, their impact can extend to adjacent properties and more regional areas including other communities in the same watershed. Storm water management aims to minimize flood conditions, and control the quality and quantity of runoff that is discharged into the watershed system (streams, rivers, wetlands, lakes, etc.) from a development site.

Policies:

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

- 2) Proposed land uses will not be permitted if the level of service currently provided by existing storm water management infrastructure and/or existing drainage patterns will be decreased, unless necessary improvements to such infrastructure or natural drainage courses are first made.
- 3) New and existing land uses will comply with all county, state, and federal regulations regarding storm water management and soil erosion, including the regulations of the Roscommon County Drain Commissioner, except where local officials determine less stringent standards in site-specific instances are appropriate and will not undermine the public health, safety and welfare.
- 4) Land development proposals that directly or indirectly discharge runoff into Higgins Lake and Marl Lake, and the township's network of streams and wetlands, will be reviewed to ensure such discharge practices do not undermine the environmental integrity of these resources.

Police and Fire Protection Services

As community growth and land development increases, so does the demand for emergency services. The survey undertaken as part of the preparation of this Plan revealed general satisfaction with police and fire protection services among residents. Commonly referenced standards regarding fire protection suggest a maximum service radius from a fire station in low density residential areas of approximately 3 miles, and approximately 3/4 to 2 mile service radius in commercial, industrial, and high density residential areas. There are some portions of the township that are not within these recommended ranges, particularly in the far northeast, northwest, and southeast corners of the community. Commonly accepted standards for police protection levels do not exist and are frequently measured as a function of public satisfaction.

Policies:

- 1) The township will require the provision of fire protection infrastructure (wells, water lines, etc.) for all new developments which are of such size and density that on-site infrastructure is considered critical. On-site fire protection infrastructure will generally be considered necessary for residential developments that concentrate building sites on lots less than approximately one-half acre.

- 2) The township will continually monitor police and fire protection needs and service to prevent emergency services deficiencies and explore improving service levels. Considerations for expansion of services will include the expansion of joint services with neighboring municipalities.

Recreation

Gerrish Township operates three local park facilities including Gerrish Township Park along the northeast shore of Higgins Lake, Town Hall Park adjacent to the township hall and police station, and a recently acquired 20 acre parcel on the west side of Higgins Lake on Birch Road. These local park facilities include, collectively, picnic facilities, playgrounds, volleyball area, baseball fields, basketball courts, football/soccer field, children's playground area, tennis courts, and an outdoor seasonal ice skating rink. In addition to the local parks, there are several significant regional recreation facilities in the township's back yard including the North and South Higgins Lake State Park and the state forest lands.

Gerrish Township officials recognize that the well being of its residents is affected by the availability of recreational opportunities. The township further recognizes that the type and availability of nearby recreational facilities are important. Demands for recreational opportunities increase with population growth. Available land for recreational purposes decreases as housing and other land uses consume more of what was open space and potential outdoor recreation land.

The township's commitment to ensuring adequate recreational opportunities for its residents is reflected in the township's preparation of a five-year community recreation plan. The plan, officially approved by the Michigan Department of Natural Resources, enables the township to apply and compete for public funds to acquire and develop recreation facilities. The Plan addresses existing conditions in the township including recreational opportunities and deficiencies, and presents a strategy for improving recreational conditions.

The Master Plan supports the initiatives of the Gerrish Township Recreation Plan including the purchase of a marina site, development of bike and pedestrian trails, and developing the recently acquired park site on the west side of Higgins Lake to address local needs.

Policies:

- 1) Periodically update the township's five-year recreation plan to ensure orderly planning and development of park sites and eligibility to compete for state and federal grant dollars.
- 2) The township will periodically monitor the extent to which area residents are satisfied with recreational opportunities in the general area by the use of surveys, public meetings, and/or interviews.
- 3) The township will strive to provide recreational facilities in a manner that recognizes the particular recreation needs expressed by its residents.
- 4) The township will provide incentives to encourage the provision of open space and recreation areas within future development projects.
- 5) Base improvements to local recreational facilities, and the purchase of new sites, according to the local population needs, population distribution, safe and convenient access to and within park sites.

Chapter Five

IMPLEMENTATION STRATEGIES

Introduction

This Master Plan establishes a strategy for growth, development and preservation in Gerrish Township. The Plan is comprised of graphic and narrative policies intended to provide basic guidelines for making reasonable, realistic community decisions. It establishes policies and recommendations for the proper use of land and the provision of public services and facilities. The Plan is intended to be used by local officials, by those considering private sector developments, and by all residents interested in the future of the township. The Plan is a policy document. As a policy document, the Plan's effectiveness is directly tied to the implementation of its policies through specific tools and actions.

The completion of the Plan is one part of the planning process. Realization or implementation of the goals, objectives and policies of the Plan can only be achieved by specific actions, over an extended period of time, and through the cooperative efforts of both the public and private sectors.

Implementation of the Plan may be realized by actively:

- 1) Ensuring knowledge, understanding, and support of the Plan by township residents, and the continued communication with and involvement of the citizenry.
- 2) Regulating the use and manner of development through up-to-date reasonable zoning controls, subdivision regulations, and building and housing codes, and other regulatory tools.
- 3) Providing a program of capital improvements and adequate, economical public services to accommodate desirable land development and redevelopment.

The purpose of this Chapter is to identify implementation tools and where applicable, specific actions to be pursued.

Public Support, Communication and Community Involvement

Citizen participation and understanding of the general planning process and the specific goals, objectives and policies of the Plan are critical to the success of the township's planning program. Understanding and support of the Plan by local citizens can greatly enhance its implementation. This enhancement may be found in citizen support for bond proposals, special assessments, zoning decisions, and development proposals.

In order to organize public support most effectively, the township must emphasize the necessity of, and reasons for long-range planning and the development of the Master Plan. The Township must encourage citizen participation in on-going community planning efforts.

Specific actions to be undertaken to encourage public understanding and support of the township's planning program, and the continued communication with and involvement of the citizenry, are as follows.

- 1) Ensure that copies of the Master Plan are readily available for viewing at the Township Hall.
- 2) Post the Future Land Use Map of the Master Plan in the Township Hall where it is clearly visible.
- 3) Post a copy of the Master Plan on the township's web site.
- 4) Post a regularly updated listing of current events pertaining to planning and zoning matters in the township.
- 5) Make copies of the Plan readily available to the general public.
- 6) Through public notices, the Township's newsletter, Township Hall postings, and other means, apprise residents of meetings that will address development proposals as the projects move through each stage of review and deliberation.

- 7) Periodically hold special meetings for the specific purpose of discussing the township's planning efforts and providing residents with the opportunity to share concerns and suggestions.
- 8) Include in the township's newsletter, articles that discuss the Township's planning efforts and land use decisions currently under deliberation.
- 9) Post the township newsletter at the Township Hall and other public sites for public viewing.
- 10) Encourage Neighborhood Watch programs in each neighborhood to promote cooperation and communication.

Land Development Codes

Zoning Ordinance

A zoning ordinance is the primary tool for implementing a Master Plan. A zoning ordinance regulates the use of land. A zoning ordinance generally divides a community into districts and identifies those land uses permitted in each District. Each district prescribes minimum standards that must be met such as minimum lot area, lot width, and building setbacks.

Zoning regulations for Michigan communities are adopted under the authority of the Michigan Zoning Enabling Act, P.A. 110 of 2006. The purpose of zoning, according to the Act, is to (in part): *"...regulate the use of land and structures; to meet the needs of the state's citizens for food, fiber, energy, and other natural resources, places of residence, recreation, industry, trade, service, and other uses of land; to insure that use of the land shall be situated in appropriate locations and relationships; to limit the overcrowding of land and congestion of population, transportation systems, and other public facilities..."*

Adoption of zoning regulations by the Township Board provides the legal basis for enforcement of zoning provisions. The ultimate effectiveness of the various ordinance requirements, however, is dependent upon the overall quality of ordinance administration and enforcement. If administrative procedures are lax, or if enforcement is handled in an inconsistent, sporadic manner, the result will be unsatisfactory. The Planning Commission, Township Board, and staff are responsible for carrying out zoning/development related functions including the review of development plans and site inspections, community/developer liaison, and other functions. Each of these functions can require a substantial investment of time. Adequate staff levels and/or consulting assistance are necessary to ensure that

these essential day-to-day functions are met and appropriate development is facilitated.

The Township first adopted zoning regulations more than 40 years ago, and has periodically updated its zoning provisions to address changing conditions and policies. With the adoption of this Master Plan and any subsequent amendments, the township's zoning ordinance should again be carefully reviewed to identify changes to the ordinance that may be beneficial to implement the most current policies of the Plan and facilitate efficient day-to-day zoning administration. The following "Zone Plan" serves as a guide in the development of updated zoning regulations.

Zone Plan: The following pages present a Zone Plan for the township. The Zone Plan establishes a foundation for the township's zoning regulations. The Zone Plan is comprised of three elements.

- 1) Critical Components of the Gerrish Township Zoning Ordinance
- 2) Overview of Zoning Districts
- 3) Zoning District Site Development Standards

Zone Plan, Part One – Critical Components of the Gerrish Township Zoning Ordinance. The following identifies important general elements that the Gerrish Township Zoning Ordinance should include to ensure its ease of use and effectiveness in advancing the goals, objectives and policies of the Master Plan:

- 1) Procedural Matters/Plan Review: The Zoning Ordinance should include clear step-by-step provisions addressing procedural matters such as the application for and issuance of zoning permits prior to construction, application procedures and approval standards for special land uses, application procedures and approval standards for amendments to the Zoning Ordinance including the zoning map, application procedures and approval standards for matters before the Zoning Board of Appeals such as variance requests and appeals of administrative decisions, and violation and enforcement procedures.

The zoning permit application procedures should include the requirement for the submittal of a plot plan or site plan illustrating proposed alterations and improvements to a parcel. Such a plan is critical in assisting local officials determine if the development complies with all standards of the Zoning Ordinance and if it is designed to encourage compatibility with surrounding land uses. The provisions should provide adequate clarification as to what uses are subject to plot plan review (such as residences) versus more comprehensive site plan review (such as

commercial, industrial and other non-residential uses).

The provisions should ensure such plans include comprehensive information pertinent to the development including the delineation of wetlands, woodlands, water courses, surrounding zoning and use conditions, required local, county state and federal permits, and the salient features of the development including buildings, parking, screening, lighting, grading and storm water management. The provisions should also provide for a comprehensive set of approval standards addressing such matters as access management and vehicular/pedestrian circulation, emergency vehicle access, environmental protection, and compatibility with surrounding conditions.

- 2) District Provisions/Special Land Uses: The ordinance should include a clear and comprehensive presentation of zoning districts including the purpose, authorized uses, and site development standards for each district. To this end, the districts should differentiate between uses authorized “by right” versus as “special land uses.”

Uses permitted by right are the primary uses and structures specified for which a particular district has been established. An example may be a dwelling in a residential district. Special land uses are uses that are generally accepted as reasonably compatible with the primary uses and structures within a district. However, because of its particular character, a special land use may present potential injurious effects upon the primary uses within the district or is otherwise unique in character, and it may not be appropriate in certain situations or on certain parcels. These unique or special circumstances may be a result of traffic, noise, or visual or operational characteristics.

As a result, special land uses require special consideration in relation to the welfare of adjacent properties and to the township as a whole. An example may be a kennel in a residential district. Special land uses require a heightened level of scrutiny in their review. Special land use applications should be acted on according to comprehensive standards and review procedures established in the zoning ordinance. Approval should not be indiscriminate and conditions should be imposed (as applicable) to minimize impacts on surrounding uses and properties.

- 3) Site Development Standards: In addition to the standards presented in the Zoning Ordinance for each district, such as minimum lot area and width, the Ordinance should include standards addressing other and more general fundamental site development issues such as:
 - a. proper access to ensure public safety and welfare including access management along thoroughfares, accessibility to property for general and emergency vehicles, and proper design and maintenance of private roads.
 - b. off-street parking and loading to ensure adequate facilities are provided on a development site and are of adequate design to encourage safe and efficient circulation.
 - c. landscaping and screening provisions intended to ensure new development (commercial, industrial, institutional, etc.) is compatible with surrounding conditions and supportive of the desired character of the community.
 - d. sign regulations to ensure local signage does not contribute to traffic safety hazards, visual clutter, confusion for vehicle drivers, visual blight, and decreased property values.
 - e. environmental safeguard provisions to ensure new development minimizes disturbances to the township's natural resources including standards addressing sewage disposal, grading, and storm water management.
- 4) Nonconformities: The Zoning Ordinance should address lots, uses and structures that are nonconforming due to changes to the zoning ordinance, and the extent to which such lots, uses and structures can be replaced, expanded, enlarged, or otherwise altered.
- 5) Site Condominium Regulations: The Zoning Ordinance should address site condominiums. Site condominiums come in many forms, but they typically involve residential developments that look identical or nearly identical to platted subdivisions. The principal differences between the two is that while privately owned lots comprise the entirety (or near entirety) of a platted subdivision, site condominiums are comprised of privately owned (or rented) building envelopes where there are no legal lot lines and substantial portions of the subdivision are commonly owned. Site condominiums are not comprised of “lots” in the traditional sense. Zoning regulations must clearly address this form of development and correlate site condominium development with “lot” regulations to ensure such development is subject to the same review procedures and standards as otherwise applicable to other residential development of similar physical character (platted subdivisions).

- 6) Open Space Preservation/Clustering Regulations: Both of these phrases are used interchangeably to describe a more innovative alternative to residential development than that frequently associated with large lot "rural sprawl," and which the Future Land Use Strategy describes in detail on page 3-3. This development approach permits new construction to be located on only a portion of the development parcel than would normally occur, and with lots that are smaller than normally required, thereby enabling the remaining open space to be permanently protected under a conservation easement. This development alternative can facilitate the preservation of special natural resources and environmental ecosystems.
- 7) Planned Unit Developments (PUDs): PUD provisions typically permit a more flexible form of development that normally permitted by the district in which the site is located or by the other districts established in the Ordinance. PUDs are expressly authorized by the Zoning Enabling Act with the intent to facilitate development that, in part, encourages innovation in land use and provides better housing, employment, and shopping opportunities. A PUD application should specify all features about the proposal that are not feasible under the Ordinance's districts, including the proposed uses and/or mix of uses and site development standards such as setbacks, lot area, and building heights. If township officials determine that the project is advantageous to the community and presents a recognizable benefit based on the project's merits, and which would not otherwise be feasible according to the conventional requirements of the Ordinance, the project may be approved as a PUD. The Ordinance should clearly delineate application, review and approval procedures and standards.

- 8) Compliance with Current Law: The Zoning Ordinance's provisions must comply with current law to ensure its validity and the ability of officials to enforce the Ordinance. The Township Zoning Act, under which Gerrish Township adopted its first zoning regulations, was repealed in 2006 and replaced by the Zoning Enabling Act (Public Act 110). The township's zoning regulations should be coordinated with the Zoning Enabling Act and periodically updated to address any subsequent changes to the law.

Zone Plan, Part Two – Overview of Recommended Zoning Districts and Relation to Future Land Use Strategy/Map. Table 5-1 presents guidelines for the presentation of zoning districts in the Gerrish Township Zoning Ordinance to implement the Future Land Use Strategy presented in Chapter Three including the Future Land Use Map.

Zone Plan, Part Three – Zoning District Site Development Standards. Table 5-2 presents guidelines for basic site development standards for zoning districts to implement the Future Land Use Strategy presented in Chapter Three including the Future Land Use Map.

Table 5-1

Overview of Recommended Zoning Districts and Relation to Future Land Use Strategy/Map

The following table presents guidelines for the zoning districts in the Gerrish Township Zoning Ordinance, within the context of how the suggested districts and the Master Plan's Future Land Use Strategy (including Future Land Use map) relate on one another and the principal types of uses envisioned for each district. All secondary uses identified in the table should be subject to comprehensive review to determine if the proposed use is appropriate on the subject site based on, in part, compatibility with surrounding land uses, environmental conditions, road infrastructure, and public services.

Zoning District (example names)	Primary Relationship to Future Land Use Map	Primary Intended Uses <i>Generally limited to:</i>	Secondary Intended Uses <i>Generally limited to uses that support and enhance primary uses, or uses that are uniquely compatible with the character of the Area, such as:</i>
RC Resource Conservation	Implements "Rural Residential – Conservation Area"	agriculture, single family residences, and conservation-based uses.	Public facilities, campgrounds, kennels, extraction operations, and bed and breakfasts.
RR Rural Residential	Implements "Rural Residential – Conservation Area"	agriculture, single family residences, and conservation-based uses.	Public facilities, schools, religious institutions, assisted living facilities, campgrounds, kennels, extraction operations, and bed and breakfasts.
R-1 Existing Lake Neighborhoods	Implements "Lakeshore Residential Area"	single and two-family residences, and conservation-based uses	Public facilities, schools, religious institutions, assisted living facilities, and day care centers.
R-1A Lake Residential	Implements "Lakeshore Residential Area"	single and two-family residences, and conservation-based uses	Public facilities, schools, religious institutions, assisted living facilities, and day care centers.
R-2 Low Density Residential	Implements "Rural Residential/Conservation" and "Suburban Residential" Areas	single and two-family residences	Public facilities, schools, religious institutions, assisted living facilities, day care centers, and bed and breakfasts.
R-3 Medium Density Residential	Implements "Suburban Residential Area"	single and two-family residences	Public facilities, schools, religious institutions, assisted living facilities, and day care centers
R-4 High Density Residential	Implements "Suburban Residential Area"	single and two-family residences	Public facilities, schools, religious institutions, assisted living facilities, and day care centers
R-MF Multiple Family Residential	Implements "Suburban Residential Area"	multiple family developments such as apartments and townhouses	Public facilities, schools, religious institutions, assisted living facilities, and day care centers
R-MHC Manufactured Housing	Implements "Suburban Residential Area"	Manufactured housing communities (mobile home parks) and subdivisions	Public facilities, schools, religious institutions, assisted living facilities, and day care centers
C-1, Local Commercial	Implements "Commercial Area"	Commercial uses that cater to local needs including retail, offices, personal services, conventional restaurants, and clinics.	Other commercial uses that cater to local needs such as marinas, gas stations, car repair, kennels, funeral homes, indoor recreation, taverns, drive-through services, and day care centers.
C-2 General Commercial	Implements "Commercial Area."	Uses that cater to the needs of a more regional population including retail, offices, personal services, trade showrooms, and health clubs	Same as C-1 above in addition to more regional uses such as funeral homes, hotels, building materials sales, and mini-storage
I-1 Light Industrial	Implements "Industrial Area"	Industrial uses of a "light" character such as printing and publishing, assembly of electrical appliances, building material sales, and tool and die.	More marginal light industrial uses such as junk yards, recycling centers, plastic molding, and warehousing.

Table 5-2
Zoning District Site Development Standards

The following table establishes guidelines for basic site development standards of the zoning districts intended to implement the Future Land Use Strategy presented in Chapter Three (including the Future Land Use Map). The standards in the table are presented as a realistic guide for each district, with recognition that conditions may suggest variations from such standards. For instance, exceptions may be appropriate for building height standards as in the case of farm buildings and communication towers, for setback standards such as in the case of a new commercial building adjacent to a residential lot or district, for lot area and width standards such as in the case of the presence or lack of sanitary sewer, and for differences among riparian and non-riparian lots. It is also recognized that conditions may surface that suggest divergence from the table's guidelines to resolve conflicts or otherwise ensure public health, safety and welfare. All guidelines presented below are approximate and serve as a framework for detailed standards in the Zoning Ordinance.

Zoning District	Minimum Lot Area	Minimum Lot Width and Frontage	Maximum Building Height	Maximum Lot Coverage	Minimum Yard Setback		
					Front	Side	Rear
RC, Resource Conservation	5 acres	250 ft.	35 ft.	5%	50 ft.	25 ft.	25 ft.
RR, Rural Residential	2.5 acres	200 ft.	35 ft.	10%	50 ft.	25 ft.	25 ft.
R-1, Existing Lake Neighborhoods	12,000 sq. ft.	65 ft.	35 ft.	25%	50 ft.	6 ft. to 10 ft.	20 ft.
R-1A, Lake Residential	25,000 sq. ft.; 50,000 sq. ft. for TFDs	65 ft.; 100 ft. for TFDs	35 ft.	25%	50 ft.	6 ft. to 10 ft.	20 ft.
R-2, Low Density Residential	40,000 sq. ft.; 60,000 sq. ft. for TFDs	125 ft.; 165 ft. for TFDs	35 ft.	25%	50 ft.	20 ft.	25 ft.
R-3, Medium Density Residential	20,000 sq. ft.; 30,000 sq. ft. for TFDs	80 ft.; 100 ft. for TFDs	35 ft.	25%	30 ft.	12 ft.	25 ft.
R-4, High Density Residential	10,000 sq. ft.; 15,000 sq. ft. for TFDs	70 ft.; 90 ft. for TFDs	35 ft.	25%	25 ft.	10 ft.	25 ft.
R-MF, Multiple Family Residential	2 acres	200 ft.	35 ft.	35%	50 ft.	50 ft.	50 ft.
R-MHC, Manufactured Housing Community	Compliance with Mobile Home Commission Rules. For standards pertaining to manufactured housing subdivisions:						
	20,000 sq. ft. w/o sewer.	65 ft.	17 ft.	25%	25 ft.	10 ft.	25 ft.
C-1, Local Commercial	1 acre	150 ft.	30 ft.	50%	45 ft.	9 ft.	20 ft.
C-2, General Commercial	1 acre	150 ft.	30 ft.	65%	45 ft.	9 ft.	20 ft.
I-1, Light Industrial	2 acres	200 ft.	40 ft.	65%	75 ft.	20 ft.	40 ft.

TFD = Two family dwelling

Subdivision Ordinance

When a developer proposes to subdivide land, the developer is, in effect, planning a portion of the township. To ensure that such a development is in harmony with the Master Plan, the subdivision or resubdivision of residential and nonresidential land must be adequately reviewed. A subdivision ordinance establishes requirements and design standards for the development of plats including streets, blocks, lots, curbs, sidewalks, open spaces, easements, public utilities, and other associated subdivision improvements. The Land Division Act, P.A. 288 of 1967, as amended, provides the authority for municipalities to adopt local ordinances to administer the provisions of the Land Division Act including the platting of subdivisions.

With the implementation of a subdivision ordinance, there is added insurance that development will occur in an orderly manner and the public health, safety and welfare will be maintained. For example, subdivision regulations can help ensure developments are provided with adequate utilities and streets, and appropriately sized and shaped lots. Adopting a local ordinance addressing the creation of subdivisions can encourage a more orderly and comprehensive manner for the review and approval of subdivision plats.

Of equal importance is the adoption of a “land division ordinance.” While a subdivision ordinance addresses unified residential developments of multiple units (plats), nearly all of the residential development in Gerrish Township to date has been incremental land divisions for the purpose of establishing a single home site. A land division ordinance assures that these incremental divisions meet certain minimum zoning ordinance standards such as lot area and width. The Land Division Act referenced above also provides municipalities with the authority to adopt a land division ordinance. Such an ordinance can ensure consistency in review and approval practices.

Gerrish Township has adopted land division and subdivision ordinances. These ordinances should be periodically reviewed and, if necessary, updated to address identified deficiencies.

Other Special Purpose Ordinances

While zoning and subdivision regulations are the most frequently used tools for the regulation of land use and development, the control of land use activities can extend beyond their respective scopes. Special purpose rules and regulations can complement zoning and subdivision regulations and further the implementation of the Master Plan. Such ordinances may address matters pertaining to noise,

public nuisances, outdoor assemblies, junk, and many other activities. Township officials should evaluate its current special purpose ordinances and determine what new ordinances, and/or amendments made to current ordinances, may be beneficial to further implement the Master Plan.

Capital Improvements Programming

The orderly programming of public improvements is to be accomplished in conjunction with the Master Plan. The use of capital improvements programming can be an effective tool for implementing the Master Plan. In its basic form, a Capital Improvements Program (CIP) is a complete list of all proposed public improvements planned for a six year period (the time span may vary), including costs, sources of funding, location, and priority. It is a schedule for implementing public capital improvements that acknowledges current and anticipated demands, and recognizes present and potential financial resources available to the community. The CIP is not intended to encourage the spending of additional public monies, but is simply a means by which an impartial evaluation of needs may be made.

The CIP outlines the projects that will replace or improve existing facilities, or that will be necessary to serve current and projected land use development within a community. Advanced planning for public works through the use of a CIP ensures more effective and economical capital expenditures, as well as the provision of public works in a timely manner. Few communities are fortunate enough to have available at any given time sufficient revenues to satisfy all demands for new or improved public facilities and services. Consequently, most are faced with the necessity of determining the relative priority of specific projects and establishing a program schedule for their initiation and completion.

This Master Plan does not recommend significant increases in public services or infrastructure at this time, and includes no recommendations for the introduction of public sewer or water. However, as the township grows and increased demands for public services and infrastructure improvements surface, the benefit of capital improvement programming may be particularly applicable in Gerrish Township.

Maintaining a Current Master Plan

Successful implementation of desired policies requires the maintenance of a current Master Plan. The Master Plan should be updated periodically. The Plan must be responsive to community changes if it is to be an effective community tool and relied upon for guidance. Periodic review of the Plan should be undertaken by the Planning Commission, Township Board, and other officials to determine whether the Plan continues to be sensitive to the needs of the community and continues to chart a realistic and desirable future. Community changes that may suggest amendments to the Plan include, but need not be limited to, changing conditions involving available infrastructure and public services, growth trends, unanticipated and large-scale development, and changing community aspirations. The importance of maintaining a current Plan is reflected in the Planning Enabling Act, requiring a Planning Commission to review its Master Plan at intervals not greater than five years to determine whether amendments or a wholly new Plan is necessary. Important questions that should be asked during a review of the Plan should include, at a minimum:

- 1) Does the Plan present valid and current inventory data (Appendices)?
- 2) Does the discussion of planning issues and goals/objectives (Chapter Two) continue to be appropriate for the township today and, if not, what additions, deletions or other revisions should be considered.
- 3) Does the Future Land Use and Public Services Strategies (Chapters Three and Four) continue to reflect preferred strategies to address development, preservation and public services and, if not, what revisions should be considered.

Amendments to the Plan, or the preparation of a wholly new Plan, should follow the minimum procedures delineated in the Planning Enabling Act in addition to measures the township believes will enhance the planning process. The township should seek substantive community input on possible revisions during the early stages of deliberations as it has done in the past.

Appendix A

CULTURAL FEATURES

GEOGRAPHY and REGIONAL CONTEXT

Gerrish Township is located in the northwest quarter of Roscommon County in the upper central region of Michigan's Lower Peninsula. The township encompasses the east half of the 15.0 square mile Higgins Lake, and is just four miles north of the 31.3 square mile Houghton Lake – the largest inland lake in Michigan. Principal surrounding townships are Beaver Creek to the north (in Crawford County), Higgins to the east, Markey to the south, and Lyon to the west. The Village of Roscommon, with a 2000 population of 1,133 persons, is located one mile east of the Township's northeast border and is the nearest urban center. The only other urban centers within 20 miles are Grayling to the north (2000 population of 1,952) and Houghton Lake to the south (2000 population of 3,749). The nearest major regional urban center of 8,000 population or more is Cadillac, 40 miles southwest (2000 population of 10,000). Approximate distances between Gerrish Township and some larger regional urban centers are: 1) Midland/Bay City, 65 miles southeast; 2) Detroit, 160 miles southeast; 3) Lansing, 120 miles south; and 4) Traverse City, 65 miles northwest.

Aside from the scattered small urban centers in the 40-mile radius of Gerrish Township, the regional landscape is dominated by agriculture, scattered residential development, and state forest lands. Located centrally within the upper half of Michigan's Lower Peninsula, the Higgins and Houghton Lakes area is one of Michigan's most popular water-based recreation and tourism area.

ACCESS and CIRCULATION

Regional Access

Regional access to Gerrish Township is excellent and is provided principally by I-75 and US-127. I-75 extends from Detroit to the state's Upper Peninsula. US-127 travels from Lansing north to intersect with I-75 approximately five miles north of the township. I-75 travels across the northeast quarter of the township, with an interchange one-half mile east of its

east boundary (Exit 239) at the M-18 junction in Higgins Township. M-18 travels southwest from the interchange and along portions of Gerrish Township's east boundary. A second I-75 interchange (Exit 244) is its junction with Federal Highway along the township's northern boundary. Federal Highway runs east from the interchange along the township's northern boundary before turning southeast toward Roscommon. US-127 passes within three miles of the township's west boundary and includes an interchange with County Route 104, which travels along portions of the township's south boundary.

Local Roadway Network

Aside from M-18, I-75, Federal Highway (a designated state highway), and some private roads (recorded as private easements), all roads in Gerrish Township are under the jurisdiction of the Roscommon County Road Commission (RCRC). Local vehicular access is facilitated principally by several designated "County Routes" (CR). Any single county route may include segments of multiple roads. The county routes comprise all of the road segments classified by the RCRC as "primary". Primary roads are considered the most critical in providing regional circulation throughout the county.

The county routes (and primary roads) are as follows:

- ⇒ **CR 100** travels north through the township's central region until it bears east and travels across the east half of the township to the Village of Roscommon. CR 100 includes portions of E. Higgins Lake Road and Cut Road.
- ⇒ **CR 101** travels north through the north end of the township for approximately one mile before entering Beaver Creek Township. CR 101 begins where CR 100 bears east, and includes portions of Cut Road.
- ⇒ **CR 103** extends from the township's east border near I-75 westward to CR 100. West of CR 100, CR 103 travels north and west (East Higgins Lake Road) and terminates at Federal Highway along the township's north border.

- ⇒ **CR 104** travels east-west across the southern periphery of the township and defines a portion of the township's south boundary. CR 104 terminates at the CR 100 intersection at the south end of Higgins Lake. CR 104 is also named Marl Lake Road.
- ⇒ **CR 106** travels north from CR 100, just west of the township's east boundary. CR 106 is also named Steele Road.
- ⇒ **CR 200** originates at CR 104 at the south end of Higgins Lake and travels north and west near the lake's shoreline and into Lyon Township. CR 200 is also named W. Higgins Lake Road.

All other public roads in the township under the jurisdiction of the RCRC are classified as "local".

Under Michigan law, townships have no responsibility for funding road improvements and maintenance. On the other hand, while the RCRC must maintain and improve primary roads at their own expense, state law limits the participation of Road Commissions to no more than 50% of the cost for improvements to local roads. Requests by townships for local road maintenance levels beyond those considered adequate by the RCRC frequently require local funding. In reality, there are very few counties in Michigan where local townships are not actively involved in funding road improvements. The RCRC is responsible for local road maintenance. The RCRC has no major road improvements planned at this time in Gerrish Township except for the repaving of CR 104 in 2006, and improving CR 200 from Birch Road to Townline Road.

Also of importance is the functional classification of township roads as established by the Federal Highway Administration (FHA). The FHA classifies road segments according to their function – the extent to which the road is intended to facilitate traffic movement over long distances versus access to abutting property. The relative hierarchy of the classification and its applicability to Gerrish Township follows.

Interstates, Freeways and Other Principal Arterials are thoroughfares intended to move large volumes of traffic over long distances. Facilitating circulation on a regional level, including between cities and states, is the primary role of these thoroughfares. I-75 is the sole interstate in the Township.

Major Collector roads serve to both accommodate through traffic while also providing access to abutting properties and minor intersecting streets. Major Collectors in Gerrish Township include the road segments classified by the RCRC as County Routes (primary roads), identified on the previous page, along with Federal Highway.

Minor Collector roads serve to collect traffic from local streets and to provide a means of access to local destinations and minor arterial/major collector roads. No roads in Gerrish Township are classified as Minor Collectors.

Local Streets serve primarily to provide access to adjacent properties and minor collectors. The balance of the roads in the township not otherwise identified above are classified as *local streets*.

Federal aid for road projects is limited to roads classified as major collectors or higher. Roads classified as minor collectors have limited eligibility. Roads classified as local streets are not eligible for federal funding.

The RCRC records 24-hour traffic counts throughout the county. As might be expected, the heaviest traffic counts in Gerrish Township have been consistently recorded along CR 100, CR 104, and CR 200. Average daily traffic counts along these roads have generally ranged between 1,500 – 3,100 trips per day during the past ten years, depending upon the particular segment of the road. Traffic along CR 100 is heaviest in the CR 101 intersection area and east to the township boundary. Traffic along CR 200 is heaviest near the Townline Road intersection.

There are a multitude of factors that impact the capacity of roads and their ability to assure efficient and safe travel. These factors include, but are not limited to, road alignment, frequency of driveways and other curb cuts, road side development, driveway turning patterns, and traffic controls (lights, signs, etc.). It is not uncommon for a two-lane rural road to be capable of accommodating between 9,000 – 15,000 trips per day without the need for additional lanes. A major factor contributing to the need for additional lanes is the extent to which road-side development encourages left-turn vehicle movements.

LAND USE and DEVELOPMENT

Gerrish Township has a varied character, and can be generally divided into four principal landscapes:

- 1) suburban residential development along the Higgins Lake shoreline, typically extending 500' – 1,000' from the lake.
- 2) strip commercial development along portions of CR 100 and 200.
- 3) expansive open spaces including woodlands and wetlands, much of which comprises state-owned land including state forest and state park land.

GERRISH TOWNSHIP MASTER PLAN

- 4) scattered low-density residential development that fills much of the spaces between the state forest holdings and the more suburban/urban areas of commercial and shoreline residential development.

Approximately 26% of the township's total area is comprised of Higgins Lake (6,120 acres). Of the remaining 17,680 acres of the township (non-water acreage), approximately 17% has been converted to residential, commercial, industrial or institutional use, with residential development comprising all but 2.6% of this acreage. The remaining approximately 83% of the township's land area is comprised of state forest lands (37.3% of township's land area) and large wooded parcels that are either vacant or used as single home sites (45.7% of township's land area). A review of some of the more significant characteristics of land use and development in the township follows.

Residential Development and Land Division

Residential development comprises approximately 14.4% of the land acreage in Gerrish Township. The 2000 Census recorded 3,347 dwelling units, 10.7% more (359) than the 2,988 dwellings recorded in 1990. Of the 3,347 dwellings in 2000, 90.7% were single family dwellings constructed on-site and 6.1% were mobile homes. The remaining 3.2% of the units (107) were part of duplex and other two-family dwellings (39), multiple family dwellings of three or more units (60), and boats, recreational vehicles, and similar motorized vehicles (8).

The 2000 Census revealed that 60.1% of the housing units were vacant. As the Census is administered in the spring, this high vacancy rate is reflective of the strong seasonal population swings in the community. Of the 2,023 vacant housing units, 95.5% were classified for seasonal, recreational or occasional use. Of the occupied housing units in 2000 (spring), 92.0% were owner-occupied and 8.0% were renter-occupied.

The housing stock of Gerrish Township is comparatively young. The 2000 Census reported that the median construction year for all dwellings in the community was 1976, compared to 1973 and 1964 for the county and state respectively. In 2000, approximately one of every five homes was constructed during the previous ten years, and one in three homes had been constructed since 1980. One in ten homes had been constructed prior to 1940. 55.4% of the dwelling units were constructed between 1940 and 1979, and 10.5% were constructed prior to 1940 (see Table A-1).

The 2000 median value of the owner-occupied housing stock in the Township was \$106,000. This value is significantly greater than that of the County (\$78,900) as a whole, and somewhat less than for the state (\$115,600).

TABLE A-1
Selected Housing Characteristics, 2000

DWELLINGS	GERRISH TOWNSHIP	ROSCOMMON COUNTY	STATE OF MICHIGAN
Year Built (%)			
1990 to 2000	19.4 %	17.4%	14.7%
1980 to 1989	14.7%	12.8%	10.5%
1970 to 1979	19.2%	21.1%	17.1%
1960 to 1969	14.3%	17.8%	14.2%
1940 to 1959	21.9%	25.0%	26.5%
Before 1940	10.5%	6.0%	16.9%
Median Year	1976	1973	1964
Median Value	\$106,000	\$78,900	\$115,600
Median Mortgage	\$795	\$654	\$972
Median Rent	\$559	\$420	\$546

Source: 2000 U.S. Census

Residential development in Gerrish Township can be divided into two principal forms. Subdivision development of comparatively high density along the Higgins Lake shoreline and randomly scattered home sites of varying acreage beyond the Higgins Lake area.

Subdivision development in Gerrish Township began in the early 1900s. Subdivisions consist of the division of land into multiple home sites (lots) as single unified development projects, pursuant to the platting requirements (platted subdivisions) of the Land Division Act (formerly Subdivision Control Act). Subdivision development in the form of condominium ownership has been available since 1978 under the Condominium Act. The early subdivisions in the state were developed with limited state regulatory overview.

The first subdivisions in Gerrish Township were Sheridan Park and Woodlawn, established in 1902 along Higgins Lake. By the end of 1906, eight additional subdivisions were recorded including the subdivisions of Whittington Park (1903), Sylvan Beach (1903), Sovereign Park (1903), Argus Acres (1905), Old Point Comfort (1905), Highland Park (1906), and Chicago Beach (1906). There are approximately 80 subdivisions in the township today, with the Meadow in the Woods Subdivision being the most recently established (2001). Nearly all subdivisions in Gerrish Township are located adjacent to or within close proximity of Higgins Lake. As a result of the extensive subdivision development along the lake and other comparatively high density lake area development, more than two-thirds of all of the township's dwellings are located within approximately 1,500' of Higgins Lake. There are no remaining privately owned parcels of greater than ten acres along the lake shoreline.

Lot sizes in the subdivisions vary, but typically range between 8,000 – 45,000 square feet in area (one acre equals 43,560 sq. ft.). The subdivisions developed prior to 1960 tend to reflect smaller lot sizes and many are based on lots as small as 3,000 to 5,000 sq. ft. in area and 25' – 50' in width. Many of the residences in these subdivisions occupy two or more lots. State and county health regulations no longer permit such small home sites unless public sewer is present. Many of the subdivisions along Higgins Lake involved no new road construction, but rather are comprised of comparatively long and narrow lots extending from the shoreline to the pre-existing road that parallels the shoreline. Other subdivisions included the construction of new roads to gain greater access to the lake and provide additional frontage for the creation of a larger number of home sites.

The balance of residences in Gerrish Township is situated primarily on parcels of five to ten acres or more in locations more distant from Higgins Lake. Many of these parcels are dispersed among the many acres of state forest lands. Most of these more outlying home sites were part of much larger parcels. The land division pattern in Gerrish Township in 1930 was comprised of recorded subdivisions along approximately half of the Higgins Lake shoreline and the balance of the township acreage was contained in parcels typically 40 – 80 acres. Parcels held by the federal government were frequently 120 acres or more. Since that time, many of the private land holdings have been incrementally divided into parcels of 5 – 10 acres. For example, the approximately 11 ten-acre parcels along the south side of W. Burdell Road just west of I-75 formerly comprised a 40 and 120-acre parcel in 1930.

This trend of parcel splitting along the township's section-line roads is commonly referred to as *strip development*. This development pattern has been the source of increasing concern in the transportation and land use planning arena due to its negative impacts upon traffic safety, congestion, and rural character.

Commercial Development

Commercial development in Gerrish Township covers approximately 75 acres. The majority of commercial uses address consumer needs and services of local populations as well as uses that cater to seasonal tourism. Commercial development is located in three principal areas as summarized below:

Federal Highway, just west of the township's east border. This small commercial strip area is a continuation of the larger strip commercial development extending west from the Village of Roscommon. Some of the few businesses in this area include a beauty parlor, auto collision shop, motel, and restaurant.

CR 100 near CR 103. Approximately one-half mile north and south of CR 103, along CR 100, includes approximately 15 businesses. The development is limited to the west side of CR 100 to the north of CR 103, and to the east side of CR 100 to the south of CR 103. Businesses in this area include, in part, sports accessory sales, laundromat, construction company, insurance company, hardware sales, real estate sales, service station, gift shop, mini-storage facilities, and restaurant.

CR 200 west of Detroit Point. An approximately three-quarter mile segment of CR 200, west of Detroit Point and east of the township's boundary, is characterized by commercial development. The majority of this development is on the south side of CR 200. Businesses in this area include, in part, mini-storage facilities, hardware sales, convenience store, gift shop, restaurant, boat sales, service and storage, real estate and bank offices, and an antique shop.

In addition to the locations above, there are a number of smaller commercial areas that have just one or two businesses including a campground and marine/boat center near the CR 100/101 intersection, a service station and construction company near the CR 101/Federal Highway intersection, and a real estate office and ice cream shop near the CR 100/104 intersection.

Industrial Development

Industrial development in Gerrish Township is limited principally to a cement manufacturing operation on the north side of Federal Highway just west of the township's east boundary, and a gravel extraction operation on Pine Drive covering approximately 50 acres.

State Resource Lands

Like much of the northern half of Michigan's Lower Peninsula, Gerrish Township is comprised of extensive state land. State forest lands comprise approximately 6,600 acres of the township's 17,680 land-based acres, or 37.3% of the township's land area. The majority of the state forest land is part of the AuSable State Forest. Approximately 400 acres of the state land comprises that portion of South Higgins Lake State Park that is in Gerrish Township. The balance and vast majority of the acreage comprises state forest land and though somewhat dispersed throughout the township, it is most dominant in the east half and least present in the northeast quarter. Parcels typically range from 40 to 300 or more acres. Due to the location of many of these parcels, there are contiguous networks of state forest lands that extend for four to five miles.

COMMUNITY FACILITIES and SERVICES

Government Administration

A five member Township Board governs Gerrish Township. Township offices are located in the Township Hall on the west side of CR 100 approximately one-half mile south of Robinson Lake Road (between the fire and police station). The Hall includes the offices of local officials and staff and a large meeting room. Government services are funded

through several measures including fees, special assessments, and a tax levy. While land owners in the township have been subject to an annual tax levy of approximately 21 – 40 mills (depending upon homestead exemption), very little of the money generated by this tax becomes available to the township. Only approximately 5.5 mills was levied by Gerrish Township in 2005. Only approximately one of the 5.5 mills levied in 2005 was for general operating purposes. The balance was comprised of special assessments for specific services as described in more detail below.

Education

All of Gerrish Township is served by the Gerrish-Higgins School District. The District operates two elementary schools, one middle school and one high school, and an alternative school program. All school facilities are located in the northeast corner of Gerrish Township between Sunset and Maplehurst Drive, except for the St. Helen Elementary School in St. Helen. Enrollment in the district in recent years has been approximately 1,900 students. The district's academic programs are supplemented by athletic activities and school facilities include on-site sports and recreational amenities. The elementary, middle and high school facilities are part of the approximately 130 acres owned by the district in this portion of the township.

Also located in Gerrish Township is the Crawford, Oscoda, Ogemaw and Roscommon Intermediate School District facility (COOR). Situated at the CR 100/101 intersection, the facilities straddle both sides of CR 101 and include administrative offices as well as education facilities dedicated to special education, career and technical education, information technology, and general education. The existing buildings and parking areas cover only seven acres of the approximately 130-acres of COOR ISD property in this area.

Sewer Disposal and Potable Water

There is no public sewer or water in Gerrish Township. Sewage disposal is accommodated by on-site septic tanks and drain fields. Potable water is provided by on-site wells. Both the septic disposal systems and potable water wells are regulated by the Roscommon County Health Department. Permits are required by the Department prior to the installation of such facilities. Sewer service in the immediate area of Higgins Lake has been explored by various groups and studies although there are no township plans to introduce any public sewage disposal systems as of the adoption of this Plan. Solid waste is collected from area properties by the Waste Management Company through a contract with the township and

transported to Harrison for landfill disposal. During the past four years, each residence has paid an annual sanitation collection fee of approximately \$83.

Emergency Services

Gerrish Township provides fire protection and emergency medical services to area residents through the Gerrish Township Fire/EMS Department. The Township operates two fire stations, one on each side of Higgins Lake. The primary fire station is located on the west side of CR 100 approximately one-half mile south of Robinson Lake Road and is housed in the Township Hall building. A second fire station is located at the southeast corner of the CR 200 / Pine Drive intersection. The fire department is a “volunteer” department in that, aside from the full-time fire chief, fire fighters are paid only when on call. Fire protection and emergency medical services are funded by both a special assessment district and user fees.

Gerrish Township provides police protection services through the Gerrish Township Police Department. The township’s single police station is located directly north of the Township Hall on CR 100. Police protection services are also funded by both a special assessment district and user fees. The township maintains a department of seven full-time police officers, including a police chief and sergeant. Aide is also provided by the Roscommon County Sheriff’s Department and State Police in times of need. The Sheriff’s Department is located in Roscommon, and State Police assistance is typically provided by the Houghton Lake station.

Recreation

Gerrish Township operates three local park facilities. Gerrish Township Park covers approximately one acre and is located on the northeast shore of Higgins Lake. The park is wooded along with 400 feet of beach shoreline, and includes picnic tables, barbecue grills, a gazebo, bath house, playground and picnic area, volleyball area, parking, and portable restrooms.

Town Hall Park is located on the same grounds as the Gerrish Township Hall and police station. The property covers 20 acres and recreational facilities include a baseball diamond, basketball court, football/soccer field, children’s playground area, a pavilion with tables and grills, tennis courts, an outdoor seasonal ice skating rink, and a portable restroom.

The township recently acquired a 20 acre parcel for recreation purposes, located on the west side of Higgins Lake on Birch Road. Comprehensive recreation improvements have not yet been undertaken at the site except for partial clearing to provide public access.

Township residents have access to two nearby state parks. South Higgins Lake State Park covers approximately 960 acres and extends from the Higgins Lake shoreline south into Markey Township. Recreation opportunities include camping, swimming, boating, picnicking, hiking and cross-country skiing trails. The park encompasses Marl Lake. North Higgins Lake State Park is located on the north end of the lake, approximately one-half mile west in Lyon Township. The park covers approximately 430 acres and includes similar recreation opportunities as the southern park.

In addition to the Higgins Lake access afforded to residents by the state parks, Gerrish Township includes approximately 50 public roads that terminate at the shoreline (“road ends”) and provide additional opportunities for lake access.

The Gerrish-Higgins School District facilities in the township also provide nearby public recreation opportunities. The elementary, middle and high school combine to include children’s play areas, baseball fields, football fields, running tracks, gymnasiums, and volleyball courts.

In addition to public recreation opportunities in the immediate Gerrish Township area, private enterprises also contribute to recreation in the Township including campgrounds, country clubs and golf courses, canoe liveries, and boat clubs.

Recreation opportunities extend further beyond the immediate area of Gerrish Township. These include the many local parks managed by area-wide municipalities including Roscommon County; state facilities including parks, ski trails, hunting grounds and public access sites to lakes; golf courses; county fairgrounds; canoe liveries; and more.

Please see the Gerrish Township Recreation Plan for a more detailed description and analysis of recreation opportunities and conditions in and around Gerrish Township.

Appendix B

ENVIRONMENTAL FEATURES

GEOLOGY and TOPOGRAPHY

During the Paleozoic era of geological history, Roscommon County and the state as a whole was inundated by successive warm, shallow seas during which large amounts of sediment were deposited. These deposits subsequently lithified to form bedrock. Nearly the entire area of Gerrish Township sits upon Michigan Formation bedrock, consisting largely of shale. 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 land's surface. These materials were then deposited during the melting of the ice to form drift materials covering the bedrock below. While the depth to bedrock exceeds 800 feet in some parts of Michigan, the depth of the drift layer in Gerrish Township ranges between approximately 375 – 450 feet, and generally increases as one moves northwest across the township.

The township's topography can be generally described as level to rolling. The majority of the township reflects grades of 2% or less. However, there are two areas of the township that are of a distinctly different topographic character and exhibit grades typically of 5% – 10% and approach 12% – 16% in isolated locations. These areas are part of a diagonal ridge crossing the northeast and southwest corners of the township. The southwest ridge extends from the southwest part of Higgins Lake northwest into Lyon Township (south of Lyon Manor). The northeast ridge extends northwest from the area of the Maplehurst/Oakwood Roads intersection to Federal Highway near E. Higgins Lake Drive. These ridges exhibit the highest elevations in the township, reaching elevations of 1,320 – 1,360 feet above sea level. The township's lowest elevations can be found where the Cut River exits the township along its south boundary and the far northeast 80 acres of the township, where elevations drop to approximately 1,150 feet above sea level. Higgins and Marl Lakes

have elevations of approximately 1,154 and 1,152 feet above sea level respectively.

The character of an area's geology and topography has bearing on development and land use planning. Guidelines recommend that development be generally discouraged in areas dominated by 12% – 18% slopes, and severely limited in steeper areas. Geology can impact the availability of potable water, and this issue is further discussed under "Groundwater."

HIGGINS LAKE and DRAINAGE

Higgins Lake

In a community of vast environmental treasures, Higgins Lake is perhaps the most spectacular environmental feature of Gerrish Township. The lake is the most dominant and unique natural feature of the community. It is believed to have been created by the glaciers of the Ice Age, forming the lake depression and the ridges to the north and south, and trapping the ice melt to create the lake.

Higgins Lake covers approximately 10,300 acres (15.6 square miles), two-thirds of which is located in Gerrish Township. The lake is more than six miles in length and three miles in width, and includes nearly 21 miles of shoreline. The lake includes a north and south basin, the depths of which are approximately 140' and 100' respectively. These depths make the lake one of the state's deepest. While the lake drains a watershed area of nearly 22,000 square acres (34.4 square miles), groundwater inflow is the primary source of the lake's water. Precipitation and two small tributaries on its west side (Little and Big Creeks in Lyon Township) provide supplemental inflow. The lake empties into the Cut River at its southeast corner, and the Cut River flows into Houghton Lake four miles south. According to a 1982 study prepared by Limno-Tech Inc., Higgins Lake has a long hydrologic retention time of 12.4 years. Higgins Lake is classified as an oligotrophic lake, a lake of abundant dissolved oxygen and limited plant nutrients and plant growth. Oligotrophic lakes are

generally considered to be the most desirable lake environments due to their typical clear waters and minimal algae growth.

The lake's considerable depth, clear water, water quality and sandy bottom make it one of the state's most popular fishing, boating and recreation-based water bodies. Just the state parks alone at each end of the lake account for approximately 500,000 annual visitors. But the lake's benefits go far beyond its recreational opportunities, including its wildlife habitats, natural visual beauty, facilitating the collection and storage of storm water runoff and flood control, and a focal area for lake-based residential life styles.

The lake's beauty and desirability is demonstrated by its popularity as a place of residence. The vast majority of residents in Gerrish Township live along the lake's shoreline or in close proximity. This attraction of the lake has also led to increasing concern regarding the long term protection of the lake's environmental quality. There has been growing concern about the impact of the shoreline development including shoreline erosion, sedimentation, and bacteria and nutrient loading in association with the many septic systems in the immediate area of the lake and the use of fertilizers. Excess sedimentation, nutrients and bacteria can undermine the water quality of the lake including the safety of the water itself as well as the accumulation of algae and plant growth. The introduction of toxic chemicals in association with improper waste and hazardous substance management can also undermine the environmental integrity of the lake. All of these forces have the potential to undermine the recreational desirability of the lake and local property values.

A number of studies have focused on the water quality of Higgins Lake and have concluded that while the water quality is very good, there are signs none-the-less of increasing degradation. One of the most recent studies, undertaken by the U.S. Geological Survey and titled "Effects of Residential Development on the Water Quality of Higgins Lake, Michigan 1995 – 99" (2001), concluded in part: *"Nitrogen concentration in the lake water near shore also has increased the most in areas where buildings exceed a density of 0.50 building per acre. Ground water beneath the lake showed higher concentrations of phosphorous, nitrogen, chloride, and boron than the lake-water samples. Escherichia Coliform (E. coli) bacteria was found in ground water at sites where building density exceeded 0.40 building per acre, indicating that water from septic systems, is leaching to the ground water that flows to the lake."*

Drainage

The principal means by which Gerrish Township drains is the rapid permeability of its predominantly sandy soils. Precipitation seeps into the ground and ultimately becomes part of the ground water flow, and runoff over land is comparatively limited. Some of this ground water flow finds its way into Higgins Lake through under ground springs and ground water flow.

There are other drainage features of the area as well. A portion of the township drains directly into Higgins Lake. This is particularly true for areas close to the shoreline where soils do not have the capacity to accommodate rapid percolation due to their physical composition or wetness. Higgins Lake drains into Marl Lake and the Cut River immediately southeast of the lake. The Cut River and its wetland corridor flows east and then southwest where it empties into Houghton Lake four miles south of Higgins Lake. Houghton Lake subsequently flows into the Muskegon River which empties to Lake Michigan approximately 100 miles southeast at Muskegon. The water flowing from Higgins Lake begins at an elevation of approximately 1,154 feet above sea level and drops approximately 15 feet before emptying into Houghton Lake. The elevation of Higgins Lake is controlled by a dam along the Cut River.

Another means by which the township drains is the expansive wetland area just southeast of Higgins Lake. Much of the township's southeast quarter that does not percolate into the soil below, or otherwise drain into Higgins Lake, drains into this wetland area which, in turn, drains into Marl Lake and the Cut River.

Much of the southwest and northeast corners of the township flow away from the lake due to the presence of the ridges that diagonally cross the township in these areas. The southeast corner of the township drains into other expansive wetlands in Lake and Markey Townships which flow into Houghton Lake. The northeast corner of the township drains northeast to the Beaver Creek and associated wetlands in Gerrish and Beaver Creek Townships. Unlike the balance of the township, the northeast corner ultimately drains into Lake Huron via the AuSable River.

Lands abutting or in close proximity to drainage courses, such as streams, ponds, and lakes, are subject to flood conditions where the soils or drainage courses do not have the capacity to accommodate the rate of runoff from a single heavy rainfall or numerous lighter rainfalls over a relatively short period of time. Serious flooding has not been an occurrence in Gerrish Township. This is due in large part to the comparatively limited development

(impervious surfaces) in the township, the expansiveness of Higgins Lake and wetland areas in the near vicinity, and the highly permeable sandy soils that permit substantial rainfall to drain into the soil.

Although Gerrish Township may be relatively free of any regular threat of flooding, improperly managed land development practices can impact flood conditions in the community.

The environmental health of Higgins Lake is affected by how local property owners and communities impact the watershed feeding the lake. Impurities entering the lake can occur by contaminants from both underground and surface water, and surface and below-surface soils. The specific sources of contaminants in a watershed can be varied and may include fertilizers and pesticides from residential lawns and agricultural operations, improper disposal and discharges of commercial, industrial, and household wastes, improper functioning of septic drain fields, erosion, and the removal of important contaminant-absorbing vegetation near shoreline areas. Managing activities and practices in a watershed can greatly benefit the environment health of the water resources within, including its streams, rivers, lakes, and wetlands. This, in turn, benefits all who have a vested interest in the water resources including those with recreation, commercial, residential, and conservation interests.

GROUNDWATER

As runoff flows across land surfaces and travels through drainage courses, a portion of the runoff seeps into the ground and collects in great quantities in the underlying soils and deeper bedrock. This is particularly true in Gerrish Township where soils are of a high permeability. These reservoirs of water are referred to as aquifers and serve as the sources of drinking water for residents of the township.

Where potable water can be drawn from bedrock, it is frequently the preferred option due to the added layer of protection from contamination. However, the Michigan Formation bedrock is deep for practical access and the shale does not allow water to move freely. Thus, wells in Gerrish Township draw water from the glacial drift above the bedrock. The water drawn from the drift is generally considered to be of good quality, although there have been reported random occurrences of high levels of nitrates and arsenic.

Aquifers can be “*confined*” or “*unconfined*” systems. Confined systems have an impermeable soil layer (typically clay) above them which acts to confine the aquifer and protect the aquifer from contaminants seeping into the subsurface above the confining soil layer, such as petroleum products and leaking underground fuel tanks, fertilizers, and improperly disposed household liquids. Unconfined systems do not have this protective layer of clay soil and are much more prone to contamination. Data from well logs suggest that while a confining clay layer is present in areas of the township, this protective cover does not extend uniformly across the township. Thus, while a well may be drilled in an area confining clay layer, contamination located elsewhere in the community can impact the well as the plume of contamination travels with ground water flows.

VEGETATION

Vegetative cover in Gerrish Township is comprised nearly entirely of upland forests and lowland woodlands and wetlands. The little portion of the township that is of a different character is primarily limited to residential lawn areas.

There are approximately 10,000 acres of upland deciduous forest in the township, approximately three-quarters of which is comprised of species such as aspen, birch, oak, hickory, beech, cherry and maple. The balance is comprised largely of pine stands such as white, red and jack pine. As the upland woodlands comprise more than one-half (56%) of the land area in the township, they are apparent in all areas of the township. Much of the woodlands are part of the state forest system, and are subject to managed harvesting. The township includes approximately 2,500 acres of wetlands which cover 14% of the township's land area. Approximately two-thirds of the wetlands are forested wetlands, comprised of lowland conifers and hardwoods such as ash, elm, spruce, and cedar. The balance consists of emergent and shrub environments such as cattail, sedges, alder, and willow. Unlike the upland woodlands, the wetlands are not dispersed across the township. All but a small portion of the township's wetlands occupy the majority of the township's southeast quarter. The balance is located along the township's northeast boundary and east and south of CR 200 near Lyon Manor. The majority of the township's woodland and wetland resources are part of the state forest lands.

The woodlands and wetlands are important because of the vital role these resources play in flood control, runoff purification, groundwater recharge, wildlife habitats, and supporting the desired character of the township. Wetlands are environmentally sensitive resources and can experience degradation and destruction due to changes in water levels, erosion and sedimentation, filling, dredging, and draining. The degradation or pollution of a wetland area can have a destructive impact upon wetlands and related woodland resources distances away due to the frequent physical linkages between these resources. In addition to the environmental constraints wetlands pose for development, wetlands present severe physical constraints on land development due to flooding and instability of soils.

Due to the important environmental role of wetlands, they are protected by the Michigan Environmental and Natural Resources Protection Act, Part 303. Wetlands are regulated by the state if they meet any of the established criteria including, but not limited to, wetlands connected to one of the Great Lakes or located within 1,000 feet of one of the Great Lakes, wetlands located within 500 feet of an inland lake, pond, river or stream, and other wetlands of five acres or more in area. The law requires a permit be obtained from the state for depositing fill in a wetland, dredging or removing soil from a wetland, constructing or operating a use in a wetland, or draining surface water from a wetland. The Michigan Department of Environmental Quality will not issue a permit unless it finds, in part, that there would be no unacceptable disruption to aquatic resources, and that the proposed activity is wetland dependent or no feasible and prudent alternatives exists.

SOILS

The U.S. Department of Agriculture, Natural Resources Conservation Service, has recently prepared an updated Soil Survey for Roscommon County. The survey reveals that the vast majority of the township is characterized by sandy soils. The east half of the township is dominated by sandy soils although there are considerable areas of muck soils throughout the southeast quarter and in the far northeast corner. Muck soils are generally associated with wetland environments, and have a high organic content. Except for a muck area south of CR 200, east of Lyon Manor, nearly the entire west half of the township is comprised of sandy soils.

The character of soils can have a profound impact upon the suitability of future land uses with regard to groundwater contamination, buckling and shifting of foundations and roads, erosion, on-site sewage

disposal, and agricultural productivity. The Natural Resources Conservation Service has identified specific individual soil units throughout the County based upon the characteristics of the upper soil layers (approximately five feet in depth) which provides a reliable basis for township planning purposes.

Aside from the muck soils, local soil conditions do not generally present severe limitations to the construction of buildings in the township. Construction challenges that may be posed by such soil conditions as ponding, soil wetness, and high shrink-swell potential can typically be overcome through special construction practices which may increase construction costs. On the other hand, The Natural Resources Conservation Service classifies nearly all township soils as presenting "severe" limitations to septic drain fields. Depending upon the specific site, these limitations are due to seasonally high water tables, ponding, poor soil filtration characteristics and/or soil wetness. A primary concern is the soil's ability to absorb and break down the leachate from the septic drain fields before it reaches underground water supplies. For example, vast areas of the township are characterized by Graycalm sand and Graycalm-Grayling sand (including along and in close proximity to the Higgins Lake shoreline). The Soil Survey classifies both of these soil types as presenting "severe" limitations to septic tank absorption fields due to the rapid permeability of the soil. Limitations on septic system by soils can often be overcome with increased lot sizes and/or specially engineered septic systems at additional costs. Soils that present only moderate or slight limitations to septic tank absorption are scattered throughout the township in a marbled pattern and cover less than 5% of the entire township.

The Central Michigan Health District is responsible for issuing permits for on-site sewage disposal. A permit will not be issued unless all county requirements have been met. Development at densities of greater than one dwelling per acre may require a centralized sewer system in order to meet all applicable standards and regulations.

It should be noted that while a site may be classified by the Natural Resources Conservation Service as presenting a limitation to septic systems and building construction, 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 land development projects are initiated.

CLIMATE

The climate of Gerrish Township can be classified as mild. Based upon data collected by the Department of Agriculture between 1964 and 1990 at Houghton Lake, the average annual daily temperature is 43.1 ° F. By comparison, the average daily temperature in Lansing in southern Michigan is 47.4 ° F and the average daily temperature in Sault St. Marie in the Upper Peninsula is 39.7° F.

The average winter temperature is 19.5 ° F. The coldest month of the year is January, where the average minimum and maximum temperatures are 8.6 ° F and 25.5 ° F respectively. The average January temperature for the entire month is 17.1 ° F. The warmest month of the year is July, where the average minimum and maximum temperatures are 55.5 ° F and 79.8 ° F respectively. The average July temperature for the entire month is 67.6 ° F.

Average yearly precipitation is 28.71 inches and average yearly snowfall is 76.0 inches. June is typically the wettest month with an average rainfall of 3.12 inches. January is typically the heaviest snow month with an average of 19.3 inches.

Because the day-to-day weather is controlled by the movement of pressure systems across the nation, this area seldom experiences prolonged periods of hot, humid weather in the summer or extreme cold during the winter. The lake effect, so noticeable in many areas of Michigan, is limited in the Gerrish Township regional area. However, the prevailing westerly winds blowing over Lake Michigan often produce cloudiness which extends across Michigan's entire Lower Peninsula, modifying fall and early winter temperatures. Weather conditions change gradually between the seasons.

Appendix C

DEMOGRAPHIC FEATURES

INTRODUCTION

Understanding fundamental demographic features of a community can provide important insight into the character of the population today, the evolving character of the community's citizens, and considerations for future planning. Demographic features can have a strong impact on economic development and stability, public services, and land use needs.

POPULATION GROWTH

Gerrish Township's growth has been strong during the past 70 years (see Table C-1 and Figure C-1). The population grew from 259 persons in 1930 to 3,072 persons in 2000. This nearly 11-fold increase in population is comparable to that of Roscommon County as a whole, but more than five times that of the state. Except for the 1950s when the township's population dipped by three persons, its ten-year growth rates have ranged from 26.9% – 65.5%. The past 30 years have witnessed strong but decreasing growth rates. While the township's overall growth rate during the past 70 years has been comparable to that of the county's, the ten-year growth rates of each have not paralleled each other. The township grew two to three times faster than the county during the 1960s and 1980s, and the county's growth rates during the 1930s and 1940s were approximately 25% – 40% greater. The township's share of the county population has remained nearly steady, dropping from 12.6% in 1930 to 12.1% in 2000.

Gerrish Township's growth is a reflection of the trend across Michigan – persons exiting urban areas for a more suburban and rural life style. However, the Township's 26.9% growth during the 1990s was nearly four times the growth experienced state-wide.

Of the 11 townships in the county, Gerrish Township experienced the fifth highest growth rate between 1990 – 2000 (26.9%). The highest growth rates were experienced by Lyon Township (41.0%) and Backus Township (40.6%). All Roscommon County townships experienced positive growth during the 1990s, with Lake Township's 9.5% growth rate being the lowest. Gerrish Township's 2000 population of 3,072 places the township as the second largest community in the county, behind Denton Township (5,817).

Figure C-1
Gerrish Township Population, 1930 – 2000

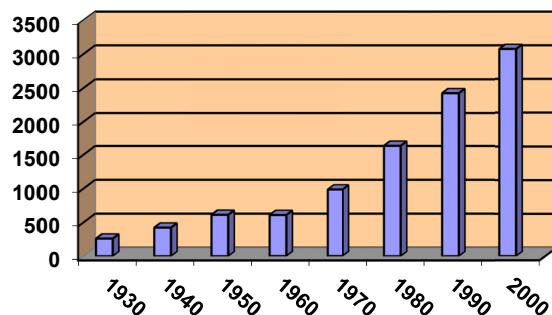


TABLE C-1
Population Trends & Growth Rates for Gerrish Township, Roscommon County and Michigan
(previous ten-year growth rate indicated by “%”)

	GERRISH TOWNSHIP		ROSCOMMON COUNTY		STATE of MICHIGAN	
1930	259		2,055		4,842,325	
1940	421	62.5%	3,668	78.5%	5,256,106	7.9%
1950	610	44.9%	5,916	61.3%	6,371,766	17.6%
1960	607	-0.5%	7,200	15.4%	7,823,194	18.6%
1970	984	62.1%	9,892	21.7%	8,881,826	11.9%
1980	1,629	65.5%	16,374	65.5%	9,262,078	4.1%
1990	2,421	48.6%	19,776	20.8%	9,295,297	0.4%
2000	3,072	26.9%	25,469	28.8%	9,938,444	6.9%

Source: U.S. Census Bureau

POPULATION PROJECTIONS

Estimating future population growth can provide important insights into identifying future land use and public services needs. Projecting the growth of a community's population over a prescribed period of time is not an exact science. The many unpredictable factors that affect growth make population projections somewhat speculative. By using several projection techniques, a range of growth estimates can be generated. These shed light on potential growth if planning policies and land development regulations are generally held constant.

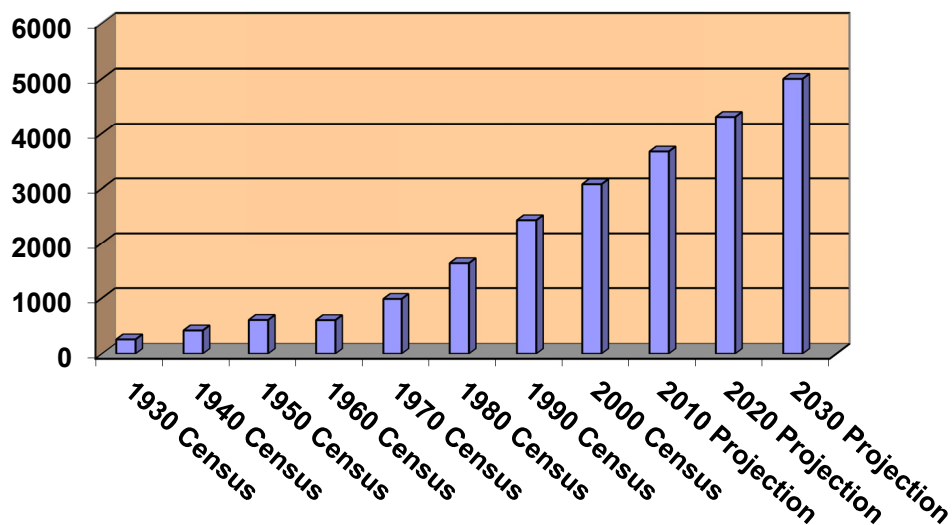
The current rate approach assumes that the township will continue to grow at a rate similar to that which occurred between 1990 and 2000 (26.9% every ten years), and results in the strongest growth compared to the other projections. The current trend approach assumes that the 35.3% average decrease in growth

rate that occurred through the 1980s and 1990s will continue for each coming decade and result in growth rates in the 2000s, 2010s, and 2020s of 17.4%, 11.3%, and 7.3% respectively. The ratio trend approach assumes the township's share of the county population will decrease by approximately 0.07% each ten years – the average ten-year proportional share decrease since 1930. This projection relies on the East Central Michigan Planning and Development Regional Commission's (ECMPDRC) population projections for Roscommon County, and results in the slowest growth compared to the other projections. The ECMPDRC projection merely relies on the specific population projections prepared by the ECMPDRC for Gerrish Township based on 2000 Census data. The average of the resulting projections yields populations of 3,668 in year 2010, 4,306 in 2020, and 4,996 in year 2030 (see Table C-2 and Figure C-2).

Table C-2
Gerrish Township Population Projections

Projection Method	Year 2010	Year 2020	Year 2030
Current Rate	3,898	4,947	6,277
Current Trend	3,606	4,014	4,307
Ratio Trend	3,513	3,924	4,231
ECMPDRC Projection	3,655	4,337	5,169
Average of Trends	3,668	4,306	4,996

Figure C-2
Gerrish Township Population Trends and Projections



SOCIAL CHARACTERISTICS

The 2000 Census revealed that Gerrish Township and Roscommon County have similar overall racial profiles, both reflecting a more homogeneous racial population than the state as a whole (see Table C-3). This homogeneity is typical of rural Michigan communities, as compared to more urban areas such as Cadillac and Grand Rapids. 98.2% of the township population was white, compared to 80.2% for the State.

Table C-3
Race, 2000
(By Percent)

RACE	GERRISH TOWNSHIP	STATE of MICHIGAN
White Alone	98.2	80.2
Black/African American Alone	0.3	14.2
American Indian, Alaska Native Alone	0.3	0.6
Asian Alone	0.2	1.8
Native Hawaiian/Other Pacific Islander Alone	0.1	0.0
Some Other Race Alone	0.3	1.3
Two or More Races	0.7	1.9

Source: 2000 U.S. Census

31.0% of township residents in 2000 were of German decent, the most dominant ancestral linkage in both the township and county, as compared to 20.4% for the state as a whole (also dominant in the state). The two other most dominant ancestries reflected in the township's 2000 population was English (16.8%) and Irish (15.4%).

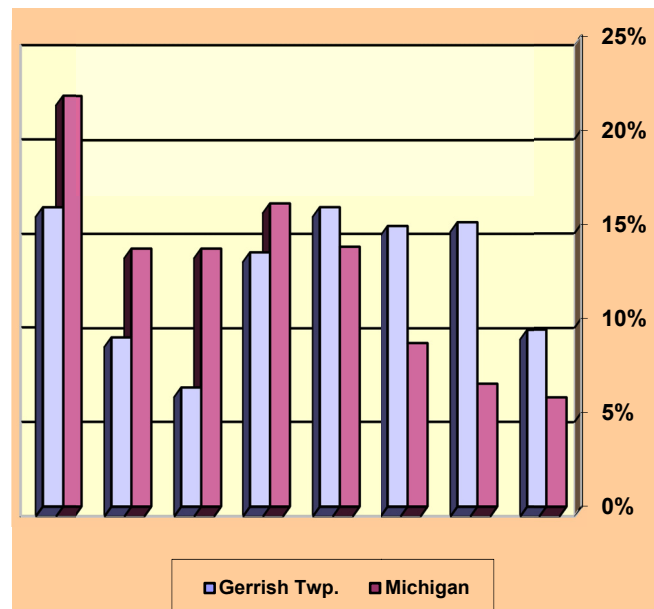
The age profile of Gerrish Township is far from characteristic of the state as well (See Table C-4 and Figure C-3). While the 2000 median age for the state was 35.5 years, Gerrish Township's was 36.1% higher at 48.3 years. Gerrish Township had twice the rate of persons 65 years and older (24.4%). The 20.0% of the township population that was under 18 years of age was noticeably less than the state's 26.1% share. The 9.0% of the township population that was between 20 – 34 years of age was significantly less than the 20.2% for the state.

The township's age profile characteristics, including its comparatively high median age, is reflective of the high proportion of retirees in the community, many of whom have come to Gerrish Township to enjoy their retirement years. This is true for much of Roscommon County, like many "up north" Michigan communities. Not only is the township's population comparatively mature, it is continuing to age like the balance of the state and nation. The 2000 township median age of 48.3 years reflects an 11.3% increase over its 1990 median age of 43.4 years.

Gerrish Township exhibits a proportionately lower percentage of persons in all age brackets through the 35 – 44 years bracket, and exhibits a proportionately higher percentage of persons in all higher age brackets (see Figure C-3).

As the nation's "baby boomers" approach retirement age, the township can expect an increasing number of senior citizens to make Gerrish Township a seasonal or year-round place of residence. This maturing will occur both through the natural aging of the existing township population and retirees relocating to the community. It is reasonable to expect increased demands by this population upon local service providers including health care, recreation, living assistance, and related services.

Figure C-3
Age Profile, 2000



GERRISH TOWNSHIP MASTER PLAN

TABLE C-4

Age, 2000

(By Percent, except where otherwise noted)

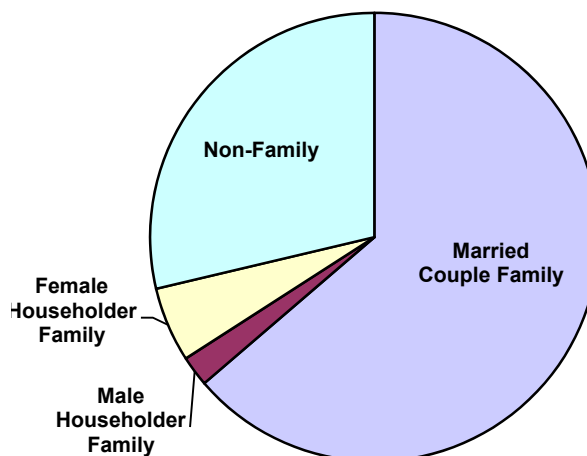
AGE	GERRISH TOWNSHIP	ROSCOMMON COUNTY	STATE of MICHIGAN
Under 5 yrs.	3.7	4.3	6.8
5 – 9 yrs.	5.6	5.8	7.5
10 – 14 yrs.	6.6	6.1	7.5
15 – 19 yrs.	6.3	6.1	7.2
20 – 24 yrs.	2.7	3.3	6.5
25 - 34 yrs.	6.3	8.1	13.7
35 - 44 yrs.	13.5	13.3	16.1
45 – 54 yrs.	16.1	13.8	13.8
55 - 59 yrs.	7.5	7.8	4.9
60 - 64 yrs.	7.4	7.7	3.8
65 - 74 yrs.	15.1	14.0	6.5
75 - 84 yrs.	7.6	7.6	4.4
85 yrs. or more	1.8	2.1	1.4
Under 18 yrs.	20.0	20.0	26.1
18 yrs. and over	80.0	80.0	73.9
65 yrs. and over	24.4	23.8	12.3
Median Age	48.3 yrs.	47.2 yrs.	35.5 yrs.

Source: 2000 U.S. Census

The 2000 Census recorded 1,343 households in the Township, a 26.1% increase over the 992 households in 1990. 71.3% (958) of the households in 2000 were comprised of families, a 19.5% increase over the 771 families in 1990. Like the balance of the state and nation, Gerrish Township families are slowly decreasing in size, dropping from 2.8 persons per family in 1990 to 2.71 persons in 2000. The average household size in 2000 was 2.29 persons. Of all the households in the Township, 63.7% included a married-couple. This percentage is significantly higher than that for the county (56.7%) and the state (51.4%). Of the 7.6% of families not consisting of a married couple, nearly two-thirds were headed by a female householder. 28.7% of all households were comprised of non-family households. 88.5% of the non-family households, or 25.4% of all households, was comprised of a person living alone. 24.6% of all households included an individual under 18 years of age, and 37.6% of all households included an individual 65 years of age or older. (see Table C-5 and Figure C-4)

The 2000 Census revealed that approximately one of every eight persons in Gerrish Township that were 25 years of age (or greater) had not received a high school diploma, while approximately one of every three persons completed high school and received either an associates, bachelor's or graduate/professional degree.

Figure C-4
Household Type
Gerrish Township, 2000



Approximately one in four finished their formal education upon attaining a high school diploma (see Figure C-5).

GERRISH TOWNSHIP MASTER PLAN

TABLE C-5
Household Type, 2000
(By Percent)

HOUSEHOLD TYPE	GERRISH TOWNSHIP	ROSCOMMON COUNTY	STATE OF MICHIGAN
Family Households	71.3	67.7	68.0
Married-couple family	63.7	56.7	51.4
Other family:	7.6	11.0	16.6
Male householder	2.2	3.3	4.1
Female householder	5.4	7.7	12.5
Non-family household	28.7	32.3	32.0
Householder living alone	25.4	28.1	26.2
Householder 65 years and over	12.6	14.0	9.4
Household/Family Size			
Average household size	2.29	2.23	2.56
Average family size	2.71	2.69	3.10

Source: 2000 U.S. Census

The 2000 Census further revealed that Gerrish Township residents had a somewhat higher level of formal education than the state as a whole and a noticeably higher level of education than the county (see Table C-6):

- ⇒ 86.9% of township residents 25 years or older had received a high school education or greater, compared to 83.4% for the state and 79.5% for the county.
- ⇒ 22.1% of township residents 25 years or older had received a bachelor's degree or higher, compared to 21.8% for the state and 10.9% for the county.
- ⇒ 9.2% of Township residents 25 years or older had received a graduate or professional degree, compared to 8.1% for the state and 4.4% for the county.

Figure C-5
Highest Education Level Attained
Gerrish Township, 2000

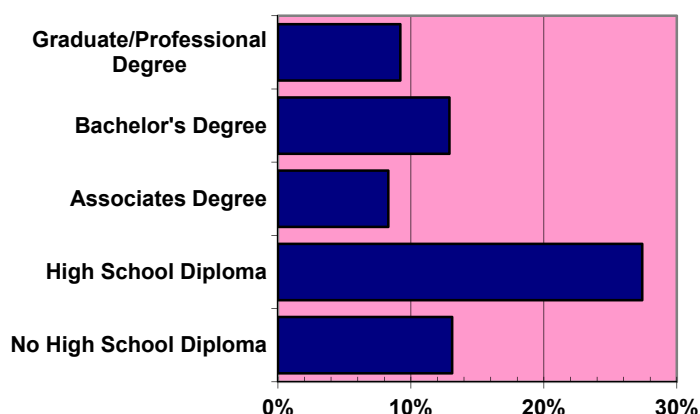


TABLE C-6
Highest Level of Education Attainment, 2000
(for persons 25 years of age, by percent)

HIGHEST EDUCATION ATTAINMENT	GERRISH TOWNSHIP	ROSCOMMON COUNTY	STATE of MICHIGAN
Less Than 9th Grade	1.9	4.4	4.7
9th to 12th, no diploma	11.2	16.1	11.9
High School Diploma	27.4	39.2	31.3
Some college, no degree	29.1	23.2	23.3
Associates Degree	8.3	6.2	7.0
Bachelor's Degree	12.9	6.5	13.7
Graduate/Professional Degree	9.2	4.4	8.1
High school graduate or higher	86.9	79.5	83.4
Bachelor's degree or higher	22.1	10.9	21.8

Source: 2000 U.S. Census

ECONOMIC CHARACTERISTICS

The township's labor force in 2000 was comprised of 1,210 persons, or 48.1% of all persons 16 years of age or greater. The three principal employment industries for Gerrish Township workers, as well as for the county and state, were 1) education, health, and social services; 2) retail trade; and 3) manufacturing. (see Table C-7). However, the 29.7% of the township's labor force that was employed in the education, health, and social services industry was significantly higher than that of the county (21.2%) and state (19.9%), and represented the single largest employment industry for township workers. Conversely, the township's 11.1% of its labor force that was employed in the manufacturing industry was approximately half the proportion of the state's labor force as a whole. The township's average unemployment rate in 2000 was 3.5%, compared to 4.1% and 3.7% for the county and state as a whole.

The township's comparative maturity and large retirement population is evident by numerous economic indicators:

- ⇒ The township's 48.1% of all persons 16 years of age or greater in the labor force in 2000 was substantially less than the state as a whole (64.6%).
- ⇒ The township's 43.6% of its households in 2000 that received social security income was considerably higher than the state as a whole (26.2%).
- ⇒ The township's 39.1% of its households in 2000 that received retirement income was considerably higher than the state as a whole (19.2%).
- ⇒ The township's 58.4% of its households in 2000 that received wages or a salary was considerably lower than the state as a whole (80.2%).

In 2000, 3.1% of Township workers did not leave their home to go to work. For those who did commute to work, the average travel time was 26.1 minutes. This average travel time is slightly greater than that of the county (24.2 minutes) and state (24.1 minutes) as a whole.

TABLE C-7
Employment by Industry, 2000
 (employed persons 16 years and older, by percent)

INDUSTRY	GERRISH TOWNSHIP	ROSCOMMON COUNTY	STATE of MICHIGAN
Education, health, and social services	29.7	21.2	19.9
Retail trade	13.7	18.3	11.9
Manufacturing	11.1	10.5	22.5
Professional, scientific, management, administrative, and waste management	8.5	4.8	8.0
Public administration	7.6	6.5	3.6
Art, entertainment, recreation, accommodations, and food services	7.3	11.8	7.6
Construction	6.9	8.5	6.0
Finance, insurance, and real estate	3.6	4.7	5.3
Transportation, warehousing, and utilities	2.8	3.6	4.1
Information	2.7	1.4	2.1
Wholesale trade	1.4	2.8	3.3
Agriculture, forestry, fishing, hunting, and mining	0.7	1.1	1.1
Other services, except public administration	3.9	4.9	4.6

Source: 2000 U.S. Census

GERRISH TOWNSHIP MASTER PLAN

Gerrish Township's median household income (\$37,147), median family income (\$46,469), and per capita income (\$19,877) placed the township in a position of prosperity between that of the county and state as a whole.

However, the Township's 5.1% of families and 6.8% of persons that were below poverty level in 2000 was significantly less than that of the county and state as a whole. (see Table C-8)

TABLE C-8
Income, 1999

INCOME CHARACTERISTIC	GERRISH TOWNSHIP	ROSCOMMON COUNTY	STATE OF MICHIGAN
Median household income	\$37,147	\$30,029	\$44,667
Median family income	\$46,469	\$35,757	\$53,457
Per capita income	\$19,877	\$17,837	\$22,168
Families below poverty level	5.1%	8.6%	7.4%
Persons below poverty level	6.8%	12.4%	10.5%

Source: 2000 U.S. Census

Appendix D

INVENTORY MAPS

Public Roads and Land Usage

Wetland Inventory

- Roads**
- Freeways
 - State Roads
 - County Roads
- Public Facilities**
- Township Hall
 - Cemetery
 - Primary/Secondary School
 - Fire Department
 - Ambulance Service
 - Church
- Land Usage**
- | Zone | Parcel Count |
|--------------------|--------------|
| Commercial | (96) |
| Industrial | (1) |
| Public | (16) |
| Residential Low | (666) |
| Residential Medium | (5239) |
| State | (70) |

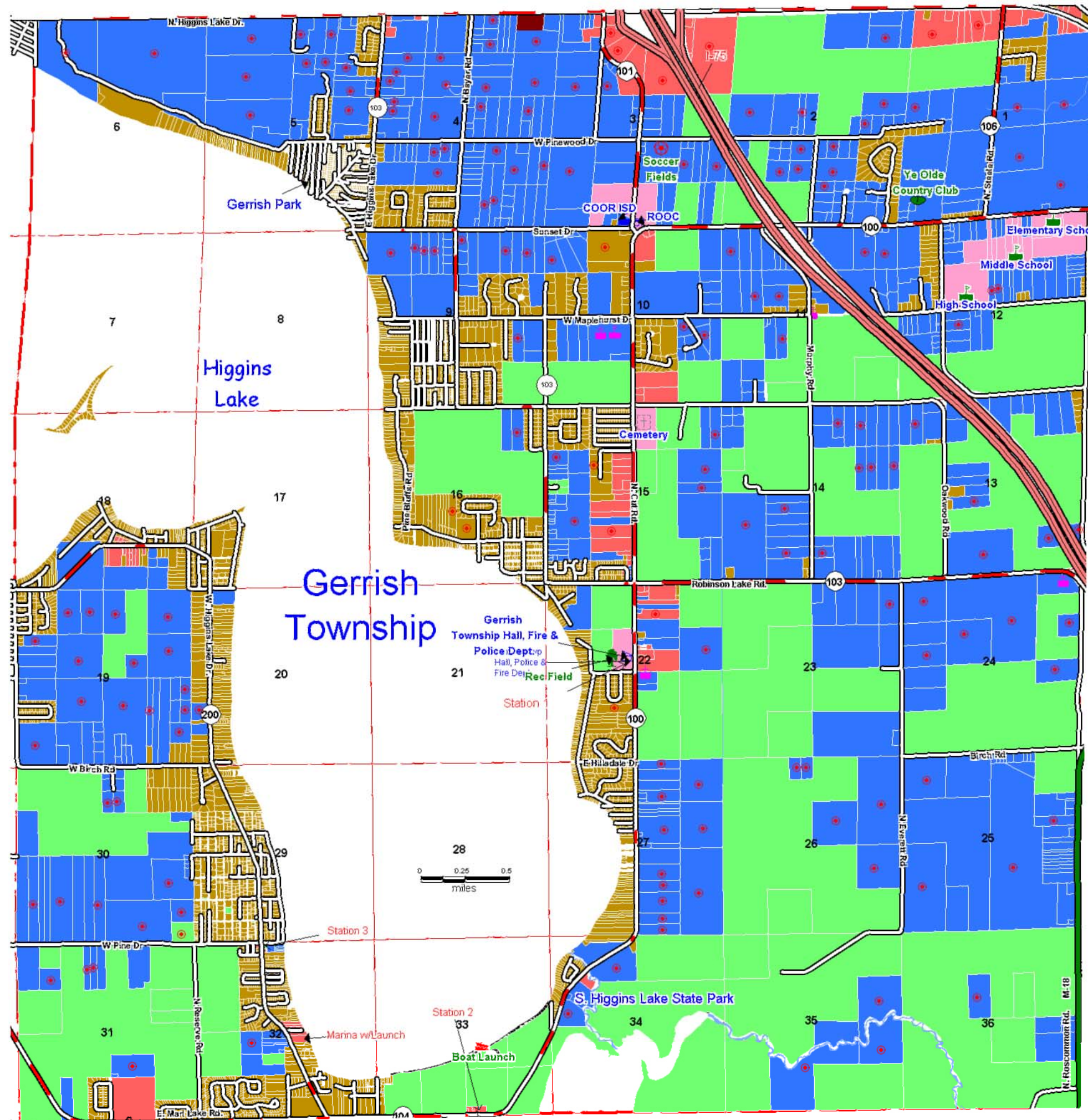
Land usage determined by
Gerrish Township assessment
of current usage in 2006

● Current vacant land 4.5 ac. and greater



Sept. 11, 2007

These maps are intended to depict spatial relationships only. They are no substitute for legal surveys or deeds. The County of Roscommon does not warrant these maps for positional accuracy.



Gerrish Township
Master Plan
Public Road &
Land Usage

Scale: 1" = .60 mi.

Roscommon County
M I S Dept.

GIS Mapping System

Roscommon County Courthouse

500 Lake St.

Roscommon, MI 48653

(989) 275-7648

mapping@roscommoncounty.net

Roads

- Freeways
- State Roads
- County Roads

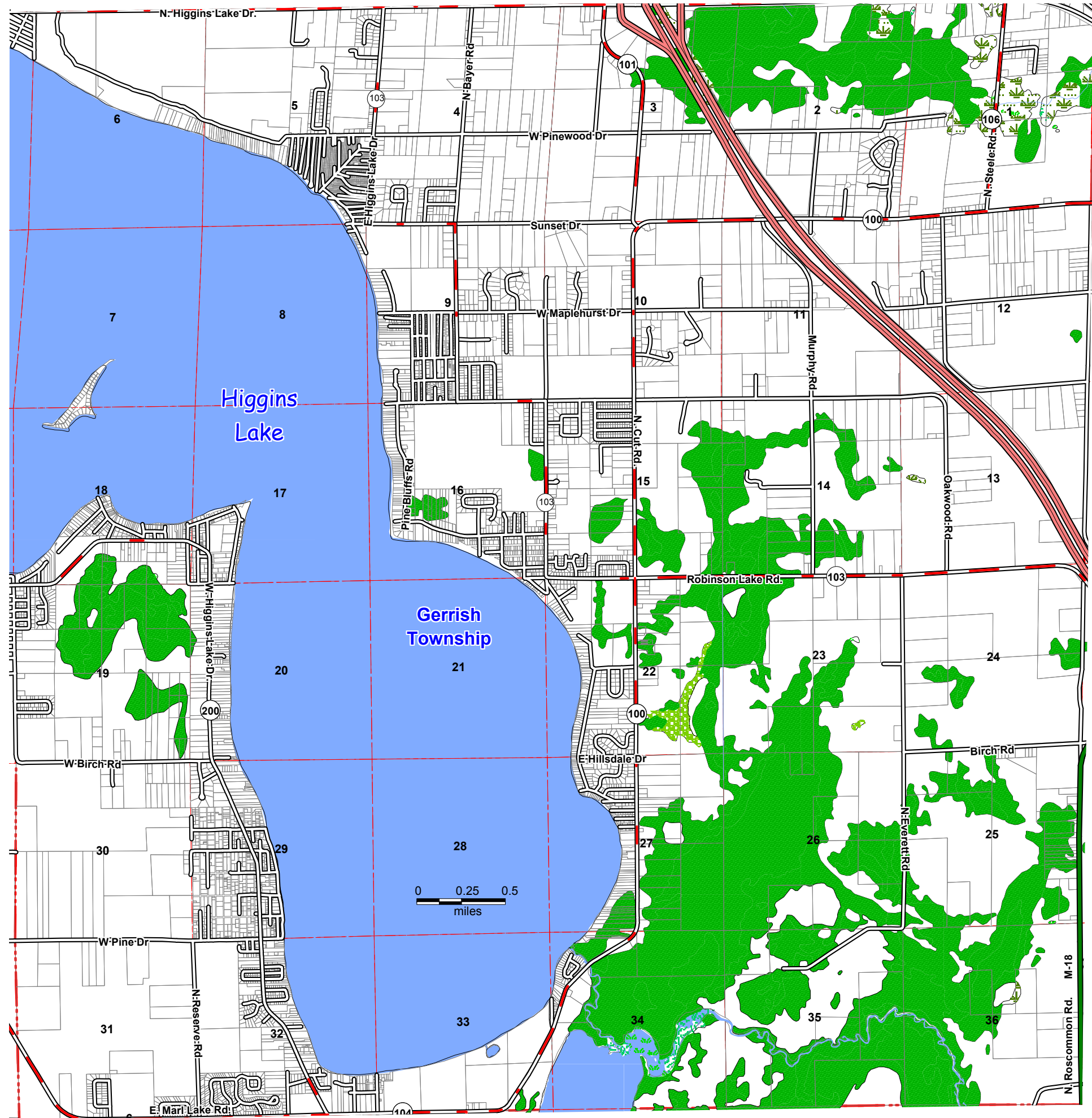
Wetlands by type

- Intermittently Exposed
- Saturated
- Seasonally Flooded
- Seasonally Flooded/Saturated
- Semipermanently Flooded
- Temporarily Flooded



Sept. 11, 2007

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Gerrish Township
Master Plan

Wetlands
Inventory

Scale: 1" = .60 mi.

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