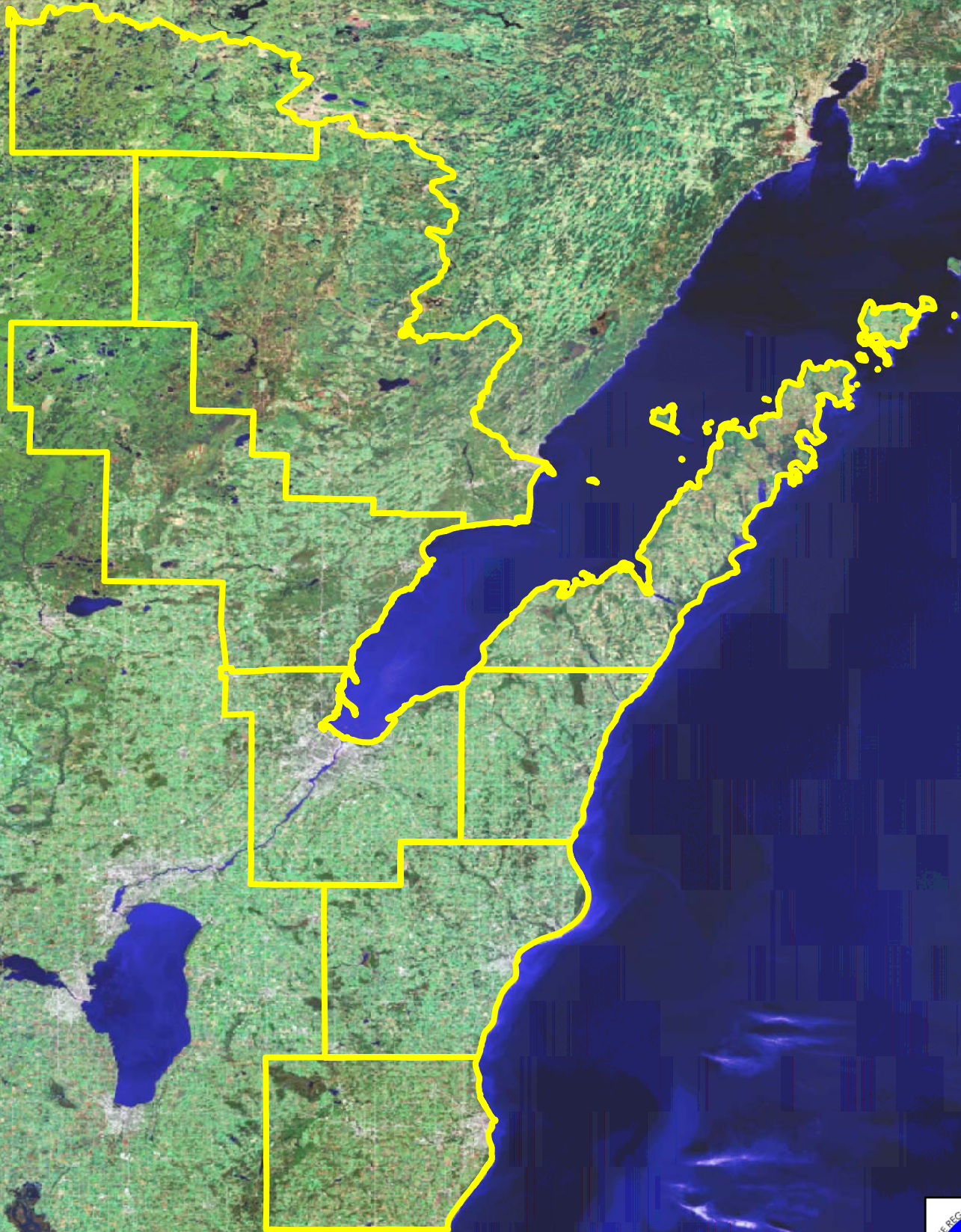


# **Bay-Lake Regional Planning Commission**

## **Regional Comprehensive Plan**



**PREPARED BY:**

**BAY-LAKE REGIONAL PLANNING COMMISSION**

**NOVEMBER 2005**









# **BAY-LAKE REGIONAL PLANNING COMMISSION 2030 REGIONAL COMPREHENSIVE PLAN**

Prepared by:  
Bay-Lake Regional Planning Commission  
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The preparation of this document was financed with financial assistance from the Department of Administration. Portions of the this plan were underwritten by the Commission's Regional Transportation Planning Program which is funded by the Wisconsin Department of Transportation and by the Commission's Economic Development Program which is funded by the Economic Development Administration.







## RESOLUTION 8-2005

Resolution of the Bay-Lake Regional Planning Commission Executive Committee recommending adoption of the *Bay-Lake Regional 2030 Comprehensive Plan* for the physical development of the region comprised of the counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan, in the State of Wisconsin.

WHEREAS, Section 66.0309 (9) of the Wisconsin Statutes specifies that the Bay Lake Regional Planning Commission has the function and duty of making and adopting a master plan of the region, containing at least the nine elements described in 66.1001 of the Wisconsin Statutes; and

WHEREAS, the Comprehensive Plan has been prepared by the Bay-Lake Regional Planning Commission which contains proposals, programs, descriptions, maps, and explanatory matter regarding natural resources, population, housing, economic development, transportation, land use, public facilities, outdoor recreation, and general plan design (land use plan) for the year 2030; and

WHEREAS, the Bay-Lake Regional Planning Commission master plan provides an advisory framework plan for the counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan by which local plans may be coordinated; and

WHEREAS, the regional master plan contains the same elements as required by Wisconsin Statutes for in county development plans: issues and opportunities elements, a housing element, a transportation element, a utilities and community facilities element, an agricultural, natural and cultural resources element, an economic development element, an intergovernmental cooperation element for joint planning and decision making with other local units of government, a land-use element, and an implementation element; and

WHEREAS, information collected and analyzed as part of the preparation of the elements of the Bay-Lake Regional Planning Commission master plan will be provided to the counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan for use in preparing county development plans; and

WHEREAS, the regional master plan encompassing the counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan will promote regional and intergovernmental cooperation and will lead to efficient use of resources; and

WHEREAS, the Comprehensive Plan has been reviewed and recommended for approval by the Bay-Lake Regional Planning Commission Executive Committee;

NOW, THEREFORE, BE IT HEREBY RESOLVED:

FIRST: that the Bay-Lake Regional Planning Commission Executive Committee hereby recommends to the Bay-Lake Regional Planning Commission that a Comprehensive Plan entitled: *Bay-Lake Regional 2030 Comprehensive Plan*, be adopted by the Commission pursuant to Wisconsin Statutes Section 66.1001(4).

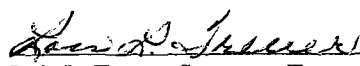
SECOND: That the said *Bay-Lake Regional 2030 Comprehensive Plan*, together with descriptive and explanatory matter therein contained, is hereby made a matter of public record; and the originals and true copies thereof shall be kept, at all times, at the offices of the Bay-Lake Regional Planning Commission presently located at Old Fort Square 211 North Broadway, Suite 211 in the City of Green Bay, County of Brown, and State of Wisconsin, or at any subsequent office that the said Commission may occupy, for examination and study by whomsoever may desire to examine the same.

THIRD: That a true, correct, and exact copy of this resolution, together with a complete and exact copy of the comprehensive plan, shall be forthwith distributed to each of the local legislative bodies of the local governmental units within the Region entitled thereto and to such other bodies, agencies, or individuals as the law may require or as the Commission, its Executive Committee, or its Executive Director, at their discretion, shall determine and direct.

The foregoing resolution, upon motion duly made and seconded, was regularly adopted at the meeting of the Bay-Lake Regional Planning Commission held on the 21st day of October 2005.

  
James E. Gilligan, Chairperson

ATTEST:

  
Lois L. Trever, Secretary-Treasurer



## RESOLUTION 12-2005

Resolution of the Bay-Lake Regional Planning Commission adopting of the *Bay-Lake Regional 2030 Comprehensive Plan* for the physical development of the region comprised of the counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan, in the State of Wisconsin.

WHEREAS, Section 66.0309 (9) of the Wisconsin Statutes specifies that the Bay Lake Regional Planning Commission has the function and duty of making and adopting a comprehensive plan of the region, containing at least the nine elements described in 66.1001 of the Wisconsin Statutes; and

WHEREAS, the Comprehensive Plan has been prepared by the Bay-Lake Regional Planning Commission which contains proposals, programs, descriptions, maps, and explanatory matter regarding natural resources, population, housing, economic development, transportation, land use, public facilities, outdoor recreation, and general plan design (land use plan) for the year 2030; and

WHEREAS, the Bay-Lake Regional Planning Commission comprehensive plan provides an advisory framework plan for the counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan by which local plans may be coordinated; and

WHEREAS, the regional comprehensive plan contains the same elements as required by Wisconsin Statutes for a county plan: issues and opportunities element, a housing element, a transportation element, a utilities and community facilities element, an agricultural, natural and cultural resources element, an economic development element, an intergovernmental cooperation element for joint planning and decision making with other local units of government, a land-use element, and an implementation element; and

WHEREAS, information collected and analyzed as part of the preparation of the elements of the Bay-Lake Regional Planning Commission comprehensive plan will be provided to the counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan for use in preparing county development plans; and

WHEREAS, the regional comprehensive plan encompassing the counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan will promote regional and intergovernmental cooperation and will lead to efficient use of resources; and

WHEREAS, the Comprehensive Plan has been reviewed and recommended for approval by the Bay-Lake Regional Planning Commission's Executive Committee;

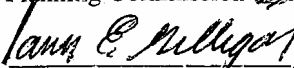
NOW, THEREFORE, BE IT HEREBY RESOLVED:

FIRST: the Bay-Lake Regional Planning Commission hereby adopts a Comprehensive Plan entitled: *Bay-Lake Regional 2030 Comprehensive Plan*, pursuant to Wisconsin Statutes Section 66.1001(4).


SECOND: That the said *Bay-Lake Regional 2030 Comprehensive Plan*, together with descriptive and explanatory matter therein contained, is hereby made a matter of public record; and the originals and true copies thereof shall be kept, at all times, at the offices of the Bay-Lake Regional Planning Commission presently located at Old Fort Square 211 North Broadway, Suite 211 in the City of Green Bay, County of Brown, and State of Wisconsin, or at any subsequent office that the said Commission may occupy, for examination and study by whomsoever may desire to examine the same.

THIRD: That a true, correct, and exact copy of this resolution, together with a complete and exact copy of the comprehensive plan, shall be forthwith distributed to each of the local legislative bodies of the local governmental units within the Region entitled thereto and to such other bodies, agencies, or individuals as the law may require or as the Commission, its Executive Committee, or its Executive Director, at their discretion, shall determine and direct.

The foregoing resolution, upon motion duly made and seconded, was regularly adopted at the meeting of the Bay-Lake Regional Planning Commission held on the 11th day of November 2005.

  
James E. Gilligan, Chairperson

ATTEST:

  
Lois L. Trever, Secretary-Treasurer

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BAY-LAKE REGIONAL PLANNING COMMISSION

2030 REGIONAL COMPREHENSIVE PLAN

VOLUME I: REGIONAL PLAN

NOVEMBER 2005



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## CHAPTER 1 - ISSUES AND OPPORTUNITIES

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### INTRODUCTION

This comprehensive plan is the initial plan for the Bay-Lake Region covering an eight county area in northeastern Wisconsin that includes Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto and Sheboygan counties. The plan was prepared to serve as a guide for future land use planning decisions throughout the region; to serve as a framework plan from which county and local plans can be carried out in greater detail; and, to meet the requirements of Wisconsin's comprehensive planning law (1999 Wisconsin Act 9) and adopted under the authority granted by Section 66.1001 of the Wisconsin Statutes.

The comprehensive plan is an advisory policy document that provides a specific guide as to where future conservation, growth and development should occur within the Region. Information collected by the Commission as part of the making of the regional plan will be provided to communities in the region and may help in the development of local and county comprehensive plans. The plan will be consulted when the Commission makes decisions concerning land use and other issues impacting the development of the region.

### PLAN CONTENTS

This comprehensive plan contains ten chapters in three volumes covering the nine elements of a comprehensive plan as required by Section 66.1001 of the Wisconsin Statutes. **Volume I: Regional Plan** of the Regional Comprehensive Plan contains three chapters: ***Chapter 1: Issues and Opportunities***, contains a summary of demographic information on the Region, a vision statement, and overall goals, objectives, policies and standards of the plan; ***Chapter 2: Future Land Use Plan***, contains goals, objectives, policies, and programs, a projection of future land use demands, and the preferred land use plan for the Region; ***Chapter 3: Implementation***, contains a strategy and work plan to assist in implementing the goals, objectives and policies of the Regional Comprehensive Plan. **Volume II: Regional Resources** includes: ***Chapter 4: Executive Summary*** which contains a summary of the resources and demographics of the Region as well as a synopsis of the overall goals of the plan; ***Chapter 5: Natural, Agricultural and Cultural Resources***, provides a description of the physical setting, natural, agricultural and cultural resources of the Region; ***Chapter 6: Housing and Population***, presents information on the demographics of the Region and on future population and housing growth; ***Chapter 7: Economic Development***, contains a development strategy regarding future and existing economic conditions within the Region, including an inventory of the labor force and an analysis of the Region's economic base; ***Chapter 8: Transportation***, presents an inventory of the existing transportation system and an overview of transportation needs; ***Chapter 9: Utility and Community Facilities***, provides an inventory of the Region's utilities and community facilities, including schools, and recreational opportunities; ***Chapter 10: Intergovernmental Cooperation***, contains programs for joint planning and decision making with other jurisdictions, including school districts and local governmental units; ***Chapter 11: Land Use***, contains an inventory of the land use controls in the region as well as a summary of existing land uses. The final volume, **Volume III: Appendices**, contains detailed information by county of demographics and financial resources, detailed program descriptions, a list of acronyms and definitions, endangered and threatened species within the Region, Nominal Group and Survey results, and other detailed data supporting the plan.

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## **PLAN DEVELOPMENT PROCESS**

The eight-county Bay-Lake Regional Planning Commission Region is composed of many diverse and often divergent interests; therefore, development of goals and objectives for the regional comprehensive plan is a very difficult task. Regional goals and objectives should incorporate the combined knowledge of many people who are informed about the Region. At the regional level, the Commission has made use of advisory committees as the most practical and effective procedure available for involving interested and knowledgeable county and local planners in this initial formulation. For the purposes of this plan, the Commission worked with its established advisory committees to gather information and provide review of plan elements.

### **Public Participation**

A major element of the comprehensive planning process is public participation. In accordance with Wisconsin State Statute 66.1001(4), which defines “Procedures For Adopting Comprehensive Plans”, written public participation procedures were adopted by the Commission on April 12, 2002. A copy of these written procedures is included in Volume III: Appendix A of this plan.

Over a 42 month period, the Commission held six public meetings, a Public Hearing, 18 working meetings of the Executive Committee, and 12 meetings with the Commission’s Work Program Committee. The Commission’s Advisory Committees met more than 30 times to review regional data, plan elements and growth options. From these meetings, the Executive Committee and other interested citizens developed a 2025 Land Use Plan. Appendix B contains a list of Committees and meeting dates at which the Regional Comprehensive Plan was reviewed.

### **BLRPC Executive Committee**

The Executive Committee of the Commission is authorized to prepare or amend the comprehensive plan and recommend the adoption of the plan or amendment to the Commission. The Commission’s by-laws require that any element of the Commission comprehensive plan must be approved by a two-thirds vote of the entire Commission. The Executive Committee met 18 times during plan development to review each element of the plan. The final review of the plan was completed in October 2005. At its October 21, 2005 meeting, the Executive Committee recommended adoption of the plan by the Commission. On November 11, the Commission adopted the regional plan.

### **Regional Land Use & Transportation Planning Technical Advisory Committee (TAC)**

The Commission designated its Regional Technical Advisory Committee (TAC) as the primary technical review body for the development of the Regional Plan. The TAC is comprised of county and community planners and administrators, state and federal agency staff (U.S. Army Corps of Engineers, WDNR, WisDOT, U.S. Fish and Wildlife Service, etc.), and county UW Extension staff.

The TAC met quarterly throughout the plan development process to review specific elements of the Regional Comprehensive Plan, exchange information about ongoing planning activities, discuss issues related to community development, and to review the Commission’s ongoing projects and programs. Comments from the TAC were incorporated into the plan as appropriate. The TAC reviewed the future land use scenarios and recommended that the Commission adopt the Compact/Infill Scenario as the preferred land use plan for the Region.

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### **Advisory Committees**

Commission advisory committees comprised of professionals and citizens with expertise in specific elements of the plan were utilized to review the elements of the plan that have a specific and narrow focus such as transit, harbor development, housing, etc. The Commission's existing Citizen's Advisory Committee, Economic Development Advisory Committee, Harbor Council, Housing Technical Advisory Committee and GIS Users Group met more than 30 times to review relevant elements of the plan as it was developed.

One of the major tasks of the advisory committees in this initial regional land use planning effort was to assist in the formulation of goals and objectives for the future development of the region. The advisory committees reviewed the goals, objectives and policies that were adopted by the Commission as part of the Commission's prior planning efforts, such as the Comprehensive Economic Development Strategy, and the Sheboygan Area Transportation Plan and that have been adopted by other regional planning commissions in Wisconsin. This chapter sets forth the regional comprehensive plan goals and objectives adopted by the Commission after careful review and upon recommendations by the Commission staff and the advisory committees.

### **Open Houses**

The Commission held two series of open houses in order to present information regarding the comprehensive plan. The first set of open houses was held at the "midway" point to present background data on the plan and to gather input from citizens and public officials. The second set of open houses was held prior to the public hearing to present the preferred future land use scenario. Open houses notices were provided in the regional newspapers, mailed to local officials, and held in three locations in the Region. The open houses provided the public with an opportunity to review and comment on the Regional Comprehensive Plan. Appendix C contains the Open House notices and a list of attendees and comments.

### **Nominal Group Workshops**

The Bay-Lake Regional Planning Commission held a series of nominal group meetings with its Commission and members of the county boards throughout the region in order to produce a list of issues and concerns regarding future development in the Bay-Lake Region. Commission staff held the first nominal group meeting as part of the December 12, 2002 Commission meeting in Green Bay. Additional meetings were held throughout the Region in 2003:

Separate nominal group meeting were held in April, May and June 2003 with members of the Marinette County Board, the Kewaunee County Board, and the Sheboygan County Board, local officials and citizens, members of the Sturgeon Bay City Council and local officials from member units of government in Door County, the Marinette County Regions Association, and the Oconto County Board. In addition, the results of the Brown County VisionFest held in September 2002 in Green Bay were included as were the results of a Nominal Group held with the Florence County Board in September 2001.

The combined list from each of these meetings was categorized by type of issue. This list was then used in formulating goals and objectives for the Regional Comprehensive Plan. In addition, the issues identified were used as a checklist to ensure that these issues were addressed within the plan, as well as discussed by the Executive and Advisory Committees during the planning and research phase.



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The following list provides a summary of the issues and concerns facing the Bay-Lake Region identified through this process. A detailed list of the Nominal Group results can be found in Volume III: Appendix D.

### *Summary of Nominal Group Issues*

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- Preserve agricultural lands
- Preserve rural character with balanced growth to maintain small Region atmosphere/rural quality of life
- Preserve and improve air quality
- Encourage the preservation of environmental corridors and other sensitive areas, such as waterfronts, streams, and wetlands.
- Enhance services and infrastructure needs for elderly population
- Preserve and promote manufacture sector of business in Region
- Enhance technological growth through promotion and use of Technology Zones to encourage growth in this industry
- Diversify local economy through local and regional economic development efforts
- Improve communication and cooperation between and among units of governments, school districts, and among citizens and governmental units.
- Stormwater/sewer management plan that affects Regions and villages together
- Effects of aging population on transportation, housing, economics, and recreation
- Need for more housing for all segments of population
- Strengthen and maintain efforts to prevent sprawl and focus development specific areas
- Establish development standards
- Encourage green space and open space in planned developments.
- Preserve natural resources and public lands with good management for multiple uses
- Preserve and protect the water quality of surface and groundwater
- Provide efficient public facilities throughout the region
- Continue to maintain, improve and expand park and trail systems
- Highway improvement and maintenance. Continue to improve highway infrastructure. Maintain rural roads and highways and improve traffic coordination
- Protect water access, and promote safe harbors and marinas
- Promote more transportation options, such as sidewalks, trails, bicycle facilities, and transit.

### **Regional Survey Results**

Based upon issues identified from the results of the nominal group meetings, the Commission developed and mailed a survey to local government officials. The survey provided further notice to the citizens of the Region that the Commission was developing a comprehensive plan and their input was being sought to establish community needs and desires.

In April 2005, a survey was sent out to all local units of government in the region asking them to prioritize the issues generated by the nominal group workshops. The survey results were used to further refine and prioritize the issues to be addressed within this plan. The results of the survey are included in Volume III: Appendix E.

### **GOALS, OBJECTIVES AND POLICIES**

The following statements describe the Commission's intent regarding the overall growth and development of the Region over the next 20 years. Goals, objectives and policies each have a

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distinct and different purpose within the planning process. Definitions used within this planning process include:

- **Plan:** a design which seeks to achieve agreed upon goals and objectives.
- **Goal:** desired situation toward which planning efforts should be directed. They are broad and long range. They represent an end to be sought, although they may never actually be fully attained.
- **Objective:** measurable ends toward reaching a defined goal.
- **Policy:** rule or course of action used to ensure plan implementation.
- **Principle:** a fundamental, primary, or generally accepted tenet used to support goals and objectives and prepare standards and plans.
- **Standard:** a criterion used as a basis of comparison to determine the adequacy of plan proposals to attain objectives.
- **Program:** a coordinated series of policies and actions to carry out a plan.

The Commission has identified goals and objectives to guide the land use planning process with the understanding that various public and private interest groups within a Region as large and diverse as northeastern Wisconsin may have varying and at times conflicting goals; many of these goals are of a qualitative nature and, therefore, difficult to quantify; and, many goals which may be held to be important by the various interest groups within the Region may not be related in a demonstrable manner to physical development plans. Under Section 66.1001 of the Wisconsin State Statutes each of the nine elements of a comprehensive plan needs to be integrated and made consistent with the other eight elements of the plan. For example, implementing the goals and policies of the Natural, Agricultural and Cultural Resources Chapter must correspond to actions recommended in other chapters such as housing and population, land use, economic development, transportation, community facilities, and implementation.

The following stated Goals, Objectives, Policies, and Programs are based on the information provided and further detailed within Volume II: Regional Resources of the comprehensive plan.

### **Planning Goal**

The goal of the Commission is to provide a comprehensive plan that is consistent with s.66.1001 of the Wisconsin State Statutes in order to best protect the interests of all of the Region's residents as well as to develop the Region in an orderly, cost efficient manner.

***Objective 1.1:*** Adopt and maintain a Comprehensive Plan under s.66.1001 that reflects the needs of all current and future citizens of the Bay-Lake Region for the next 20 years.

***Objective 1.2:*** Regularly update the comprehensive plan to keep it current in order to provide for the greatest possible benefits regarding the future development of residential, commercial, industrial, and parkland expansion and development.

***Policy 1.1a:*** Consult this plan when the Commission and other units of government make any decision regarding land use and land use policies.

***Policy 1.1b:*** Present the adopted plan to municipalities within and adjacent to the Region as described within the Implementation section of the plan.

***Policy 1.1c:*** Encourage cooperation and communication between neighboring municipalities, county government and the Commission in implementing this plan.

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## **Natural, Agricultural, and Cultural Resources Goals, Objectives and Policies**

### **Natural Resources**

**Goal:** To preserve the Region's natural resources for enjoyment by its residents and visitors for present and future generations.

**Objective 1.1:** Maintain a visually appealing, healthy, and sustainable natural environment in the Region.

**Policy 1.1a:** Provide education on, and assist in reducing development sprawl and segregation of land uses.

**Policy 1.1b:** Develop Cost of Community Services studies to enable local officials to better understand the cost impacts of local planning decisions.

**Policy 1.1c:** Encourage the preservation of natural scenic vistas.

**Policy 1.1d:** Provide education on, and assistance towards practices that encourage the availability of sustainable resources for future development within the Region.

**Policy 1.1e:** Encourage the inclusion of natural areas in new and existing developments.

**Policy 1.1f:** Discourage artificial light pollution, while preserving the safety of the residents of the Region.

**Objective 1.2:** Preserve biodiversity, and critical habitats and communities in the Region.

**Policy 1.2a:** Develop GIS mapping to identify critical habitats and communities in a manner that will not endanger them further by identifying their precise locations.

**Policy 1.2b:** Encourage infill and cluster development within developed areas with access to current infrastructure.

**Policy 1.2c:** Encourage comprehensive planning throughout the Region.

**Policy 1.2d:** Encourage the preservation of natural corridors for species movement between significant natural areas.

**Objective 1.3:** Protect and preserve the Niagara Escarpment.

**Policy 1.3a:** Provide/support education on the value and uniqueness of the Niagara Escarpment.

**Policy 1.3b:** Continue the Commission efforts with the Niagara Escarpment Education Network to disseminate information and expand the knowledge of the Escarpment.

**Policy 1.3c:** Continue to develop conferences to educate and expand the knowledge of the Escarpment.

**Policy 1.3d:** Encourage the protection of the Escarpment in community zoning.

**Policy 1.3e:** Create a sample ordinance aimed at protection of the Niagara Escarpment.

**Policy 1.3f:** Discourage nonmetallic mining and development on the Niagara Escarpment.

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**Objective 1.4:** Encourage sustainable forestry practices.

**Policy 1.4a:** Provide education/support on the benefits of sustainable forestry to the health of forestlands.

**Policy 1.4b:** Provide education/support on the economic benefits of sustainable forestry.

**Policy 1.4c:** Develop GIS mapping of public and private forestland and tree types.

**Objective 1.5:** Preserve, restore, and improve surface water quality (inland and coastal wetlands, lakes, rivers, and streams) within the Region.

**Policy 1.5a:** Provide and support educational efforts related to surface water quality issues and protection, restoration, and improvement tools for communities in the Region.

**Policy 1.5b:** Provide tools for erosion control, buffer strips, easements, land use controls, flood controls, nutrient and sediment reductions.

**Policy 1.5c:** Encourage the use of environmental corridors in planning.

**Policy 1.5d:** Assist in efforts to maintain the natural beauty and integrity of Lake Michigan and Green Bay shorelines, while providing for public use and access.

**Objective 1.6:** Encourage protection of groundwater resources (quality and quantity) within the Region.

**Policy 1.6a:** Inventory ground water recharges areas in the Region.

**Policy 1.6b:** Complete wellhead protection plans for municipalities in the Region.

**Policy 1.6c:** Provide/support education on groundwater quality and quantity issues and protection tools to communities in the Region.

**Policy 1.6d:** Encourage the use of environmental corridors in planning.

**Policy 1.6e:** Promote the use of sound agricultural and soil conservation methods to minimize groundwater contamination.

**Objective 1.7:** Provide healthy, swimmable beaches within the Region.

**Policy 1.7a:** Assist in efforts to determine the causes of beach closings.

**Policy 1.7b:** Assist in efforts to improve the quality of beaches in the Region.

**Policy 1.7c:** Promote efforts to remedy beach closings.

**Objective 1.8:** Ensure that present and future mining sites will not negatively affect the natural resources of the Region or the well-being of its residents.

**Policy 1.8a:** Encourage mining operations and communities working with mining operations to protect scenic views and aesthetics, and protect the health of the natural environment when undertaking mining activities.

**Policy 1.8b:** Encourage communities to work with mining operations throughout reclamation activities to ensure the restored area is consistent with the vision of the community.

**Policy 1.8c:** Discourage nonmetallic mining in sensitive natural environments, such as on the Niagara Escarpment.



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## **Agricultural Resources**

**Goal:** To identify and preserve the Region's agricultural resources to provide food and feed for present and future generations, and preserve the rural character of the Region.

**Objective 2.1:** Maintain existing agricultural lands and open spaces.

**Policy 2.1a:** Establish guidelines for communities to protect existing agricultural land uses and rural character.

**Policy 2.1b:** Promote the use of sound agricultural and soil conservation methods to minimize soil erosion and groundwater contamination.

**Policy 2.1c:** Encourage the preservation of prime agricultural lands.

**Policy 2.1d:** Encourage sound management and/or preservation of the Region's forested areas.

**Policy 2.1e:** Encourage conservation-based land use policies for development.

**Policy 2.1f:** Address the impacts of large farming operations.

**Objective 2.2:** Minimize the potential for conflicts between rural landowners.

**Policy 2.2a:** Assist in the development of an inventory of local roads and offer methods to create a safe environment for travel between agricultural fields and operations.

**Policy 2.2b:** Provide and support educational efforts to inform homebuyers of what to expect when moving into a rural agricultural community.

**Policy 2.2c:** Assist communities with inventorying agricultural infrastructure to identify areas best suited for agriculture-only land use districts.

**Objective 2.3:** Develop better-informed local governments that can react to changes in agriculture and land use.

**Policy 2.3a:** Provide and support educational efforts to inform elected officials on current issues related to agriculture and land use law.

**Policy 2.3b:** Support local forums for elected officials to provide education on agriculture and land use issues.

## **Cultural Resources**

**Goal:** To preserve and encourage development and expansion of cultural resources within the Region.

**Objective 3.1:** Encourage the preservation of the Region's historic and archeological locations and structures.

**Policy 3.1a:** Work with the State Historical Society to inventory historic and archeological resources for the communities within the Region.

**Policy 3.1b:** Work with the State Historical Society to maintain and update the Region's inventory on historic and archeological resources.

**Policy 3.1c:** Assist communities with tying historic and archeological resources to recreational areas to encourage access to the sites and knowledge of their significance, where appropriate.

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**Objective 3.2:** Support and encourage the development and expansion of cultural resources and facilities within the Region.

**Policy 3.2a:** Assist in, and offer support for regional efforts to develop or expand cultural resources and facilities.

**Policy 3.2b:** Support a variety of cultural activities.

**Policy 3.2c:** Provide education on the value of cultural resources and facilities within the Region.

**Policy 3.2d:** Assist in, and offer support for artistic, ethnic, and educational entertainment activities (concerts, Community Theater, art exhibits, etc.).

**Objective 3.3:** Ensure residents have safe and adequate recreational parks within the Region that provide a variety of activities.

**Policy 3.3a:** Assist local governments in planning for the development of additional high quality, well-maintained recreational parks and trails within the Region, to include public access to the waters of Lake Michigan and Green Bay.

**Policy 3.3b:** Assist local governments in identifying and obtaining the resources needed for the acquisition, development, and maintenance of recreational sites within the Region.

**Policy 3.3c:** Inventory public access areas to the surface waters of the Region in order to facilitate preservation.

**Policy 3.3d:** Assist in preserving the quality of public lands.

### **Housing Goals, Objectives and Policies**

**Goal 1:** To provide for a variety of quality, affordable housing opportunities for all segments of the Region's current and future population.

**Objective 1.1:** Continue to promote programs that assist all citizens, including those persons with special needs, in obtaining affordable quality housing.

**Policy 1.1a:** Support agencies and programs that promote and provide affordable housing to their clients.

**Policy 1.1b:** Promote state and federal initiatives that seek to provide adequate housing options for all persons including low and moderate income, elderly, and residents with special needs.

**Policy 1.1c:** Support local initiatives that work towards rehabilitating and preserving the existing housing stock within the Region.

**Policy 1.1d:** Encourage counties and local communities that do not have housing authorities to create one so as to increase the opportunity for securing state and federal funding.

**Policy 1.1e:** Encourage units of government to adopt or strengthen local ordinances and building codes which provide for investigative and enforcement powers.

**Objective 1.2:** Continue to review and assess information provided by local officials, state and federal agencies to monitor the changes in population characteristics.

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**Policy 1.2a:** Assist local officials in reviewing existing zoning and subdivision ordinances to identify standards that limit certain housing choices and to measure impacts that current ordinances have on the Region's housing stock and future choices.

**Policy 1.2b:** Continue the Commission's Regional Housing Advisory Committee.

**Policy 1.2c:** Build stronger working relationships with area housing organizations to help gather and disseminate information on housing related topics.

**Policy 1.2d:** Assist in the coordination of state and federal housing programs and services.

**Goal 2:** To promote new housing development in areas where it is needed and can be done in an environmentally and cost effective manner.

**Objective 2.1:** Continue to identify areas in local comprehensive plans where new development should be located to maintain open space and the preserve natural or unique areas.

**Policy 2.1a:** Encourage new housing in areas in which community facilities and infrastructure already exist.

**Policy 2.1b:** Monitor development that has the potential to adversely affect the assessed value or livability of neighboring residential properties.

**Policy 2.1c:** Encourage the development of multi-family, senior and disabled housing located adjacent to amenities.

**Policy 2.1d:** Promote the availability of land for the development or redevelopment of low and moderate income housing.

**Policy 2.1e:** Support the construction of affordable single family homes and adequate availability of apartments and elderly housing.

**Policy 2.1f:** Encourage the use Conservation Subdivisions and cluster development for residential neighborhoods.

**Policy 2.1g:** Encourage development and land use practices at the state, county, and local levels that preserve historically and architecturally significant homes, buildings, structures, and sites.

### **Economic Development Goals, Objectives and Policies**

**Goal 1:** To expand the number of employers in the Region through business expansion, retention, development, and recruitment.

**Objective 1.1:** Promote and strengthen existing industry clusters.

**Policy 1.1a:** Support programs that assist companies to increase their exports.

**Policy 1.1b:** Encourage the retention and expansion of the paper industry.

**Policy 1.1c:** Facilitate a study to identify other industry clusters that would support those already present in the Region.

**Policy 1.1d:** Build stronger working relationships with business development entities and economic development corporations already in place.

**Policy 1.1e:** Support and promote the maritime industry.

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**Policy 1.1f:** Help assist agri-businesses to better position themselves to compete in future product markets through expanded marketing efforts and the integration of value-added processing.

**Policy 1.1g:** Help define strategies to increase tourism and recreation revenue within the Region.

**Objective 1.2:** Encourage continued growth and stability of the Region's growth centers.

**Policy 1.2a:** Continue to provide technical assistance to local economic development organizations on the development and marketing of business and industrial parks.

**Policy 1.2b:** Work with local officials to determine strategies to revitalize older commercial, downtown, and industrial areas including those designated as brownfield sites.

**Objective 1.3:** Encourage the preservation of existing manufacturing firms.

**Policy 1.3a:** Participate in a bi-annual business retention and expansion study.

**Policy 1.3b:** Support the creation and maintenance of a regional marketing website to promote area manufacturers.

**Objective 1.4:** Work with local communities and development organizations to seek ways to diversify the economic base of the Region and its counties.

**Policy 1.4a:** Continue to gain additional knowledge on how to integrate bio-technology and value-added processing into existing manufacturing operations.

**Policy 1.4b:** Promote technology intensive spin-offs from existing companies.

**Policy 1.4c:** Assist in the establishment of a comprehensive incentive program that is administered through regional development organizations.

**Policy 1.4d:** Help generate reports or instructional materials for municipal leaders on how to work with companies looking to expand or relocate to their communities.

**Policy 1.5e:** Facilitate the maintenance of an inventory of available large commercial and manufacturing facilities, and business and industrial park space.

**Policy 1.5f:** Work with regional development organizations to create and promote a more positive image of the Region to help recruit businesses to the area.

**Goal 2:** To increase the quantity and quality of the labor force.

**Objective 2.1:** Support efforts to improve the coordination of existing education, vocational training, and work force development services to ensure employees have competency in basic job skills.

**Policy 2.1a:** Encourage institutions of higher education to offer courses for the hospitality industry to help maintain and expand the tourism and recreation industries.

**Policy 2.1b:** Encourage the expansion of support services to enable willing workers to continue in or return to the workforce.

**Objective 2.2:** Help prepare a comprehensive marketing strategy to recruit skilled and professional persons to the Region.

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**Policy 2.2a:** Work with elected officials, consultants, business leaders, and others to design communities that are attractive and offer the environment being sought by these individuals.

**Policy 2.2b:** Support and expand the number of young professional groups in the Region.

**Policy 2.2c:** Encourage universities and technical colleges to expand their alumni programs to encourage graduates to return to the Region.

**Policy 2.2d:** Work with universities and technical colleges to develop strategies to recruit more minorities to their institutions.

**Policy 2.2e:** Assist local economic development organizations to increase the number of job fairs and business expos held throughout the Region.

**Objective 2.3:** Encourage the expansion of opportunities for students in local school districts to better understand the employment options available to them.

**Policy 2.3a:** Support local efforts to develop an adjunct instructor's organization comprised of local business leaders and professionals to teach at area high schools and institutions of higher education.

**Policy 2.3b:** Work with local economic development corporations and chambers of commerce to establish a speaker's bureau to be available to speak at area schools.

**Policy 2.1c:** Promote programs such as youth apprenticeship programs, post high school apprenticeship programs, and employee training programs in the Region that meet the needs of the Region's employers.

**Objective 2.4:** Help identify ways to provide the unemployed and underemployed with more options to acquire additional skills.

**Policy 2.4a:** Promote the need for additional educational attainment within the current workforce.

**Policy 2.4b:** Help establish more opportunities for retraining in new advanced technologies.

**Policy 2.4c:** Participate in local initiatives to explore the option of creating scholarship pools for adults wanting to return to school to acquire new skills.

**Goal 3:** To improve community facilities, services, and infrastructure needed to foster economic growth in the rural and urban areas of the Region.

**Objective 3.1:** Encourage maintaining and improving the Region's highway, rail, water, and air transportation systems.

**Policy 3.1a:** Help maintain the designation of the Region's federal navigation channels.

**Policy 3.1b:** Continue to actively promote the use of the Region's harbor facilities for a balance of industrial, commercial, residential, and recreational uses.

**Policy 3.1c:** Advocate for the inclusion of harbors and ports in statewide development initiatives.

**Policy 3.1d:** Work to improve the transportation access points to port facilities.

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**Policy 3.1e:** Support activities to develop high speed rail passenger services between major metropolitan regions.

**Policy 3.1f:** Continue to work with federal and state officials to develop strategies to improve the existing transportation network and advocate for funding of these projects.

**Policy 3.1g:** Continue to evaluate the condition of local roads to establish a priority maintenance list.

**Objective 3.2:** Support local planning activities that help create economic opportunities for local communities.

**Policy 3.2a:** Continue to work with counties and communities in developing sound economic development strategies for their area.

**Policy 3.2b:** Participate in local efforts to secure funding to draft an inventory with analysis on the Region's development potentials and constraints.

**Policy 3.2c:** Continue to work with local harbor commissions to investigate ways to increase commerce and expand uses of the port.

**Policy 3.3d:** Help initiate the process to conduct an inventory of all airports in the Region and facilitate a discussion on development of strategies to upgrade and expand uses for those facilities.

**Policy 3.3e:** Continue to serve as a technical resource to communities in the planning, development, and expansion of business/industrial parks.

**Policy 3.3f:** Work with local officials to develop highway corridors plans.

**Policy 3.3g:** Help initiate a technology infrastructure assessment study for the Region.

**Objective 3.3:** Work to ensure each community has the necessary infrastructure and community facilities to serve existing and future economic development and housing needs.

**Policy 3.3a:** Continue to promote the funding and technical resources available through local, state, and federal programs.

**Policy 3.3b:** Advocate for more funding for communities and counties to access to improve and expand local infrastructure and community facilities.

**Policy 3.3c:** Continue to assist local communities and counties in the preparation of funding applications.

**Policy 3.3d:** Encourage the upgrading of the Region's wastewater treatment facilities and public water supply facilities so that all communities have facilities that meet the standards of the Wisconsin Administrative Code.

**Policy 3.3e:** Promote economic opportunities presented by the regions telecommunications facilities

**Objective 3.4:** Support local efforts to ensure there is adequate industrial/business park space available for future development.

**Policy 3.4a:** Promote the use of grant and financing programs by communities to upgrade wastewater treatment facilities and public water supply facilities for their business/industrial parks.

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**Policy 3.4b:** Encourage the well-planned, coordinated, and cost-effective provision of public facilities in those communities lacking basic infrastructure for economic development, such as public water supply, wastewater treatment facilities, and natural gas service and high voltage electrical service.

**Policy 3.4c:** Participate in the development of industrial park location and development studies for each county in the Region.

**Policy 3.4d:** Encourage industrial development to locate in areas that have available space served by existing public facilities.

**Goal 4:** To promote the wise use and conservation of natural resources.

**Objective 4.1:** Promote sustainable forestry practices.

**Policy 4.1a:** Promote the certification of the regions forest lands as sustainable forest, so that the regions wood supply can be marketed to industries that require such certification.

**Policy 4.1b:** Assist in the expansion and retention of the forest product industry through valued added manufacturing.

**Policy 4.1c:** Conduct a feasibility study to locate a value added high-tech wood manufacturing industrial park in the northern portion of the Region.

**Policy 4.1d:** Continue to monitor the impacts of timbering on public lands.

**Objective 4.2:** Support efforts to preserve prime agricultural land and stabilize and enhance the agricultural economy.

**Policy 4.2a:** Continue to work with state and federal regulatory agencies on the siting of large farming operations and assist local communities in the implementation of those regulations.

**Policy 4.2b:** Continue to monitor efforts underway to help curb non-source pollution and use that information for the development of local comprehensive plans.

**Objective 4.3:** Encourage the most efficient use of energy in the development of all economic development projects.

**Objective 4.4:** Encourage the development of environmentally sound landfill disposal sites in appropriate locations based upon regional solid waste disposal needs, the safe disposal of toxins and hazardous wastes, and the reduction in the quantity of materials going to landfills

**Objective 4.5:** Encourage the expansion or development of pulp mill operations in locations where such development is desirable, feasible, and appears to have the greatest development potential while maintaining environmental quality, as identified in the state of Wisconsin preliminary report, *The Pulp Mill Siting Feasibility Study*.

**Objective 4.6:** Encourage compliance with the Clean Water Act and the Clean Air Act

**Policy 4.6a:** Continue to educate federal and state officials that much of the Region's poor air quality is caused by factors outside the Region's control (i.e. transport of ozone precursor emissions from outside the Region)

**Policy 4.6b:** Work with local community officials and economic development professionals to attract employers to the Region that will not adversely impact the environment.

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**Policy 4.6c:** Assist local community officials and economic development professionals to address environmental issues caused by growth.

**Policy 4.6d:** Promote infill development to avoid uncontrolled urban sprawl.

**Objective 4.7:** Encourage the coordination and implementation of environmental cleanup programs for the removal of hazardous waste, including underground storage tanks

**Policy 4.7a:** Investigate the opportunity to establish a regional environmental clean-up revolving loan fund to encourage businesses and land owners to redevelop unusable land.

**Goal 5:** To encourage planning efforts that will guide and promote regional economic development.

**Objective 5.1:** Continue to prepare an annual *Comprehensive Economic Development Strategy (CEDS)* for the Region.

**Policy 5.1a:** Encourage the development of projects that promote regional economic development such as business/parks and incentive programs.

**Policy 5.1b:** Continue to prepare and disseminate information about economic conditions in the Region.

**Policy 5.1c:** Promote the excellent quality of life as a part of the Region's economic development Policy.

**Policy 5.1d:** Continue to maintain an inventory of local, state, and federal technical and financial resources available to economic development professionals and community officials.

**Objective 5.2:** Promote cooperative economic development efforts at the county, regional, and state levels.

**Policy 5.2a:** Assist in the coordination of area economic development planning activities with county wide economic development organizations.

**Policy 5.2b:** Help ensure the Region's economic development planning is broadly representative of the principal economic interests of the eight-county Region, including the interests of its minority and low-income populations.

**Policy 5.2c:** Help expand the capacity of local organizations and local government to understand, plan, and implement economic development programs.

**Policy 5.2d:** Encourage the linkage and coordination of the various federal, state, local, and private funding sources for economic development projects

**Policy 5.2e:** Encourage, as appropriate, the modification of existing economic development tools and incentives and the creation of new tools and incentives in response to changing community economic development needs

### **Transportation Goal, Objectives and Policies**

**Goal 1:** To provide an efficient, integrated and inter-modal transportation system for the Bay-Lake Region.

**Objective 1.1:** Provide an efficient highway system that ensures the highest degree of mobility and accessibility while protecting the safety of its users.



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**Policy 1.1a:** Maintain the functional integrity of existing and future roadways through appropriate land use controls and design standards to alleviate congestion, promote safety, and reduce the need for new highways.

**Policy 1.1b:** Provide sufficient capacity on the existing road network in the Region through appropriate expansion and improvement.

**Policy 1.1c:** Discourage the development of new highways which may stimulate sprawl.

**Policy 1.1d:** Enhance the safety of the existing road network.

**Policy 1.1e:** Protect existing investments in the road network with proper maintenance.

**Policy 1.1f:** Continue to promote efforts to enhance and protect the aesthetic and scenic qualities of the entire road network.

**Policy 1.1g:** Promote access management as a means of protecting the capacity and safety of the existing road network.

**Policy 1.1h:** Provide and encourage alternative facility designs and enhancements that serve to relieve congestion and reduce the need for additional highway capacity.

**Policy 1.1i:** Encourage transportation demand management strategies that reduce the number of single occupant vehicles, such as park-and-ride lots, high occupancy vehicle lanes, public transportation, and carpooling.

**Policy 1.1j:** Support implementation of the *State Highway Plan*.

**Objective 1.2:** Promote public transportation systems within the Region's urban areas that support preferred land use patterns, serve the needs of all users, and reduce the number of vehicular trips.

**Policy 1.2a:** Support an affordable and accessible public transportation system that links urban centers, suburban neighborhoods, employment centers, and villages.

**Policy 1.2b:** Promote concentrations of housing, employment centers, and commercial development.

**Policy 1.2c:** Provide for the transportation needs of the elderly and special needs populations.

**Policy 1.2d:** Reduce the automobile impact on the Region by increasing opportunities for transit use by residents, commuters, students, employees and visitors to the area.

**Policy 1.2e:** Encourage interagency coordination to anticipate and accommodate transit services changes.

**Policy 1.2f:** Emphasize commuter transit services on congested corridors.

**Policy 1.2g:** Protect the potential for future commuter transit service on existing rail lines.

**Policy 1.2h:** Provide an integrated and ADA compliant transportation system that is responsive to the special needs of all seniors and persons with disabilities.

**Policy 1.2i:** Coordinate ADA transit and paratransit services with other specialized transportation services.

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**Policy 1.2j:** Encourage transit-oriented development and provide alternatives to automobile commutes by linking land use decisions with transit, bikeway, pedestrian and park and ride investments.

**Objective 1.3:** Promote alternative means of travel to reduce automotive dependency, increase accessibility, and improve air quality.

**Policy 1.3a:** Protect existing corridors and create new corridors to provide opportunities for non-motorized travel with links to other means of travel.

**Policy 1.3b:** Enhance pedestrian and bicycle connections within and between residential, commercial, and employment areas, and between community facilities.

**Policy 1.3c:** Support concentrated, mixed-use development that encourages bicycling and walking.

**Policy 1.3d:** Promote the location of bikeways as bicycle lanes on roads unless a more direct bicycle path can be provided.

**Policy 1.3e:** Support the provision of bicycle racks and/or lockers at park-and-ride lots, transit centers and bus stops; bicycles on transit, pedestrian connections to transit; and potential interconnections with future passenger rail lines within the Bay-Lake Region.

**Policy 1.3f:** Serve inter-county and intra-county travel needs, including consideration of travel links outside of the county.

**Policy 1.3g:** Provide multi-modal access to recreational resources.

**Policy 1.3h:** Regularly update local bicycle plans for all local jurisdictions, and assist in the implementation of projects from within those plans.

**Policy 1.3i:** Encourage safe routes to schools by providing improved bicycle and pedestrian facilities, improved transit service, traffic calming measures and bicycle rider training programs for elementary students.

**Policy 1.3j:** Retain the option of future passenger rail service for when it is financially feasible, acceptable to the community, and only after completion of an environmental impact report that concludes all significant impacts can be satisfactorily mitigated.

**Policy 1.3k:** Support expanded general and freight aviation at the municipal airports consistent with the current *State Airport Master Plan* and if it will not adversely affect surrounding areas.

**Objective 1.4:** Promote the preservation and enhancement of connecting highways, rail and air facilities and selected highways for the efficient movement of goods and people.

**Policy 1.4a:** Promote the enhancement a defined network of roads important for goods movement.

**Policy 1.4b:** Encourage the use of airports and heliports to support economic development.

**Policy 1.4c:** Continue to encourage the improvement of existing port facilities and rail freight systems to reduce the number of trucks using the highway network.

**Policy 1.4d:** Promote the wise utilization of limited capital resources to maximize the efficiency of the existing transportation system, and as an alternative to constructing new facilities.

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**Policy 1.4e:** Encourage private development proposals to include transit, bicycle and pedestrian service improvements and financial support of transit service, consistent with transit improvement plans.

**Policy 1.4f:** Continue to aggressively pursue new and additional funding sources for needed transportation improvements and programs including transit needs, specialized transportation, and rail demonstration projects.

**Policy 1.4g:** Continue to seek additional funding sources to support and expand alternative transportation mode facilities and services.

**Policy 1.4h:** Support transportation investments that encourage sustainable land use practices.

**Objective 1.5:** Help ensure that the transportation system complements and enhances the natural environment of the Bay-Lake Region.

**Policy 1.5a:** Emphasize sustainable transportation modes consistent with regional environmental policies.

**Policy 1.5b:** Advocate for transportation projects that contribute to improved regional air quality and reduced energy consumption.

**Policy 1.5c:** Advocate for transportation projects that contribute to the protection of biological and scenic resources, open space and agricultural land.

**Policy 1.5d:** Avoid, minimize or mitigate the impact of transportation improvements on parks, recreation areas, historic sites, and cultural resources.

**Policy 1.5e:** Avoid, minimize or mitigate noise, vibration, and visual impacts from transportation improvements in sensitive areas.

**Policy 1.5f:** Ensure all transportation project specific environmental reviews incorporate appropriate avoidance, minimization or mitigation measures, such as Transportation Control Measures.

**Objective 1.6:** Coordinate land use and transportation decisions to ensure that the Region's social, cultural, and economic vitality is sustained for current and future generations.

**Policy 1.6a:** Plan transportation improvements which are consistent with the needs and desires of residents and businesses of the Region and which are closely coordinated with local land use and transportation planning policies.

**Policy 1.6b:** Reduce auto-dependent development by emphasizing opportunities to reuse underutilized urban land for housing and compact mixed use developments.

**Policy 1.6c:** Encourage land use policies which locate child care facilities at or near residential areas and around transit centers.

**Policy 1.6d:** Protect municipal airport operations by limiting nearby incompatible land uses.

**Policy 1.6e:** Support established urban communities, residential neighborhoods, major activity and recreation centers, and commercial districts with a broad range of transportation options.

**Policy 1.6f:** Help limit development unless transportation impacts can be mitigated or improvements funded by the project.

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**Policy 1.6g:** Support traffic calming measures on local residential streets.

**Policy 1.6h:** Work with local jurisdictions to implement land use policies that promote jobs/housing balance along existing and future transit routes.

**Policy 1.6i:** Support parking management principles which reduce transportation demand at employer sites and commercial areas without negatively impacting neighborhoods.

### **Utilities and Community Facilities Goals, Objectives and Policies**

**Goal 1:** To advocate for quality utilities and community facilities and services that are planned in an efficient, coordinated and cost-effective manner for residents of the Region.

**Objective 1.1:** Coordinate, consolidate and share governmental facilities and services where possible.

**Policy 1.1a:** Encourage communities to work with other jurisdictions to maximize the joint use of community facilities to reduce costs, promote efficiency in use, and avoid duplication and overbuilding of services.

**Policy 1.1b:** Encourage concentrated development in areas where appropriate utilities, community facilities, and public services are available.

**Policy 1.1c:** Encourage the concept of “mutual aid agreements” for public services.

**Policy 1.1d:** Work with communities to consider the impacts of development proposals on the cost and quality of community facilities and services.

**Objective 1.2:** Coordinate with communities to ensure an adequate supply of quality water will be available to meet the needs of the Region’s residential, commercial and agricultural land uses.

**Policy 1.2a:** Work with communities to maintain and enhance community water systems that meet the needs of existing and planned future development.

**Policy 1.2b:** Work with communities to evaluate local water system capacities to ensure that they are able to meet the everyday demands of the customers as well as demands for higher volumes.

**Policy 1.2c:** Work with communities to advocate for wellhead protection programs in an effort to ensure a long-term source of clean water.

**Policy 1.2d:** Examine the reuse and recycling of water to maintain a quality water supply.

**Objective 1.3:** Coordinate with communities to expand or improve local wastewater system capabilities to meet future demand in a cost-effective and environmentally friendly manner.

**Policy 1.3a:** Continue to prepare sewer service area plans for the future of wastewater systems in order to meet future growth and ensure the expansion of sewerage systems.

**Policy 1.3b:** Promote the proper disposal of wastewater to protect groundwater and surface water resources.

**Policy 1.3c:** Continue to evaluate the negative impacts on the environment where future developments will rely on private on-site wastewater treatment systems.

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**Policy 1.3d:** Promote the use of shared on-site wastewater treatment systems where appropriate.

**Objective 1.4:** Continue to monitor the potential impacts of development on the stormwater drainage systems.

**Policy 1.4a:** Consider the possible impacts to the water resources when weighing future developments.

**Policy 1.4b:** Encourage the use of best management practices and other stormwater controls to manage non-point sources of stormwater runoff.

**Policy 1.4c:** Support the preservation of environmental features, such as wetlands, that minimize flooding.

**Policy 1.4d:** Promote the establishment of drainage districts to manage agricultural runoff.

**Objective 1.5:** Advocate for dependable, efficient, and environmentally conscious utilities to adequately serve the Region.

**Policy 1.5a:** Work with communities and service providers to ensure adequate electric, natural gas and telecommunication services meet the needs of existing and planned future developments.

**Policy 1.5b:** Advocate for the development of redundant power and communication

**Policy 1.5c:** Consider alternative energy options such as anaerobic manure digestion, wind power, solar power, hydroelectric generation, and others where feasible.

**Policy 1.5d:** Promote the expansion of telecommunications capabilities for emergency situations.

**Policy 1.5e:** Consider telecommunication towers for alternate structures or joint use of new and existing towers to minimize conflict with community character and the environment.

**Objective 1.6:** Encourage the maintenance and improvement of public services and facilities to serve present and planned development.

**Policy 1.6a:** Assist local communities in locating grant money to maintain and upgrade government facilities, libraries and other public facilities as needed.

**Policy 1.6b:** Encourage communities to monitor resident satisfaction with services including solid waste disposal, recycling and protective services.

**Policy 1.6c:** Promote the provision of adequate medical services, elderly care services and childcare services.

**Objective 1.7:** Advocate for a level of police protection, fire protection, and emergency services that meets the needs of existing and planned future development patterns.

**Policy 1.7a:** Coordinate with communities to fill any potential service gaps that may exist to provide quality protection.

**Policy 1.7b:** Work with communities to develop and maintain all hazard mitigation plans for all areas of the Region.

**Objective 1.8:** Advocate for quality educational opportunities.

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**Policy 1.8a:** Encourage technical colleges and University of Wisconsin Extension to boost community education efforts.

**Policy 1.8b:** Coordinate with school districts to monitor population changes and projections in order to maintain and upgrade facilities.

### **Intergovernmental Cooperation Goals and Objectives**

**Goal 1:** To encourage joint planning between jurisdictions including Tribes and special districts.

**Objective 1.1:** Encourage coordination and sharing or joint ownership of community facilities, equipment and other services whenever possible.

**Policy 1.1a:** Explore the possibility of jointly developing services including:

1. Fire protection
2. Police protection
3. Ambulance and First Responder services
4. Public transportation
5. Sanitary and water districts
6. Snow removal

**Policy 1.1b:** Explore the possibility of jointly developing facilities including:

1. Utilities
2. Sanitary and water treatment plants
3. Parks and recreational facilities
4. Airports
5. Libraries
6. Shared municipal buildings
7. Animal shelter

**Policy 1.1c:** Explore the possibility of jointly developing programs including:

1. Waste and recycling
2. Health and human services
3. Building inspector
4. Beach maintenance and beach water quality testing
5. Household water testing
6. Cooperative efforts to spur legislative change
7. Senior and elderly programs
8. Child care programs
9. Cultural programs

**Objective 1.2:** Promote coordination between neighboring communities on future planning projects to best maintain the character of the area.

**Objective 1.3:** Encourage participation between neighboring communities regarding meetings, workshops, mutual planning activities, etc.

**Policy 1.3a:** Work with neighboring municipalities to jointly plan to ensure compatible land uses along shared borders.

**Policy 1.3b:** Work with neighboring municipalities to identify and develop advantageous transportation corridors.

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**Goal 2:** To improve communication and cooperation between and among units of government and the citizens they serve.

**Objective 2.1:** Promote coordination with adjacent communities on future planning projects to best maintain the character of the surrounding area.

**Policy 2.1a:** Encourage leaders of neighboring communities to meet at regularly to discuss issues of common concern.

**Objective 2.2:** Encourage neighboring communities to discuss any unique natural features and other land uses which span municipal boundaries.

**Goal 3:** To develop collaborative stormwater & sewer management plans.

**Objective 3.1:** Work with neighboring communities to identify shared natural features such as wetland recharge areas and natural habitat areas.

**Goal 4:** To encourage a more diverse population to participate in planning and government.

**Goal 5:** To encourage local governments to enter into cooperative service arrangements to better utilize existing resources.

**Objective 5.1:** Encourage the development of boundary agreements between neighboring communities.

**Policy 5.1a:** Encourage communities to work cooperatively to address possible boundary issues to minimize conflicts, to include staying aware of issues or regulations that would impact development within each community.

**Goal 6:** To assist local units of government in identifying funding and technical resources to acquire and improve the services available to their residents.

**Objective 6.1:** Explore the possibility of sharing municipal services, facilities, and programs with neighboring municipalities.

**Objective 6.2:** Work with surrounding municipalities to address possible boundary issues to minimize conflict.

**Policy 6.2a:** Encourage open communication with neighboring Regions and villages to facilitate the creation of co-planning areas along municipal borders.

**Policy 6.2b:** Encourage the development of border agreements with neighboring villages, if and when, annexation issues arise.

## **Land Use Goals and Objectives**

**Goal 1:** To promote the distribution of land uses that will preserve and enhance the character of the Bay-Lake Region by establishing land development guides designed to promote environmental protection, meet social and economic needs, provide for adequate services and facilities, conserve natural resources, and ensure compatibility of land uses.

**Objective 1.1:** Encourage preservation of water resources, unique open spaces, and other natural and cultural resources.

**Objective 1.2:** Encourage a spatial distribution of the various land uses which maintains biodiversity and will result in the protection and wise use of the natural resources of the Region.

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**Objective 1.3:** Ensure a spatial distribution of the various land uses which will result in a compatible arrangement of land uses. Encourage the preservation of land areas to provide for agriculture, provide a reserve or holding area for future urban and rural needs, and ensure the preservation of those rural areas which provide wildlife habitat and which are essential to shape and order urban development.

**Goal 2:** To conserve and protect desirable existing residential, commercial, industrial, and agricultural development in order to maintain desirable social and economic values; renewal of obsolete and deteriorating residential, commercial, and industrial areas in the rural as well as in the urban areas of the Region; and prevention of slums and blight.

**Objective 2.1:** Encourage harmonious and well-planned commercial development which will serve the needs of residents of the region, visitors and the specialized needs of rural areas.

**Objective 2.2:** Encourage a balanced allocation of space to the various land use categories which meets the social, physical, and economic needs of the regional population.

**Objective 2.3:** Develop a spatial distribution of the various land uses which is properly related to the supporting transportation, utility and public facility systems in order to assure the economical provision of transportation, utility and public facility services.

**Objective 2.4:** Encourage the development and conservation of residential areas within a physical environment that is healthy, safe, convenient, and attractive.

**Objective 2.5:** Encourage the preservation, development, and redevelopment of a variety of suitable industrial and commercial sites both in terms of physical characteristics and location.

**Objective 2.6:** Encourage the preservation and provision of open space to enhance the total quality of the regional environment.

**Goal 3:** To develop communities having distinctive individual character, based on physical conditions, historical factors, and local desires.

**Objective 3.1:** Ensure that growth and development occurs in a planned and coordinated manner that will maintain or improve the quality of life associated with community character for both existing and future residents.

**Objective 3.2:** Encourage the preservation, development, and redevelopment of a variety of suitable industrial and commercial sites both in terms of physical characteristics and location.



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## **REGIONAL DEMOGRAPHIC SUMMARY**

The following summary includes information regarding population and employment forecasts, as well as demographic trends, age distribution, education levels, income levels and employment characteristics that exist within the Bay-Lake Region.

### **Existing Conditions**

#### **Demographic Trends**

The largest age grouping in the Bay-Lake Region is between 30 and 49 year olds, which is the age group traditionally, having the highest earning power.

The region experienced a population of 554,556 persons in 2000, an 11.17 percent increase from 1990.

According to Wisconsin Department of Administration (WDOA), the region's population is projected to increase to 663,973 persons by 2030, which represents a 14.2 percent increase.

The Region's median age in 2000 was nearly 39 years old, which indicates an aging adult population. Implications are that an aging community will need additional specialized services to accommodate these age groups in the future.

The region's population has risen markedly over the course of the last four decades. Projections developed after the 2000 Census indicates that the region's population was likely to increase through 2015, though at a slower rate than has been seen from the 2000 Census. The region has experienced (over the past three decades) an age structure shift towards the older age groups. This may lead the region to spend more on services to accommodate an aging population over the next twenty years. Likewise, the aging population can also mean additional business opportunities. The elderly have been shown to import income into a community, living on prior savings or investments in the form of social security, private pensions, stocks, etc. This aging population requires basic services such as groceries, housing and health care, but they tend to spend their incomes locally. Well planned and financed services and programs directed towards the elderly can go a long way in keeping the buying power of the retired community within the region.

The number of housing units in the Region has seen a steady increase from 1990 to 2000. The Region has had a 68.1 percent increase in housing units since 1970.

The household size for the Region is expected to decline over the next 25 years from 2.46 to 2.20 persons per household.

At approximately 2.20 persons per household, the Region can expect between 81,000 and 187,000 new housing units by 2030.

Throughout the planning period, there will be a demand for additional housing units within the Region. An increased population, a demand for larger lot sizes and a trend of smaller household sizes will increase the demand for residential developments. This plan identifies areas throughout the region that will be needed to accommodate this change in land use while ensuring adequate services are provided.

Of the 248,916 housing units in the Region, 23.0 percent (57,146) were built before 1940.

In 2000, approximately 27 percent of renters were living in "non-affordable" housing, due to their paying 30 percent or more of their incomes towards rent.

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In 2000, 16 percent of home owners were paying 30 percent or more of their incomes towards housing payments.

### **Age Distribution**

From 1990 to 2000, several notable population distribution trends were observed in the Region. Most of the Region's population is within the middle age groups of 20 to 64. In 2000, approximately 49.8 percent of the Region's population was male, while 50.2 percent was female. The overall male population increased by 31,170 individuals (12.72 percent). The overall female population increased by 24,571 persons (9.68 percent).

The number of persons in the age groups consisting of 70 years and older is increasing, both in absolute numbers and as a percent of the region's total population. For males, each distribution group increased by at least 9.92 percent; ages 90 and over increase the most (50.7 percent). For females, each distribution group 75 years and old increased by at least 5.37 percent. The distribution groups 80 to 84 and 90 and over years also showed the greatest increases; these groups increased by 21.04 percent and 42.67 percent, respectively.

### **Educational Levels**

The level of education that is attained by the population of a community will often be an indicator of the type of jobs in the area and the standard of living. In 2000, the educational attainment level with the greatest percent for the Bay-Lake Region's population (aged 25 years and older) was the High School diploma or equivalent level of education at 39.4 percent of the population. The Bay-Lake Region showed a higher percentage in this attainment level than any other area.

### **Income Levels**

The per capita income for residents in the Bay-Lake Region increased 67.5 percent for the period 1989 to 1999. As a percent, this increase was greater than the state increase over the same period. The highest per capita incomes (PCI) in the region, according to the 2000 Census, were recorded in Brown, Door and Sheboygan counties. PCI ranged from a low of \$17,492 in Marinette County to a high of \$21,784 in Brown County. Overall, the regional average of the eight PCIs in the Bay-Lake Region was \$19,778. Although this number is \$1,493 less than the PCI recorded at the state level, the PCI in the region appears to be growing at a faster pace than the state.

### **Employment Characteristics**

In 2000, the majority of employed persons 16 years and older in the Bay-Lake Region were in management, professional and related occupations (27.5 percent). Two other important occupations in the region include the sales and office occupations and the production, transportation, and material moving occupations with 24.1 percent and 23.9 percent of employment, respectively. Less than 10 percent of the region's workforce over 16 years is in the construction, extraction, and maintenance occupations. Only 1.2 percent of the employed persons in the region work in the farming, fishing and forestry occupations.

### **Forecasts**

Tables, figures and additional text are provided in later chapters to aid in the explanation of the forecasting methods used below.

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## **Population**

In 2004, the Wisconsin Department of Administration (WDOA) Demographic Services Center prepared population projections to the year 2030 for all communities and counties in the state. The WDOA utilized a projection formula that calculates the annual population change over three varying time spans. From this formula, the WDOA projections indicated that the Bay-Lake Region will have a population of 663,975 persons in 2030 with an increase of 109,408 persons, or 19.7 percent. Marinette County is anticipated to show the smallest change proportionately (3.1 percent) while Brown County will show the highest change (28.7 percent).

An area's future population provides an important basis for planning and public policy making. Population projections are an important factor necessary to assess the area's future need for housing, community facilities, transportation, and other population-related facilities. They can also be used to forecast the area's future expenditures, revenues, and tax receipts. The Commission has prepared alternative population projections to determine an approximate range in the growth rate for the Region using the WDOA population projections to 2030, and Census information.

A "Linear" projection was created using the 1970, 1980, 1990 and 2000 Census figures. According to Commission projections, the projected 2010 population is 583,514 persons, while in 2030, the projected population is 656,235. Linear projections indicate the population of the Bay-Lake Region will increase by 18.3 percent by 2030; an increase of 101,670 persons.

The Commission developed a second "Growth" projection by using the 1970, 1980, 1990 and 2000 Census figures and creating a growth trend series to the year 2030. This method identified a projected year 2010 population of 592,865 persons, and a projected population for 2030 of 696,482. According to this "Growth" projection, the Region's 2000 population will increase by 25.6 percent by the year 2030; an increase of 141,917 persons.

For a detailed discussion of the regional population projections, see Volume II, Chapter 3: Population and Housing.

## **Housing**

In formulating a "best guess" for the future residential needs of the region, three growth scenarios were used to determine a range in housing projections to 2030.

Using the Census housing counts from 1970 to 2000, the Commission calculated a linear trend in housing units to the year 2030. This created a housing unit projection which indicated that by 2030 the region would have 351,398 total housing units or an increase of 102,482 housing units over the 2000 Census count.

A growth trend was also developed to the year 2030 using the Census housing counts. This created a housing unit projection which indicated by 2030 the region would have 436,837 total housing units or an increase of 187,921 housing units over the 2000 Census count.

A third growth scenario was calculated using the WDOA Population Projections and Household Size Projections. The percent of occupied housing units was held constant for the planning period for each county in order to calculate the number of housing units that could be expected by 2030. This created a housing unit projection which indicated by 2030 the region would have 330,531 total housing units or an increase of 81,615 housing units over the 2000 Census count.

The Commission chose to use a housing scenario representing an average of the three projections in order to determine the amount of land that needs to be allocated for future residential growth during the 20 year planning period.

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## **Employment**

In 1996, the Wisconsin Department of Workforce Development created projections for industries, occupations, and the labor force called the Northeast Wisconsin Projections: 1992-2005. These projections are for all of Northeast Wisconsin. The study concluded that overall employment is expected to increase by more than 20 percent in the region. Unemployment rates will remain low through 2005, and labor shortages may be common in some occupations. Since that report, unemployment has edged up to its highest rate in years.

In 2005, the manufacturing industry is projected to continue to be the industry with the largest share of employment. However, although manufacturing jobs will continue to increase, the rate of increase will slow down. Occupations in manufacturing are expected to move away from general labor positions to more semi-skilled and skilled operator and technician jobs. This is due primarily to production processes that are more efficient and new available technology.

Service industry employers will add approximately 18,400 jobs to the region's labor market by 2005. The largest divisions within this industry group will be business and health services with a similar growth in professional or technical jobs. With the aging of the population, the demand for such services will continue to increase. The overall health of the Northeast Wisconsin economy is projected to be strong with no major projected decreases in any occupation or industry.

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## CHAPTER 2 - FUTURE LAND USE PLAN

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### **INTRODUCTION**

This chapter presents a projection of future land use demands based upon population projections, land use trends, discussions on land-use issues and a preferred future development pattern.

### **SUMMARY & IMPLICATIONS**

In order to fully develop the future land use plan, an overview of issues and implications related to each of the elements is presented.

#### **Issues**

##### **Natural Resources**

- Preservation and sound management of natural resources and public lands for multiple uses
- Preservation of environmental corridors
- Preservation, restoration, and improvement of surface water quality
- Protection of groundwater resources (quality and quantity)
- Promotion of healthy beaches and efforts to remedy beach closings
- Preservation and encouragement of public access to lakes and rivers
- Preservation of biodiversity and critical habitats/communities
- Preservation of the Niagara Escarpment
- Encouragement of sustainable forestry practices
- Improvement of air quality

##### **Agricultural Resources**

- Promotion of education towards efforts to limit land use conflicts
- Preservation of agricultural lands
- Preservation of rural character

##### **Cultural Resources**

- Support for development and expansion of cultural resources/facilities
- Preservation of valuable historic and archaeological resources
- Preservation and protection of parks and natural areas

##### **Population & Housing**

The region's population has risen markedly over the course of the last four decades. Projections developed after the 2000 Census indicates that the region's population was likely to increase through 2015, though at a slower rate than has been seen from the 2000 Census. The region has experienced (over the past three decades) an age structure shift towards the older age groups. This may lead the region to spend more on services to accommodate an aging population over the next twenty years. Likewise, the aging population can also mean additional business opportunities. The elderly have been shown to import income into a community, living on prior savings or investments in the form of social security, private pensions, stocks, etc. This aging population requires basic services such as groceries, housing and health care, but they tend to spend their incomes locally. Well planned and financed services and programs directed towards the elderly can go a long way in keeping the buying power of the retired community within the region.

As was stated earlier in this document, the Commission anticipates that throughout the planning period, there will be a demand for additional housing units within the Region. An increased

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population, a demand for larger lot sizes and a trend of smaller household sizes will increase the demand for residential developments. This plan identifies areas throughout the region that will be needed to accommodate this change in land use while ensuring adequate services are provided.

## **Economic Development**

### **Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis**

This element of the plan looks at conditions and resources within the region as a strength, a weakness, an opportunity, or a threat for retaining, expanding or attracting businesses and creating new jobs. These factors may greatly influence the future economic climate of the region over the next two decades and thus are important to identify as part of this plan in order to understand exactly the region's continued economic viability and future draw for new businesses. On May 20, 2003, a meeting of the Bay-Lake Regional Planning Commission's Economic Development Advisory Committee was held to undertake this SWOT Analysis. This portion of the element gives a perspective from an economic development point of view and reflects strengths, weaknesses, opportunities, and threats of the region. Results of the SWOT Analysis are as follows:

#### **Strengths**

1. Many Areas with a Strong Industrial Base
2. Growing Health Care
3. Growing Retail Base
4. NWTC, UW-Marinette, St. Norbert, UW – Green Bay, Silver Lake, Lakeshore Tech, and UW Centers (CESA, apprenticeship programs)
5. Bay of Green Bay and Menominee River
6. Good Transportation System – Highways, Port, Air and Rail Facilities
7. Good Tourism Reputation – Green Bay Packers, Casinos/Gaming, Lake Michigan, Natural Resources in general, entertainment and cultural facilities, State parks, national forests, protected resources (dunes, cave pt.), hunting and fishing, winter sports
8. Low Crime Rate
9. Quality of Life – friendly place to raise a family, clean appearance, community identity
10. Diverse Ethnicity – Polish, Belgium, Hmong, Hispanic, African American, etc.
11. Paper Industry Cluster – Spin-offs, Secondary Industry – attracts diverse population/skills
12. Low Utility Rates – WPS and WE Energies, Utility Co-ops
13. Well-trained Workforce and Good Work Ethic
14. Embraces New Technology
15. EDC and Extensions, Regional Planning Commissions

#### **Weaknesses**

1. Weak in White-Collar Industry
2. Areas of Small, Run-down Housing
3. Areas of Shrinking Population
4. Don't Embrace New Cultures and their Needs (i.e. jobs)
5. Large Amount of Wetlands (hinders economic development)
6. Regulatory Agencies – timing/permitting, etc.

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7. Minority Unemployment Rate – high
  8. High Taxes – per capita income
  9. Employment Concentrated – need new infrastructure in some outlying areas
  10. Brain Drain
  11. CWD, PCB – poor air quality and water quality, polluted fish
  12. Don't Partner with Regulatory Agencies when Dealing with the Problem (i.e. fines should be used to find solution to problem)
  13. Aesthetics of Shoreline in Many Areas
  14. Old Infrastructure in Cities
  15. Losing Corporate Headquarters (losing corporate commitment)
  16. State Regulatory Requirements on Businesses
  17. Low Wages in Service Industries and Retail Assembly
  18. High Dependency on Manufacturing
  19. Lack of Comprehensive Planning and/or Lack of Follow Through

#### Opportunities

1. Educational Opportunities
2. Tourism/Hospitality
3. Intergovernmental Cooperation
4. Local Governments Diversify Income Stream (ie. room tax, user fees)
5. Opportunity to Hire Minority Employees
6. Diverse Minority Businesses, lots of construction going on in region
7. Opportunity to Develop Clusters of Certain Types of Industry
8. Many Boat Building Companies; how do we make it grow?
9. Youth Apprenticeships and “Youth to Work”
10. Create Bilingual/Trilingual Workforce

#### Threats

1. No Strength Behind “Hiring Minority Employees”
2. Global Competition
3. Cyclical Industries – Shipbuilding
4. Transportation – how do we move people to work and back, what's adequate today may not be adequate tomorrow
5. Social Breakdown – crime, drugs
6. Regulatory Agencies Not Keeping Pace
7. Shrinking Budgets (funding from state/federal)
8. Rising Health Care Costs, Insurance Costs, Care Itself
9. Free Trade Without Domestic Job Protection – NAFTA
10. Loss of Local Bank Decision Making
11. Parochial Thinking Governments and School Districts
12. Loss of Manufacturing and Blue Collar Jobs
13. Diminishing Financial Resources (i.e. grants, free money, purchasing power)



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## **LAND USE STRATEGY**

**Goal 1:** To promote the distribution of land uses that will preserve and enhance the character of the Bay-Lake Region by establishing land development guides designed to promote environmental protection, meet social and economic needs, provide for adequate services and facilities, conserve natural resources, and ensure compatibility of land uses.

***Objective 1.1:*** Encourage preservation of water resources, unique open spaces, and other natural and cultural resources.

***Objective 1.2:*** Encourage a spatial distribution of the various land uses which maintains biodiversity and will result in the protection and wise use of the natural resources of the Region.

***Objective 1.3:*** Ensure a spatial distribution of the various land uses which will result in a compatible arrangement of land uses.

***Objective 1.4:*** Encourage the preservation of land areas to provide for agriculture, provide a reserve or holding area for future urban and rural needs.

***Objective 1.5:*** Ensure the preservation of those rural areas which provide wildlife habitat and which are essential to shape and order urban development.

**Goal 2:** To conserve and protect desirable existing residential, commercial, industrial, and agricultural development in order to maintain desirable social and economic values; renewal of obsolete and deteriorating residential, commercial, and industrial areas in the rural as well as in the urban areas of the Region; and prevention of slums and blight.

***Objective 2.1:*** Encourage harmonious and well-planned commercial development which will serve the needs of residents of the region, visitors and the specialized needs of rural areas.

***Objective 2.2:*** Encourage a balanced allocation of space to the various land use categories which meets the social, physical, and economic needs of the regional population.

***Objective 2.3:*** Develop a spatial distribution of the various land uses which is properly related to the supporting transportation, utility and public facility systems in order to assure the economical provision of transportation, utility and public facility services.

***Objective 2.4:*** Encourage the development and conservation of residential areas within a physical environment that is healthy, safe, convenient, and attractive.

***Objective 2.5:*** Encourage the preservation, development, and redevelopment of a variety of suitable industrial and commercial sites both in terms of physical characteristics and location.

***Objective 2.6:*** Encourage the preservation and provision of open space to enhance the total quality of the regional environment.

**Goal 3:** To develop communities having distinctive individual character, based on physical conditions, historical factors, and local desires.

***Objective 3.1:*** Ensure that growth and development occurs in a planned and coordinated manner that will maintain or improve the quality of life associated with community character for both existing and future residents.

***Objective 3.1:*** Encourage the preservation, development, and redevelopment of a variety of suitable industrial and commercial sites both in terms of physical characteristics and location.

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## **Planning Criteria**

Planning criteria are developed in order to give the community a sense in which to base their land use recommendations. Criteria make the planning process defensible when presenting scenarios to the general public and when modifying or developing alternative sites for land use developments. The criteria used by the Commission when developing the general plan design, was based upon values identified by the State and the Commission.

The following State criteria are based upon Smart Growth criteria encouraged within community plans:

- Promotion of the redevelopment of lands with existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial and industrial structures.
- Encouragement of neighborhood designs that support a range of transportation choices.
- Protection of natural areas, including wetlands, wildlife habitats, lakes, woodlands, open spaces and groundwater resources.
- Protection of economically productive areas, including farmland and forests.
- Encouragement of land uses, densities and regulations that promote efficient development patterns and relatively low municipal, state governmental and utility costs.
- Preservation of cultural, historic and archaeological sites.
- Encouragement of coordination and cooperation among nearby units of government.
- Building of community identity by revitalizing main streets and enforcing design standards.
- Providing an adequate supply of affordable housing for individuals of all income levels throughout each community.
- Providing adequate infrastructure and public services and an adequate supply of developable land to meet existing and future market demand for residential, commercial and industrial uses.
- Promoting the expansion or stabilization of the current economic base and the creation of a range of employment opportunities at the state, regional and local levels.
- Balancing individual property rights with community interests and goals.
- Planning and development of land uses that create or preserve varied and unique urban and rural communities.
- Providing an integrated, efficient and economical transportation system that affords mobility, convenience and safety and that meets the needs of all citizens, including transit-dependent and disabled citizens.

## **Development Objectives**

The objectives adopted for the regional land use plan are largely self-descriptive. They are concerned primarily with spatial allocation to, and distribution of, the various land uses, land use compatibility, resource protection, and accessibility.

It should be noted that the foregoing land use development objectives are systems-level objectives which the regional land use plan should seek to achieve. They are concerned with the proper allocation of space to the various categories of land use and the proper arrangement of land use at the systems level of planning. While the objectives and standards include guidelines for neighborhood development and the development of commercial and industrial areas, detailed site

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design considerations are properly addressed at the local level of planning, and it is the function of local planning to ensure good design at individual development sites. It is in the local planning process that the ultimate responsibility lies to ensure the development of properly designed neighborhood units and properly designed commercial and industrial areas served by public utilities and having adequate parking and good access to the arterial street and transit systems.

### **Principles and Standards**

The Bay-Lake Regional Planning Commission has reviewed and modified standards developed by the Southeastern Wisconsin Regional Planning Commission for use in this Regional Plan.

Complementing each of the foregoing specific land use development objectives are one or more planning principles and a set of planning standards. Each set of standards is directly related to a planning principle, as well as to the objective, and serves to facilitate quantitative application of the objectives in plan design, test, and evaluation.

In applying the planning standards and in preparing the regional land use plan, several overriding considerations must be taken into account. First, it must be recognized that it is unlikely that any one plan proposal can meet all of the standards completely; the extent to which each standard is met, exceeded, or violated must serve as a measure of the ability of the plan proposal to achieve the specific objectives which the given standard complements.

Second, it must be recognized that some objectives may be complementary, with the achievement of one objective supporting the achievement of others. Conversely, some objectives may be conflicting, requiring reconciliation through compromise.

Third, it must be recognized that the standards must be very judiciously applied to areas or facilities which are already partially or fully developed, since full attainment of certain standards may require extensive renewal or reconstruction programs. It should be noted in this respect that the land use standards which are concerned with natural resource protection, use, or development or with neighborhood and community development related primarily to those areas of the Region where the resource base has not as yet been significantly deteriorated, depleted, or destroyed and where neighborhood and community development has not yet been significantly disrupted. In areas where such disruption, deterioration, depletion, or destruction has already occurred, application of the standards may make it necessary to inaugurate programs which would restore neighborhoods and the resource base to a higher level of both quality and quantity.

### **ANTICIPATED LAND USE TRENDS**

Analyzing data within the previous elements of this comprehensive plan, the following land use trends were developed for the planning period. It is expected that these trends will influence the region's future growth and preservation. The following trends were used to provide direction in the development of the General Plan Design, along with the plan's goals, objectives, and policies, the issue identification and region wide survey results.

The demand for larger lot sizes will increase and the ratio of persons per household will decrease resulting in greater acreage needs to accommodate future residential growth.

Residential developments adjacent to urban areas will continue at higher densities in order to receive adequate services and to preserve the rural nature of the surrounding areas.

Farmlands will continue to be preserved in the region to allow for general crop farming.

The rural character will continue to be maintained in the region, preserving the natural environment resulting in the protection of wildlife and fish spawning habitats.

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The use of on-site wastewater septic systems and individual groundwater wells will continue within the region throughout the planning period.

As computer technology continues to advance in global information (Internet), home occupations will likely increase.

The region will experience an increased demand for services, as the median population age continues to increase.

Seasonal and year-round residents will need to work together to continue to enjoy the trails, lakes and woodlands of the region.

## **Land Supply**

### **Amount**

Currently the Bay-Lake Region allows ample room to develop with residential, commercial, park and recreation, industrial and institutional/governmental land uses while preserving the natural amenities that give the Region its character. Design elements that promote open space, such as natural buffering, are recommended to minimize any negative impacts and reduce conflicts between land uses.

The amount of land available for development within the Region is determined by factoring in the existing development and areas not recommended for development such as environmental corridors (wetlands with a 50 foot setback, floodplains, areas of steep slope, water resources with a 75-foot setback from the water resources, State Natural and Scientific areas, and State Wildlife and Fishery Areas.). It is also the intent of the plan to preserve the prime agricultural lands within the Region. Taking in account the various factors which may affect development, it is determined that an adequate amount of developable lands exist within the Region for the planning period.

### **Price**

The approximate cost per acre of lands within the region varies dramatically from county to county and depends on the physical landscape. Property along the Region's shorelines and coastal areas is significantly more expensive than areas in the rural communities. The urbanizing areas near the Green Bay Metropolitan area also have higher land values than the more rural areas of the Region.

The prices of these lands vary depending on the surrounding land uses, location, access, services, along with other subjective factors. For example, residential prices can depend on whether a parcel has water frontage, is wooded, or has a vast amount of open space in and around it. Waterfront properties were attracting higher price listings. For more information regarding land prices for residential, commercial, and other land uses in the Region, contact local realtors.

### **Demand**

Throughout Wisconsin and in many areas of the Region, the trend for many families has been to move from the larger cities to smaller communities or lower density areas, and commute to work.

Many businesses have been locating in the larger cities in the Region. With the increased development of highway commercial businesses, the demand for highway commercial opportunities may increase along major highway corridors such as I-43 and USH 41/141 during the planning period. Development between the Green Bay metropolitan area and the Fox Cities metropolitan area along USH 41/141 is likely to continue to grow. Development of the Region's shorelines is predicted to be seen throughout the planning period as well.

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## **LAND USE ISSUES AND CONFLICTS**

Throughout the Region, there are many areas where conflicts may arise between uses in the future, especially as residential growth takes place in the historically agricultural areas, and commercial and industrial development takes place adjacent to residential areas.

The goal of this regional comprehensive plan is to provide strategies that communities and counties within the Region can use to create an orderly transition of land uses to avoid or mitigate conflicts. Many combinations of land uses may cause some degree of conflict; however, there are certain associations that continually create problems. A typical example might be a residential development in close proximity to a particularly intense commercial or industrial development that might conflict due to sight, sound, odor, or other undesirable characteristics. Another example could be an auto salvage yard in proximity to a recreational or natural area or a home occupation in a single-family residential area that has outgrown its roots. Allowing for adequate screening, setbacks and buffering should alleviate much of the incompatibility, as will additional controls within subdivision ordinances and ordinances regulating signage, lighting and noise.

### **Agricultural Activities and Residential Development**

Currently, the major land use conflict experienced by many developing communities is that of new homes in close proximity to active farming operations. It is important that new residents in these areas be made aware of active farms, as well as the sights, smells, and other activities that characterize farming operations. These communities should work with agricultural land owners to identify those areas which are to remain agricultural, and every effort should be made to ensure that the existing farming operations are not negatively impacted by development.

### **Multifamily Developments**

Another land use conflict seen in the larger communities in the Region are large multifamily developments being concentrated in one area of the community. This often results in greater traffic impacts and a general dissatisfaction by nearby single-family dwelling occupants. Instead of concentrating multifamily development in a specific location, communities should instead promote the development of well-designed owner and renter-occupied housing units that are oriented toward the surrounding neighborhood and dispersed throughout the community.

### **Non-Metallic Mining Operations and Residential Development**

Due to the nature of non-metallic mining operations, they can create conflicts with nearby residential and commercial development. Surface mining is often associated with heavy machinery operations, truck traffic, blasting and other similar practices that are typically incompatible with residential development. Adequate buffers should be established between residential development and the non-metallic mining operation, and potential homebuyers should be notified by the community of the operation.

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## **DEVELOPMENT CONSIDERATIONS**

### **Environmental and Public Utility Considerations**

The population projections found in Volume II: Chapter 3 of this document can be used to calculate an adequate number of acres that will be needed to accommodate future growth. The following environmental and public utility considerations should be utilized to provide communities within the Region with an indication of which acreage of the municipality is best suited for development.

Since suitable vacant lands exist throughout the Region, it is not necessary to propose development within the Region's designated "environmental corridors". These areas shall be protected and integrated into the overall development of the region. The Region has an abundance of these unique areas including wetlands, floodplains, and steep slopes, which can add significantly to the aesthetic appeal of any community while providing important ecological and environmental functions such as stormwater retention and flood control.

An adequate network of arterial, collector, and local roads are already in place throughout the Region, which could readily serve future traffic flows generated from any increased growth.

### **Land Use Development Standards and Policies**

The following land use standards were originally developed by the Southeastern Wisconsin Regional Planning Commission and subsequently modified by the Bay-Lake Regional Planning Commission for use within this plan. More detailed definitions are contained in Appendix F.

#### **Standards**

1. For each additional 100 dwelling units to be accommodated within the Region at each residential density, the following minimum amounts of residential land should be set aside:

Residential Density Category	Net Area (acres per 100 dwelling units)	Gross Area (acres per 100 dwelling units)
High-Density Urban.....	9	14
Medium-Density Urban .....	25	34
Low Density Urban.....	75	98
Suburban .....	266	325
Rural.....	1700	2000

2. For each additional 1,000 persons to be accommodated within the Region, the following minimum amounts of public park and recreational land should be set aside:

Public Park and Recreational Land Category	Net Area (acres per 1,000 persons)	Gross Area (acres per 1,000 persons)
Major.....	4	5
Other .....	8	9

3. For each additional 100 industrial employees to be accommodated within the Region, the following minimum amounts of industrial land should be set aside:

Industrial Land Category	Net Area (acres per 100 employees)	Gross Area (acres per 100 employees)
Major and other.....	7	9

4. For each additional 100 commercial employees to be accommodated within the Region, the following minimum amounts of commercial land should be set aside:

Commercial Land Category	Net Area (acres per 100 employees)	Gross Area (acres per 100 employees)
Retail and Service		
Major.....	1	3
Other .....	2	6
Office		
Major and Other.....	1	2

5. For each additional 1,000 persons to be accommodated within the Region, the following minimum amounts of governmental and institutional land should be set aside:

Governmental and Institutional Land Category	Net Area (acres per 100 employees)	Gross Area (acres per 100 employees)
Major and other.....	9	12

6. A minimum of 25 percent of the perimeter or shoreline frontage of lakes having a surface area in excess of 50 acres should be maintained in a natural state.
7. Not more than 50 percent of the length of the shoreline of inland lakes having a surface area in excess of 50 acres should be allocated to urban development, except for park and outdoor recreational uses.
8. A minimum of 10 percent of the shoreline of each inland lake having a surface area in excess of 50 acres should be maintained for public uses, such as a beach area, pleasure-craft marina, or park.
9. It is desirable that 25 percent of the shoreline of each inland lake having a surface area of less than 50 acres be maintained in either a natural state or some low-intensity public use, such as parkland.
10. A minimum of 25 percent of both banks of all perennial streams should be maintained in a natural state.
11. Not more than 50 percent of the length of perennial streams should be allocated to urban development, except for park and outdoor recreational uses.
12. A minimum of 10 percent of the land area of each watershed within the Region should be devoted to woodlands.
13. A minimum regional aggregate of five acres of woodland per 1,000 population should be maintained for recreational pursuits.
14. Urban high-, medium-, and low-density residential development should be located in well-planned neighborhood units which are physically self-contained within clearly defined and relatively permanent recognizable boundaries, such as arterial streets and highways, major park and open space reservations, or significant natural features, such as rivers, streams, or hills. Neighborhood unit sizes assumed for these residential density categories are 160 acres for urban high-density; 640 acres for urban medium-density, and 2,560 acres for urban low-density.

15. Suburban- and rural-density residential development should be located in areas where onsite soil absorption sewage disposal systems and private wells can be accommodated and access to other services and facilities can be provided through appropriate components of the transportation system at the community or regional level, thereby properly relating such development to a rural environment. The cluster design concept should be encouraged in suburban- and rural-density residential developments. No more than one acre per housing unit should be allocated to the intensive-use areas of the site, thereby preserving a greater proportion of open space, reducing the visual impacts of urban sprawl, and preserving the rural character of the landscape for those developments in more rural locations of the Region. To meet the foregoing standards, land should be allocated in each urban and rural development category as follows:

	Percent of Area in Land Development Category					
	Urban High-Density (7.0-17.9 dwelling units per net residential acre)	Urban Medium-Density (2.3-6.9 dwelling units per net residential acre)	Urban Low-Density (0.7-2.2 dwelling units per net residential acre)	Suburban-Density (0.2-0.6 dwelling units per net residential acre)	Rural-Density (0.1-0.2 dwelling unit per net residential acre)	Agricultural (<0.2 dwelling unit per net residential acre)
Residential .....	66.0	71.0	76.5	82.0	85.0	6.0
Streets and Utilities .....	25.0	23.0	20.0	18.0	15.0	4.0
Parks and Playgrounds .....	3.5	2.5	1.5	--	--	--
Public Elementary Schools....	2.6	1.5	0.5	--	--	--
Other Governmental and Institutional.....	1.5	1.0	1.0	--	--	--
Retail and Service.....	1.5	1.0	0.5	--	--	--
Nonurban .....	--	--	--	--	--	--
Total	100.0	100.0	100.0	100.0	100.0	100.0

16. Other commercial development, which includes activities primarily associated with the sale of convenience goods and services, should be contained within the residential planning units, the total minimum area devoted to the commercial use varying with the residential density as follows:
- In low-density urban areas, land devoted to local commercial centers should comprise at least 0.5 percent of the total gross neighborhood area, or about 3.2 acres per square mile of gross neighborhood area.
  - In medium-density urban areas, land devoted to local commercial centers should comprise at least 1.0 percent of the total gross neighborhood area, or about 6.4 acres per square mile of gross neighborhood area.
  - In high-density urban areas, land devoted to local commercial centers should comprise at least 1.5 percent of the total gross neighborhood area, or about 9.6 acres per square mile of gross neighborhood area.
17. Major park and recreation sites providing opportunities for a variety of resource-oriented outdoor recreational activities should be provided within a 10-mile service radius of every dwelling unit in the Region, and should have a minimum gross site area of 250 acres.
18. Other park and recreation sites should be provided within a maximum service radius of one mile of every dwelling unit in an urban area, and should have a minimum gross site area of five acres.

## Policies

- Urban high-, medium-, and low-density residential uses should be located within planning units which are served with centralized public sanitary sewerage and water supply facilities and contain, within a reasonable walking distance, necessary supporting local service uses,



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such as a neighborhood park, local commercial, and elementary-school facilities, and should have reasonable access through the appropriate component of the transportation system to employment, commercial, cultural, and governmental centers, and secondary-school and higher educational facilities.

2. Rural- and suburban-density residential uses should have reasonable access through the appropriate component of the transportation system to local service uses; employment, commercial, cultural, and governmental centers; and secondary-school and higher educational facilities.
3. Industrial uses should be located to have direct access to arterial street and highway facilities and reasonable access through an appropriate component of the transportation system to residential areas and to railway, seaport, and airport facilities, and should not be intermixed with commercial, residential, governmental, recreational, or institutional land uses.
4. Major commercial uses should be located in centers of concentrated activity on only one side of an arterial street and should be afforded direct access to the arterial street system.
5. Sewered urban development, particularly for residential use, should not be located in areas covered by soils as having severe limitations for such development.
6. Unsewered suburban residential development should not be located in areas covered by soils identified as unsuitable for such development.
7. Rural development, including agricultural and rural residential development, should not be located in areas covered by soils as unsuitable for such uses.
8. Floodlands should not be allocated to any urban development which would cause or be subject to flood damage.
9. No unauthorized structure or fill should be allowed to encroach upon and obstruct the flow of water in perennial stream channels and floodways.
10. All wetlands adjacent to streams or lakes, all wetlands within areas having special wildlife or other natural values, and all wetlands having an area of five acres or greater should not be allocated to any urban development except limited recreational use, and should not be drained or filled. In addition, county and local units of government may choose to preserve all wetlands.
11. Open lands surrounding particularly important wetlands, including wetlands adjacent to streams or lakes, wetlands having special wildlife or other natural values, and wetlands having an area in excess of 50 acres, should be kept in open space uses such as agricultural or limited recreational uses.
12. For demonstration and educational purposes, the woodland cover within each county should include a minimum of one 40-acre or larger woodlot devoted to each major forest type: dry, mesic, or lowland forest. In addition, the best remaining examples of the native forest vegetation type's representative of the pre-settlement vegetation should be maintained in a natural condition and be made available for research and educational use.
13. The remaining natural areas and critical species habitat areas should be preserved.
14. The most suitable habitat for wildlife, the area wherein fish, game, and non-game species can best be fed, sheltered, and reproduced, is a natural habitat. Since the natural habitat for wildlife can best be achieved by preserving or maintaining in a wholesome state other resources such as water, wetlands, prairies, and woodlands, the standards for each of these other resources, if met, would ensure the preservation of a suitable wildlife habitat and population.

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15. Wildlife populations should be maintained in balance with the holding capacity of the land.
  16. Urban development should be located and designed so as to maximize the use of existing transportation and utility systems.
  17. The transportation system should be located and designed to provide access not only to all land presently devoted to urban development but to land planned to be used for such urban development.
  18. All land developed or planned to be developed for urban medium-, high-, and low-density residential use should be located in areas serviceable by an existing or planned public sanitary sewerage system and preferably within the gravity drainage area tributary to such systems.
  19. All land developed or planned to be developed for urban medium-, high-, and low-density residential use should be located in areas serviceable by an existing or planned public water supply system.
  20. All land developed or planned to be developed for urban medium- and high-density residential use should be located in areas serviceable by existing or planned public transit facilities.
  21. The transportation system should be located and designed to minimize the penetration of existing and planned residential neighborhood units by through traffic.
  22. Transportation terminal facilities, such as off-street parking, off-street truck loading, and mass transit loading facilities, should be located in close proximity to the principal land uses to which they are accessory.
  23. In the absence of public sanitary sewer service, onsite sewage disposal systems should be utilized only in accordance with the following:
    - a. Onsite soil absorption sewage disposal systems should be utilized only in areas covered by soils which are suitable for the system being considered.
    - b. The use of onsite sewage disposal systems should be limited to the following types of development:
      - Rural residential development.
      - Suburban-density residential development, limited, however, to areas already committed to such use.
      - Urban land uses which may be required in unsewered areas such as transportation-related businesses, agriculture-related businesses, communication facilities, utility installations, and park and recreation sites.
    - c. Use of the various types of onsite sewage disposal systems should be in accordance with the following:
      - New development in unsewered areas should be designed to be served by conventional onsite soil absorption sewage disposal systems.
      - Alternative onsite soil absorption sewage disposal systems should only be utilized to remedy failing conventional onsite sewage disposal systems or on lots or parcels of record that cannot support conventional systems.
      - Holding tanks should only be used as a last resort as a replacement for failing conventional or alternative onsite sewage disposal systems.
    - d. New urban development served by onsite sewage disposal systems in areas planned to receive sanitary sewer service should be discouraged. Where such development is

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permitted, it should be designed so that the public and private costs of conversion to public sanitary sewer service are minimized.

24. Urban residential neighborhood units should contain enough area to provide the following: housing for the population served by one elementary school and one neighborhood park; an internal street system which provides multiple pathways for access and circulation; and all the community and commercial facilities necessary to meet the day-to-day living requirements of the family within the immediate vicinity of its dwelling unit.
25. To the extent practicable, efforts directed at the conservation and renewal of existing residential areas should be undertaken on a neighborhood basis and should seek to preserve those cultural features which contribute to the promotion of neighborhood identity within the larger urban complex.
26. Major industrial development should be located in planned industrial districts which meet the following standards:
  - a. Direct access to the arterial street and highway system and access within two miles to the freeway system.
  - b. Direct access to railway facilities, if required by the industries located within the district.
  - c. Direct access to public rapid, express, and local transit service.
  - d. Access to a General Utility-Stage II airport within a maximum travel time of 30 minutes, and access to seaport facilities with a maximum travel time of 60 minutes.
  - e. Available adequate water supply.
  - f. Available adequate public sanitary sewer service.
  - g. Available adequate stormwater drainage facilities.
  - h. Available adequate power supply.
  - i. Site covered by soils identified in the regional soils survey as having slight or moderate limitations for industrial development.

In addition to the above minimum standards, the following site development standards are desirable:

- j. Lands with slopes generally exceeding 6 percent may not be suitable for industrial development. Desirably, the maximum grade of any street in an industrial area should not exceed 3 percent.
  - k. Provision of adequate off-street parking and loading facilities.
  - l. Provision of properly located points of ingress and egress which are controlled to prevent traffic congestion on adjacent arterial streets.
  - m. Provision of adequate buffer between the industrial and adjacent non-industrial uses.
  - n. Provision of adequate setbacks from major arterial streets and highways.
27. Major retail development should be concentrated in commercial centers which meet the following minimum standards:
  - a. Direct access to the arterial street system.
  - b. Direct access to the rapid, express, and local public transit service.
  - c. Available adequate water supply.
  - d. Available adequate public sanitary sewer service.
  - e. Available adequate stormwater drainage facilities.
  - f. Available adequate power supply.

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- g. Site covered by soils identified in the regional soils survey as having slight or moderate limitations for commercial development.

In addition to the above minimum standards, the following site development standards are desirable:

- h. Provision of adequate off-street parking and loading facilities.
- i. Provision of properly located points of ingress and egress which are controlled to prevent traffic congestion on adjacent arterial streets.
- j. Provision of adequate buffer between the retail use and adjacent non-retail uses.
- k. Provision of adequate building setbacks from major arterial streets and highways.

28. Major office development should be concentrated in commercial centers which meet the following minimum standards:

- a. Direct access to the arterial street system and access within two miles to the freeway system.
- b. Direct access to rapid, express, and local public transit service.
- c. Available adequate water supply.
- d. Available adequate public sanitary sewer service.
- e. Available adequate stormwater drainage facilities.
- f. Available adequate power supply.
- g. Site covered by soils identified in the regional soils survey as having slight or moderate limitations for commercial development.
- h. Access to a General Utility-Stage 11 airport within a maximum travel time of 30 minutes.

In addition to the above minimum standards, the following site development standards are desirable:

- i. Provision of adequate off-street parking and loading facilities.
- j. Provision of properly located points of ingress and egress which are controlled to prevent traffic congestion on adjacent arterial streets.
- k. Provision of adequate buffer between the office use and adjacent non-office uses.
- l. Provision of adequate building setbacks from major arterial streets and highways.

29. Other industrial development should be located in planned industrial districts which meet the following standards:

- a. Ready access to the arterial street and highway system.
- b. Direct access to mass transit facilities.
- c. Available adequate water supply.
- d. Available adequate public sanitary sewer service.
- e. Available adequate stormwater drainage facilities.
- f. Available adequate power supply.
- g. Site covered by soils identified in the regional soils survey as having slight or moderate limitations for industrial development.

30. Areas having unique scientific, cultural, scenic, or educational value should not be allocated to any urban or agricultural land uses; adjacent surrounding areas should be retained in open space use, such as agricultural or limited recreational uses.

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31. As appropriate, open space located in cluster design and planned unit development projects, or accompanying development of privately owned recreation facilities, should be made accessible to the public.
  32. The most productive soils, those designated by the U. S. Natural Resources Conservation Service as comprising agricultural soil capability Classes I and 11, should be preserved for agricultural use.
  33. All agricultural lands surrounding adjacent high-value scientific, educational and recreational resources should be preserved.

### **GENERAL PLAN DESIGN CLASSIFICATIONS**

The classifications listed below closely follow a set of standards that were developed and are utilized by the Regional Planning Commissions (RPC) of eastern Wisconsin (Bay-Lake RPC & Southeastern Wisconsin RPC). These classifications set by the RPCs were utilized in the beginning of the development of the General Plan Design to assist with allocating various areas for the different types of land use.

The General Plan Design indicates the classes of future land use. A more detailed explanation of recommended uses within each classification can be found in the Recommended Development Strategy portion of this plan. The General Plan Design classifications and a general description of each are as follows:

#### **Future Land Use Scenarios**

The Commission and its planning staff, with assistance from the Regional Technical Advisory Committee, developed three growth scenarios for the future land use plan of the Region.

The first scenario involves the “continuation of existing trends,” and assumes that new development will follow the recent development pattern of low-density, fragmented, noncontiguous development. The second scenario involves “corridor development,” and assumes that development will take place at low to medium densities along major transportation corridors. The third scenario involves “compact or infill development,” and assumes that development will take place in a more compact fashion at higher densities. Characteristics of each scenario are list below:

##### **Scenario 1 - Exiting Trends**

- Large lot – low residential density
- Utilization of transportation corridors
- Unsewered, scattered, fragmented, and noncontiguous development
- High density shoreland development, ½ mile development pattern along Green Bay and Lake Michigan
- High density ridge, bluff, view shed development
- Conversion of agriculture to residential
- Business parks at interchanges
- Movement out of urban core
- Commuter orientation

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## **Scenario 2 - Corridor Development**

- Focus on business/industrial development within sewered areas
- Large lot for residential development
- Development at interchanges
- Strip commercial along highways
- Perception of existing conditions!

## **Scenario 3 - Compact Development/In-fill**

- Small lot, high density, sewered residential
- Multi-family, condo development
- Reduced infrastructure costs (maintenance, construction, service)
- Improved access to public facilities/services
- Transit/pedestrian/bicycle friendly
- Preservation of agriculture, open space, rural character, natural features
- More affordable housing
- Reduced air and water pollution (less vehicle miles and hours)
- Greater ability for low-cost stormwater management methods
- Lower transportation costs
- Greater sense of community (porches)
- Compatibility with local community zoning ordinances

After careful considerations of the socio-economic impacts of each scenario, combined with the population and housing projections for the Region, the Commission selected Scenario 3 as the preferred development vision for the Region after a number of meetings and presentations over the merits of each growth scenario. Benefits of Growth Scenario 3 include its relative compatibility with other plans and with area zoning ordinances. The increased importance of ensuring that services will be available to an aging population in close proximity to where they live combined with increasing fuel costs were heavily weighed in the selection process. The spatial layout of Scenario 3 offers greater opportunities for the provision of transit facilities, bicycling and walking.

## **DESIGN YEAR LAND USE PROJECTIONS**

The General Plan Design map was developed based on the information contained in Volume II of this document including demographics, land use tabulations, physical characteristics, the goals, objectives, policies and programs, and nominal group and survey results. Over a 42 month period, the Commission and its Advisory Committees met more than 60 times to review data and growth options for the Region. From these meetings and presentation to the public, a 2030 General Plan Design was developed and approved.

### **Five Year Incremental Land Use Projections**

Wisconsin Statutes require Comprehensive Plans to include projections, in five-year increments, for future residential, commercial, and industrial land uses in the community over the twenty year planning period.

### **Residential Projections**

The methodology used to project the region's future residential land use acreage employed: the projected housing needs presented in Volume II: Chapter 3 of the Regional Comprehensive Plan,

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and the standards presented earlier in this chapter. There are several factors that must be taken into consideration including:

it is not the intent of the plan to see all classified areas developed, rather the specified uses shall be allowed if consistent with the type, location, and density of the development;

some of the lands would hinder development based on the nature of the area;

within residential growth areas, lands must be allocated for future roads, parks, and recreation areas.

In most standard residential developments, these additional factors generally account for approximately 25 percent of the gross land area. Based on the selected housing unit projection of 102,482 new occupied units throughout the region by 2030, in conjunction with the selected future land use scenario and the standards identified for each type of residential growth, new residential growth of all kinds would require approximately 151,000 acres of land for development. The Commission projects that follow existing trends in development would require more than 850,000 acres for new development.

### **Commercial Projections**

To calculate commercial land use projections, the Commission compared the current ratio of residential acreage to commercial land use acreage in the Region based on the 2000 land use inventory as well as the standards discussed earlier in this chapter. Based on this methodology, the Region would need to accommodate about 2,200 acres for new commercial growth. These areas designated as commercial will also allow for proper parking facilities and adequate buffers between the different business types.

### **Industrial Projections**

To calculate industrial land use projections, the Commission compared the current ratio of residential acreage to commercial land use acreage in the Region based on the 2000 land use inventory as well as the standards discussed earlier in this chapter. Therefore the Region would need to accommodate about 2,100 acres for future industrial development over the next twenty-five years. The Commission has also recommended that the majority of future industries locate within the Region's industrial parks where the industries can be supplied with adequate services.

### **Recommended Development Strategy**

#### **Preferred Alternative:** Compact Development/In-fill Development

- Small lot, high density, sewer residential
- Multi-family, condo development
- Reduced infrastructure costs (maintenance, construction, service)
- Improved access to public facilities/services
- Transit/pedestrian/bicycle friendly
- Preservation of agriculture, open space, rural character, natural features
- More affordable housing
- Reduced air and water pollution (less vehicle miles and hours)
- Greater ability for low-cost stormwater management methods
- Lower transportation costs
- Greater sense of community (porches)
- Compatibility with local community zoning ordinances

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**Anticipated Growth Patterns** for the following areas to year 2030:

1. Largest three metro areas will continue the growth patterns as demonstrated during the past 20 years: *Green Bay, Manitowoc/Two Rivers, and Sheboygan*
2. Medium sized metro areas with an 8,000-10,000 population and having a sewer service area and strong local economies: *Sturgeon Bay, Plymouth, and Marinette*
3. High growth small communities:
  - a. Luxemburg – Proximity to Green Bay and on State Highway 57.
  - b. Pulaski – Proximity to Green Bay and State Highways 29 & 32.
  - c. Wrightstown – proximity to Green Bay and U.S. Highways 41/141.
  - d. Crivitz – Development of Tommy Thompson State Park, widening of U.S. Highway 141 to 4-lane, and recent Peshtigo River land sale.
  - e. Cleveland – Proximity to Sheboygan, Whistling Straits, and located on Lake Michigan
  - f. Mishicot – New sewer line being built to City of Two Rivers.
  - g. City of Peshtigo – Located on U.S. Highway 41, and adjacent to bay and the City of Marinette
4. There will continue to be low density, scattered development in non-sewered rural areas throughout the region.

**Residential Development**

As residential development pressures continue, the Commission must closely monitor the proposed types of development regarding their impacts on the natural resources and rural character of the Region.

**Urban Residential**

Residential developments are those units that are intended to promote orderly and efficient growth. It is the intent that these areas develop at relatively high density. Residential developments should be steered to these areas rather than allowing the developments to scatter throughout the Region. This would help to preserve the open spaces, viewsheds and natural settings that are prevalent throughout the Region. Locating the residential developments within incorporated communities will also ensure that the prime farmlands, open spaces, and sensitive natural resources found throughout the Region are preserved, thus lessening potential conflicts between residential and agricultural land uses.

By locating within incorporated communities, residential developments in these areas could potentially receive services such as sewer and water. The creation of smaller lot sizes in the areas would enhance the cost effective provision of water and sewer and decrease the cost of providing services.

***Suburban Residential***

Suburban residential areas are transition areas between urban and rural residential land uses at moderate densities.

***Rural Residential***

The third type of residential development addresses those developments that are intended to provide for spacious living environments at very low densities. In addition, these areas allow a mixture of agricultural, forestry and open space uses which are compatible with other surrounding land uses. These areas will also help to preserve the Region's rural nature and ensure that there will



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be fewer conflicts between incompatible land uses. The Rural Residential classification allows the Region to provide for a range of lot sizes within the Region, while providing a transition from urban to rural areas. In addition, home occupational businesses also fall into this category.

### **Commercial Strategy**

The Commercial category accounts for existing commercial uses found within the Region. It is the intent of this plan that existing commercial establishments continue throughout the 20-year planning period.

Any new commercial businesses or expanding businesses should be directed toward these areas. Overall, as with any kind of development, when commercial development is proposed within the Region, the Commission must closely monitor the capacities of the infrastructure and community services that accommodate this new development and weigh the future costs to benefits. The Commission does not encourage the development of commercial businesses within the Region not specified within the plan. More intensive commercial businesses should be directed to incorporated communities that currently have adequate infrastructure and services.

### **Industrial Strategy**

It is recommended that future industries be steered toward the region's industrial parks, which provide the services industries need.

As with the commercial development, when industrial development is proposed within the Region the Commission must closely monitor the capacities of the infrastructure and community services that accommodate this new development and weigh the future costs to benefits.

### **Governmental/Institutional**

It is the intent of this plan to see that the Commission continues to monitor services provided to the Region's residents. Officials throughout the region will need to work with adjoining communities and counties to help provide future services as effectively and efficiently as reasonably possible. The Commission should explore the most cost effective and efficient options for future road services, recycling services and disposal of solid waste for communities in the Region. It is also recommended that communities cooperate on maintaining and enhancing the recreational facilities in the Region to minimize the costs of providing these amenities.

Communities should utilize the Pavement Management Program developed by BLRPC to assist in maintaining the roads in the future. Grant and aid programs shall be explored by the Commission when considering improvements to any of the Region's services. The Commission will continue to work with communities to update zoning ordinances in order to best protect the residents' quality of life.

### **Communication/Utilities**

Services such as electric and natural gas services provided to Region residents will be available through the planning period and will need to be expanded and upgraded to address redundancy and deficiencies.

The Region will need to address a variety of issues in the future including telecommunication towers and antennas, wind towers and electric generation facilities as well as stormwater, source water supply and sanitary systems. With the expanding use of cell phones which provide many benefits, including safety and convenience, their rapid growth also requires an expanding network of new transmission towers.

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## **Park and Recreation**

It is the intent of this plan to preserve the existing park and recreation areas throughout the Region and to identify areas for future recreational uses.

## **Agricultural Strategy**

It is the intent of this plan to preserve these lands for continuation of agricultural uses within this classification. Lands devoted to agricultural production are not encouraged to be converted to residential. Future residential development should be directed toward residential areas identified on the General Plan Design Map in order to preserve natural areas, viewsheds, open spaces, and areas deemed important for the Region to keep preserved. Adequate buffers shall exist between farming and non-farming operations in order to lessen conflict. Decisions to allow residential development in areas identified for agricultural uses should be limited and decisions to approve or deny must be based on sound land use planning criteria.

It is also recommended that the Region address the issue of mega-farming operations. The trend in farming within the State of Wisconsin is showing that the smaller, family-owned farms have difficulty trying to compete with the larger farming operations, which eventually leads to the smaller farms ceasing operations and possibly selling out to developers just to survive. This in turn, could change the landscape of the Region as a whole, and possibly create conflicts between different types of land uses.

## **Forest/Open Space**

The Forest/Open Space classification is intended to preserve the natural amenities within the Region. By preserving the woodlands and open spaces, the Region will maintain the rural nature which gives much of the area its character. Residential development in these areas should be discouraged; any development should show that they will have a minimal affect on wildlife habitats and the rural nature of the Region. In addition, care shall be given that residential development along transportation corridors in these areas does not negatively impact the view along the roads.

## **Environmental Corridors**

The preservation and protection of natural areas within the Region will become increasingly important as population and development pressures increase. Many natural features are either unsuitable for development, enhance the appearance of the community, improve natural processes such as flood control, water retention or groundwater recharge.

The Region has many significant natural features including wetlands, large stands of trees, floodplains, lakes, rivers, and creeks. This plan recommends that natural features within the Region remain in a natural state, or be minimally modified for possible recreational use, where suitable.

Environmental corridors are represented by four elements including; 100-year floodplains as defined by the Federal Emergency Management Agency (FEMA), DNR wetlands and their associated setback, steep slopes of 12 percent or greater, and a 75-foot setback from all navigable waterways. These four elements provide serious limitations to development; and the floodplains, wetlands and the 75-foot building setback are generally regulated by the federal, state, or the county government. Together, these elements represent the areas of the Region that are most sensitive to development and should be preserved.

Public input during the planning process overwhelmingly indicated that residents feel strongly about preserving natural resources. Using the environmental corridors as a guide when reviewing proposed developments will give the Region background information on which areas the Region's

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residents believe are important to maintaining the Region's rural character and the quality of its natural resource base.

Development should be directed away from environmental corridors as much as possible. Agricultural operations should be buffered from waterways by adequate natural vegetation. It is encouraged that the Region preserves large natural areas and or features within possible subdivisions to enhance/retain buffers between residential uses and transportation routes. This plan should serve as a guide for the preservation of environmental corridors and alert the Region that detailed studies are needed when developments are proposed in and around these natural areas. Impacts should be minimized to the fullest extent possible when developments are permitted.

### **IDENTIFIED "SMART GROWTH" AREAS**

During the planning process, the Region Plan Committee developed a recommended land use plan (Map 2.4) which identifies how the Region will develop and preserve its lands throughout the planning period. During this process the Plan Committee identified areas that are considered "smart growth areas". According to s. 16.965, Wis. Stats., a "smart growth area" is "an area that will enable the development and redevelopment of lands within existing infrastructure and municipal, state and utility services, where practicable, or that will encourage efficient development patterns that are both contiguous to existing development and at densities which have relatively low utility and municipal and state governmental costs." The "smart growth areas" within the Region are found immediately adjacent to the growth areas of the Region. Locating these areas near existing development allows for more orderly and efficient development patterns. In addition, these lands immediately surrounding the growth areas will allow for a mixture of uses (residential, industrial, commercial, recreational, etc.), and are in close proximity to urban services such as public sewer and water. Locating higher density development adjacent to these growth areas also assists the Region in maintaining its rural character. Allowing lower densities throughout the remainder of the Region offers the opportunity to preserve the many valuable natural areas and prime agricultural lands that make up the Region's landscape.

### **SUMMARY**

Overall, the Region 2030 General Plan Design is the result of approximately 42 months of preparation and work done by the Regional Technical Advisory, the Executive Committee and other committees which generally work towards several issues including:

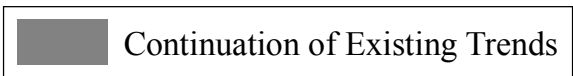
- finding a balance between individual property rights and community wide interests and goals;
- steering developments to areas of within the Region in order to minimize land use conflicts;
- understanding the value of environmental corridors and wildlife habitats by steering development away from these areas;
- promoting environmental corridors to serve as natural buffers which will help lessen conflicts;
- preserving productive farmlands within the Region;
- maintaining the Regions rural and open space character;
- steering more intensive development toward the Region's growth areas in order to promote more efficient development patterns;
- identifying enough land to accommodate a variety of development over a 20 year planning period.

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The effect that this comprehensive plan will have on the Region is twofold: first, it identifies a responsible program to improve the overall condition and delivery of public facilities and services; and second, it provides a future development scheme which is not only cost-effective but is also compatible with the Region's existing development pattern and provides for the achievement of the Region's vision and goals outlined within the plan. In simple terms, the Region must not only plan for new development that may occur, but must also plan on the timing and location of the new development that is within the framework of this plan design. To accomplish this, the Commission and all its residents must work together in an organized and cooperative manner on all future planning efforts within the Region. This may require cooperative agreements and joint planning between adjoining communities and counties.

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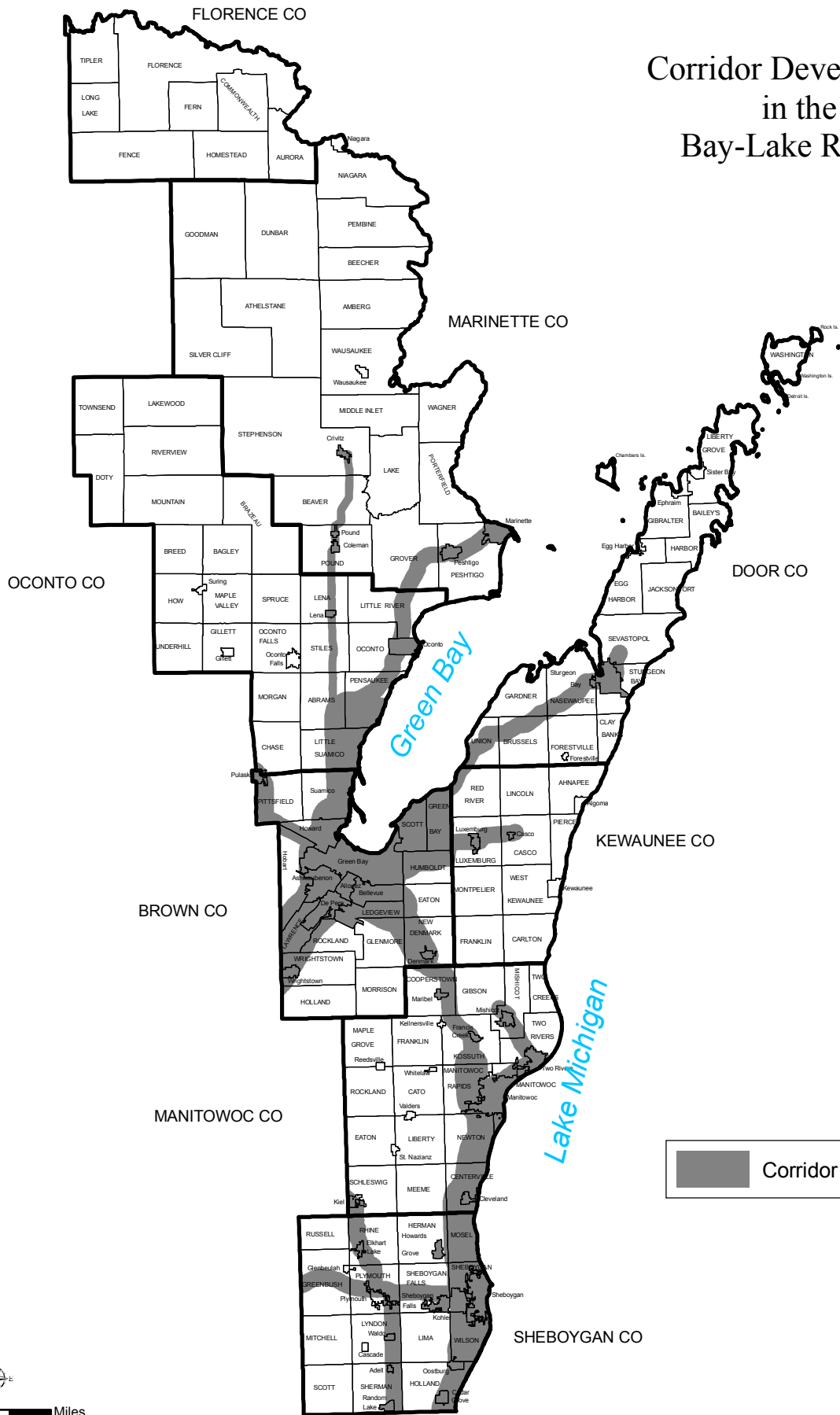
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# Corridor Development in the Bay-Lake Region



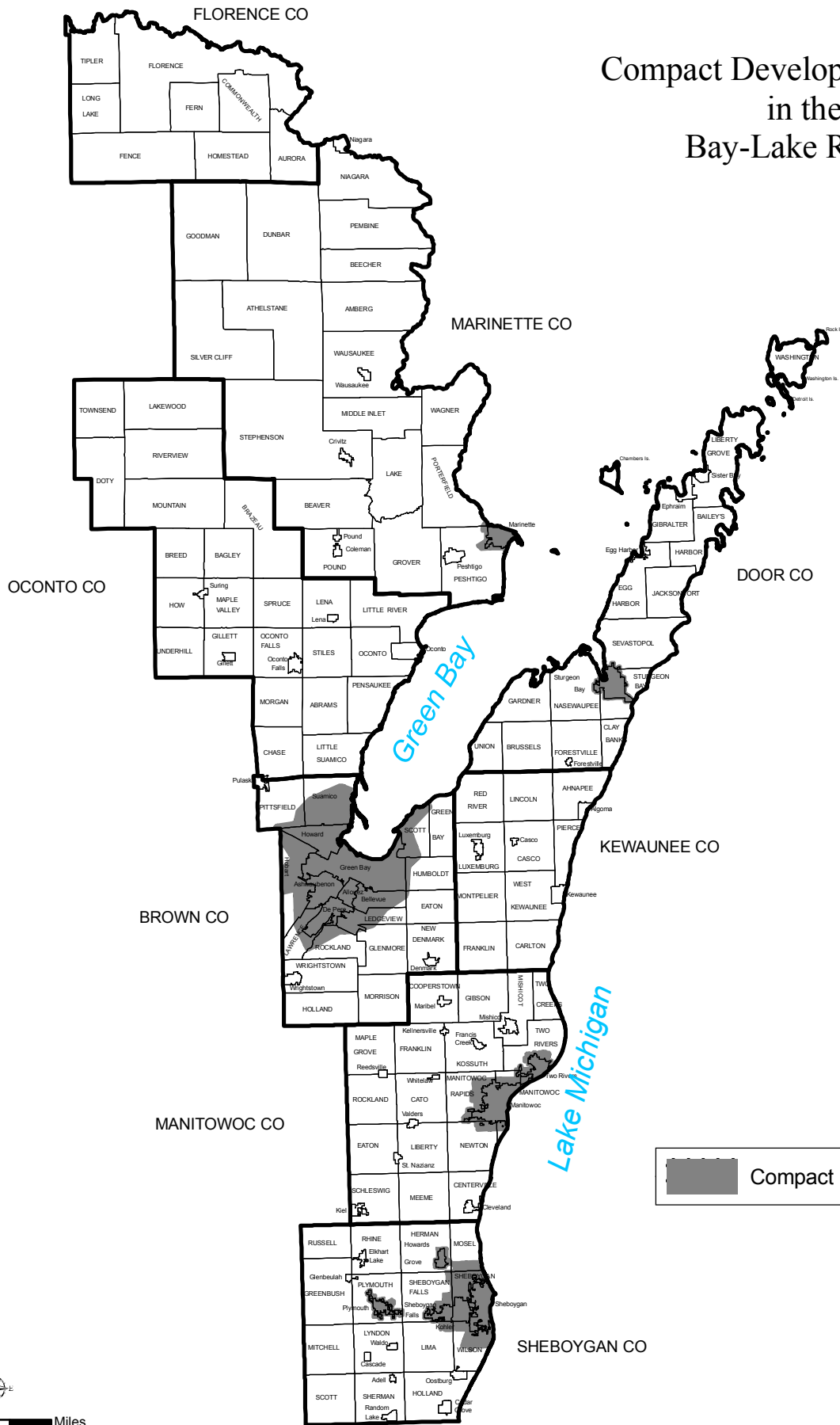
Q:\myfiles\region\master\_plan\VOL1\_2\_2.mxd  
Source: Bay-Lake Regional Planning Commission, 2005



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(Back Map 2.2)

# Compact Development/In-Fill in the Bay-Lake Region



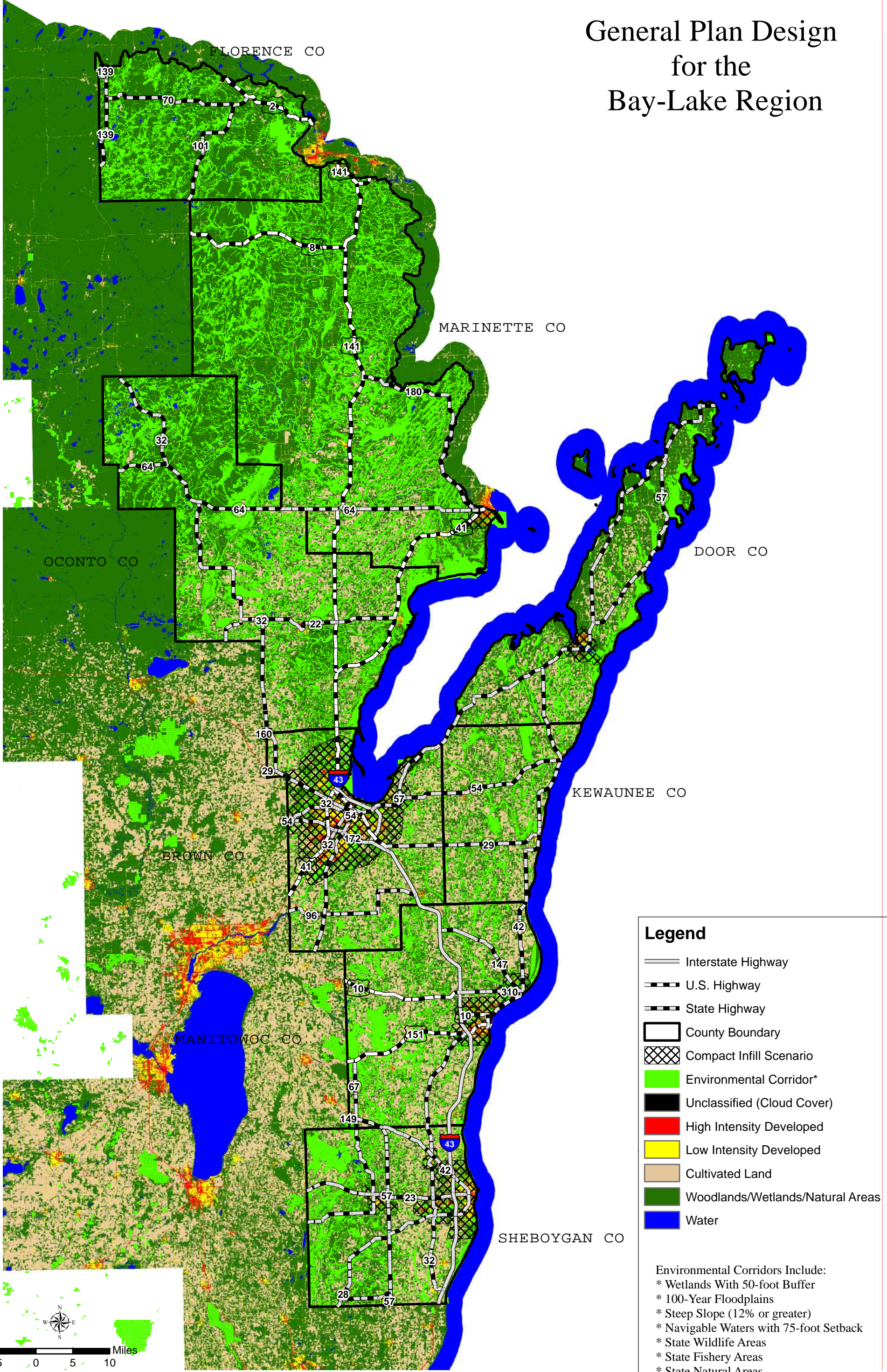
 Compact Development/In-Fill

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# General Plan Design for the Bay-Lake Region





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## **CHAPTER 3 - IMPLEMENTATION**

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### **INTRODUCTION**

The final element in a comprehensive planning program is the implementation of the approved Year 2030 Comprehensive Plan. Implementation can take the form of:

Carrying out the recommendations in the plan for specific projects, for example, creating an Official Map;

Using the plan as a guide to public and private decision-making on matters that relate to the development of the Region, for example, a rezoning request or a capital expenditure, and;

Reviewing and amending the plan as changes in the demographics, economy or political climate changes.

This chapter provides information on the comprehensive plan amendment/update process and its overall use by the Bay-Lake Regional Planning Commission. More specific information on various statutory powers which the Region may utilize to implement the Year 2030 Comprehensive Plan are also included in this chapter.

### **Role of the plan**

The comprehensive plan must be in conformance with land controls governing within the Region. When reviewing any petition or when amending any land controls within the Region, the plan shall be reviewed, and a recommendation will be derived from its identified statements, goals, objectives, vision statement and General Plan Design. If a decision is one that needs to be made in which it is inconsistent with the comprehensive plan, then before the decision can take effect, the comprehensive plan must be amended to include this change in policy.

### **Role of the Elected Officials**

The elected officials must make their decisions from the standpoint of overall community impact - tempered by site specific factors. In this task they must balance the recommendations made by plans and policies, the objectives of the applicant, the technical advice of staff, and the politically neutral recommendations of advisory boards, with their own judgment on the matter at hand.

### **LAND USE PLANNING CONTROLS RECOMMENDATIONS**

#### **Zoning**

Communities within the Bay-Lake Region are under the authority of numerous zoning ordinances administered by cities, villages, towns and counties. Many of the future land uses may need re-zoning in order to take place. Communities will need to stand firm on minimum zoning standards regarding natural features and should veto any relaxing attempts of regulations.

A comparison between the preferred land uses and local zoning ordinance and zoning map to determine compatibility of text and realignment of boundaries within various districts should take place. The Commission should work with communities in amending their zoning to reflect the Region's desires, which may mean the development of additional zoning districts.

Work with communities in identifying standards for lighting, and landscaping in order to best protect the rural look of the Region, regarding future commercial and industrial uses.

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## **Official Maps**

Under §62.23(6), the city council/village board/town board (under village powers) "...may by ordinance or resolution adopt an official map showing the streets, highways, parkways, parks and playgrounds laid out, adopted and established by law." "The council/board may amend the map to establish the exterior lines of planned new streets, highways, parkways, parks, or playgrounds, or to widen, narrow, extend or close existing streets, highways, parkways, railroad rights-of-way, public transit facilities, waterways, parks or playgrounds." Once an area is identified on an official map, no building permit may be issued for that site, unless the map is amended.

The official map serves several important functions:

It helps assure that when the city/village/town acquires lands for streets, etc., it will be at a lower vacant land price;

It establishes future streets that sub-dividers must adhere to unless the map is amended; and,

It makes potential buyers of land aware that land has been designated for public use.

Given the rural character and abundance of agricultural lands in the Bay-Lake Region, it is recommended that communities begin the official map process in specific areas where more intensive development is to take place, (such as within incorporated communities and Sanitary Sewer Districts) as opposed to the entire Region.

Another option is to require Area Development Plans prior to the approval of certified survey maps or subdivision plats. If approved, the plans would be incorporated as part of the Official Map of the community. Thus, developers would be required to ensure the community that their proposals will result in planned, orderly growth and development. In effect, roads and utilities would be planned to include areas beyond the land proposed to be platted. This would help communities avoid dead ends and looped streets that are characteristic of developments that have not considered adjacent lands owned by other parties.

## **Sign Regulations**

Many communities are finding themselves having to regulate signage especially along transportation corridors, in order to preserve a sense of place and community character. As signs become more bolder, have greater illumination placed on them, and have greater square footage, the sides of roadways and within community centers become places of growing confusion as each sign attempts to get your attention.

Communities may wish to adopt stricter sign controls in order to preserve their rural look and character, especially as commercial businesses develop within the Region along transportation corridors.

## **Erosion and Storm Water Control Ordinances**

Under § 61.354 of the Wisconsin Statutes, communities may enact a construction site erosion control and storm water management zoning ordinance. The purpose of such an ordinance is to protect water quality and to minimize the amount of sediment and other pollutants carried by runoff or discharged from construction sites to lakes, streams, and wetlands.

The Commission should support this type of ordinance and work with communities to develop, adopt, and ensure compliance by developers.

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### **Design Review Ordinances**

Design review can accompany many different development aspects and will assist communities in achieving the identified look and character they expressed within their vision statements and goals. These ordinances however, need to be based upon well defined sets of criteria.

The Commission should work with communities that may wish to explore the use of such ordinances to promote a specific look for an identified area within the Region. Such areas may be along an identified commercial corridor or within an established industrial area (which are identified in this plan). Signage, lighting, exterior building material types and colors would be specifically identified within the ordinance.

### **Economic Development Committee**

An Economic Development Committee (EDC) is a not-for-profit organization representing the interests of both the public and private sectors within a community. EDCs have been formed in a number of communities to handle the municipality's economic development activities and bridge the communication gap that oftentimes exists between the public and private sectors. Typical activities undertaken by an EDC include commercial and industrial development, business retention and recruitment, and tourism. EDCs consist of a Council of Directors and professional staff members. Council members typically depict a broad representation of the community's business, labor and educational sectors and are jointly appointed by the community and its Chamber of Commerce or other existing business associations. The Council sets policy for the EDC and is responsible for all actions undertaken.

It is recommended that the commercial and industrial needs of the Region be expressly conveyed to this agency in order to attract the desired commercial and industrial growth.

### **Building/Housing Codes**

The Commission should work closely with communities on the enforcement of all applicable building/housing codes to ensure that properties are adequately maintained to preserve the rural character of the Region and to protect property values. This is important especially for those older areas within the Region and for properties that are not owner occupied. The Commission should assist communities in reviewing their building/housing codes to determine their effectiveness within the Region.

### **Floodplain Ordinance**

Floodplain ordinances regulate development within the designated FEMA floodplain areas. These regulations limit development within identified areas. In some instances it will be important to re-adjust the floodplain boundaries in specific areas. To do so communities must follow three steps:

Hire an engineering firm to conduct hydrologic and hydraulic engineering models to calculate floodplain boundaries for the specified area.

Submit the re-calculated floodplain boundaries to the WDNR Bureau of Watershed Management and the FEMA for their review.

If approved, amend existing zoning maps to reflect the re-calculated floodplain boundaries.

### **Sanitary Codes**

Groundwater protection is of great importance to the Commission and its communities. Uncontrolled waste can have detrimental and wide ranging impacts on health and property values.



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The Commission will review code enforcement to determine its effectiveness within the Region, and will stay informed on any future changes to code minimum standards which may affect residents and their lands.

### **Subdivision Ordinances**

Section 236 of the Wisconsin Statutes regulates the division of raw land into lots for the purpose of sale or building development. Communities may regulate, by ordinance, the subdivision of land within their boundaries. The subdivision ordinance is related to the zoning ordinance in that the zoning ordinance regulates the lot size, density, and use of the land, while the subdivision ordinance regulates the platting, or mapping, of newly created lots, streets, easements, and open areas. Most importantly, the subdivision ordinance helps implement the comprehensive plan. A basis of the approval of a subdivision is its conformance or consistency with a local comprehensive plan. A subdivision ordinance allows communities to encourage well designed neighborhoods and ensure the creation of adequate land records. In addition, a subdivision ordinance allows communities to set construction standards and timelines for improvements such as streets. Communities could also require dedication of parks and playgrounds or a fee-in-lieu of dedication as a condition of approval of a subdivision, thus implementing another aspect of the comprehensive plan.

### **COMPREHENSIVE PLAN INTERNAL CONSISTENCY**

The comprehensive plan was developed sequentially in order to develop a plan with supportive goals, objectives, policies, and programs. Utilizing a set of nominal group surveys as a base, key issues were identified within each of the nine elements of the plan. Using these issues along with factual information regarding natural features, past population and housing data and infrastructure, a set of goals, objectives, policies and programs were developed in order to determine a desired vision which would be used throughout the planning period. The identified vision, goals and strategies expressed within this plan were utilized to determine the final General Plan Design as well as the specified implementation actions the Region will undertake throughout the planning period. Any amendment to the plan shall be accompanied with an overall review of the nine elements along with their identified goals, objectives, policies and programs, in order to ensure that inconsistency within and between elements does not occur in the future.

### **PROCESS FOR UPDATING PLAN**

As directed by s66.1001, any plan commission or other body of a local governmental unit authorized to prepare or amend a comprehensive plan may recommend the adoption or amendment of a comprehensive plan only by adopting a resolution by a majority vote of the entire commission (or governmental unit). This plan shall be amended/updated following s66.1001 (4)(b) and the adopted written community procedures for fostering public participation found in Appendix B.

### **ACTION PLAN**

The following is a summary of the key implementation activities needed to be followed to ensure initial progress is made after the adoption of the comprehensive plan. The following Action Plan identifies the activity (**What**) and the appropriate body (**Who**) that would have the responsibility for carrying out the activity. The timeframe the activity needs to be initiated (**When**) is also identified and should begin immediately or within the first year of the plan's adoption or reviewed for continued applicability. The actions are as follows:

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## **Action Plan**

- 1. Activity** Consult this plan when the Commission and other units of government make any decision regarding land use and land use policies.

**Who:** Commission Members

**When:** On-going continuous effort
- 2. Activity** Present the adopted plan to municipalities within and adjacent to the Region as described within the Implementation section of the plan.

**Who:** Commission,

**When:** Spring 2006 and on-going effort
- 3. Activity** Administer the Comprehensive Plan's recommendations, and monitor/update the statistical projections within the comprehensive plan.

**Who:** Commission

**When:** On-going effort for goals, objectives, policies; Minor Update of Plan's Components  
Every 3 to 5 Years; Complete Update of Plan at 10 Years
- 4. Activity** Communicate with other units of government in an effort to identify shared goals, visions, and efforts to further the Region's development.

**Who:** Commission

**When:** On-going through 2010
- 5. Activity** Encourage cooperation and communication between neighboring municipalities, county government and the Commission in implementing this plan.

**Who:** Commission

**When:** On-going
- 6. Activity** Explore Design options for future use within commercial and industrial areas of the Region to further community character protections as recommended within this plan.

**Who:** Commission, Units of Government

**When:** On-going through 2010
- 7. Activity** Work on educating Commission Members, Chief Elected Officials and residents on the latest methods of development such as Conservation Subdivisions, Cluster Districts, Traditional Neighborhoods - that will allow creative development opportunities while protecting and enhancing the natural resources of the Region.

**Who:** Commission Staff

**When:** On-Going
- 8. Activity** Monitor public facility needs and improvements so as to be able to determine their associated impacts on the plan's proposed development goals regarding future land development.

**Who:** Commission

**When:** On-going continuous effort

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## **WORK PLAN**

The following is a summary of the implementation activities needed to be followed to ensure initial progress is made after the adoption of the comprehensive plan. The Work Plan identifies the activity and the appropriate body that would have the responsibility for carrying out the activity. The timeframe the activity needs to be initiated is also identified and should begin within the first year of the plan's adoption or reviewed for continued applicability.

A detailed list of all the plan policies is found in the Work Plan on the following pages.



The work plan activities listed in the following tables represent both ongoing and individual initiatives.

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Goal: Planning</b>				
The goal of the Commission is to provide a comprehensive plan that is consistent with s.66.1001 of the Wisconsin State Statutes in order to best protect the interests of all of the Region's residents as well as to develop the Region in an orderly, cost efficient manner.				
<b>Objective 1.1:</b> Adopt and maintain a Comprehensive Plan under s.66.1001 that reflects the needs of all current and future citizens of the Bay-Lake Region for the next 20 years.				
<b>Objective 1.2:</b> <i>The comprehensive plan will remain current in order to provide for the greatest possible benefits regarding the future development of residential, commercial, industrial, and parkland expansion and development.</i>				
Consult this plan when the Commission and other units of government make any decision regarding land use and land use policies.	Commission	Units of Government	Budget	On-Going
Present the adopted plan to municipalities within and adjacent to the Region as described within the Implementation section of the plan.	Commission	Units of Government	Budget	2005-2007
Encourage cooperation and communication between neighboring municipalities, county government and the Commission in implementing this plan.	Commission	Units of Government	Budget	On-Going
<b>Goal: Natural Resources</b>				
To preserve the Region's natural resources for enjoyment by its residents and visitors for present and future generations.				
<b>Objective 1.1:</b> <i>Maintain a visually appealing, healthy, and sustainable natural environment in the Region.</i>				
Provide education on, and assist in reducing development sprawl and segregation of land uses.	Commission, Local Assistance	UW-Extension	WDOA, WDNR	On-Going
Develop Cost of Community Services studies to enable local officials to better understand the cost impacts of local planning decisions.	Commission, Local Assistance, Natural Resources	Communities	WDNR, WCMP	2006-2008

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Encourage the preservation of natural scenic vistas.	Natural Resources, Local Assistance	WDNR	WDNR, EPA	On-Going
Provide education on, and assistance towards practices that encourage the availability of sustainable resources for future development within the Region.	Natural Resources, Local Assistance	UWEX, WDNR	WDNR, EPA	On-Going
Encourage the inclusion of natural areas in new and existing developments.	Natural Resources, Local Assistance	Local Units, WDNR	WDNR, EPA	On-Going
Discourage artificial light pollution, while preserving the safety of the residents of the Region.	Local Assistance	Local Units	WDOA, WCMP	On-Going
<b>Objective 1.2: Preserve biodiversity, and critical habitats and communities in the Region.</b>				
Develop GIS mapping to identify critical habitats and communities in a manner that will not endanger them further by identifying their precise locations.	Natural Resources, GIS, Local Assistance	WDNR, EPA, WCMP	WDNR, EPA, WCMP	2006-2009
Encourage infill and cluster development within developed areas with access to current infrastructure.	Natural Resources, Local Assistance	Local Units, WDNR, EPA, WCMP	WDNR	On-Going
Encourage comprehensive planning throughout the Region.	Local Assistance	WDNR, EPA, WCMP	WDOA	On-Going
Encourage the preservation of natural corridors for species movement between significant natural areas.	Natural Resources, Local Assistance	Local Units, WDNR, EPA, WCMP	WDNR, EPA	On-Going
<b>Objective 1.3: Protect and preserve the Niagara Escarpment.</b>				
Provide/support education on the value and uniqueness of the Niagara Escarpment.	Natural Resources, Local Assistance	Local Units, WDNR, EPA, WCMP	WDNR, EPA	On-Going
Continue the Commission efforts with the Niagara Escarpment Education Network to disseminate information and expand the knowledge of the Escarpment.	Natural Resources, Local Assistance	Local Units, WDNR, EPA, WCMP	WDNR, EPA	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Continue to develop conferences to educate and expand the knowledge of the Escarpment.	Natural Resources	UWEX	WDNR, USEPA, WCMP	On-Going
Encourage the protection of the Escarpment in community zoning.	Natural Resources, Local Assistance	Local Planners	WDNR, USEPA	On-Going
Create a sample ordinance aimed at protection of the Niagara Escarpment.	Natural Resources, Local Assistance	UWEX, County LCD, Local Planners	USEPA, WCMP	2006-2008
Discourage nonmetallic mining and development on the Niagara Escarpment.	Natural Resources, Local Assistance	UWEX, County LCD, Local Planners	WDNR, USEPA	2006-2008, On-Going
<b>Objective 1.4: Encourage sustainable forestry practices.</b>				
Provide education/support on the benefits of sustainable forestry to the health of forestlands.	Natural Resources, Economic Development	WDNR, US Forest Service	USDA, WDNR	On-Going
Provide education/support on the economic benefits of sustainable forestry.	Natural Resources, Economic Development	WDNR, US Forest Service	USDA, WDNR	On-Going
Develop GIS mapping of public and private forestland and tree types.	Natural Resources, GIS	WDNR, US Forest Service	USDA, WDNR	On-Going
<b>Objective 1.5: Preserve, restore, and improve surface water quality (inland and coastal wetlands, lakes, rivers, and streams) within the Region.</b>				
Provide and support educational efforts related to surface water quality issues and protection, restoration, and improvement tools for communities in the Region.	Natural Resources, Local Assistance	UWEX, WDNR, County LCD	WDNR, USEPA	On-Going
Provide tools for erosion control, buffer strips, easements, land use controls, flood controls, nutrient and sediment reductions.	Natural Resources, Local Assistance	WDNR	WDNR	On-Going
Encourage the use of environmental corridors in planning.	Natural Resources, Local Assistance	Local Planners, WDNR	WDNR, WCMP	On-Going
Assist in efforts to maintain the natural beauty and integrity of Lake Michigan and Green Bay shorelines, while providing for public use and access.	Natural Resources, Local Assistance	WDNR, USEPA, WCMP	WDNR, USEPA, WCMP	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Objective 1.6: Encourage protection of groundwater resources (quality and quantity) within the Region.</b>				
Inventory ground water recharges areas in the Region.	Natural Resources, GIS	WDNR, UWEX, WGNHS	WDNR, USEPA	2007-2010
Complete wellhead protection plans for municipalities in the Region.	Natural Resources, Local Assistance	WDNR, UWEX, County LCD	WDNR	2006-2010
Provide/support education on groundwater quality and quantity issues and protection tools to communities in the Region.	Natural Resources, Local Assistance	WDNR, UWEX, County LCD	WDNR	On-Going
Encourage the use of environmental corridors in planning.	Natural Resources, Local Assistance	Local Planners, WDNR	WDNR, WCMP	On-Going
<b>Objective 1.7: Provide healthy, swimmable beaches within the Region.</b>				
Assist in efforts to determine the causes of beach closings.	Natural Resources	WDNR, USEPA	USEPA	On-Going
Assist in efforts to improve the quality of beaches in the Region.	Natural Resources	WDNR, USEPA	USEPA	On-Going
Promote efforts to remedy beach closings.	Natural Resources	WDNR, USEPA	USEPA	On-Going
<b>Objective 1.8: Ensure that present and future mining sites will not negatively affect the natural resources of the Region or the well-being of its residents</b>				
Encourage mining operations and communities working with mining operations to protect scenic views and aesthetics, and protect the health of the natural environment when undertaking mining activities.	Natural Resources, Local Assistance	Local Planners, WDNR, UWEX, County LCD	WDNR, Budget	On-Going
Encourage communities to work with mining operations throughout reclamation activities to ensure the restored area is consistent with the vision of the community.	Natural Resources, Local Assistance	Local Planners, WDNR, UWEX, County LCD	WDNR, Budget	On-Going
Discourage nonmetallic mining in sensitive natural environments, such as on the Niagara Escarpment.	Natural Resources	Local Planners, WDNR, UWEX, County LCD	WDNR, Budget	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Goal: Agricultural Resources</b>				
To identify and preserve the Region's agricultural resources to provide food and feed for present and future generations, and preserve the rural character of the Region.				
<i><b>Objective 2.1:</b> Maintain existing agricultural lands and open spaces.</i>				
Establish guidelines for communities to protect existing agricultural land uses and rural character.	Natural Resources, Local Assistance	Local Planners, WDNR, UWEX, County LCD	DATCP, WDNR	On-Going
Promote the use of sound agricultural and soil conservation methods to minimize soil erosion and groundwater contamination.	Natural Resources	Local Planners, WDNR, UWEX, County LCD	DATCP, Budget	On-Going
Encourage the preservation of prime agricultural lands.	Natural Resources, Local Assistance	Local Planners, WDNR, UWEX, County LCD	DATCP, Budget	On-Going
Encourage sound management and/or preservation of the Region's forested areas.	Natural Resources	Local Planners, WDNR, UWEX, County LCD	DATCP, Budget	On-Going
Encourage conservation-based land use policies for development.	Natural Resources, Local Assistance	Local Planners, WDNR, UWEX, County LCD	DATCP, Budget	On-Going
Address the impacts of large farming operations.	Natural Resources, Local Assistance	Local Planners, WDNR, UWEX, County LCD	DATCP, WDNR	On-Going
<i><b>Objective 2.2:</b> Minimize the potential for conflicts between rural landowners.</i>				
Assist in the development of an inventory of local roads and offer methods to create a safe environment for travel between agricultural fields and operations.	Transportation, Local Assistance	Local Planners, WDNR, UWEX, County LCD	WisDOT	On-Going
Provide and support educational efforts to inform homebuyers of what to expect when moving into a rural agricultural community.	Local Assistance	Local Planners, WDNR, UWEX, County LCD	UWEX, Budget	On-Going
Assist communities with inventorying agricultural infrastructure to identify areas best suited for agriculture-only land use districts.	Local Assistance	Local Planners, WDNR, UWEX, County LCD	DATCP	On-Going



Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Objective 2.3:</b> <i>Develop better-informed local governments that can react to changes in agriculture and land use.</i>				
Provide and support educational efforts to inform elected officials on current issues related to agriculture and land use law.	Local Assistance	UWEX, County LCD	DATCP, Budget	On-Going
Support local forums for elected officials to provide education on agriculture and land use issues.	Local Assistance	UWEX, County LCD	DATCP, UWEX	On-Going
<b>Goal: Cultural Resources</b> To preserve and encourage development and expansion of cultural resources within the Region.				
<b>Objective 3.1:</b> <i>Encourage the preservation of the Region's historic and archeological locations and structures.</i>				
Work with the State Historical Society to inventory historic and archeological resources for the communities within the Region.	Local Assistance	WSHS	WSHS	On-Going
Work with the State Historical Society to maintain and update the Region's inventory on historic and archeological resources.	Local Assistance	WSHS	WSHS	On-Going
Assist communities with tying historic and archeological resources to recreational areas to encourage access to the sites and knowledge of their significance, where appropriate.	Local Assistance	WSHS, Local Historical Societies	WSHS	On-Going
<b>Objective 3.2:</b> <i>Support and encourage the development and expansion of cultural resources and facilities within the Region.</i>				
Assist in, and offer support for regional efforts to develop or expand cultural resources and facilities.	Economic Development	Local Officials	Budget	On-Going
Support a variety of cultural activities.	Local Assistance, Economic Development	Local Officials	Budget	On-Going
Provide education on the value of cultural resources and facilities within the Region.	Local Assistance, Economic Development	Local Officials	Budget	On-Going
Assist in, and offer support for artistic, ethnic, and educational entertainment activities (concerts, Community Theater, art exhibits, etc.).	Local Assistance, Economic Development	Local Officials	Budget	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Objective 3.3:</b> <i>Ensure residents have safe and adequate recreational parks within the Region that provide a variety of activities.</i>				
Assist local governments in planning for the development of additional high quality, well-maintained recreational parks and trails within the Region, to include public access to the waters of Lake Michigan and Green Bay.	Natural Resources, Local Assistance, Transportation	WDNR, Local Officials	WDNR, Budget	On-Going
Assist local governments in identifying and obtaining the resources needed for the acquisition, development, and maintenance of recreational sites within the Region.	Natural Resources, Local Assistance, Transportation	WDNR, Local Officials	WDNR, Budget	On-Going
Inventory public access areas to the surface waters of the Region in order to facilitate preservation.	Natural Resources, Local Assistance	WCMP	WDNR, WCMP	On-Going
Assist in preserving the quality of public lands.	Natural Resources	WDNR	WDNR	On-Going
<b>Goal: Housing #1</b> To provide for a variety of quality, affordable housing opportunities for all segments of the Region's current and future population.				
<b>Objective 1.1:</b> <i>Continue to promote programs that assist all citizens, including those persons with special needs, in obtaining affordable quality housing.</i>				
Support agencies and programs that promote and provide affordable housing to their clients.	Economic Development, Local Assistance	Commerce, WDOA, Local Housing Authority	Commerce	On-Going
Promote state and federal initiatives that seek to provide adequate housing options for all persons including low and moderate income, elderly, and residents with special needs.	Economic Development, Local Assistance	Commerce, WDOA, Local Housing Authority	Commerce	On-Going
Support local initiatives that work towards rehabilitating and preserving the existing housing stock within the Region.	Economic Development, Local Assistance	Commerce, WDOA, Local Housing Authority	Commerce	On-Going
Encourage counties and local communities that do not have housing authorities to create one so as to increase the opportunity for securing state and federal funding.	Economic Development, Local Assistance	Commerce, WDOA, Local Housing Authority	Commerce	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Encourage units of government to adopt or strengthen local ordinances and building codes which provide for investigative and enforcement powers.	Economic Development, Local Assistance	Commerce, WDOA, Local Housing Authority	Commerce, Budget	On-Going
<b>Objective 1.2:</b> Continue to review and assess information provided by local officials, state and federal agencies to monitor the changes in population characteristics.				
Assist local officials in reviewing existing zoning and subdivision ordinances to identify standards that limit certain housing choices and to measure impacts that current ordinances have on the Region's housing stock and future choices.	Economic Development, Local Assistance	Commerce, WDOA, Local Housing Authority	Commerce, Budget	On-Going
Continue the Commission's Regional Housing Advisory Committee.	Economic Development	Commerce, WDOA, Local Housing Authority	Commerce, Budget	On-Going
Build stronger working relationships with area housing organizations to help gather and disseminate information on housing related topics.	Economic Development	Local Housing Authority	Commerce, Budget	On-Going
Assist in the coordination of state and federal housing programs and services.	Economic Development	Commerce, Local Housing Authority	Commerce, Budget	On-Going
<b>Goal: Housing #2</b> To promote new housing development in areas where it is needed and can be done in an environmentally and cost effective manner.				
<b>Objective 2.1:</b> Continue to identify areas in local comprehensive plans where new development should be located to maintain open space and the preserve natural or unique areas.				
Encourage new housing in areas in which community facilities and infrastructure already exist.	Local Assistance	Commerce, Local Housing Authority	Commerce, Budget	On-Going
Monitor development that has the potential to adversely affect the assessed value or livability of neighboring residential properties.	Economic Development, Local Assistance	Commerce, Local Housing Authority	Commerce, Budget	On-Going
Encourage the development of multi-family, senior and disabled housing located adjacent to amenities.	Economic Development, Local Assistance	Commerce, Local Housing Authority	Commerce, WDOA, Budget	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Promote the availability of land for the development or redevelopment of low and moderate income housing.	Economic Development, Local Assistance	Local Housing Authority, Local Planners	Commerce	On-Going
Support the construction of affordable single family homes and adequate availability of apartments and elderly housing.	Economic Development, Local Assistance	Local Housing Authority, Local Planners	Commerce, WDOA	On-Going
Encourage the use Conservation Subdivisions and cluster development for residential neighborhoods.	Economic Development, Local Assistance	Local Housing Authority, Local Planners	WDOA	On-Going
Encourage development and land use practices at the state, county, and local levels that preserve historically and architecturally significant homes, buildings, structures, and sites.	Economic Development, Local Assistance, Transportation	Local Housing Authority, Local Planners	WDOA, Commerce	On-Going
<b>Goal: Economic Development #1</b> To expand the number of employers in the Region through business expansion, retention, development, and recruitment.				
<b>Objective 1.1:</b> <i>Promote and strengthen existing industry clusters.</i>				
Support programs that assist companies to increase their exports.	Economic Development	Local Economic Development Authorities, Commerce	Commerce, EDA	On-Going
Encourage the retention and expansion of the paper industry.	Economic Development	Local Economic Development Authorities, Commerce	Commerce, EDA	On-Going
Facilitate a study to identify other industry clusters that would support those already present in the Region.	Economic Development	Local Economic Development Authorities, Commerce	Commerce, EDA	2006-2009
Build stronger working relationships with business development entities and economic development corporations already in place.	Economic Development, Local Assistance	Local Economic Development Authorities, Commerce	Commerce, EDA	2006-2008, On-Going
Support and promote the maritime industry.	Economic Development, Local Assistance	Local Economic Development Authorities, Commerce	Commerce, EDA	On-Going
Help assist agri-businesses to better position themselves to compete in future product markets through expanded marketing efforts and the integration of value-added processing.	Economic Development, Local Assistance	Local Economic Development Authorities, Commerce	Commerce, EDA	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Help define strategies to increase tourism and recreation revenue within the Region.	Economic Development	Commerce, Tourism, Local EDCs	Tourism, Commerce	2007-2009
<b>Objective 1.2: Encourage continued growth and stability of the Region's growth centers.</b>				
Continue to provide technical assistance to local economic development organizations on the development and marketing of business and industrial parks.	Economic Development	Local EDCs	Commerce, Budget, EDA	On-Going
Work with local officials to determine strategies to revitalize older commercial, down Region, and industrial areas including those designated as brown field sites.	Economic Development, Local Assistance	Local EDCs	Commerce, Budget, EDA	On-Going
<b>Objective 1.3: Encourage the preservation of existing manufacturing firms.</b>				
Participate in a bi-annual business retention and expansion study.	Economic Development	Commerce, Local EDCs	Commerce, Budget, EDA	On-Going
Support the creation and maintenance of a regional marketing website to promote area manufacturers.	Economic Development	Commerce, Local EDCs	Commerce, Budget, EDA	2006-2007, On-Going
<b>Objective 1.4: Work with local communities and development organizations to seek ways to diversify the economic base of the Region and its counties.</b>				
Continue to gain additional knowledge on how to integrate bio-technology and value-added processing into existing manufacturing operations.	Economic Development	Commerce, Local EDCs	Commerce, Budget, EDA	On-Going
Promote technology intensive spin-offs from existing companies.	Economic Development	Commerce, Local EDCs	Commerce, Budget, EDA	On-Going
Assist in the establishment of a comprehensive incentive program that is administered through regional development organizations.	Economic Development	Commerce, Local EDCs	Commerce, Budget, EDA	2006-2010
Help generate reports or instructional materials for municipal leaders on how to work with companies looking to expand or relocate to their communities.	Economic Development	Commerce, Local EDCs	Commerce, Budget, EDA	2006-2010, On-Going
Facilitate the maintenance of an inventory of available large commercial and manufacturing facilities, and business and industrial park space.	Economic Development	Commerce, Local EDCs	Commerce, Budget, EDA	2007-2008, On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Work with regional development organizations to create and promote a more positive image of the Region to help recruit businesses to the area.	Economic Development	Commerce, Local EDCs	Commerce, Budget, EDA	On-Going
<b>Goal: Economic Development #2</b> To increase the quantity and quality of the labor force.				
<b>Objective 2.1:</b> Support efforts to improve the coordination of existing education, vocational training, and work force development services to ensure employees have competency in basic job skills.				
Encourage institutions of higher education to offer courses for the hospitality industry to help maintain and expand the tourism and recreation industries.	Economic Development	Commerce, UW, Tech Colleges	Commerce, UW	On-Going
Encourage the expansion of support services to enable willing workers to continue in or return to the workforce.	Economic Development	Commerce, Local EDCs	Commerce, Budget, EDA	On-Going
<b>Objective 2.2:</b> Help prepare a comprehensive marketing strategy to recruit skilled and professional persons to the Region.				
Work with elected officials, consultants, business leaders, and others to design communities that are attractive and offer the environment being sought by these individuals.	Economic Development, Local Assistance	Commerce, Local EDCs	Commerce, Budget, EDA	On-Going
Support and expand the number of young professional groups in the Region.	Economic Development	Commerce, Local EDCs	Commerce, Budget	On-Going
Encourage universities and technical colleges to expand their alumni programs to encourage graduates to return to the Region.	Economic Development	Commerce, UW, Tech Colleges	Commerce, UW	2007-2010, On-Going
Work with universities and technical colleges to develop strategies to recruit more minorities to their institutions.	Economic Development	Commerce, UW, Tech Colleges	Commerce, UW	2007-2010, On-Going
Assist local economic development organizations to increase the number of job fairs and business expos held throughout the Region.	Economic Development	Commerce, Local EDCs	Commerce, Budget, EDA	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Objective 2.3:</b> <i>Encourage the expansion of opportunities for students in local school districts to better understand the employment options available to them.</i>				
Support local efforts to develop an adjunct instructor's organization comprised of local business leaders and professionals to teach at area high schools and institutions of higher education.	Economic Development	Commerce, UW, Tech Colleges	Commerce, Budget	2006-2009, On-Going
Work with local economic development corporations and chambers of commerce to establish a speaker's bureau to be available to speak at area schools.	Economic Development	Commerce, UW, Tech Colleges	Commerce, Budget	2006-2008, On-Going
Promote programs such as youth apprenticeship programs, post high school apprenticeship programs, and employee training programs in the Region that meet the needs of the Region's employers.	Economic Development	Commerce, UW, Tech Colleges	Commerce, Budget	On-Going
<b>Objective 2.4:</b> <i>Help identify ways to provide the unemployed and underemployed with more options to acquire additional skills.</i>				
Promote the need for additional educational attainment within the current workforce.	Economic Development	Commerce, UW, Tech Colleges	Commerce, UW	On-Going
Help establish more opportunities for retraining in new advanced technologies.	Economic Development	Commerce, UW, Tech Colleges	Commerce, UW	On-Going
Participate in local initiatives to explore the option of creating scholarship pools for adults wanting to return to school to acquire new skills.	Economic Development	Commerce, UW, Tech Colleges	Commerce, UW	On-Going
<b>Goal: Economic Development #3</b> To improve community facilities, services, and infrastructure needed to foster economic growth in the rural and urban areas of the Region.				
<b>Objective 3.1:</b> <i>Encourage maintaining and improving the Region's highway, rail, water, and air transportation systems.</i>				
Help maintain the designation of the Region's federal navigation channels.	Economic Development, Transportation	WisDOT, EDCs	Commerce, WisDOT	On-Going
Continue to actively promote the use of the Region's harbor facilities for a balance of industrial, commercial, residential, and recreational uses.	Economic Development, Transportation	WisDOT, EDCs, WCMP	Commerce, WisDOT, WCMP	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Advocate for the inclusion of harbors and ports in statewide development initiatives.	Economic Development, Transportation	WisDOT, EDCs, WCMP	Commerce, WisDOT, WCMP	On-Going
Work to improve the transportation access points to port facilities.	Economic Development, Transportation	WisDOT, EDCs, WCMP	Commerce, WisDOT, WCMP	On-Going
Support activities to develop high speed rail passenger services between major metropolitan regions.	Economic Development, Transportation	WisDOT, Commerce	Commerce, WisDOT	On-Going
Continue to work with federal and state officials to develop strategies to improve the existing transportation network and advocate for funding of these projects.	Economic Development, Transportation	WisDOT, Commerce	Commerce, WisDOT	On-Going
Continue to evaluate the condition of local roads to establish a priority maintenance list.	Economic Development, Transportation	WisDOT	WisDOT	On-Going
<b>Objective 3.2:</b> <i>Support local planning activities that help create economic opportunities for local communities.</i>				
Continue to work with counties and communities in developing sound economic development strategies for their area.	Economic Development, Local Assistance	EDCs, Commerce	Commerce	On-Going
Participate in local efforts to secure funding to draft an inventory with analysis on the Region's development potentials and constraints.	Economic Development	EDCs, Commerce	Commerce	2007-2009
Continue to work with local harbor commissions to investigate ways to increase commerce and expand uses of the port.	Economic Development, Transportation, Local Assistance	Local Harbor Commissions, EDCs, Commerce, WisDOT	Commerce	On-Going
Help initiate the process to conduct an inventory of all airports in the Region and facilitate a discussion on development of strategies to upgrade and expand uses for those facilities.	Economic Development, Transportation	WisDOT	WisDOT	2006-2010
Continue to serve as a technical resource to communities in the planning, development, and expansion of business/industrial parks.	Economic Development	Commerce, EDCs	Commerce	On-Going



Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Work with local officials to develop highway corridors plans.	Economic Development, Transportation	WisDOT	WisDOT	2007-2011
Help initiate a technology infrastructure assessment study for the Region.	Economic Development	Commerce, EDCs, EDA	EDA	2006-2009
<b>Objective 3.3:</b> <i>Work to ensure each community has the necessary infrastructure and community facilities to serve existing and future economic development and housing needs.</i>				
Continue to promote the funding and technical resources available through local, state, and federal programs.	Economic Development	Commerce, EDCs, EDA	Commerce, EDA	On-Going
Advocate for more funding for communities and counties to access to improve and expand local infrastructure and community facilities.	Economic Development	Commerce, EDCs, EDA	Commerce, EDA	On-Going
Continue to assist local communities and counties in the preparation of funding applications.	Economic Development	Commerce, EDCs, EDA	Commerce, EDA	On-Going
Encourage the upgrading of the Region's wastewater treatment facilities and public water supply facilities so that all communities have facilities that meet the standards of the Wisconsin Administrative Code.	Economic Development, Natural Resources	Commerce, EDCs, WDNR	WDNR, Commerce	On-Going
Promote economic opportunities presented by the regions telecommunications facilities	Economic Development	Commerce, EDCs, EDA	Commerce, EDA	On-Going
<b>Objective 3.4:</b> <i>Support local efforts to ensure there is adequate industrial/business park space available for future development.</i>				
Promote the use of grant and financing programs by communities to upgrade wastewater treatment facilities and public water supply facilities for their business/industrial parks.	Economic Development, Natural Resources	WDNR	WDNR	On-Going
Encourage the well-planned, coordinated, and cost-effective provision of public facilities in those communities lacking basic infrastructure for economic development, such as public water supply, wastewater treatment facilities, and natural gas service and high voltage electrical service.	Economic Development	Commerce	EDA	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Participate in the development of industrial park location and development studies for each county in the Region.	Economic Development	Commerce, WDOA	Commerce, EDA	2007-2011
Encourage industrial development to locate in areas that have available space served by existing public facilities.	Economic Development, Local Assistance	Commerce, EDCs	Commerce	On-Going
<b>Goal: Economic Development #4</b> To promote the wise use and conservation of natural resources.				
<b>Objective 4.1:</b> <i>Promote sustainable forestry practices.</i>				
Promote the certification of the regions forest lands as sustainable forest, so that the regions wood supply can be marketed to industries that require such certification.	Economic Development, Natural Resources	Commerce, EDCs	USDA	On-Going
Assist in the expansion and retention of the forest product industry through valued added manufacturing.	Economic Development	Commerce, EDCs, Forest Service	USDA	On-Going
Conduct a feasibility study to locate a value added high-tech wood manufacturing industrial park in the northern portion of the Region.	Economic Development	Commerce, EDCs, Forest Service	USDA, Commerce	2007-2011
Continue to monitor the impacts of timbering on public lands.	Economic Development, Natural Resources	Commerce, EDCs, Forest Service	WDNR, Budget	On-Going
<b>Objective 4.2:</b> <i>Support efforts to preserve prime agricultural land and stabilize and enhance the agricultural economy.</i>				
Continue to work with state and federal regulatory agencies on the siting of large farming operations and assist local communities in the implementation of those regulations.	Economic Development, Natural Resources, Local Assistance	Commerce, DATCP, WDNR	WDNR, DATCP	On-Going
Continue to monitor efforts underway to help curb non-source pollution and use that information for the development of local comprehensive plans.	Economic Development, Natural Resources, Local Assistance	Commerce, DATCP, WDNR	WDNR, DATCP	On-Going
<b>Objective 4.3:</b> <i>Encourage the most efficient use of energy in the development of all economic development projects.</i>				
<b>Objective 4.4:</b> <i>Encourage the development of environmentally sound landfill disposal sites in appropriate locations based upon regional solid waste disposal needs, the safe disposal of toxins and hazardous wastes, and the reduction in the quantity of materials going to landfills</i>				

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Objective 4.5:</b> Encourage the expansion or development of pulp mill operations in locations where such development is desirable, feasible, and appears to have the greatest development potential while maintaining environmental quality, as identified in the state of Wisconsin preliminary report, The Pulp Mill Siting Feasibility Study.				
<b>Objective 4.6:</b> Encourage compliance with the Clean Water Act and the Clean Air Act				
Continue to educate federal and state officials that much of the Region's poor air quality is caused by factors outside the Region's control (i.e. transport of ozone precursor emissions from outside the Region)	Natural Resources, Local Assistance	WDNR, Commerce	WDNR	On-Going
Work with local community officials and economic development professionals to attract employers to the Region that will not adversely impact the environment.	Economic Development	Commerce	Commerce	On-Going
Assist local community officials and economic development professionals to address environmental issues caused by growth.	Economic Development, Natural Resources, Local Assistance	Commerce, EDCs	Commerce	On-Going
Promote infill development to avoid uncontrolled urban sprawl.	Economic Development, Local Assistance	Local Planners, EDCs	WDOA	On-Going
<b>Objective 4.7:</b> Encourage the coordination and implementation of environmental cleanup programs for the removal of hazardous waste, including underground storage tanks				
Investigate the opportunity to establish a regional environmental clean-up revolving loan fund to encourage businesses and land owners to redevelop unusable land.	Economic Development, Natural Resources	Commerce, WDNR	Commerce, WDNR, EDA, USEPA	2006-2009
<b>Goal: Economic Development #5</b> To encourage planning efforts that will guide and promote regional economic development.				
<b>Objective 5.1:</b> Continue to prepare an annual Comprehensive Economic Development Strategy (CEDS) for the Region.				
Encourage the development of projects that promote regional economic development such as business/parks and incentive programs.	Economic Development	EDCs, Commerce, EDA	EDA	On-Going
Continue to prepare and disseminate information about economic conditions in the Region.	Economic Development	EDA, Commerce, EDCs	EDA	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Promote the excellent quality of life as a part of the Region's economic development policy.	Economic Development	EDA, Commerce, EDCs	EDA, Budget	On-Going
Continue to maintain an inventory of local, state, and federal technical and financial resources available to economic development professionals and community officials.	Economic Development	EDA, Commerce, EDCs	EDA, Budget	On-Going
Encourage the development of projects that promote regional economic development such as business/parks and incentive programs.	Economic Development	EDA, Commerce, EDCs	EDA, Budget	On-Going
<b>Objective 5.2:</b> <i>Promote cooperative economic development efforts at the county, regional, and state levels.</i>				
Assist in the coordination of area economic development planning activities with county wide economic development organizations.	Economic Development	EDA, Commerce, EDCs	EDA, Budget	On-Going
Help ensure the Region's economic development planning is broadly representative of the principal economic interests of the eight-county Region, including the interests of its minority and low-income populations.	Economic Development	EDA, Commerce, EDCs	EDA, Budget	On-Going
Help expand the capacity of local organizations and local government to understand, plan, and implement economic development programs.	Economic Development	EDA, Commerce, EDCs	EDA, Budget	On-Going
Encourage the linkage and coordination of the various federal, state, local, and private funding sources for economic development projects	Economic Development	EDA, Commerce, EDCs	EDA, Budget	On-Going
Encourage, as appropriate, the modification of existing economic development tools and incentives and the creation of new tools and incentives in response to changing community economic development needs	Economic Development	EDA, Commerce, EDCs	EDA, Budget	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Goal: Transportation #1</b>				
To provide an efficient, integrated and inter-modal transportation system for the Bay-Lake Region.				
<i>Objective 1.1: Provide an efficient highway system that ensures the highest degree of mobility and accessibility while protecting the safety of its users.</i>				
Maintain the functional integrity of existing and future roadways through appropriate land use controls and design standards to alleviate congestion, promote safety, and reduce the need for new highways.	Local Assistance, Transportation	Local Officials, WisDOT	WisDOT	On-Going
Provide sufficient capacity on the existing road network in the Region through appropriate expansion and improvement.	Transportation	Local Planners, WisDOT	WisDOT	On-Going
Discourage the development of new highways which may stimulate sprawl.	Local Assistance, Transportation	Local Planners, WisDOT	WisDOT	On-Going
Enhance the safety of the existing road network.	Transportation	Local Planners, WisDOT	WisDOT	On-Going
Protect existing investments in the road network with proper maintenance.	Local Assistance, Transportation	Local Officials, WisDOT	WisDOT	On-Going
Continue to promote efforts to enhance and protect the aesthetic and scenic qualities of the entire road network.	Transportation	WisDOT	WisDOT	On-Going
Promote access management as a means of protecting the capacity and safety of the existing road network.	Transportation	Local Planners, WisDOT	WisDOT	On-Going
Provide and encourage alternative facility designs and enhancements that serve to relieve congestion and reduce the need for additional highway capacity.	Transportation	Local Planners, WisDOT	WisDOT	On-Going
Encourage transportation demand management strategies that reduce the number of single occupant vehicles, such as park-and-ride lots, high occupancy vehicle lanes, public transportation, and carpooling.	Transportation	Local Planners, WisDOT	WisDOT	On-Going
Support implementation of the State Highway Plan.	Transportation	WisDOT	WisDOT	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Objective 1.2:</b> <i>Promote public transportation systems within the Region's urban areas that support preferred land use patterns, serve the needs of all users, and reduce the number of vehicular trips.</i>				
Support an affordable and accessible public transportation system that links urban centers, suburban neighborhoods, employment centers, and villages.	Transportation	WisDOT	WisDOT	On-Going
Promote concentrations of housing, employment centers, and commercial development.	Transportation, Economic Development	WisDOT, Commerce, WDOA	WisDOT	On-Going
Provide for the transportation needs of the elderly and special needs populations.	Transportation, Economic Development	WisDOT	WisDOT	On-Going
Reduce the automobile impact on the Region by increasing opportunities for transit use by residents, commuters, students, employees and visitors to the area.	Transportation	WisDOT	WisDOT	On-Going
Encourage interagency coordination to anticipate and accommodate transit services changes.	Transportation	State and Local Agencies	WisDOT	On-Going
Emphasize commuter transit services on congested corridors.	Transportation	WisDOT	WisDOT	On-Going
Protect the potential for future commuter transit service on existing rail lines.	Transportation	WisDOT	WisDOT	On-Going
Provide an integrated and ADA compliant transportation system that is responsive to the special needs of all seniors and persons with disabilities.	Transportation	WisDOT	WisDOT	On-Going
Coordinate ADA transit and Para transit services with other specialized transportation services.	Transportation	WisDOT	WisDOT	On-Going
Encourage transit-oriented development and provide alternatives to automobile commutes by linking land use decisions with transit, bikeway, pedestrian and park and ride investments.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Objective 1.3:</b> <i>Promote alternative means of travel to reduce automotive dependency, increase accessibility, and improve air quality.</i>				
Protect existing corridors and create new corridors to provide opportunities for non-motorized travel with links to other means of travel.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Enhance pedestrian and bicycle connections within and between residential, commercial, and employment areas, and between community facilities.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Support concentrated, mixed-use development that encourages bicycling and walking.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Promote the location of bikeways as bicycle lanes on roads unless a more direct bicycle path can be provided.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Support the provision of bicycle racks and/or lockers at park-and-ride lots, transit centers and bus stops; bicycles on transit, pedestrian connections to transit; and potential interconnections with future passenger rail lines within the Bay-Lake Region.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Serve inter-county and intra-county travel needs, including consideration of travel links outside of the county.	Transportation	WisDOT	WisDOT	On-Going
Provide multi-modal access to recreational resources.	Transportation, Natural Resources	WisDOT, WDNR	WisDOT, WDNR	On-Going
Regularly update local bicycle plans for all local jurisdictions, and assist in the implementation of projects from within those plans.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Encourage safe routes to schools by providing improved bicycle and pedestrian facilities, improved transit service, traffic calming measures and bicycle rider training programs for elementary students.	Transportation	Local Planners, WisDOT	WisDOT	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Retain the option of future passenger rail service for when it is financially feasible, acceptable to the community, and only after completion of an environmental impact report that concludes all significant impacts can be satisfactorily mitigated.	Transportation	WisDOT	WisDOT	On-Going
Support expanded general and freight aviation at the municipal airports consistent with the current State Airport Master Plan and if it will not adversely affect surrounding areas.	Transportation	WisDOT	WisDOT	On-Going
<b>Objective 1.4:</b> <i>Promote the preservation and enhancement of connecting highways, rail and air facilities and selected highways for the efficient movement of goods and people.</i>				
Promote the enhancement of a defined network of roads important for goods movement.	Transportation, Economic Development	Local Planners, WisDOT	WisDOT	On-Going
Encourage the use of airports and heliports to support economic development.	Transportation, Economic Development	EDCs, WisDOT	WisDOT	On-Going
Continue to encourage the improvement of existing port facilities and rail freight systems to reduce the number of trucks using the highway network.	Transportation	Local Planners, WisDOT	WisDOT	On-Going
Promote the wise utilization of limited capital resources to maximize the efficiency of the existing transportation system, and as an alternative to constructing new facilities.	Transportation, Economic Development	WisDOT, Commerce	WisDOT	On-Going
Encourage private development proposals to include transit, bicycle and pedestrian service improvements and financial support of transit service, consistent with transit improvement plans.	Transportation	Local Planners, WisDOT	WisDOT	On-Going
Continue to aggressively pursue new and additional funding sources for needed transportation improvements and programs including transit needs, specialized transportation, and rail demonstration projects.	Transportation	WisDOT	WisDOT	On-Going



Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Continue to seek additional funding sources to support and expand alternative transportation mode facilities and services.	Transportation	WisDOT	WisDOT	On-Going
Support transportation investments that encourage sustainable land use practices.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
<b>Objective 1.5:</b> <i>Help ensure that the transportation system complements and enhances the natural environment of the Bay-Lake Region.</i>				
Emphasize sustainable transportation modes consistent with regional environmental policies.	Transportation, Natural Resources	WisDOT, WDNR	WisDOT, WDNR	On-Going
Advocate for transportation projects that contribute to improved regional air quality and reduced energy consumption.	Transportation, Natural Resources	WisDOT, WDNR	WisDOT, WDNR	On-Going
Advocate for transportation projects that contribute to the protection of biological and scenic resources, open space and agricultural land.	Transportation, Natural Resources, Local Assistance	WisDOT, WDNR	WisDOT, WDNR	On-Going
Avoid, minimize or mitigate the impact of transportation improvements on parks, recreation areas, historic sites, and cultural resources.	Transportation, Natural Resources, Local Assistance	WisDOT, WDNR	WisDOT, WDNR	On-Going
Avoid, minimize or mitigate noise, vibration, and visual impacts from transportation improvements in sensitive areas.	Transportation, Natural Resources	WisDOT, WDNR	WisDOT, WDNR	On-Going
Ensure all transportation project specific environmental reviews incorporate appropriate avoidance, minimization or mitigation measures, such as Transportation Control Measures.	Transportation, Natural Resources	WisDOT, WDNR	WisDOT, WDNR	On-Going
<b>Objective 1.6:</b> <i>Coordinate land use and transportation decisions to ensure that the Region's social</i>				
Plan transportation improvements which are consistent with the needs and desires of residents and businesses of the Region and which are closely coordinated with local land use and transportation planning policies.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going

<b>Activity</b>	<b>Program Lead/Area</b>	<b>Cooperators</b>	<b>Potential Funding Sources</b>	<b>Time Period</b>
Reduce auto-dependent development by emphasizing opportunities to reuse underutilized urban land for housing and compact mixed use developments.	Transportation, Economic Development	Local Planners, WisDOT	WisDOT	On-Going
Encourage land use policies which locate child care facilities at or near residential areas and around transit centers.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Protect municipal airport operations by limiting nearby incompatible land uses.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Support established urban communities, residential neighborhoods, major activity and recreation centers, and commercial districts with a broad range of transportation options.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Help limit development unless transportation impacts can be mitigated or improvements funded by the project.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Support traffic calming measures on local residential streets.	Transportation, Local Assistance	Local Planners, WisDOT	WisDOT	On-Going
Work with local jurisdictions to implement land use policies that promote jobs/housing balance along existing and future transit routes.	Transportation, Local Assistance	Local Planners & Officials, WisDOT	WisDOT	On-Going
Support parking management principles which reduce transportation demand at employer sites and commercial areas without negatively impacting neighborhoods.	Transportation	Local Planners, WisDOT	WisDOT	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Goal: Utilities and Community Facilities</b> To advocate for quality utilities and community facilities and services that are planned in an efficient, coordinated and cost-effective manner for residents of the Region.				
<b>Objective 1.1:</b> <i>Coordinate, consolidate and share governmental facilities and services where possible.</i>				
Encourage communities to work with other jurisdictions to maximize the joint use of community facilities to reduce costs, promote efficiency in use, and avoid duplication and overbuilding of services.	Economic Development, Local Assistance	Local Officials & Planners	Budget	On-Going
Encourage concentrated development in areas where appropriate utilities, community facilities, and public services are available.	Economic Development, Local Assistance	Local Officials & Planners	Budget	On-Going
Encourage the concept of “mutual aid agreements” for public services.	Local Assistance	Local Officials & Planners	Budget	On-Going
<b>Objective 1.2:</b> <i>Coordinate with communities to ensure an adequate supply of quality water will be available to meet the needs of the Region’s residential, commercial and agricultural land uses.</i>				
Work with communities to maintain and enhance community water systems that meet the needs of existing and planned future development.	Economic Development, Local Assistance	Local Officials & Planners, Commerce, EDCs	Commerce, Budget	On-Going
Work with communities to evaluate local water system capacities to ensure that they are able to meet the everyday demands of the customers as well as demands for higher volumes.	Economic Development, Local Assistance	Local Officials & Planners	Budget	On-Going
Work with communities to advocate for wellhead protection programs in an effort to ensure a long-term source of clean water.	Natural Resources, Local Assistance	Local Officials & Planners, WDNR	WDNR, Commerce, Budget	On-Going
Examine the reuse and recycling of water to maintain a quality water supply.	Natural Resources, Local Assistance	Local Officials & Planners, WDNR	WDNR	On-Going
<b>Objective 1.3:</b> <i>Coordinate with communities to expand or improve local wastewater system capabilities to meet future demand in a cost-effective and environmentally friendly manner.</i>				
Continue to prepare sewer service area plans for the future of wastewater systems in order to meet future growth and ensure the expansion of sewerage systems.	Natural Resources, Local Assistance	Local Officials & Planners, WDNR	WDNR	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Promote the proper disposal of wastewater to protect groundwater and surface water resources.	Natural Resources, Local Assistance	Local Officials & Planners, WDNR	WDNR	On-Going
Continue to evaluate the negative impacts on the environment where future developments will rely on private on-site wastewater treatment systems.	Natural Resources, Local Assistance	Local Officials & Planners, WDNR	WDNR	On-Going
Promote the use of shared on-site wastewater treatment systems where appropriate.	Natural Resources, Local Assistance	Local Officials & Planners, WDNR	WDNR	On-Going
<b>Objective 1.4:</b> Continue to monitor the potential impacts of development on the stormwater drainage systems.				
Consider the possible impacts to the water resources when weighing future developments.	Natural Resources, Local Assistance	Local Officials & Planners, WDNR	WDNR, USEPA	On-Going
Encourage the use of best management practices and other stormwater controls to manage non-point sources of stormwater runoff.	Natural Resources, Local Assistance	Local Officials & Planners, WDNR, DATCP	DATCP, WDNR	On-Going
Support the preservation of environmental features, such as wetlands, that minimize flooding.	Natural Resources, Local Assistance	Local Officials & Planners, WDNR	WDNR	On-Going
Promote the establishment of drainage districts to manage agricultural runoff.	Natural Resources	Local Officials & Planners, WDNR, DATCP	DATCP, WDNR	On-Going
<b>Objective 1.5:</b> Advocate for dependable, efficient, and environmentally conscious utilities to adequately serve the Region.				
Work with communities and service providers to ensure adequate electric, natural gas and telecommunication services meet the needs of existing and planned future developments.	Local Assistance	Local Officials & Planners, Commerce	Commerce	On-Going
Advocate for the development of redundant power and communication systems.	Economic Development, Local Assistance	Commerce	Commerce	On-Going
Consider alternative energy options such as anaerobic manure digestion, wind power, solar power, hydroelectric generation, and others where feasible.	Natural Resources, Local Assistance	Local Officials & Planners, WDNR, DATCP	DATCP, WDNR	On-Going
Promote the expansion of telecommunications capabilities for emergency situations.	Economic Development, Local Assistance	Commerce	Commerce	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
Consider telecommunication towers for alternate structures or joint use of new and existing towers to minimize conflict with community character and the environment.	Local Assistance	Local Officials & Planners, Commerce	Commerce	On-Going
<b>Objective 1.6:</b> <i>Encourage the maintenance and improvement of public services and facilities to serve present and planned development.</i>				
Assist local communities in locating grant money to maintain and upgrade government facilities	Economic Development, Local Assistance	Local Officials & Planners	Commerce	On-Going
Encourage communities to monitor resident satisfaction with services including solid waste disposal	Local Assistance	Local Officials & Planners	Commerce	On-Going
Promote the provision of adequate medical services	Local Assistance	Local Officials & Planners	Commerce	On-Going
<b>Objective 1.7:</b> <i>Advocate for a level of police protection, fire protection, and emergency services that meets the needs of existing and planned future development patterns.</i>				
Coordinate with communities to fill any potential service gaps that may exist to provide quality protection.	Local Assistance	Local Officials & Planners	Commerce	On-Going
Work with communities to develop and maintain all hazard mitigation plans for all areas of the Region.	Local Assistance	Local Officials & Planners	Commerce	On-Going
<b>Objective 1.8:</b> <i>Advocate for quality educational opportunities.</i>				
Encourage technical colleges and University of Wisconsin Extension to boost community education efforts.	Economic Development, Local Assistance	UW, Tech Colleges	Commerce	On-Going
Coordinate with school districts to monitor population changes and projections in order to maintain and upgrade facilities.	Economic Development, Local Assistance	Local Officials & Planners	Commerce	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Goal: Intergovernmental Cooperation #1</b>				
To encourage joint planning between jurisdictions including Tribes and special districts.				
<i>Objective 1.1: Encourage coordination and sharing or joint ownership of community facilities</i>				
Explore the possibility of jointly developing services including: Fire protection, Police protection, Ambulance and First Responder services, Public transportation, Sanitary and water districts and Snow removal	Local Assistance	Local Officials & Planners, WDOA	WDOA	On-Going
Explore the possibility of jointly developing facilities including: Utilities, Sanitary and water treatment plants, Parks and recreational facilities, Airports, Libraries, Shared municipal buildings, and Animal shelters	Local Assistance	Local Officials & Planners, WDOA	WDOA	On-Going
Explore the possibility of jointly developing programs including: Waste and recycling, Health and human services, Building inspector, Beach maintenance and beach water quality testing, Household water testing, Cooperative efforts to spur legislative change, Senior and elderly programs, Child care programs and Cultural programs	Local Assistance	Local Officials & Planners, WDOA	WDOA	On-Going
<i>Objective 1.2: Promote coordination between neighboring communities on future planning projects to best maintain the character of the area.</i>				
<i>Objective 1.3: Encourage participation between neighboring communities regarding meetings, workshops, mutual planning activities, etc.</i>				
Work with neighboring municipalities to jointly plan to ensure compatible land uses along shared borders.	Local Assistance	Local Officials & Planners, WDOA	WDOA	On-Going
Work with neighboring municipalities to identify and develop advantageous transportation corridors.	Local Assistance, Transportation	Local Officials & Planners, WisDOT	WisDOT	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Goal: Intergovernmental Cooperation #2</b>				
To improve communication and cooperation between and among units of government and the citizens they serve.				
<i>Objective 2.1: Promote coordination with adjacent communities on future planning projects to best maintain the character of the surrounding area.</i>				
Encourage leaders of neighboring communities to meet at regularly to discuss issues of common concern.	Local Assistance	Local Officials & Planners	Budget	On-Going
<i>Objective 2.2: Encourage neighboring communities to discuss any unique natural features and other land uses which span municipal boundaries.</i>				
<b>Goal: Intergovernmental Cooperation #3</b>				
To improve communication and cooperation between and among units of government and the citizens they serve.				
<i>Objective 3.1: Work with neighboring communities to identify shared natural features such as wetland recharge areas and natural habitat areas.</i>				
<b>Goal: Intergovernmental Cooperation #4</b>				
To encourage a more diverse population to participate in planning and government.				
<b>Goal: Intergovernmental Cooperation #5</b>				
To encourage local governments to enter into cooperative service arrangements to better utilize existing resources.				
<i>Objective 5.1: Encourage the development of boundary agreements between neighboring communities.</i>				
Encourage communities to work cooperatively to address possible boundary issues to minimize conflicts, to include staying aware of issues or regulations that would impact development within each community.	Local Assistance	Local Officials & Planners	Budget	On-Going

Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<b>Goal: Intergovernmental Cooperation #6</b>				
To assist local units of government in identifying funding and technical resources to acquire and improve the services available to their residents.				
<i>Objective 6.1: Explore the possibility of sharing municipal services, facilities, and programs with neighboring municipalities.</i>				
<i>Objective 6.2: Work with surrounding municipalities to address possible boundary issues to minimize conflict.</i>				
Encourage open communication with neighboring Regions and villages to facilitate the creation of co-planning areas along municipal borders.	Local Assistance	Local Officials & Planners	Budget	On-Going
Encourage the development of border agreements with neighboring villages, if and when, annexation issues arise.	Local Assistance	Local Officials & Planners	Budget	On-Going
<b>Goal: Land Use #1</b>				
To promote the distribution of land uses that will preserve and enhance the character of the Bay-Lake Region by establishing land development guides designed to promote environmental protection, meet social and economic needs, provide for adequate services and facilities, conserve natural resources, and ensure compatibility of land uses.				
<i>Objective 1.1: Encourage preservation of water resources, unique open spaces, and other natural and cultural resources.</i>				
<i>Objective 1.2: Encourage a spatial distribution of the various land uses which maintains biodiversity and will result in the protection and wise use of the natural resources of the Region.</i>				
<i>Objective 1.3: Ensure a spatial distribution of the various land uses which will result in a compatible arrangement of land uses. Encourage the preservation of land areas to provide for agriculture, provide a reserve or holding area for future urban and rural needs, and ensure the preservation of those rural areas which provide wildlife habitat and which are essential to shape and order urban development.</i>				
<b>Goal: Land Use #2</b>				
To conserve and protect desirable existing residential, commercial, industrial, and agricultural development in order to maintain desirable social and economic values; renewal of obsolete and deteriorating residential, commercial, and industrial areas in the rural as well as in the urban areas of the Region; and prevention of slums and blight.				
<i>Objective 2.1: Encourage harmonious and well-planned commercial development which will serve the needs of residents of the region, visitors and the specialized needs of rural areas.</i>				
<i>Objective 2.2: Encourage a balanced allocation of space to the various land use categories which meets the social, physical, and economic needs of the regional population.</i>				



Activity	Program Lead/Area	Cooperators	Potential Funding Sources	Time Period
<i><b>Objective 2.3:</b> Develop a spatial distribution of the various land uses which is properly related to the supporting transportation, utility and public facility systems in order to assure the economical provision of transportation, utility and public facility services.</i>				
<i><b>Objective 2.4:</b> Encourage the development and conservation of residential areas within a physical environment that is healthy, safe, convenient, and attractive.</i>				
<i><b>Objective 2.5:</b> Encourage the preservation, development, and redevelopment of a variety of suitable industrial and commercial sites both in terms of physical characteristics and location.</i>				
<i><b>Objective 2.6:</b> Encourage the preservation and provision of open space to enhance the total quality of the regional environment.</i>				
<b>Goal: Land Use #3</b>				
To develop communities having distinctive individual character, based on physical conditions, historical factors, and local desires.				
<i><b>Objective 3.1:</b> Ensure that growth and development occurs in a planned and coordinated manner that will maintain or improve the quality of life associated with community character for both existing and future residents.</i>				
<i><b>Objective 3.2:</b> Encourage the preservation, development, and redevelopment of a variety of suitable industrial and commercial sites both in terms of physical characteristics and location.</i>				
<i><b>Objective 3.3:</b> Ensure that growth and development occurs in a planned and coordinated manner that will maintain or improve the quality of life associated with community character for both existing and future residents.</i>				

BAY-LAKE REGIONAL PLANNING COMMISSION

2030 REGIONAL COMPREHENSIVE PLAN

VOLUME II: REGIONAL RESOURCES

NOVEMBER 2005



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## CHAPTER 4 - EXECUTIVE SUMMARY

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### **INTRODUCTION**

This comprehensive plan is the initial plan for the Bay-Lake Region covering an eight county area in northeastern Wisconsin that includes Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto and Sheboygan counties. The plan was prepared to serve as a guide for future land use planning decisions throughout the region; to serve as a framework plan from which county and local plans can be carried out in greater detail; and, to meet the requirements of Wisconsin's comprehensive planning law (1999 Wisconsin Act 9) and adopted under the authority granted by Section 66.1001 of the Wisconsin Statutes.

The comprehensive plan is an advisory policy document that provides a specific guide as to where future conservation, growth and development should occur within the Region. Information collected by the Commission as part of the making of the regional plan will be provided to communities in the region and may help in the development of local and county comprehensive plans. The plan will be consulted when the Commission makes decisions concerning land use and other issues impacting the development of the region.

### **PLAN CONTENTS**

This volume of the Regional Comprehensive Plan, **Volume II: Regional Resources** includes: **Chapter 4: Executive Summary** which contains a summary of the resources and demographics of the Region as well as a synopsis of the overall goals, objectives, and policies of the plan; **Chapter 5: Natural, Agricultural and Cultural Resources**, provides a description of the physical setting natural and cultural resources of the planning area; **Chapter 6: Housing and Population**, presents information on the demographics of the Region and on future population and housing growth; **Chapter 7: Economic Development**, contains a development strategy regarding future and existing economic conditions within the Region, including an inventory of the labor force and an analysis of the Region's economic base; **Chapter 8: Transportation**, presents an inventory of the existing transportation system and an overview of transportation needs; **Chapter 9: Utility and Community Facilities**, provides an inventory of the Region's community facilities, including schools, recreational opportunities and utilities; **Chapter 10: Intergovernmental Cooperation**, contains programs for joint planning and decision making with other jurisdictions, including school districts and local governmental units; **Chapter 11: Land Use**, contains an inventory of the land use controls in the region as well as a summary of existing land uses.

### **PLAN DEVELOPMENT PROCESS**

The eight-county Bay-Lake Regional Planning Commission Region is composed of many diverse and often divergent interests; therefore, the formulation of goals and objectives for the preparation of advisory comprehensive regional development plans is a very difficult task. Regional goals and objectives should incorporate the combined knowledge of many people who are informed about the Region. At the regional level, the use of advisory committees is the most practical and effective procedure available for involving interested and knowledgeable county and local planners in this initial formulation. For the purposes of this plan, the Commission

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worked with its established advisory committees to gather information and provide review of plan elements.

## **GOALS, OBJECTIVES AND POLICIES**

The following statements describe the Commission's intent regarding the overall growth and development of the Region over the next 20 years.

The Commission has identified broad goals and more specific objectives to guide the land use planning process with the understanding that various public and private interest groups within a Region as large and diverse as northeastern Wisconsin may have varying and at times conflicting goals; many of these goals are of a qualitative nature and, therefore, difficult to quantify; and, many goals which may be held to be important by the various interest groups within the Region may not be related in a demonstrable manner to physical development plans. The following stated Goals, are based on the information provided and further detailed within this volume of the Regional Comprehensive Plan. More detailed Objectives, Policies, and Programs can be found in Volume I: The Plan.

### **Planning Goal**

The goal of the Commission is to provide a comprehensive plan that is consistent with s.66.1001 of the Wisconsin State Statutes in order to best protect the interests of all of the Region's residents as well as to develop the Region in an orderly, cost efficient manner.

### **Natural, Agricultural, and Cultural Resources Goals**

#### **Natural Resources**

**Goal 1:** To preserve the Region's natural resources for enjoyment by its residents and visitors for present and future generations.

#### **Agricultural Resources**

**Goal 2:** To identify and preserve the Region's agricultural resources to provide food and feed for present and future generations, and preserve the rural character of the Region.

#### **Cultural Resources**

**Goal 3:** To preserve and encourage development and expansion of cultural resources within the Region.

### **Housing Goals**

**Goal 1:** To provide for a variety of quality, affordable housing opportunities for all segments of the Region's current and future population.

**Goal 2:** To promote new housing development in areas where it is needed and can be done in an environmentally and cost effective manner.

### **Economic Development Goals**

**Goal 1:** To expand the number of employers in the Region through business expansion, retention, development, and recruitment.

**Goal 2:** To increase the quantity and quality of the labor force.

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**Goal 3:** To improve community facilities, services, and infrastructure needed to foster economic growth in the rural and urban areas of the Region.

**Goal 4:** To promote the wise use and conservation of natural resources.

**Goal 5:** To encourage planning efforts that will guide and promote regional economic development.

**Transportation Goal**

**Goal 1:** To provide an efficient, integrated and intermodal transportation system for the Bay-Lake Region.

**Utilities and Community Facilities Goal**

**Goal 1:** To advocate for quality utilities and community facilities and services that are planned in an efficient, coordinated and cost-effective manner for residents of the Region.

**Intergovernmental Cooperation Goals**

**Goal 1:** To encourage joint planning between jurisdictions including Tribes and special districts.

**Goal 2:** To improve communication and cooperation between and among units of government and the citizens they serve.

**Goal 3:** To develop collaborative stormwater & sewer management plans.

**Goal 4:** To encourage a more diverse population to participate in planning and government.

**Goal 5:** To encourage local governments to enter into cooperative service arrangements to better utilize existing resources.

**Goal 6:** To assist local units of government in identifying funding and technical resources to acquire and improve the services available to their residents.

**Land Use Goals and Objectives**

**Goal 1:** To promote the distribution of land uses that will preserve and enhance the character of the Bay-Lake Region by establishing land development guides designed to promote environmental protection, meet social and economic needs, provide for adequate services and facilities, conserve natural resources, and ensure compatibility of land uses.

**Goal 2:** To conserve and protect desirable existing residential, commercial, industrial, and agricultural development in order to maintain desirable social and economic values; renewal of obsolete and deteriorating residential, commercial, and industrial areas in the rural as well as in the urban areas of the Region; and prevention of slums and blight.

**Goal 3:** To develop communities having distinctive individual character based on physical conditions, historical factors, and local desires.

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## **REGIONAL DEMOGRAPHIC SUMMARY**

The following summary includes information regarding population and employment forecasts, as well as demographic trends, age distribution, education levels, income levels and employment characteristics that exist within the Bay-Lake Region. More detailed information can be found in later chapters of this plan.

### **Existing Conditions**

#### **Demographic Trends**

The region's population has risen markedly over the course of the last four decades. Projections developed after the 2000 Census indicates that the region's population was likely to increase through 2015, though at a slower rate than has been seen from the 2000 Census. The region has experienced (over the past three decades) an age structure shift towards the older age groups. This may lead the region to spend more on services to accommodate an aging population over the next twenty years. Likewise, the aging population can also mean additional business opportunities. The elderly have been shown to import income into a community, living on prior savings or investments in the form of social security, private pensions, stocks, etc. This aging population requires basic services such as groceries, housing and health care, but they tend to spend their incomes locally. Well planned and financed services and programs directed towards the elderly can go a long way in keeping the buying power of the retired community within the region.

Throughout the planning period there will be a demand for additional housing units within the Region. An increased population, a demand for larger lot sizes and a trend of smaller household sizes will increase the demand for residential developments. This plan identifies areas throughout the region that will be needed to accommodate this change in land use while ensuring adequate services are provided.

#### **Age Distribution**

From 1990 to 2000, several notable population distribution trends were observed in the Region. Most of the Region's population is within the middle age groups of 20 to 64. In 2000, approximately 49.8 percent of the Region's population was male, while 50.2 percent was female. The overall male population increased by 12.7 percent. The overall female population increased by 9.7 percent.

The number of persons in the age groups consisting of 70 years and older is increasing, both in absolute numbers and as a percent of the region's total population. For males, each distribution group increased by at least 9.9 percent; ages 90 and over increase the most (50.7 percent). For females, each distribution group (75 years and older) increased by at least 5.4 percent. The distribution groups 80 to 84 and 90 and over years also showed the greatest increases; these groups increased by 21.0 percent and 42.7 percent, respectively.

#### **Educational Levels**

The level of education that is attained by the population of a community will often be an indicator of the type of jobs in the area and the standard of living. In 2000, the educational attainment level with the greatest percent for the Bay-Lake Region's population (aged 25 years and older) was the High School diploma or equivalent level of education at 39.4 percent of the

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population. The Bay-Lake Region showed a higher percentage in this attainment level than any other area.

### **Income Levels**

The per capita income for residents in the Bay-Lake Region increased 67.5 percent for the period 1989 to 1999. As a percent, this increase was greater than the state increase over the same period. The highest per capita incomes (PCI) in the region, according to the 2000 Census, were recorded in Brown, Door and Sheboygan counties. PCI ranged from a low of \$17,492 in Marinette County to a high of \$21,784 in Brown County. Overall, the regional average of the eight PCIs in the Bay-Lake Region was \$19,778. Although this number is \$1,493 less than the PCI recorded at the state level, the PCI in the region appears to be growing at a faster pace than the state.

### **Employment Characteristics**

In 2000, the majority of employed persons 16 years and older in the Bay-Lake Region were in management, professional and related occupations (27.5 percent). Two other important occupations in the region include the sales and office occupations and the production, transportation, and material moving occupations with 24.1 percent and 23.9 percent of employment, respectively. Less than 10 percent of the region's workforce over 16 years is in the construction, extraction, and maintenance occupations. Only 1.2 percent of the employed persons in the region work in the farming, fishing and forestry occupations

### **Forecasts**

Tables, figures and additional text are provided in later chapters to aid in the explanation of the forecasting methods used below.

### **Population**

In 2004, the Wisconsin Department of Administration (WDOA) Demographic Services Center prepared population projections to the year 2030 for all communities and counties in the state. The WDOA utilized a projection formula that calculates the annual population change over three varying time spans. From this formula, the WDOA projections indicated that the Bay-Lake Region will have a population of 663,975 persons in 2030. This is an increase of 109,408 persons, or 19.7 percent. Marinette County is anticipated to show the smallest change proportionately (3.1 percent) while Brown County will show the highest change (28.7 percent).

The Commission has prepared alternative population projections to determine an approximate range in the growth rate for the Region using the WDOA population projections to 2030, and Census information.

A "Linear" projection was created using the 1970 through 2000 Census figures. According to Commission projections, the projected 2030 population will 656,235. This projection represents an increase of 18.3 percent by 2030 or 101,670 persons.

The Commission also developed a second "Growth" projection by using the 1970 through 2000 Census figures and creating a growth trend series to the year 2030. This method identified a projected year 2030 population of 696,482. According to this "Growth" projection, the Region's



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2000 population will increase by 25.6 percent by the year 2030 representing an increase of 141,917 persons.

For a detailed discussion of the regional population projections, see *Volume II, Chapter 6: Housing and Population*.

## **Housing**

In formulating a “best guess” for the future residential needs of the region, three growth scenarios were used to determine a range in housing projections to 2030.

Using the Census housing counts from 1970 to 2000, the Commission calculated a linear trend in housing units to the year 2030. This created a housing unit projection which indicated that by 2030 the region would have 351,398 total housing units or an increase of 102,482 housing units over the 2000 Census count.

A growth trend was also developed to the year 2030 using the Census housing counts. This created a housing unit projection which indicated by 2030 the region would have 436,837 total housing units or an increase of 187,921 housing units over the 2000 Census count.

A third growth scenario was calculated using the WDOA Population Projections and Household Size Projections. The percent of occupied housing units was held constant for the planning period for each county in order to calculate the number of housing units that could be expected by 2030. This created a housing unit projection which indicated by 2030 the region would have 330,531 total housing units or an increase of 81,615 housing units over the 2000 Census count.

The Commission chose to use a housing scenario representing an average of the three projections in order to determine the amount of land that needs to be allocated for future residential growth during the 20 year planning period.

## **Employment**

In 2002, the Wisconsin Department of Workforce Development created projections for industries, occupations, and the labor force called the Bay Area (Northeast Wisconsin) 2002-2012. These projections cover 10 counties of Northeast Wisconsin to include the eight counties of the Bay-Lake Region. The study concluded that overall employment is expected to increase by 11.9 percent within the region. Unemployment rates will remain in the 4.5-5.5 percent range for the area for the near future, and labor shortages may be common in some occupations. .

The manufacturing industry is projected to continue to be the industry with the largest share of employment. Although manufacturing jobs will continue to increase, that rate of increase will slow down dramatically to less than one percent for this 10 year time period. Occupations anticipated to be lost in paper manufacturing are expected to be added in the manufacture of plastics and rubber and transportation equipment.

Service industry employers will add approximately 19,200 jobs to the region’s labor market by 2012. The largest divisions within this industry group will be business and health services with a similar growth in professional or technical jobs. With the aging of the population, the demand for such services will continue to increase. Other than a decline in paper manufacturing occupations, the overall health of the Northeast Wisconsin economy is projected to be strong across all industry sectors.

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## **CHAPTER 5 - NATURAL, AGRICULTURAL AND CULTURAL RESOURCES**

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### **INTRODUCTION**

The Bay-Lake Region has abundant agricultural, natural, and cultural resources with plentiful prime agricultural land, over 400 miles of coastal shoreline along Lake Michigan and Green Bay, containing 12 major watershed areas that drain into the waters of Green Bay and Lake Michigan teaming with significant natural resources, and numerous examples of history, art, and culture.

### **Statement of Purpose**

This chapter provides an inventory of the agricultural, natural, and cultural resources of the Bay-Lake Region and presents opportunities to protect the resources we value, so that future generations may enjoy these treasures. An understanding of these resources is needed to make informed planning decisions and balance the needs of development while maintaining a healthy environment within the Region.

### **SUMMARY AND IMPLICATIONS**

This chapter provides a summary of the natural, agricultural, and cultural resources available in the Bay-Lake Region. The chapter is divided into three sections; natural/physical resources, agricultural resources, and cultural resources. Each section contains a broad inventory of the resources and an overview of issues and implications related to those resources.

### **Issues**

#### **Natural Resources**

- Preservation and sound management of natural resources and public lands for multiple uses
- Preservation of environmental corridors
- Preservation, restoration, and improvement of surface water quality
- Protection of groundwater resources (quality and quantity)
- Promotion of healthy beaches and efforts to remedy beach closings
- Preservation and encouragement of public access to lakes and rivers
- Preservation of biodiversity and critical habitats/communities
- Preservation of the Niagara Escarpment
- Encouragement of sustainable forestry practices
- Improvement of air quality

#### **Agricultural Resources**

- Promotion of education towards efforts to limit land use conflicts
- Preservation of agricultural lands
- Preservation of rural character

#### **Cultural Resources**

- Support for development and expansion of cultural resources/facilities
- Preservation of valuable historic and archaeological resources
- Preservation and protection of parks and natural areas

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## **NATURAL RESOURCES STRATEGY**

The current legislation on comprehensive plans, under Section 66.1001 of the Wisconsin State Statutes, requires that the agricultural, natural, and cultural resources element needs to be integrated and made consistent with the other eight elements of the comprehensive plan. For example, implementing the goals and policies of this chapter must correspond to actions recommended in other chapters such as housing and population, land use, economic development, transportation, community facilities, and implementation.

The following stated Goals, are based on the information provided and further detailed within this volume of the Regional Comprehensive Plan. More detailed Objectives, Policies, and Programs can be found in *Volume I: The Plan*.

### **Natural, Agricultural, and Cultural Resources Goals**

#### **Natural Resources**

**Goal 1:** To preserve the Region's natural resources for enjoyment by its residents and visitors for present and future generations.

#### **Agricultural Resources**

**Goal 2:** To identify and preserve the Region's agricultural resources to provide food and feed for present and future generations, and preserve the rural character of the Region.

#### **Cultural Resources**

**Goal 3:** To preserve and encourage development and expansion of cultural resources within the Region.

## **NATURAL RESOURCES**

### **Climate**

The Bay-Lake Region typically experiences continental weather with some modification by Lake Michigan and Green Bay. The cool waters of the lake and bay delay spring, while relatively warm water in fall retards early frost. Summers, on average, are mild due to the region's proximity to water that moderates daily extremes.

About two-thirds of the annual precipitation falls during the growing season. It is normally adequate for vegetation, although drought is occasionally reported. The climate is most favorable for dairy farming; the primary crops are corn, small grains, hay, and vegetables.

The growing season averages 118 to 150 days. The average date of the last spring freeze varies from the first week to the last week of May. The first autumn freezes occur in early to mid-October.

The long-term mean annual precipitation ranges from 31 to 32 inches over most of the Bay-Lake Region. Ice forms on Green Bay in late December and generally covers the bay by mid-January. During mild winters, the bay may not freeze completely. Ice breakup usually occurs in early April.

The average seasonal snowfall varies from 55 inches in the north to 48 inches in the south. The mean dates of first snowfall of consequence, an inch or more, occur in early November. The snow cover acts as protective insulation for grasses, autumn seeded grains, and other vegetation.

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The approximate humidity conditions for the Bay-Lake Region in winter ranges from an average nighttime maximum of about 80 percent to a daytime minimum of about 70 percent. Relative humidity in the summer averages 85 percent at night and 60 percent in the daytime.

### **Ecological Landscapes**

The Wisconsin DNR has mapped Wisconsin into areas of similar ecological potential and geography into units known as Ecological Landscapes. This classification is based on aggregations of subsections from the National Hierarchical Framework of Ecological Units (NHFEU) (Avers et al. 1994). The NHFEU and the Ecological Landscape systems delineate landscapes of similar ecological pattern and potential across the state in a way that is meaningful and useful to resource administrators, planners, and managers.

The Bay-Lake Region falls into six of these Ecological Landscapes or Eco-Regions. These include (Map 5.1):

*The North Central Forest Ecological Landscape* occupies much of the northern third of Wisconsin. Its landforms are characterized by end and ground moraines with some pitted outwash and bedrock controlled areas. Kettle depressions and steep ridges are found in the northern portion. Two prominent areas are the Penokee-Gogebic Iron Range in the north extending into the state of Michigan and Timm's Hill in the south. Soils consist of sandy loam, sand, and silts. Forests cover approximately 80 percent of the area, with northern hardwood species dominating. A variety of wetland communities are also present, both forested and non-forested.

*The Northeast Sands Ecological Landscape* occupies a relatively, narrow, vertical band of land in northeast Wisconsin. This landscape formed in glacial outwash sand plains and has steep outcropping of Precambrian bedrock knolls formed from basalt, rhyolite, and granite. Sandy ground and end moraines are interspersed in the landscape. Most of this area is forested, primarily with aspen and some northern hardwoods. The Brazeau Swamp is one of the best large cedar swamp forests in northern Wisconsin. The area contains several important river systems, as well as extensive wetlands.

*The Forest Transition Ecological Landscape* supports both northern forests and agricultural areas. The eastern and western portions of the landscape are on moraines of the Wisconsin glaciations. The growing season is long enough to support viable agriculture. Soils are diverse ranging from sandy loam to loam or shallow silt loam, and from poorly drained to well drained. Approximately 60 percent of the landscape is non-forested, though most of the eastern portion remains forested. Ecologically significant areas are found within this landscape as it lies along the Tension Zone between northern and southern landscapes of Wisconsin.

*The Northern Lake Michigan Coastal Ecological Landscape* includes Green Bay, as well as the northern part of the Door Peninsula. Its landforms consist of the Niagara escarpment, a prominent dolostone outcropping along the east side of Green Bay; a lacustrine plain along the west side of Green Bay; and ground moraine elsewhere. The influence of Lake Michigan moderates extreme temperatures. Soils are very diverse; in some areas, lacustrine sands are found overlying clays or bedrock within only a few feet of the surface. In the Door Peninsula, soils are typically stony loamy sands to loams. Poorly drained sands are common in the lake plain or in depressions between dunes and beach ridges. On the western side of Green Bay, the ground moraine is composed mostly of moderately well drained, rocky sandy loams interspersed

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with lacustrine sands and clays, and peat and muck is common. Current vegetation consists of more than 60 percent non-forested land, most of which is in agricultural crops, with smaller amounts of grasslands, wetlands, shrub lands, and urbanized areas. Forested lands are dominated by maple-basswood, with smaller amounts of lowland hardwoods, aspen-birch, and lowland conifers. High quality areas of exposed alkaline bedrock beach occur on the northern Door Peninsula, providing habitat for many rare plants. In addition, several islands off the Door Peninsula provide critical habitat for rare species and colonially nesting birds.

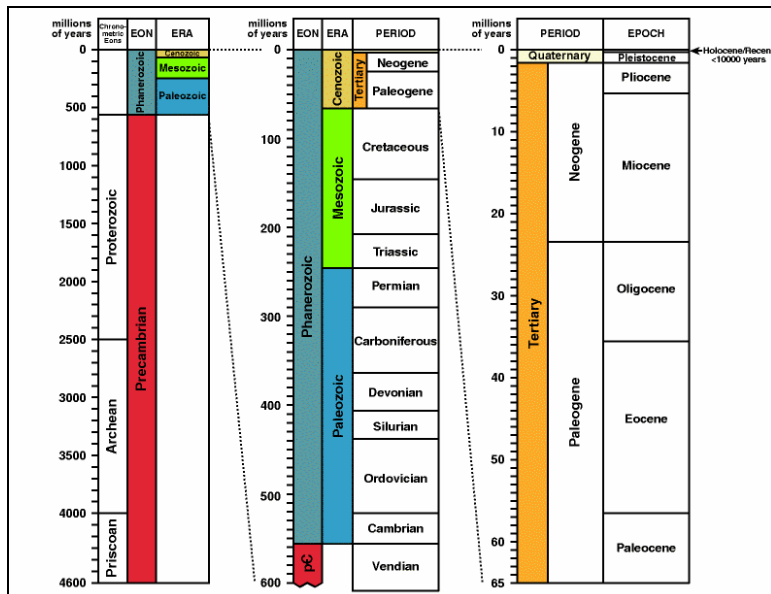
*The Central Lake Michigan Coastal Ecological Landscape* stretches from southern Door County west across Green Bay to the Wolf River drainage, then southward in a narrowing strip along the Lake Michigan shore to central Milwaukee County. Summers are cooler, winters are warmer, and precipitation levels are greater in the eastern part of this landscape than at locations farther inland, owing to the influence of Lake Michigan. Dolostone and shale underlie the glacial deposits that blanket virtually all of the Central Lake Michigan Coastal Ecological Landscape. The dolostone Niagara Escarpment is the major bedrock feature, running across the entire landscape from northeast to southwest. Series of dolostone cliffs provide critical habitat for rare terrestrial snails, bats, and specialized plants. The primary glacial landforms are ground moraine, outwash, and lakeplain. The topography is generally rolling where the surface is underlain by ground moraine, variable over areas of outwash, and nearly level where lacustrine deposits are present. Important soils include clays, loams, sands, and gravels. Certain landforms, such as sand spits, clay bluffs, beach and dune complexes, and ridge and swale systems, are associated only with the shorelines of Lake Michigan and Green Bay. Today approximately 84 percent of this Ecological Landscape is non-forested. The remaining forest consists mainly of mesic maple-basswood or maple-beech types, or lowland hardwoods composed of soft maples, ashes, and elms.

*The Southeast Glacial Plains Ecological Landscape* makes up the bulk of the non-coastal area in southeast Wisconsin. This landscape is made up of glacial till plains and moraines composed of glacial materials deposited during the Wisconsin Ice Age. Agricultural and residential uses have significantly altered the historic vegetation. Most of the rare natural communities are associated with the Niagara Escarpment or large moraines. Agriculture and urban land uses dominate, with forested areas occupying about 10 percent of the area.

## **Geology**

Two different types of geologic settings, Quaternary geology and bedrock geology, characterize the Bay-Lake Region. Quaternary geology refers primarily to the effects that continental glaciations have had on the region within the last 20,000 years and to a lesser extent, the surface effects of erosion that is more recent and deposition. Bedrock geology refers to the much older, solid rock layers that lie beneath Quaternary sediments. Figure 5.1 and 5.2 illustrate the time span for each of these geologic time periods.

Figure 5.1: Geologic Time Scale



Source: Dr. Andrew MacRae, The University of Calgary, Dept. of Geology and Geophysics, 1996.

Figure 5.2: Geologic Eras

CENOZOIC ERA (Age of Recent Life)	Quaternary Period	The several geologic eras were originally named Primary, Secondary, Tertiary, and Quaternary. The first two names are no longer used. Tertiary and Quaternary have been retained but used as period designations.
	Tertiary Period	
MESOZOIC ERA (Age of Medieval Life)	Cretaceous Period	Derived from Latin word for chalk (creta) and first applied to extensive deposits that form white cliffs along the English Channel.
	Jurassic Period	Named for the Jura Mountains, located between France and Switzerland, where rocks of this age were first studied.
	Triassic Period	Taken from the word "trias" in recognition of the threefold character of these rocks in Europe.
PALEOZOIC ERA (Age of Ancient Life)	Permian Period	Named after the province of Perm, U.S.S.R., where these rocks were first studied.
	Pennsylvanian Period	Named for the State of Pennsylvania where these rocks have produced much coal.
	Mississippian Period	Named for the Mississippi River Valley where these rocks are well exposed.
	Devonian Period	Named after Devonshire, England, where these rocks were first studied.
	Silurian Period	Named after Celtic tribes, the Silures and the Ordovices, that lived in Wales during the Roman Conquest.
	Ordovician Period	
PRECAMBRIAN	Cambrian Period	Taken from the Roman name for Wales (Cambria) where rocks containing the earliest evidence of complex forms of life were first studied.
		The time between the birth of the planet and the appearance of complex forms of life. More than 80 percent of the Earth's estimated 4-1/2 billion years falls within this era.

Source: USGS, *Geologic Time*, 1997.

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## **Bedrock Geology**

The bedrock units, which underlie the Bay-Lake Region, range in age from Precambrian at depth, to Silurian at the surface. The oldest are impermeable crystalline rock of Precambrian age at depths that average more than 1,500 feet below the land surface (Map 5.2).

The northern part of the region is underlain by some of the oldest and most complexly formed rocks in Wisconsin. These rocks, many of which are over one billion years in age, were formed during the Precambrian Era. The northern bedrock is a continuation of the Canadian Shield and consists of Lower Precambrian and Middle Precambrian Rocks. The rocks consist largely of granites and various other igneous and metamorphic rocks that are estimated to be 5,000 to 15,000 feet in thickness.

In the central and southern part of the region, these rocks are overlain by consolidated sedimentary rocks of Cambrian, Ordovician, and Silurian ages. These sedimentary rocks are solidified marine sediments that dip southeast towards the center of Michigan at approximately 45 feet per mile.

Silurian dolostone, often referred to as Niagara, is the uppermost bedrock in the southern portion of the region. The dolostone bedrock, reaching thicknesses up to 580 feet, is exposed in outcroppings along the bluffs near the waters of Green Bay. Rocks underlying the Niagara dolostone are not visible in the region. Below the Niagara dolostone is a shale formation known as Maquoketa. It reaches a maximum thickness of 450 feet. The Maquoketa Shale overlies a dolostone formation, termed Platteville-Galena, which is approximately 500 feet in thickness. This rock formation, in turn, overlies Cambrian sandstones, which are 450 feet thick. All of these sedimentary rock formations overlie Precambrian igneous rocks.

The Silurian or "Niagara" dolostone is perhaps the most notable bedrock unit within the region. The rock dips gently to the southeast and is best exposed along the northern shore of Green Bay as a 60 to 90 foot cliff in the region. This cliff is known as the "Niagara Escarpment". The Niagara Escarpment is a 650-mile geologic landform, made up of Niagara dolostone that crosses state and national borders. The escarpment is a sickle-shaped cuesta (a ridge with a steep face on one side and a gentle slope on the other) that begins in western New York State and runs through central Ontario into Michigan, ending in south-central Wisconsin. Within the Bay-Lake Region, the Niagara Escarpment is a linear feature that starts at Washington Island at the tip of Door County and follows southwesterly along the western edge of the Door Peninsula to the northeast side of the city of Green Bay. Subsequently, the escarpment turns more southerly from Green Bay and becomes covered with glacial till for several miles throughout Kewaunee County, then reappears in the regions of Ledgeview and Morrison in southern Brown County. The escarpment continues further southwest outside of the Bay-Lake Region.

## **Quaternary Geology**

The last glacial ice of Quaternary glaciations, which left the planning area approximately 10,000 years ago, modified the bedrock surface by scouring highlands and depositing material in lowlands created by pre-glacial erosion. Four types of Quaternary deposits are recognized within the region, including till, glaciofluvial sediments, shoreline deposits, and organic deposits (Map 5.3).

Till or unstratified drift is a mixture of unsorted, angular- to round-shaped sediments ranging in size from clay to boulders. Tills are ice-contact deposits originating directly from glacial ice.

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Unlike till, glaciofluvial sediments are sorted by particle size that delineates the stratification. Glaciofluvial sediments were deposited in a fluvioglacial environment involving glacial meltwater flow. Each individual layer of glaciofluvial sediments are characterized by a given grain size, ranging from pebbles and cobbles to sand, or finer.

Ground and end moraines are two types of topographic landforms found in the region that consist primarily of till. A ground moraine is an irregular surface of till that was deposited by a receding glacier. The steeper slope points in the direction from which the glacier advanced. An end moraine is an accumulation of earth, stones, and other debris deposited at a glacier's end stage.

At least one type of topographic landform consisting of glaciofluvial sediments occurs in some areas of the planning area. This type of topographic feature is an outwash plain, which is an apron of well-sorted, stratified sand and gravel deposited by glacial meltwater. Glaciofluvial deposits, which contained large ice blocks that eventually melted, were pitted with depressions known as kettles. Glaciofluvial deposits of sand and gravel surround many drumlins; but these are often covered with a thin silt cap.

The most prominent ancient shoreline in the area is that of the Nipissing Great Lakes phase, which usually occurs at an elevation of 600-605 feet above sea level. The highest ancient shoreline in the area is that of the Algonquin phase, which occurs at elevations between 620 and 658 feet above sea level.

### **Soils**

Soil is composed of varying proportions of sand, gravel, silt, clay, and organic material. The composition of a soil affects the specific properties of that soil. These properties must be evaluated prior to any development.

The general character soil is largely the result of various glacial depositional processes. Outwash soils were formed from glacial deposits that were derived from local bedrock formations. Organic soils developed under a forest cover consisting mainly of conifers and hardwoods in the north, in a cool and relatively moist climate. Sandy soils were formed from parent materials derived from sandstone bedrock pulverized by glacial ice.

Soils, in part, determine how much rainfall or snowmelt directly flows into the rivers, lakes, and wetland, and how much infiltrates the ground. Water that infiltrates the ground replenishes soil moisture and recharges the groundwater system. Soils are grouped into general soil associations that have similar patterns of relief and drainage. These associations typically consist of one or more major soils and some minor soils. The general soil types can be divided into three broad categories: areas dominated by soils formed in glacial till; areas dominated by soils formed in glacial outwash and till; and areas dominated by organic soils.

### **General Soils Description**

There are 27 diverse soil associations within the Bay-Lake Region ranging from sandy loam to loam or shallow silt loam, and from poorly drained to well drained (Map 5.4). In some areas, lacustrine sands are found overlying clays or bedrock within only a few feet of the surface. In the Door Peninsula, soils are typically stony loamy sands to loams. Poorly drained sands are common in the lake plain or in depressions between dunes and beach ridges. On the western side of Green Bay, the ground moraine is composed mostly of moderately well drained, rocky sandy



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loams interspersed with lacustrine sands and clays, and peat and muck. Important soils in the southern part of the region include clays, loams, sands, and gravels.

### **Steep Slope**

Steep slopes are defined (for planning purposes) as areas of land that rise greater than 12 percent in angle. This translates to 1.2 feet of elevation change for every ten feet of area. Areas of steep slopes are prone to erosion if the vegetation is not maintained and are unsuitable for development. For that reason, the Bay-Lake Regional Planning Commission has included steep slopes (slopes at 12 percent or greater) as an element of the environmental corridors. The Bay-Lake Regional Planning Commission has inventoried the steep slopes of the Region using county NRCS soil surveys, which were updated digitally in early 2004. All soils of slope type D, E and F were categorized as steep slopes having a slope of 12 percent or greater. The steep slopes of the Region appear on Map 5.5.

### **Topography**

The attractiveness of the Bay-Lake Region is due, in part, to a variety of topographic features. The general topography of the study area is characterized by a gently rolling landscape broken by the Niagara Escarpment and areas of steep slope. Most landforms in the Region are glacial in origin, including drumlins, esker-like ridges, and wetlands.

### **Water Resources**

Wisconsin is divided into three major water basins each identified by the primary waterbody into which the basin drains. In Wisconsin, there is the Lake Superior Basin, Mississippi River Basin and the Lake Michigan Basin. The Bay-Lake Region is wholly contained within the Lake Michigan Basin. The larger Major Basins are hydrologically divided into sub-basins or Water Management Units (WMUs). Of the 24 sub-basins in Wisconsin, five (wholly or in part) are within the Bay-Lake Region. These are the Upper Green Bay Basin, the Lower Fox River Basin, the Lakeshore Basin, the Sheboygan River Basin, and a small part of the Milwaukee River Basin in southern Sheboygan County.

### **Watersheds**

A watershed is defined as an interconnected area of land draining from surrounding ridges to a common point such as a lake or stream confluence with a neighboring watershed. All lands and waterways can be found within one watershed or another.

The Bay-Lake Region encompasses some of the most scenic and critical watersheds within Wisconsin (Map 5.6). The Region has 42 watersheds and they are all part of the Lake Michigan basin; therefore, all the watersheds in the Bay-Lake Region's eight counties drain to Lake Michigan through Green Bay, major rivers, or direct drainage to the Lake. Watersheds in Wisconsin have been classified as either Priority or Non-Priority watersheds for water quality purposes by the Wisconsin Department of Natural Resources. Three watersheds, the Fox (the Fox River watershed includes the East River, Duck Creek, and Apple/Ashwaubenon Creeks Priority Watersheds), the Menominee, and the Sheboygan Rivers, have been designated as Great Lakes Areas of Concern (AOCs) by the International Joint Commission. AOCs are required to have a Remedial Action Plan (RAP) and implement the RAP to address contamination issues in the watershed.

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### ***Priority Watersheds***

The Wisconsin Nonpoint Source Water Pollution Abatement Program (NPS Program) was created in 1978 by the State Legislature and is managed by the WDNR. This program selected priority watersheds based on numerous factors including, but not limited to the potential for unique species to respond positively to nonpoint source controls and sensitivity to phosphorus loading. The program has provided financial and technical assistance to landowners and local governments to reduce nonpoint source pollution by addressing land management activities that contribute to urban and rural runoff. The Program funds such activities as implementation of watershed and lake projects; installation of best management practices; reductions in sediment/soil loss from uplands, streams, and gullies; phosphorus reductions from barnyards and croplands; and activities to protect the shoreline and habitat in a watershed or lake.

As of January 2004, 16 watersheds within the Bay-Lake Region have been designated as Priority Watersheds. Each of the 16 priority watersheds have been listed below with a brief description.

*Apple/Ashwaubenon Creeks Watershed* was designated a priority watershed in 1994. It is 113 square miles in size, of which approximately 60 percent lies within Outagamie County and 40 percent is located within Brown County. There are 171 miles of named and unnamed streams in the watershed, all of which empty into the Fox River. Apple Creek, a 24-mile creek, is usually dry except for scattered pools near road crossings and toward the mouth of the river where it drains into the Fox River. Sources of nonpoint pollutants include stormwater runoff, erosion, phosphorous loading from upland agricultural fields, cattle pasturing along stream banks and hills, and sedimentation. Ashwaubenon Creek, a 15-mile sluggish, hard water stream, flows through agricultural and residential Brown County. In the agricultural portion of the stream, the stream banks and hills are bare and eroded due to cattle pasturing. The residential portion of the stream is filled with litter and debris. Land use in the watershed is primarily agriculture and residential, though industrial areas do exist in the urban areas of Green Bay and the north side of Appleton. Many intermittent tributaries discharge to Apple and Ashwaubenon Creeks and serve as the transport system for rain runoff; the headwaters are often dry in summer.

*Branch River Watershed* was designated in 1993. It is located eight miles southeast of the city of Green Bay and approximately 15 miles northeast of the city of Manitowoc. It drains 107 square miles of land in Brown and Manitowoc Counties and is located within the Manitowoc River Basin. Approximately 41,656 acres of the Branch River Watershed lies within the boundaries of Manitowoc County and 27,020 acres within Brown County. Land use in the Branch River Watershed is primarily dairy farming with the intensity of cropland, pastures, and cattle numbers appearing to be the greatest in the headwaters of the watershed. Most of the watershed's population lives in rural unincorporated areas. Sources of rural nonpoint pollutants occur from barnyard runoff, stream bank erosion, gully erosion, and sediment loading from croplands.

*Duck Creek Watershed* was designated in 1994. Of its 152-square mile area, 62 percent lies in Outagamie County with the remaining 38 percent in Brown County. Duck Creek is a 42-mile hard water stream that originates in Burma Swamp, located in central Outagamie County, and winds northeast until it empties into Green Bay, just north of the city of Green Bay. Land use in the watershed is predominately agricultural in the upstream portions with growing residential use in and near the Green Bay metropolitan area. Sources of nonpoint pollutants include sedimentation and phosphorus from upland agricultural fields. Upland areas account for well

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over 80 percent of the overall load. Eroding stream banks and improperly managed livestock operations are also contributors of nonpoint pollution.

*East and West Branch Milwaukee River Watershed* was designated in 1984. It covers 266 square miles and is located in portions of Dodge, Fond du Lac, Ozaukee, Sheboygan, and Washington counties. Land cover is primarily rural with agriculture dominating. Sources of nonpoint pollutants included wetland drainage, and urban and agricultural runoff contributing nutrients and sediment.

*East River Watershed* was designated in 1986. This watershed drains areas of land situated between the village of Wrightstown and Lake Michigan. The watershed area includes the East River Watershed (148 square miles), the lower portion of the Fox River from the village of Wrightstown to the bay of Green Bay (28 square miles), and the small streams to the east side of the bay of Green Bay (33 square miles). The East River Watershed drains approximately 209 square miles and contains more than 260 miles of streams. The watershed lies mostly in Brown County (99 percent), with a portion in Calumet and Manitowoc Counties. The majority of the population resides in incorporated areas primary concentrated in the metropolitan area of the cities of Green Bay and De Pere, and the villages of Ashwaubenon, Allouez, and Bellevue. The predominant land uses within the watershed are rural, consisting of agricultural and related open space uses, including woodlands and wetlands. Sources of rural nonpoint pollutants include sediment loading from cropland and eroding stream banks, polluted runoff from barnyards and feedlots, and runoff from winter-spread manure. Sources of urban nonpoint pollutants include construction sites, freeways, industrial areas, commercial areas, and residential areas.

*Kewaunee River Watershed* was designated in 1982. It traverses central Kewaunee County and eastern Brown County. Of the watershed's 139 square miles, 82 percent lies in Kewaunee County. The watershed is predominantly agricultural. Sources of rural nonpoint pollutants most commonly found in this watershed include sediment from crop and stream bank erosion, polluted runoff from barnyards and feedlots, and runoff from winter-spread with livestock manure.

*Little River Watershed* was designated in 1983. It is located in northern Oconto and southern Marinette Counties on the east shore of Green Bay. It included the lands draining to Little River and its tributaries. The Little River joins with the Oconto River about 11 stream miles from Green Bay. The watershed covers 218 square miles: 205 square miles in Oconto County and 13 square miles in Marinette County. The watershed is mostly rural in nature with about two-thirds of the area in agricultural use and one-third in uncultivated wetlands. Dairy farming is the major type of agriculture in the area, with few other types of livestock operations and very little cash grain. The only incorporated area within the watershed is the village of Lena. Sources of nonpoint pollutants included upland erosion, stream bank erosion, barnyard runoff, and manure spreading runoff.

*Lower Manitowoc River Watershed* was designated in 1979. The Lower Manitowoc River watershed includes the 168-square mile area of land that extends from the confluence of the North and South branches of the Manitowoc River and flows easterly approximately 36 miles before entering Lake Michigan. More than 90 percent of this part of the watershed is within Manitowoc County; the remaining portions lie in Brown and Calumet counties. Most of the land use along the river is agricultural and sources of nonpoint pollutants included cropland and stream bank erosion, and barnyard runoff.

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*Middle Peshtigo and Thunder Rivers Watershed* was designated in 1995. The Middle Peshtigo and Thunder Rivers Watershed is located in central Marinette County and northeastern Oconto County. The land use in this 194-mile basin consists of mostly forested areas with some rural residential, recreational, and a small amount of agriculture in the southeast portion of the watershed. Sources of nonpoint pollutants include runoff from agriculture and forestry areas.

*North Branch Manitowoc River Watershed* was designated in 1979. The watershed is part of the Lake Michigan basin. The main stem of the Manitowoc River, formed by the confluence of the North and South branches of the Manitowoc River, flows easterly approximately 36 miles before entering Lake Michigan. Most of the land use along the river is agricultural. The North Branch of the Manitowoc River Watershed is a 77-square mile area of land that is primarily in Northeastern Calumet County, but has a small part in northwestern Manitowoc County. Sources of nonpoint pollutants include cropland and stream bank erosion, and barnyard runoff.

*Pensaukee River Watershed* was designated in 1994 or 1996. The Pensaukee River Watershed is a 164-square mile drainage basin located approximately 25 miles north of the city of Green Bay and 12 miles east of the city of Shawano. Most of the watershed's population lives in rural unincorporated areas. Farming is of vital importance to this area's economy, as agriculture companies are the predominant land use in the watershed. Sources of rural nonpoint pollutants include sediment from crop and stream bank erosion, polluted runoff from barnyards and feedlots, and runoff from winter-spread with livestock manure. Population trends in the watershed appear stable, with population and new home construction projected to increase steadily through the year 2015. This is due largely in part to the expansion of State Highway 29 west from Green Bay, as well as the previous expansion of U.S. Highway 41 north of the city of Green Bay.

*Pigeon River Watershed* was designated in 1995. The Pigeon River is a 30-mile long tributary of Lake Michigan that lies within the Sheboygan River Basin. It forms at the confluence of the Pigeon and Meeme River Branches near the Sheboygan-Manitowoc county line. Sources of nonpoint pollutants include sedimentation, stream bank erosion, and construction and feedlot runoff.

*Red River and Sturgeon Bay Watershed* was designated in 1992. This 139-square mile drainage area is a sub-basin of the Twin-Door-Kewaunee basin that is located within the southern portion of the Door County peninsula, and Kewaunee and Brown Counties. The only incorporated area in the watershed is the city of Sturgeon Bay, where the majority of the watershed's population lives. Unincorporated areas include the villages of Brussels and Dyckesville. Sources of nonpoint pollutants in the watershed come from animal lot runoff, winter-spread manure, cropland erosion, improperly sited manure storage, stream bank erosion, and urban runoff. Pollutants found in runoff from agricultural and urban lands include sediment, phosphorus, nitrogen, bacteria, pesticides, and oxygen demanding materials. In addition, urban runoff may contain heavy metals and a large number of toxic organic chemicals (i.e. PCBs). Karst features such as sinkholes, caves, swales, exposed bedrock, and fracture traces are prevalent in many areas of the watershed.

*Sevenmile - Silver Creeks Watershed* was designated in 1986. The Sevenmile - Silver Creeks Watershed includes Silver, Calvin, Pine, Point, Fisher, and Centerville creeks. Agriculture is by far the dominant land use, making up 87 percent of all land uses in the watershed (WDNR, 1997). Sources of rural nonpoint pollutants most commonly found in this watershed include

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sediment from crop and stream bank erosion, polluted runoff from barnyards and feedlots, and runoff from winter-spread of livestock manure.

*Sheboygan River Watershed* was designated in 1985. The Sheboygan River originates in east-central Wisconsin and drains an area of land situated between Lake Winnebago and Lake Michigan. The watershed is a sub-basin of the larger Sheboygan River drainage basin that includes the Sheboygan River, the Pigeon River, Mullet River, Onion River, Black River, and direct tributaries to Lake Michigan. The Sheboygan River Watershed drains approximately 260 square miles. The watershed lies in portions of four counties: Sheboygan County, having the largest contributing drainage area with about 52 percent of the watershed; Fond du Lac County, containing about 30 percent of the watershed; Calumet County, containing about 7 percent; and Manitowoc County, making up about 11 percent of the watershed. The majority of the population living in the watershed resides in incorporated areas, primarily concentrated in the metropolitan area of Sheboygan and Sheboygan Falls, the city of Kiel, and the village of Kohler. Land uses in the watershed are primarily rural. Most of the land is used for agricultural purposes, with milk production and dairy products being the predominant industry in all four counties. Sources of rural nonpoint pollutants most commonly found in this watershed include sediment from crop and stream bank erosion, polluted runoff from barnyards and feedlots, and runoff from winter-spread of livestock manure. Sources of urban nonpoint pollutants include construction sites, freeways, industrial areas, commercial areas, and residential areas. The Sheboygan River Watershed is the most studied watershed in the Sheboygan River Basin. Many researchers have conducted studies to determine the effects of polychlorinated biphenyl (PCB) uptake in fish and wildlife in the lower 14 miles of the Sheboygan River. This section of the river is listed as a Federal Superfund site. The U.S. EPA and others are currently evaluating clean up alternatives for this site.

*Upper Door Peninsula Watershed* was designated in 1984. It includes the northern portion of the Door County peninsula from the Sturgeon Bay ship canal to the northern tip of the county, including Washington Island and Chambers Island. The Upper Door has a mix of rural agricultural land use and tourist-associated land use. The interior of the peninsula from Sturgeon Bay north to a line drawn from approximately Fish Creek to Bailey's Harbor is predominantly agricultural land use. North of the line, agricultural land use exists to a much lesser degree and fallow lands are common. The shoreline of Sturgeon Bay, Green Bay, and Lake Michigan are lined mostly with seasonal residential dwellings. Sources of nonpoint pollutants included eroding agricultural lands, eroding stream banks and roadsides, poorly managed livestock wastes, erosion from both established and developed urban areas, and stormwater runoff from urban areas.

### ***Non-Priority Watersheds***

The other 26 watersheds within the Bay-Lake Region have been designated as Non-Priority Watersheds through the Wisconsin Nonpoint Source Water Pollution Abatement Program (NPS Program). Each of the twenty-eight non-priority watersheds have been listed below with a brief description.

*Ahnapee River Watershed* covers northern Kewaunee County and southern Door County. This 136-mile watershed contains the Ahnapee River, which flows through predominantly agricultural lands and wetlands. The watershed is particularly susceptible to groundwater degradation due to its shallow soils and exposed, fractured dolostone bedrock. Sources of

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nonpoint pollutants include sediment deposition and nutrient enrichment from agricultural land erosion. This watershed received a “high” groundwater ranking for selection as a priority watershed project.

*Black River Watershed* is located entirely within Sheboygan County and contains the 11-mile Black River. It is characterized primarily as natural lowlands with adjacent agricultural areas. Sources of rural and urban nonpoint source pollutants include channel modification, construction site erosion, and increased imperviousness contribute to flashy flows, increased nutrients, bacteria, and sedimentation.

*Brule River Watershed* is located in Florence County and creates the border between northeast Wisconsin and Michigan's Upper Peninsula. This 195-mile watershed is predominantly forested with some residential and industrial land uses. Nonpoint source pollutants include sedimentation, produced largely in part to forestry management practices, highway and residential construction, and power generation. Other sources include stream bank erosion, and water and wind erosion from farmland.

*East Twin River Watershed*, which is 184 square miles, is located in northeastern Manitowoc County and southeastern Kewaunee County. The primary land use is agriculture, but some industrial land uses border the river in the city of Two Rivers. Urban development is restricted primarily to the Two Rivers area. Sources of nonpoint pollutants include cropland erosion, stream bank, woodlot pasturing, gully erosion, and construction site and barnyard runoff.

*Little Peshtigo River Watershed* is located in southwestern Marinette County and extends in eastern Oconto County. The land use is largely agricultural with scattered areas of wetlands and small, forested areas. There are some water quality problems resulting from nonpoint sources runoff into the lakes and streams. This watershed drains into the Peshtigo River.

*Lower North Branch Oconto River Watershed* lies in central Oconto County with small portions extending into Marinette and Menominee Counties, along with overlapping into the Headwaters Basin (Forest and Langlade Counties). There are a number of inland lakes throughout the basin and wetlands are abundant in the southeastern portion of the watershed. A large part of the watershed is forested with some areas of agricultural lands found in the lower reaches of the Peshtigo Brook.

*Lower Oconto River Watershed* is located in central Oconto County with small portions extending into northern Shawano and eastern Menominee counties and drains into Green Bay. There is some agricultural activity along with a few small communities and three hydroelectric power dams in this watershed.

*Lower Peshtigo River Watershed* is located in southeastern Marinette County where the Peshtigo River drains into Green Bay. The watershed includes the city of Peshtigo and part of the City of Marinette. A portion of the watershed is forested with some agricultural use. There are some large areas of wetlands in the watershed.

*Middle Inlet and Lake Noquebay Watershed* was designated in 1992. It is located entirely within Marinette County in the Upper Green Bay Basin. The watershed area is a 156-square mile drainage basin that drains to The Outlet and Peterman Brook. The entire watershed drains to the Peshtigo River, which in turn drains to the bay of Green Bay. Seasonal residents and weekend vacationers make up a large portion of the rural population. Approximately one-half of the

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village of Crivitz lives within the watershed boundary. Rural land use dominates this watershed, with forests being the predominant land cover. Agriculture, primarily dairy farming, is the next predominant land use. Sources of nonpoint pollutants are mainly of agricultural sources from eroding agricultural lands and stream banks, field application of manure, fertilizers and pesticides, and runoff from livestock wastes. There is little developed land in the watershed, but urban lands do contribute some nonpoint sources of pollutants including storm sewers, roads, ditches, and riparian development.

*Mullet River Watershed* is about 88 square miles and it originates at the outlet of Mullet Lake in Fond du Lac County, running northeast into Sheboygan County. The river then runs east and drains into the Sheboygan River near Sheboygan Falls. Land use in the Mullet River watershed is primarily agricultural. Sources of nonpoint pollutants include runoff from barnyards, eroding agricultural lands, and stream bank erosion.

*North Branch Milwaukee River Watershed* was designated in 1984. The North Branch Milwaukee River Watershed is located in portions of Sheboygan, Ozaukee, and Washington counties and has a drainage area of 150 square miles. Land cover is primarily rural with agriculture dominant. Sources of nonpoint pollutants included runoff from animal waste, sedimentation from crop fields, urban construction sites, and stream bank erosion.

*Onion River Watershed* was designated in 1980. The Onion River Watershed was one of the first watersheds targeted under the Nonpoint Source Water Pollution Abatement Program. The watershed covers about 98 square miles and has 124 miles of streams. It flows southerly for about half its length before turning northward, entering the Sheboygan River in the city of Sheboygan Falls. Belgium Creek is the only major tributary to the Onion River. Land use in the watershed is primarily agricultural. The entire village of Waldo, most of the village of Belgium, and small portions of the village of Cedar Grove, and the city of Sheboygan Falls comprise the urban areas of the watershed. Sources of nonpoint pollutants included sedimentation, agricultural and urban runoff, pasturing practices, and stream bank erosion.

*Otter Creek and Rat River Watershed* originates in Forest County (Headwaters Basin) and most of the watershed is within the Headwaters Basin. A small portion of the watershed extends into east-central Marinette County. The watershed streams are comprised mostly of trout streams with a small number of warm water streams. Wetlands are found throughout the watershed and the majority of the watershed is wooded and wild with a small amount of agricultural use.

*Pemebonwon River and Middle Menominee Watershed* is located in Florence and Marinette counties and covers 291 square miles. The watershed is predominantly forested and flows to the Menominee River. Nonpoint source pollutants include sedimentation (produced largely from forestry management practices), highway and residential construction, stream bank erosion, and water and wind erosion from farmland.

*Pike River Watershed* is located in Marinette County. This 285-square mile area is sparsely populated and largely undeveloped, and is listed as a Wild River\*. Woodland and wetlands predominate in the watershed. Nonpoint source pollutants include sedimentation from forestry management practices, and residential construction.

\*A Wild River is designated as such in the Wisconsin Statutes Section 30.26. The Statute states that the Wild Rivers must remain in a free flowing condition containing no dams or other artificial development or structures that hinder the flow of the stream, and they must remain in a natural condition, free from most development or alteration. For more information, see the "Wild Rivers" section of this chapter under the heading of "Rivers and Streams".

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*Pine River Watershed* is located in Florence and northern Forest counties and has an area of 343 square miles. The Pine River is 89 miles in length. The area is sparsely populated and largely undeveloped, and is listed as a Wild River. Woodlands, wetlands, and undeveloped open space cover more 92 percent of the watershed.

*Plum and Kankapot Creeks Watershed* is an 84-square mile watershed of primarily agricultural land located mostly in Outagamie and Calumet Counties with a portion in southwestern Brown County. The watershed includes the village of Wrightstown in Brown County, most of the Fox Cities area from Kaukauna to Appleton, and village of Sherwood in Calumet County. Plum Creek is a 19-mile stream with poor water quality. The headwaters are intensively farmed. The lower reaches have very steep banks that prohibit pasturing and cropping. Sources of nonpoint pollutants include cropland erosion, stream bank pasturing in the upper reaches, and barnyard runoff. Kankapot Creek is a 9-mile stream with poor water quality. Sources of nonpoint pollutants include stream banks and gully erosion. The watershed is currently eligible for selection as a priority watershed under the Wisconsin Nonpoint Source Pollution Abatement Program.

*Popple River Watershed* is located in Florence and northern Forest counties and has an area of 231 square miles. The Popple River is the main tributary to the Pine River. It is over 62 miles in length and averages a width of 60 feet. The area is sparsely populated and largely undeveloped. The Popple River is listed as a Wild River.

*Sauk and Sucker Creeks Watershed* includes a small portion of Sheboygan County, but is predominately in Ozaukee County. Sauk and Sucker Creeks flow southward entering into Lake Michigan in and near Port Washington. Agriculture is the dominant land use in the Sauk and Sucker Creek Watershed; however, it is an urbanizing watershed. Sources of nonpoint pollutants include erosion from construction sites, run off from impervious surfaces, agricultural runoff, stream bank erosion, and sedimentation.

*South Branch Manitowoc River Watershed* was designated in 1979. The watershed is part of the Lake Michigan basin. The south branch of the Manitowoc River flows easterly to Lake Michigan. Most of the land use along the river is agricultural. The South Branch Manitowoc River watershed includes a 189-square mile area of land that extends from the confluence of the North and South branches of the Manitowoc River. More than 90 percent of this part of the watershed is within Manitowoc County; the remaining portions lie in Brown and Calumet counties. Sources of nonpoint pollutants included cropland and stream bank erosion, and barnyard runoff.

*South Branch Oconto River Watershed* is situated in west-central Oconto County, extending into Menominee County and a small portion in Langlade County (Headwaters Basin). The majority of the streams in this watershed are trout waters. Most of the inland lakes are located in the northern half of the watershed, and wetlands areas are found in the southern half of the watershed.

*Stony Creek Watershed* is a small watershed in eastern Door County with a portion extending into northeastern Kewaunee County. Stony Creek is 14 miles long and has been ditched in some sections. The watershed is particularly susceptible to groundwater quality problems due to prevalent shallow soils and the exposed, fractured dolostone bedrock. Land use is mainly agricultural, with limited residential development. Sources of nonpoint pollutants include



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sediment deposition and nutrient enrichment from agricultural land erosion. This watershed received a “high” groundwater ranking for selection as a priority watershed project.

*Suamico and Little Suamico Rivers Watershed* is located in Brown County and southern Oconto County and includes the village of Suamico. The watershed, which drains to Green Bay, is a mix of urban and agricultural land uses and is rapidly urbanizing. Sources of nonpoint pollutants include erosion from construction sites, runoff from impervious surfaces, agricultural runoff, stream bank erosion, and sedimentation.

*Upper Peshtigo River Watershed* originates in Forest County (Headwaters Basin) and most of the watershed is within the Headwaters Basin. The watershed extends into Marinette County including Caldron Falls Flowage and a small portion of Oconto County. It is largely forested with abundant wetlands throughout much of the watershed. Some recreational and agricultural lands are present as well.

*Wausaukee and Lower Menominee Rivers Watershed* with a drainage area of 187 square miles, begins at the junction of the Wausaukee River with the Menominee River and flows in a southeasterly direction into the west side of the bay of Green Bay. It located within Marinette County and bordered on the east side by the State of Michigan. Nonpoint source pollutants include sedimentation (produced largely in part to forestry management practices), highway and residential construction, power generation, stream bank erosion, and water and wind erosion from farmland.

*West Twin River Watershed* consists of 180-square miles located in north central Manitowoc County, southeastern Brown County, and a small portion extends into southwestern Kewaunee County. The primary land use is agriculture, but some industrial land uses border the river in the city of Two Rivers. Urban development is restricted primarily to the Two Rivers area. Sources of nonpoint pollutants include cropland erosion, stream bank, woodlot pasturing, gully erosion, and construction site and barnyard runoff.

## **Surface Waters**

Major surface waters within the planning area include Lake Michigan and the bay of Green Bay, the Fox River, and the Menominee River. The largest surface water resource within the region is the bay of Green Bay and Lake Michigan (Map 5.7).

### ***Outstanding and Exceptional Resource Waters***

The Bay-Lake Region has 88 *Outstanding Resource Waters* and 5 *Exceptional Resource Waters*. Wisconsin's “Outstanding and Exceptional Resource Waters Program” was designed by the State to maintain the water quality in Wisconsin's cleanest waters. Outstanding and Exceptional Resource Waters have been designated as such in NR 102.10 and NR 102.11 of the Wisconsin Administrative Code, *Water Quality Standards for Wisconsin Surface Waters*. An *Outstanding Resource Water* is a lake or stream having excellent water quality, high recreational and aesthetic value, high quality fishing, and free from point and nonpoint source pollution. An *Exceptional Resource Water* is a lake or stream exhibiting the same high quality resource values as an *Outstanding Resource Water*, but it may be impacted by point or nonpoint sources of pollution or have the potential for receiving a wastewater discharge from a non-sewered community in the future. Table 5.1 lists the Outstanding Water Resource Lakes in the region that have been designated by the state of Wisconsin under Wisconsin Administrative Code NR 102.

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Table 5.2 lists the rivers, streams, and creeks that are *Outstanding Water Resource* waters and Table 5.3 lists the *Exceptional Water Resource* waters in the Bay-Lake Region.

Table 5.1: Outstanding Resource Lakes

Outstanding Resource Lakes	County
Edith Lake	Florence
Keyes Lake	Florence
Lost Lake	Florence
Perch Lake	Florence
Riley Lake, South	Florence
Caldron Falls Flowage	Marinette
Archibald Lake	Oconto
Bass Lake	Oconto
Bear Paw lake	Oconto
Boot Lake	Oconto
Chain Lake	Oconto

Source: Wisconsin Administrative Code, NR 102, 2001.



Table 5.2: Outstanding Resource Rivers and Streams in the Bay-Lake Region

Outstanding Resource Waters	County	Outstanding Resource Waters	County
Logan Creek	Door	Little Harvey Creek (tributary)	Marinette
Mink River		Lost Creek (tributary)	
Black Earth Creek (above the easternmost CTY KP crossing)		MacIntire Creek (tributary)	
Brule River and Tributaries	Florence	Sackerson Creek (tributary)	
Montagne Creek (tributary)		Shinns Creek (tributary)	
Riley Creek (tributary)		Sidney Creek (tributary)	
Pine River/Popple River* and Tributaries		Smeesters Creek (tributary)	
Chipmunk Creek (tributary)		Springdale Brook (tributary)	
Cody Creek (tributary)		Whiskey Creek (tributary)	
Haley Creek (tributary)		Cedarville Creek	
Haymarsh Creek (tributary)		Otter Creek	
LaMontagne Creek (tributary)		Holmes Creek	
Lepage Creek (tributary)		East Thunder Creek	
Lunds Creek (tributary)		North Fork Thunder River	
Martin Creek (tributary)		Eagle Creek	
Olson Creek (tributary)		Little Eagle Creek	
Patten Creek (tributary)		Plumadore Creek	
Pine Creek (tributary)		Meadow Brook	
Riley Creek (tributary)		Upper Middle Inlet Creek	
Rock Creek (tributary)		Middle Inlet Creek	
Simpson Creek (tributary)		Wausaukee River	
Seven Mile Creek (tributary)		Little Wausaukee Creek	
Wakefield Creek (tributary)		Coldwater Brook	
Woods Creek (tributary)		Medicine Brook	
Little Popple River		South Branch Miscauno River	
Little Scarboro Creek	Kewaunee	Miscauno River	
Pike River* and Tributaries	Marinette	Swede John Creek	
Little South Branch Pike River (tributary)		South Branch Pemebonwon River	
Camp D Creek (tributary)		Spikehorn Creek	
Camp F Creek (tributary)		Silver Creek	
Camp 9 Creek (tributary)		Little Silver Creek	
Cole Creek (tributary)		Sullivan Creek	
Glen Creek (tributary)		North Branch Beaver Creek & Tributaries	
Harvey Creek (tributary)		First South Branch Oconto River	Oconto
North Branch Harvey Creek (tributary)		Second South Branch Oconto River	
South Branch Harvey Creek (tributary)		South Branch Oconto River	
Hemlock Creek (tributary)		Hills Pond Creek	
Holloway Creek (tributary)		Nichols Creek	Sheboygan
K.C. Creek (tributary)		*Wild & Scenic Rivers	

Source: Wisconsin Administrative Code, NR 102, 2001.

Table 5.3: Exceptional Resource Waters in the Bay-Lake Region

Exceptional Resource Waters	County	Portion
Casco Creek	Kewaunee	T24N R24E S19 downstream of Rock Ledge to Kewaunee River
Branch River	Manitowoc	
North Branch Oconto River	Oconto	
South Branch Oconto River	Oconto	
Ben Nutt Creek	Sheboygan	Class II Portion to Junction with Mill Creek

Source: Wisconsin Administrative Code, NR 102, 2001.

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## ***Lakes***

There are 1,314 lakes within the Bay-Lake Region. Of these documented lakes in the Region, only about 54 percent have actually been named. The acreage of the Region's lakes varies greatly, ranging from one acre to 2,409 acres with Lake Noquebay in Marinette County. Only 286 or 41 percent of the Region's lakes are larger than 20 acres, but they constitute more than 91 percent of the surface area of the Region's inland lakes. The total inland lake surface acreage in the Region approaches 38,000 acres. The depth of the Region's also varies a great deal, ranging from one foot to a maximum depth of 119 feet in Elkhart Lake (Big Elkhart Lake) in Sheboygan County (Map 5.8).

### **Most Common Lake Names in the Region**

<b>Lake Name</b>	<b>Lake Count</b>
Mud Lake	12
Bass Lake	7
Lost Lake	7
Long Lake	6
Perch Lake	6

Source: WDNR, *Wisconsin Lakes Book*, 2001.

In addition to the inland lakes, portions of Lakes Michigan and Green Bay lie within Wisconsin's boundaries. Lake Michigan is one of the Great Lakes that together add nearly 6.5 million acres of water to Wisconsin. Although Lake Michigan is far from being contained "within" the Region, much of its western shorelands lie within county boundaries of the Bay-Lake Counties. Green Bay, which is a part of Lake Michigan, it is often studied independently as the Bay is very different from the rest of Lake Michigan and is quite separated by the extent of the Bay.

Lake Michigan is the second largest Great Lake by volume, and the sixth largest lake in the world with a total area of 67,900 square miles, 307 miles long, and 118 miles wide. It is bordered by the States of Wisconsin, Illinois, Indiana, and Michigan and it is the only Great Lake entirely within the boundaries of the United States and drains a land area of 45,600 square miles. Within the Bay-Lake Region, Lake Michigan borders on Door, Kewaunee, Manitowoc, and Sheboygan counties. The Lake Michigan bottom type consists mainly of bedrock on exposed shores, and sand within the bays and shallow shores. Access for larger pleasure crafts is restricted to harbor sites because of the rocky, shallow, and sandy shores. Smallmouth bass, northern pike, and yellow perch are the dominant sport fishes, with the occasional walleye and rainbow trout. Most sport fishing occurs in the bays.

Bay of Green Bay is an arm of Lake Michigan. It starts on the south-west coast of Michigan's Upper Peninsula and runs along the east coast of Wisconsin. It is separated from the rest of the Lake Michigan by the Door Peninsula in Wisconsin, the Garden Peninsula in Michigan, and the chain of islands between them. Green Bay is some 120 miles long, with a width ranging from about 10 to 20 miles. The Fox River flows into the head of the bay at the city of Green Bay.

The Green Bay shoreline covers portions of Brown, Door, Kewaunee, Marinette, and Oconto Counties. The Door County shoreline alone is 133 miles long and contains 11 islands.

The Green Bay fishery consists of yellow perch, smallmouth bass, northern pike, and walleyes. Public access is available from several roads, public hunting grounds, public access sites with boat ramps, and navigable water from the Little Suamico, Oconto, Menominee, Peshtigo, Suamico, and Fox Rivers, and Duck Creek. Green Bay has one of the most productive Great Lakes fisheries, but it has received decades of wastes from a very large concentration of pulp and paper mills.

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PCB contamination in the Green Bay is an unfortunate outcome of the pulp and paper mills that have come and gone along the Fox River. Decades of discharge from the mills into the Fox River-Green Bay system has led to its present contamination level of an estimated 50,000 kilograms (110,000 lbs.) of PCBs. The majority of the PCB contamination exists in the Fox River, but a significant amount of the PCBs transfer into Green Bay. Remediation efforts continue in hopes of removing much of the PCBs from the Fox River and halting the transfer from the Fox River to the Green Bay.

### ***Rivers and Streams***

The Bay-Lake Region contains over 300 major waterway systems. Map 5.9 displays all of the major rivers and streams of the Bay-Lake Region. The following is some information on a couple of the major rivers/streams in each county in the Region.

#### ***Brown County***

The larger waterway systems in Brown County include the Fox River, which traverses about 20 miles, and the East River, which traverses about 41 miles.

#### ***Door County***

The larger waterway systems in Door County include Stony Creek, which traverses about 16 miles, and Sugar Creek, which traverses about 11 miles.

#### ***Florence County***

The larger waterway systems in Florence County include the Pine River, which traverses about 49 miles, the Brule River, which traverses about 37 miles, and the Popple River, which traverses about 32 miles.

#### ***Kewaunee County***

The larger waterway systems in Kewaunee County include the Kewaunee River, which traverses about 28 miles in Kewaunee County, with about two miles of it in Brown County. Another large waterway system in Kewaunee County is half of the East Twin River, which traverses about 21 miles in Kewaunee County, with the other 21 miles in Manitowoc County.

#### ***Manitowoc County***

The larger waterway systems in Manitowoc County include the Manitowoc River, which traverses about 36 miles, and Mud Creek, which traverses about 23 miles in Manitowoc County.

#### ***Marinette County***

With 106 rivers and streams, Marinette County has more waterways than any other county in the Bay-Lake Region. The larger waterway systems in Marinette County include the Menominee River, which traverses about 101 miles, with about 20 miles of it in Florence County. Another large waterway system in Marinette County is the Peshtigo River, which traverses about 98 miles.

#### ***Oconto County***

The larger waterway systems in Oconto County include the Oconto River, which traverses about 54 miles, and the North Branch Oconto River, which traverses about 52 miles.

#### ***Sheboygan County***

The larger waterway systems in Sheboygan County include the Sheboygan River, which traverses about 56 miles in Sheboygan County, with about nine miles of it in Manitowoc County.

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The Sheboygan River, which flows 65 miles through Sheboygan and Manitowoc Counties, is the longest waterway in the Bay-Lake Region. Two other large waterway systems in Sheboygan County are the Onion River, which traverses about 37 miles, and the Mullet River, which traverses about 33 miles.

### Wild Rivers

The Bay-Lake Region contains all or parts of the only three rivers in the state with a “Wild River” designation, the Pike River in Marinette County, the Pine River in Florence and Forest counties, and the Popple River in Florence and Forest counties. A Wild River is designated as such in the Wisconsin Statutes Section 30.26. The Statute states that the Wild Rivers must remain in a free flowing condition containing no dams or other artificial development or structures that hinder the flow of the stream, and they must remain in a natural condition, free from most development or alteration.

Chapter NR 302 of the Wisconsin Administrative Code establishes a management program designed to protect legislatively designated Wild Rivers from development, afford people an opportunity to enjoy the rivers in their natural and free-flowing condition, and to assure the well-being of Wisconsin's tourist industry by attracting out-of-state visitors, which the legislature has deemed to be in the public interest. NR 302 ensures that there will be no development, including campgrounds adjacent to the shorelines within a 400-foot protection zone of a Wild River. In addition, there will be no development beyond the protection zone and up to at least a ¼ mile from either side of a Wild River, except when necessary to accommodate the users of the Wild River area.

### ***Shoreland Corridors***

Shorelands are often viewed as valuable recreational and environmental resources both in urbanized and rural areas. As a result, the State of Wisconsin requires that counties adopt shoreline/floodplain zoning ordinances to address the problems associated with development in floodplain areas. Development in shoreland areas is generally permitted, but specific design techniques must be considered. For planning and regulatory purposes, the floodplain is normally defined as those areas, excluding the stream channel, that are subject to inundation by the 100-year recurrence interval flood event. This event has a one percent chance of occurring in any given year. Because of the chance of flooding, development in the floodplain should be discouraged, and the development of parks and other open spaces in these areas should be encouraged.

The authority to enact and enforce floodplain and other zoning provisions in counties is set forth in Chapter 59.97 of the Wisconsin Statutes and Wisconsin Administrative Code NR 115, 116, 117. This same authority is also vested to cities and villages in Chapter 62.23 of the Wisconsin Statutes.

### ***Floodplains***

Floodplains are often viewed as valuable recreational and environmental resources. These areas provide for stormwater retention, groundwater recharge, and habitat for various kinds of wildlife unique to the water.

Development permitted to take place in these areas is susceptible to storm damage and can have an adverse effect on water quality and wildlife habitat. In addition, it can also result in increased

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development and maintenance costs such as providing flood-proofing, repairing damage associated with flooding and high water, increased flood insurance premiums, extensive site preparation, and repairing water-related damage to roads, sewers, and water mains. Some communities have special ordinances for buildings within the floodplain for remodeling and expanding. New expansions may have to be compliant to the rules of floodplain construction.

As a result, the State of Wisconsin requires that counties, cities, and villages adopt shoreland/floodplain zoning ordinances to address the problems associated with development in floodplain areas. Development in shoreland areas is generally permitted, but specific design techniques must be considered. Development in floodplain areas is strictly regulated and in some instances is not permitted (Map 5.10).

### ***Water Levels***

The last several years have seen a dramatic drop in the water levels of Lake Michigan and the bay of Green Bay. The drop in water levels has had a significant effect on the use of the bay and rivers feeding to it. With lower water levels, more of the shoreline is exposed and wet areas become dry. In December 1999, the water level of lakes Michigan and Huron continued to decline, passing the Low Water Datum elevation of 577.5 feet above the International Great Lakes Datum of 1985 (Figure 5.3).

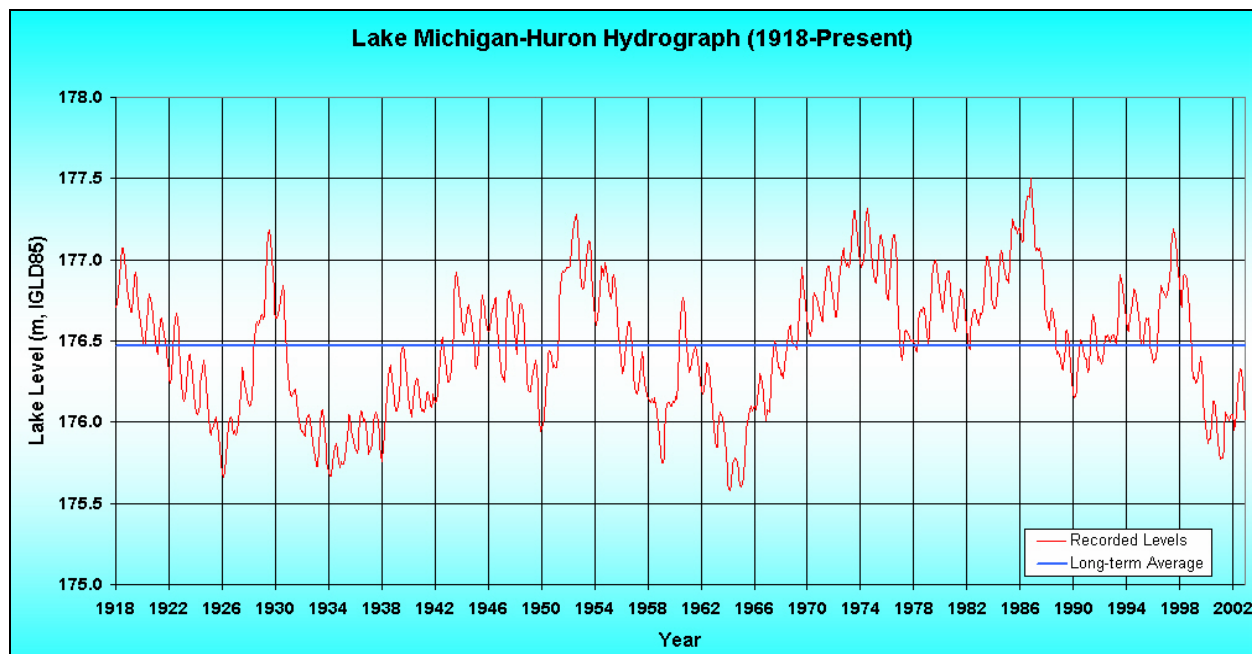
According to the US Army Corps of Engineers (Detroit District), evaporation is the cause of much of the drop in lake levels over the past few years. Warmer-than-average water temperatures have occurred in the past few summers, causing greater than average evaporation of lake water when the cold fall winds arrive. Brisk, dry, cold winds blowing over exposed warmer waters hastens evaporation and lowers water levels. According to the Army Corps, Lakes Michigan and Huron lose about one inch of water a week to evaporation in October. If an unusually cold air mass settles over a much warmer lake, the same amount of evaporation, or more, may occur in just a few days. Since Lakes Michigan and Huron rise and fall together, a drop of one inch in water level is a loss of about 784 billion gallons of water to the atmosphere.

During times of low lakes levels, cargo-loading ships in some Great Lakes harbors and inter-connecting channels are vulnerable to being set down on the bottom if there is a temporary drop in water level caused by an atmospheric pressure change or a shift in wind direction to strong winds blowing offshore.

Large declines in lake levels can create large-scale economic concern for the commercial users of the water system. Shipping companies and hydroelectric power companies can suffer economic repercussions when harbors and/or marinas are not deep enough to allow certain ships to dock. Increased costs and impacts of dredging are an additional concern with low water levels.

Water level drops have exposed areas in the lower portion of the bay of Green Bay that are now being used as habitat by waterfowl and other wildlife. The decreasing water depth in the bay has exposed areas that were previously under several feet of water, forming new sandbars and shoals.

Figure 5.3: Lake Michigan/Huron Historic Water Levels, 1918-2002



Source: US Army Corps of Engineers, 2003.

On June 6, 2003, the water level was nine inches below the chart datum of 577.5 feet (IGLD 1985). This level is 24 inches below the long-term average lake level for the date, but still slightly more than eight inches above the lowest average water level of this century; a record set in 1964. On average, the minimum seasonal water level of these lakes occurs in February. These lower water levels have also exposed areas in the lower portion of the bay of Green Bay that are now being used as habitat by waterfowl and other wildlife. The decreasing water depth in the bay has exposed areas that were previously under several feet of water, forming new sandbars and shoals.

### **Wetlands**

According to the Wisconsin Department of Natural Resources, wetlands are areas where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophilic vegetation. Other common names for wetlands are swamps, bogs, or marshes. Wetlands serve as a valuable biological resource and provide scenic open spaces in both urban and rural areas.

Wetlands act as natural pollution filters, making many lakes and streams cleaner and drinking water safer. They retain storm and floodwaters and often act as groundwater discharge areas. Filling or draining of wetlands is costly, destroys the productive capacity of the ecosystem, and can adversely affect surface water quality and drainage. Finally, they provide valuable and irreplaceable habitat for many plants and animals.

Because of their importance, there are strict regulations regarding wetlands. Wisconsin Administrative Codes NR 115 and NR 117 fall under the jurisdiction of the Wisconsin Department of Natural Resources, and mandate that shoreland wetlands be protected in both the rural and urban areas of the state. In the unincorporated areas, NR 115 provides the legislation to protect wetlands of two acres or more that are within the jurisdiction of county shoreland zoning ordinances. Wetlands not in the shoreland zone are protected from development by the federal



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government and the WDNR through Section 404 of the Clean Water Act, and NR 103, respectively. It should be noted that all wetlands, no matter how small, are subject to WDNR and possibly federal regulations, if they meet the State definition.

Brown, Door, Kewaunee, Marinette, and Oconto counties all fall within the boundaries of the Special Wetlands Inventory Study (SWIS); a joint federal and state effort to study wetlands of the Green Bay area. More than 4,000 of the 6,000 wetlands mapped by the WDNR have been field verified and a database has been created that classifies and characterizes each wetland. The SWIS database includes information on academic studies, agency records, Superfund site information, underground storage tank inventories, Remedial Action Plan location information, identification of some sites for restoration or enhancement of wetlands, as well as bibliographic information. The database also includes data on each wetland, identifying its site name, WDNR abbreviation, unique ID, location, watershed, USGS watershed code, quadrangle name, owner, evaluator, date, sources used, remarks, adjacent land use, disturbance, acreage, a brief narrative, and a number of other pieces of information related to the wetland's hydrologic properties, water quality and habitat.

Within the Bay-Lake Region, there are thousands of acres of wetlands (Table 5.4). Many of these wetlands are large complexes associated with lowland areas in western Sheboygan and Manitowoc counties, eastern Oconto and Marinette counties, western Brown County adjacent to the bay of Green Bay, and the eastern side of the Door Peninsula adjacent to Lake Michigan. The WDNR has identified large wetland acquisition and restoration projects in two areas of the Region: the Green Bay West Shore Wildlife Area and the Mink River estuary in Door County.

The Green Bay West Shore area contains some of the major wetland complexes within the Region including County Line Swamp and Peshtigo Harbor; Sheboygan Marsh; Mink River Estuary; Brazeau Marsh; and Collins Marsh. Map 5.11 displays the wetlands of the Bay-Lake Region.

Table 5.4: Wetlands of the Region

<b>County</b>	<b>Acres of Wetland</b>
Brown	28,257
Door	50,990
Florence	49,974
Kewaunee	27,436
Manitowoc	48,758
Marinette	212,997
Oconto	159,717
Sheboygan	40,447
<b>TOTAL</b>	<b>618,576</b>

Source: WDNR, 1990; BLRPC, 2003.

These wetland areas are vital to many rare and threatened species. Over the years, many smaller wetlands have been drained and filled for agriculture and development purposes. In the past, wetlands were considered wastelands and often the only acceptable use recognized for them was to drain them. Today, we know that wetlands serve many important functions, such as flood prevention, essential wildlife habitat, groundwater recharge, and when adjacent to waterways, they act as filters by slowing incoming surface water and allowing sediments to settle. Continued

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education and proper management practices can go a long way to preserve wetland areas and allow them to serve their valuable natural functions.

## **Groundwater**

Groundwater is an important natural resource. Less than half of the precipitation we receive in the Bay-Lake Region, seeps into the ground and recharges our aquifers.

### ***Aquifers***

The Bay-Lake Region Planning area's groundwater reserves are held in four principal aquifers; the sand and gravel aquifer, the eastern dolostone aquifer, the sandstone and dolostone aquifer, and the crystalline bedrock aquifer.

*Sand and Gravel Aquifer* is made up mostly of sand and gravel deposited from glacial ice or in river floodplains. These deposits reach up to more than 300 feet thick in some places in the planning area. The glaciers reached a thickness of almost two miles and transported a great amount of glacial drift. As the ice melted, large amounts of sand and gravel were deposited and formed outwash plains. Pits formed in the outwash where buried blocks of ice melted. The sand and gravel aquifer was deposited within the past 1 million years. Because the top of the sand and gravel aquifer is also the land surface for most of Wisconsin, it is highly susceptible to human-induced and naturally occurring pollutants.

*Eastern Dolostone Aquifer* is perhaps the most common aquifer in the area. It occurs from Door County to the Wisconsin-Illinois border. It consists of Niagara dolostone underlain by Maquoketa shale. These rock formations were deposited approximately 400 to 425 million years ago. The amount of water held from a well in this aquifer depends mainly on the number of fractures the well intercepts. In areas where fractured dolostone bedrock occurs at, or near, the land surface, the groundwater in shallow portions of the western dolostone aquifer can easily become contaminated. In Door, Kewaunee, and Manitowoc Counties, there is little soil to filter pollutants carried or leached by precipitation. This means little or no filtration takes place once the water reaches large fractures in the dolostone resulting in many groundwater quality problems. The Maquoketa shale layer, which is beneath the dolostone was formed from clay and does not transmit water easily. Therefore, it is important as a barrier or shield between the eastern dolostone aquifer and the sandstone and dolostone aquifer.

*Sandstone and Dolostone Aquifer* consists of layers of sandstone and dolostone bedrock that vary greatly in their water-yielding properties. The rock formations that make up the sandstone and dolostone aquifer were deposited approximately between 425 and 600 million years ago. In dolostone, groundwater mainly occurs in fractures whereas, in sandstone, water occurs in pore spaces between loosely cemented sand grains. In eastern Wisconsin, this aquifer lies below the eastern dolostone aquifer and the Maquoketa shale layer. These rock types dip slightly to the east, south, and west, away from north central Wisconsin, becoming much thicker and extending to greater depths below the land surface in the southern part of the state. In eastern Wisconsin, most users of substantial quantities of groundwater tap this deep aquifer to obtain a sufficient amount of water.

*Crystalline Bedrock Aquifer* is composed of various rock types formed during the Precambrian Era when the rocks in the sandstone and dolostone aquifer began to be formed more than 4,000 million years ago. During this lengthy period, sediments were deposited in ancient oceans;

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volcanoes spewed forth ash and lava; mountains were built and destroyed, and molten rocks from the earth's core flowed up through cracks in the upper crust. The rocks remaining today have a granite-type crystalline structure and are the base rocks that underlie the entire state. These dense base rocks are not uniformly spaced; therefore, in order to obtain the water that is stored and transmitted through cracks and fractures in the rock, a well must intersect the cracks and fractures. The crystalline bedrock aquifer oftentimes cannot provide adequate quantities of water for larger municipalities or industries. Many wells in the crystalline bedrock aquifer have provided good water; however, most of these wells do not penetrate deeply into the rock.

### ***Groundwater Contamination***

In Wisconsin, the primary sources of groundwater contamination are agricultural activities, municipal landfills, leaky underground storage tanks, abandoned hazardous waste sites, and hazardous/toxic spills. Septic tanks and land application of wastewater are also sources for possible contamination. The most common groundwater contaminant is nitrate-nitrogen, which comes from fertilizers, animal waste storage sites and feedlots, municipal and industrial wastewater and sludge disposal, refuse disposal areas, and leaking septic systems.

Another significant groundwater contamination issue in northeast Wisconsin is arsenic contamination in water supplies occurring from exposing oxygen to arsenic-rich bedrock horizons. The arsenic found in Wisconsin is naturally occurring, deposited in the bedrock layers millions of year ago. The arsenic from the bedrock is being released into the groundwater and drawn into wells. Increased water demands have lowered the water table allowing oxygen to get into the aquifer, creating chemical reactions that release arsenic into the water.

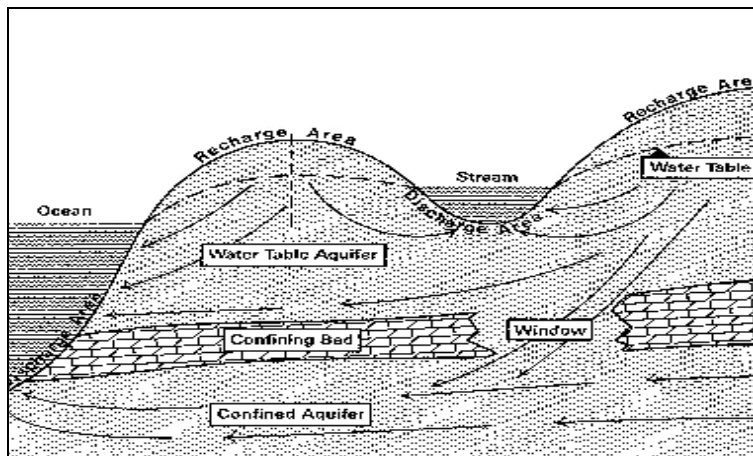
### ***Groundwater Recharge***

Groundwater recharge, along with water conservation, is the best and most economical remedy available to tackle dropping groundwater levels. It is difficult to decrease our dependence on water when it is viewed as an infinite resource. Even a little water conservation consciousness can go a long way. However, since water conservation is a difficult task that may take a generation or more to become an accustom practice; addressing groundwater recharge obstacles is a remedy that should be utilized now.

Groundwater recharge occurs naturally when rainfall and surface waters are transmitted to the aquifer. Most areas, unless composed of solid rock or covered by impervious surfaces, allow a certain percentage of total precipitation to reach the water table. However, some areas have greater infiltration levels than others. Areas that transmit a relatively greater volume of precipitation are often referred to as "critical" groundwater recharge areas.

The amount of water that infiltrates to the groundwater depends on vegetation cover, slope, soil composition, depth to the water table, the presence or absence of confining beds and other factors. Recharge is promoted by natural vegetation cover, flat topography, permeable soils that have not been compacted, a deep water table, and the absence of confining beds. Under the force of gravity, groundwater generally flows from high areas to low areas. Thus, high areas, such as hills or plateaus are likely to be the area where aquifers are recharged and low areas, such as wetlands or streams are where the water discharges. However, in many instances aquifers occur beneath streams or wetlands, so those areas can also be important recharge areas. Typical recharge and discharge areas are depicted in Figure 5.4.

Figure 5.4: Groundwater Recharge and Discharge Areas



Source: Washington State, Department of Ecology, Ground Water Resource Protection Handbook. 1986.

Water infiltration is severed in areas of urban development that create impervious surfaces such as parking lots, structures, compact soils, etc. Better land use decisions, particularly in critical groundwater recharge areas, could enable needed recharge to the aquifer as well as limit contamination. Making better land use decisions, even if they limit development, is more economical than tackling the expense of costly groundwater contamination and the search for alternate water supply sources.

Ideally, a community would be equipped with a current map of the locations of significant groundwater recharge areas in order to make better land use decision in those areas. However, such groundwater recharge mapping is unavailable in almost all of the Bay-Lake counties. The only known exception is the upper Door County area. The Bay-Lake Regional Planning Commission is vigorously pursuing resources to undertake the task of utilizing GIS to map all the groundwater recharge areas in the Region to provide its communities with necessary land use planning tools. This GIS data could be used along with such land use management tools and as zoning ordinances, subdivision ordinances, site plan reviews, design standards, best management practices, purchase, or transfer of development rights programs, public education activities, household hazardous waste collection, and water conservations programs.

### Woodlands/Forestlands

Woodlands throughout the Bay-Lake Region are comprised primarily of sugar maple, yellow birch, American beach, basswood, red oak, red pine, hemlock, sugar maple, paper birch, aspen, and white cedar, and small stands of the northern hardwood species. Also present in the region are balsam firs, white spruce, black spruce and tamarack. These woodlands offer an aesthetic and natural purpose, and provide habitat to many flora and fauna. There are 6 major State and County forests located in the Bay-Lake Region (Map 5.12).

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### ***Chequamegon/Nicolet National Forest***

The Chequamegon-Nicolet National Forest is located in northern Wisconsin, covering over a million and a half acres. The Chequamegon side of the forest covers about 858,400 acres in Ashland, Bayfield, Sawyer, Price, Taylor, and Vilas counties. The Nicolet side covers nearly 661,400 acres in Florence, Forest, Langlade, Oconto, Oneida, and Vilas counties. The Nicolet side of the forest comprises two ranger districts. The Eagle River and Florence ranger districts have been combined into a single unit - the Eagle River-Florence Ranger District, with ranger stations located in Eagle River and Florence. The Lakewood and Laona ranger districts have also been combined into a single unit, called the Lakewood-Laona Ranger District. District headquarters offices are located in both Lakewood and Laona at the old ranger office sites.

In March 1933, shortly before President Herbert Hoover left office, he issued a proclamation establishing the Nicolet National Forest. The headquarters were located in Park Falls. A second office was opened in Rhinelander to handle land acquisition in the eastern part of the state. The Chequamegon was established as a separate national forest in November 1933, by President Franklin Roosevelt, from the Nicolet's westernmost lands. At that time, Park Falls became the headquarters for the Chequamegon and Rhinelander the headquarters for the Nicolet.

In April 2004, the Forest Service completed the *2004 Land and Resource Management Plan* for the Chequamegon-Nicolet National Forests. The Forest Plan provides guidance for all resource management activities on the Chequamegon-Nicolet National Forests. It establishes forestwide multiple-use goals and implementing objectives; management requirements (known as Forestwide Standards and Guidelines); management area direction, including area-specific standards and guidelines, desired future conditions and management practices; identification of lands suited or not suited for timber management; monitoring and evaluation requirements, and recommendations to Congress for additional Wilderness.

### ***Point Beach State Forest***

Point Beach State Forest is located along Lake Michigan just north of the city of Two Rivers in Manitowoc County. The point juts seven miles into Lake Michigan, and the six-mile beach occasionally yields pieces of 19th century ships that sank in the area. There is also an interpretive center and indoor group camps.

### ***Peshtigo River State Forest***

The Wisconsin Public Service Corporation (WPSC) "Peshtigo River Purchase" comprised approximately 70 miles of the Peshtigo River frontage and approximately 9,200 acres (not including submerged land associated with the river's flowages) in northern Marinette County. The majority of the property lies approximately 20 miles northwest of Crivitz with the Potato Rapids flowage lying approximately three miles north of Peshtigo. A section of the purchase is adjacent to Tommy G. Thompson Centennial State Park.

### ***Florence County Forest***

The Florence County Board approved the establishment of a county forest largely of county-owned lands in the eastern half of Florence County. The Board approved the first entry of 26,841 acres in 1935. The early phases of development consisted mainly of planting vast open areas using the Civilian Conservation Corps. The first timber sale was made in 1941; and with the

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exception of 1943, sales have been made annually to date. Today the county forest has more than 36,000 acres.

People seeking recreational pursuits such as hunting, fishing, and camping utilize the forest. It serves as an outdoor classroom for all ages, due to the diversity of plants and animals available for observation. The county forest is managed to enhance wildlife populations and for timber production. The forest plays a major role in the economy of Florence County by providing employment in the production and manufacture of forest products.

### ***Marinette County Forest***

The Marinette County Forest is comprised of approximately 231,000 acres and ranks as the second largest county forest in Wisconsin. The majority of these lands are open for the public to enjoy. Revenues from timber sales average \$1,500,000 per year, which goes directly into the county operating budget. The county forest also supplies about 60,000 cords of wood a year for forest industries.

### ***Oconto County Forest***

The Oconto County Forest is composed of 89 management compartments ranging in size from 88 acres to nearly 1,022 acres. Within the county forest boundaries, approximately 70 percent of the land is county owned with most of the remaining 30 percent in small private holdings. With the movement towards the computerization of the county forest maps, compartments and stands will change during this planning period. Most Oconto County forestlands are open for public use and for foot travel. In addition, the county forest is served by a network of town, county, state, and federal highways. A system of roads and trails provide seasonal access to much of the forestland. Most of the unsurfaced roads are quite serviceable except for short periods during spring breakup. The Oconto County Forest, with approximately 42,274 acres, is one of the smaller county forests in the State.

### **Wildlife Resources**

Fish and wildlife habitat areas have been delineated according to their level of quality and importance in many of the coastal areas of the Bay-Lake Region as part of a Fish and Wildlife Habitat Study prepared by the WDNR in 1976. In this study, habitat areas were identified as being top, medium, or low quality areas, which measures the capability of supporting various types of wildlife habitat. The WDNR is developing an update to the 1976 study titled, "Wisconsin's Strategy for Wildlife Species of Greatest Conservation Need", which is in "draft" form as of June 2005.

Major wildlife species using these habitats include songbirds, deer, ruffed grouse, chipmunks, and squirrels. Other common species include snowshoe hare, coyote, gray fox, raccoon, skunk, and porcupine. Black bears and grey wolf are prevalent in the northern part of the Region. Muskrat, mink, beaver, and otter have been identified in the wetland areas. Several species of gulls, terns, geese, and ducks inhabit the area, and some of the old fields provide habitat for pheasants. Wolf, woodchuck, meadow vole, American toad, snapping turtle, Canada goose, and wild turkey are common throughout the northern areas of the Region. The Bay-Lake Region lies within an important migratory corridor for songbirds, shorebirds, waterfowl, and raptors. These birds, possibly including some threatened or endangered species, use the wooded and wetland areas for food and rest.

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A majority of the large remaining wooded and wetland areas within the region have been designated as Class 1 (most desirable) wildlife habitats by the Wisconsin Department of Natural Resources. The variety of habitat types within the planning area is a key to the number of species found in the area. The high bluff shoreline woodlands, the wetlands, the grassy fields, and inland woodlands are each vital to certain species. Many of the plants that can be found in the planning area include cottonwood, early buttercup, white oak, red oak, white pine, red pine, ground juniper, green ash, black ash, alder, bluegrass, butterfly weed, cattail, and many others.

The Wisconsin Department of Natural Resources has also designated the waters of Green Bay and Lake Michigan as Class 2 (desirable habitat) fish habitat. Fish species that may be found include small mouth bass, yellow perch, northern pike, rock bass, rainbow trout, lake trout, and brown trout.

### ***Threatened and Endangered Species***

Under the Endangered Species Act of 1973, an “endangered species” is any species that is in danger of extinction throughout all or a significant portion of its range (excluding species of the Class Insecta determined to be a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to humans). A “threatened species” is any species that is likely to become an endangered species within the near future throughout all or a significant portion of its range. The U.S. Fish & Wildlife Service in the Department of the Interior, and the NOAA Fisheries Service in the Department of Commerce, share responsibility for administration of the Endangered Species Act.

The Wisconsin Department of Natural Resources designates species as threatened or endangered for species that live within the borders of Wisconsin, regardless of how common they are in other states. In Wisconsin, threatened and endangered species are protected by the Wisconsin Department of Natural Resources under NR 27 of the Wisconsin Administrative Code. This law regulates the sale, transport, taking and possession of state endangered and threatened plant and animal species.

The Bay-Lake Region is ecologically rich, made evident by the fact that many rare birds, fish, turtles, snakes, frogs, butterflies and other invertebrates, plants, and communities occur within the Region, including six federal listed species. Many of the species found within the Region are considered rare because their populations and habitat are declining throughout their range. These species are of aesthetic, ecological, cultural, educational, historical, medicinal, recreational, and/or scientific importance to the land and people.

The Wisconsin Department of Natural Resources, Bureau of Endangered Resources (BER) keeps records on the endangered resources of Wisconsin as part of their Natural Heritage Inventory. The Bay-Lake Region has many special concerned, threatened, and endangered species. Although exact locations of the species can not be published, care should be taken before development occurs to leave potential habitats undisturbed for these flora and fauna.

### **Environmental Corridors**

Many of the Commission’s planning activities require delineation of environmental corridors (comprehensive plans, watershed plans, sewer service area plans, etc.). Environmental corridors serve many purposes. They protect local water quality and wildlife habitat through identification and preservation of environmentally sensitive areas. They can be used as a means of controlling,

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moderating, and storing floodwaters while providing nutrient and sediment filtration. Environmental corridors can provide fish and wildlife habitat, recreational opportunities, and serve as buffers between land uses while improving the aesthetics of the community. The environmental corridor process is used as part of the planning process for making planning and zoning decisions at the local level.

The concept of a corridor is based on the delineation of environmental features adjacent to waterways and water-related resources.

The Commission has defined its environmental corridors to include the following data layers:

- Navigable waters with a 75-foot setback
- WDNR Wetlands with a 50-foot buffer
- 100-year Floodplains
- Areas of steep slope (12 percent or greater)
- Public Parks and Recreation Areas
- Historical/Archaeological Sites
- WDNR State Natural and Scientific Areas
- WDNR State Wildlife and Fishery Areas

Other features that may be considered part of the environmental corridor definition on an area-by-area basis include designated scientific and natural areas; unique and isolated woodland areas; scenic view sheds; historic and archaeological sites; unique geology; wetland mitigation sites; isolated wooded areas; unique wildlife habitats; parks and recreation areas; Land Legacy Sites; and other locally identified features. The Commission has defined environmental corridors for the Bay-Lake Region to help in identifying areas that have the greatest need for protection. These corridors were delineated using the Commission's Geographic Information System (GIS) to overlay a variety of features. Map 5.13 displays the environmental corridors of the Bay-Lake Region.

## **Air Quality Issues**

The U.S. Environment Protection Agency (EPA) uses six "criteria pollutants" as indicators of air quality: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate matter, and lead. For each of these, the EPA has established "primary" standards to protect public health, and "secondary" standards to protect other aspects of public welfare, such as preventing materials damage, preventing crop and vegetation damage, or assuring visibility. These standards are called the National Ambient Air Quality Standards (NAAQS). Areas of the country where air pollution levels persistently exceed these standards may be designated "non-attainment". The Bay-Lake Region contains no areas that exceed the limits of the NAAQS for nitrogen dioxide, sulfur dioxide, lead, particulates, or carbon monoxide.

In 2004, after several years of litigation and review, the EPA finalized a new standard for ozone attainment. Prior to this rule, the primary standard allowed an ozone exposure of up to 0.12 parts per million (ppm) as a one hour average concentration. The new rule requires a primary air quality standard for ozone of 0.08 ppm, measured as an eight-hour average concentration. Door, Kewaunee, and Manitowoc Counties are "basic" non-attainment areas for the 8-hour ozone



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standard. Sheboygan County is a “moderate” non-attainment area for the 8-hour ozone standard. Ozone monitoring sites have been placed in Brown, Door, Florence, Kewaunee, Manitowoc, and Sheboygan Counties in order to ensure that standards are being met in those areas.

Door County is classified as a “rural transport area”, which means that industries in other cities may be contributing to the air quality in Door County. According to an EPA finding, ozone formed in one area can drift on air currents to add to air quality problems elsewhere. Research shows that this “transported ozone” contributes significantly to high ozone levels in Wisconsin. Facilities wishing to move into the region may be subject to additional requirements because of Door County’s designation as a non-attainment area.

### **Metallic and Non-Metallic Mining Resources**

Metallic mining in Wisconsin has occurred since the time of settlement. Metals mined in the state include copper, lead, iron, and zinc. Mining has economic value to multi-regional areas, but often degrades natural resources. Any new mines need to have a permit granted by the WDNR, which includes a reclamation plan. A reclamation plan is a detailed technical document designed to meet the goals that will lead to successful reclamation and will help reduce the negative effects to the environment once the mine is abandoned. The plan has minimum standards that must be met before acceptance. The WDNR defines successful reclamation as “the restoration of all areas disturbed by mining activities including aspects of the mine itself, waste disposal areas, buildings, roads, and utility corridors”. Restoration (of a mining site) is defined as “returning of the site to a condition that minimizes erosion and sedimentation, supports productive and diverse flora and fauna communities, and allows for the desired post-mining land use”. Currently there is no metallic mining occurring in the Bay-Lake Region. However, sand, gravel, and crushed stone (nonmetallic resources) are nonrenewable resources mined in the region.

Sand, gravel, and crushed stone are needed for sub-base materials for road construction as well as a major component in concrete for foundations, basement walls, sidewalks, etc. As the region undergoes further growth and development, there will be greater demands for sand, gravel, and crushed stone. Even though sand, gravel, and crushed stone are ubiquitous, some deposits are of far better quality than other deposits. Gravel and crushed stone deposits with low chert content are best suited for concrete. Gravel deposits with low percentages of foliated metamorphic rock, gabbro, and basalt fragments are best suited for sub-base material and concrete. Outwash plains, kames, eskers, dunes, point bars, and stream channels are the best sources for better quality sand and gravel.

Sand, gravel, and crushed stone have low “intrinsic value”, but high “place value”. Intrinsic value refers to cash value of a given unit (weight or volume) of the product, while place value refers to the cost of transporting a given unit of the product. Construction costs increase significantly as the distance from the source of sand, gravel, and crushed stone increases, to the point that transportation costs may exceed production costs.

Nonmetallic mining is a threat to the Niagara Escarpment. Due to the thin soil and the relative ease in accessing the bedrock, quarries of varying sizes continue to be developed at several locations along the Niagara Escarpment. Quarrying can have several impacts including the obvious direct habitat destruction and fragmentation. A less obvious effect of mining can be the alteration the hydrology and microclimate of the Escarpment.

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## **AGRICULTURAL RESOURCES**

Agriculture is a large contributor to many local economies; it creates jobs, provides marketable products, and pays taxes. Farmland can provide substantial benefits to the environment as well, including floodplain protection, groundwater recharge areas, and wildlife habitat. There are also social benefits, including rural views and open space.

### **Prime Agricultural Lands**

The USDA, Natural Resources Conservation Service defines **prime farmland** as land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops, with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. Prime farmland includes land that is being used currently to produce livestock and timber. It does not include land already committed to urban development or water storage.

Two classes of prime farmland are identified; those areas that are considered prime farmland at all times and those areas that are considered prime farmland only where drained. The rest of the region is classified as not prime farmland (Map 5.14).

### **Land Use Conflicts**

The effect of rural residential development in productive agricultural areas creates many issues. New development can make daily farming activities difficult and sometimes dangerous. New residents in farming areas may not understand basic farming practices, such as manure handling or harvesting. As a result, farmers are forced to contend with conflicts such as; increased traffic and nuisance complaints by new neighbors related to slow moving vehicles on roadways, noise, dust, odors, and late hours of operation. Farmland does not require the infrastructure and services that residential, commercial, industrial, and other intensive uses do. As development pressures increase, so will conflicts with agricultural practices, and rural character will continue to slip away.

## **CULTURAL RESOURCES**

### **Parks and Recreational Areas**

The Bay-Lake Region boasts some of the most popular parks in the state as well as some of the most picturesque areas. Door County alone has more state parks than any other county in the State, allowing visitors many opportunities to utilize the region's shoreline. The Region also boasts a number of state and local trail facilities including the Ahnapee Trail, Mountain-Bay Trail, the Fox River Trail, and the Ice Age National Scenic Trail. The following inventory provides a description of some of the public parks and recreation areas offered throughout the Region. Map 5.15 displays the state and county recreational facilities of the Bay-Lake Region.

#### **State Parks**

*Copper Culture State Park* is a 48-acre park features a Native American burial ground from the Copper Culture over 2,000 years ago. It is a locally owned park museum offering a detailed look at the life and times of the Copper Culture. The site includes a 15-acre short-grass prairie and is adjacent to the Oconto River. There is an admission charge.

*Fisher Creek State Recreation Area* is a 123-acre area with nearly a mile of Lake Michigan shoreline, scenic wooded bluffs, grasslands, and wetlands. It is managed by Manitowoc County.

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*Heritage Hill State Park* is a 40-acre outdoor museum in Green Bay featuring 25 structures from Wisconsin's past. The park functions as a living history museum and state park that recreates life in northeastern Wisconsin with actual and reconstructed buildings and artifacts spanning the periods between 1672 through 1905. There is an admission charge.

*Kohler-Andrae State Park* is one of the last natural preserves along the Lake Michigan shore, and is open for everyone to explore and enjoy. This 1,000-acre scenic spot on the shore of Lake Michigan offers a peaceful setting year round with campgrounds, picnic areas, trails, a nature center, a bathhouse, and approximately two miles of beach.

*Newport State Park* located northeast of Ellison Bay on the tip of the Door Peninsula, is Wisconsin's only formally designated "Wilderness Park". It contains 2,373 acres and 11 miles of Lake Michigan shoreline. Cool winds off Lake Michigan create habitats similar to boreal forests supporting plant life typically found in Canada. The Park contains evergreen and hardwood forests, wetlands, and upland meadows, and offers an interpretive center, naturalist program, and 38 miles of trails, all of them open for hiking. Of these, 17 miles are open to off-road bicycles. In the winter, 26 miles of trails are available for cross-country skiing, including 12.5 miles groomed and tracked for classical skiing, 2 miles groomed for skate skiing, and 4.5 miles are open for snowshoeing.

*Peninsula State Park* is a 3,776-acre state park that was established in 1909 and is now one of the largest and most well attended state parks in Wisconsin. Peninsula State Park, considered "Wisconsin's most complete park", receives over one million visitors annually. The Park has nearly seven miles of Green Bay shoreline and contains a landscape of forests, meadows, wetlands, and 150-foot rocky bluffs. The park offers a wide variety of summer and winter outdoor recreational activities. Nature and hiking trails, snowmobile, and cross-country ski trails, mountain bike trails, a beach, a picnic area with concessions, a boat launch, a nature center, and a lighthouse are facilities available for park visitors. The majority of the park is forested, mainly with white birch and other northern hardwoods. The large acreage and mostly undeveloped character of the park makes it a prime natural area for the Region.

*Potawatomi State Park* is located on the shores of Sturgeon Bay. The park is owned and run by the Wisconsin DNR and consists of nearly 1,200 acres of flat to gently rolling terrain, with steep slopes along the shoreline. Most of the park is heavily wooded. The park offers year-round activities including, but not limited to, camping, hiking, swimming during the summer, and cross-country skiing during the winter. A 75-foot observation tower rises above the forest canopy, giving a panoramic view of Sawyer Harbor. On a clear day, the view from the Park's observation tower reaches 16 miles across Green Bay.

*Rock Island State Park* is a 912-acre island in Lake Michigan, accessible only by ferry from Washington Island. There are stone buildings on the island that were built by a wealthy inventor who owned the island between 1910 and 1945. Cars, and even bikes, are not allowed on Rock Island, but there is 10 miles of hiking trails, including a one-mile interpretive trail, 40 reservable campsites, a naturalist program, and 5,000 feet of beach.

*Governor Tommy G. Thompson Centennial State Park* lies on 2,187 acres and is located 13 miles northwest of Crivitz in Marinette County. The site protects 5,300 feet of shoreline on Wood and Huber Lakes and protects Handsaw Creek and Woods Outlet, both excellent brook and brown trout waters. The main parcel creating the park is the 1,987-acre Paust Woods Lake Resort and

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about 200 acres of wild-looking lakefront purchased from Wisconsin Public Service Corporation on Caldron Falls Reservoir. The park includes frontage on two inland lakes - Woods Lake and Huber Lake - as well as several cold, clear trout-inhabited streams. Wildlife abounds on this extensively forested site; deer, grouse, and turkey are the most abundant. The natural balance of wooded upland and wetland provides diverse natural habitats and the ability to support many recreational activities.

*Whitefish Dunes State Park* is an 865-acre day use park set along Lake Michigan. It was established in 1967 to protect the fragile dune environment. Whitefish Dunes has more visitors than any other day use park in Wisconsin. Its shoreline, composed of sandy shoreline and rocky bluffs, extends nearly 3 miles. An observation deck offers views of the park's forests, wetlands, and the shoreline, which displays intriguing ice formations on frigid Lake Michigan waves in the winter. The park offers features for people with disabilities including an accessible beach grid system and interpretive loop. Whitefish Dunes has 14 miles of hiking trails, of which 11 miles are groomed for winter skiing. The park also offers a 2.5-mile multi-use winter trail for snowshoers and hikers. Whitefish Dunes State Park is also a designated State Natural Area offering a combination of natural features including rugged Lake Michigan shoreline, dense upland forest, shoreline on an interior lake, a winding creek with wetlands, and the highest sand dunes in Wisconsin.

## **County Parks**

### ***Brown County***

*Bay Shore Park* lies along the Niagara Escarpment and offers scenic hiking trails, breakwater and boat launch facilities, fishing sites, a playground area, and camping.

*Brown County Park* is a lightly forested area of which Duck Creek flows through. The park offers picnic spots, restroom facilities, and a pet exercise area.

*Fonferek's Glen* is a 74-acre park located along Bower Creek in the Town of Ledgeview. The park features a plethora of geologic features including a 30-foot waterfall, limestone cliffs, and a stone archway that can be viewed from scenic hiking trails.

*L.H. Barkhausen Waterfowl Preserve* contains 920 acres of forest, meadows, and wetlands that serves as a refuge for a wide range of waterfowl, wildlife, and plants. The park offers 9 miles of hiking trails that are also groomed for cross-country skiing during the winter months. An interpretive center located on the preserve provides a variety of educational opportunities throughout the year.

*Lily Lake Park* is a heavily wooded park that surrounds Lily Lake. A shelter is located within the park for picnicking and special events.

*Neshota Park* is located where King Creek and Neshota River meet. The park contains 260 acres of scenic riverbed, steeply sloped valleys, and wooded hills which visitors can enjoy by the use of hiking trails or bridle paths for horseback riding. During the winter months, the park is a popular location for cross-country skiing, sledding, and snowmobiling.

*T.A. Pamperin Park* is a highly developed park that offers a scenic hiking trail that follows Duck Creek, volleyball courts, wooded picnic areas, and a playground area.

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*Way-Morr Park* is a 32-acre park that provides ample recreational opportunities including picnic areas, a playground area, tennis and volleyball courts, and a baseball diamond.

*Wequiock Falls* is a small park located within the Niagara Escarpment that features picturesque waterfalls and provides areas for picnicking.

*Wrightstown Park* is located along the Fox River and features a boat launching ramp and docking facilities as well as space for picnicking.

### ***Door County***

*Bailey's Harbor Ridges Park* is a 30-acre park that provides scenic hiking trails through the Bailey's Harbor Wildlife Sanctuary. The park is also home to two rangelight houses that are no longer in operation.

*Cave Point County Park* in Sevastopol lies on 19 acres and features wave-worn limestone edges and underwater caves. The park offers a vast picnic area, a ½ mile hiking trail, and shoreline access.

*Chaudior's Dock Park* is a 5-acre park is located in the Town of Union on the bay of Green Bay. The park offers a boat launch and sites for fishing and picnicking.

*Door Bluff Headlands County Park* is a 155-acre park located in the township of Liberty Grove and has remained mainly undeveloped for recreational use. The park features scenic views of vertical bluffs and a variety of tree and plant species.

*Ellison Bluff Park* is a 55-acre park located south of Door Bluff Headlands Park. The park offers a picnic area as well as a viewing site that provides a beautiful view of Green Bay.

*Forestville Dam County Park* is a 79-acre park that lies along the east side of the Forestville Pond. The park features a small boat launch as well as access to the Ahnapee State Trail and the Ahnapee River.

*Frank E. Murphy County Park* is a 10-acre park in Egg Harbor Township that provides a sand beach, a boat launch, bathhouse for swimmers, picnic facilities, and a dock for fishing.

*Lily Bay County Park* is located in the town of Sturgeon Bay and is the smallest of the Door County Parks. The park offers a boat launch, swimming, and fishing.

*Lyle-Harter-Matter Sanctuary County Park* is located in the township of Jacksonport and features a 40-acre wildlife sanctuary that serves as a nesting ground for various species of waterfowl. The park has remained undeveloped for recreational purposes.

*Meridian County Park* is contiguous with Lyle-Harter-Matter Sanctuary. The park covers 92 acres and has remained largely undeveloped except for a small wayside located on the southeast corner that provides picnic and bathroom facilities.

*Olde Stone Quarry County Park* is a 9-acre park located in Sevastopol featuring fishing, a boat launch, restroom facilities, and picnicking.

*Percy Johnson County Park* is a 5-acre park located on the eastern side of Washington Island. The park offers facilities for picnicking and swimming.

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*Robert La Salle County Park* is an 8-acre park located in the township of Clay Banks that features 440 feet of public access to Lake Michigan along the Southern Door County Shoreline. The park offers swimming, picnic areas, and volleyball courts.

*Sugar Creek County Park* is a 40-acre park that has remained mostly undeveloped. The park features a boat launch, picnic areas, and volleyball courts and is a popular location for smelt fishing.

*Tornado Memorial County Park* is a 3-acre park located in the town of Gardner. In 1927 the property became the first county park created in Door County and is currently recognized by the Door County Historical Society as a historical site. The park features picnic and restroom facilities.

### ***Florence County***

*Lake Emily Park* is located in the town of Commonwealth featuring hiking, picnicking, camping, a boat launch, and a beach for swimming.

*Keyes Lake County Park* is located in the town of Commonwealth and offers trails for hiking, biking, and cross country skiing and a boat launch.

*West Bass Lake Park* is located in the town of Homestead offering camping, swimming, and a boat launch.

### ***Kewaunee County***

*Bruemmer County Park* is a 76-acre recreation site located about one mile west of the city of Kewaunee. The park primarily functions as a passive recreation area and features picnic areas, playground equipment, hiking trails, and a small zoo.

### ***Manitowoc County***

*Cherney Maribel Caves Park* is a 75-acre park located in the town of Cooperstown and was the first park developed by Manitowoc County. The park features a rugged cliff line that contains several caves. Popular activities at the park include sightseeing, hiking, and picnicking.

*Horse Shoe Lake Park* is an 8.5-acre park featuring picnic facilities, playground equipment, and a pier for boat launching and fishing.

*Long Lake County Park* is a 4.5-acre park that lies along the northeastern shore of Long Lake. The park features a boat launch, fishing pier, picnic area, playground equipment, and restroom facilities.

*Lower Cato Falls Park* is an 84-acre park located in the town of Cato. The lower section of the park includes unique rock formations and a waterfall along the river. Two wooded stairways are provided for access from the upper portion of the park, down the steep escarpment, to the lower portion of the park. The park offers picnicking, hiking, and nature trail walks.

*Point Creek Conservation Area* is located in the town of Centerville and consists of 39 acres of woodlands, meadows, estuary, wetlands, and coastal bluffs. The park features scenic hiking trails and sites for bird watching.

*Silver Lake Park* is a 12-acre park featuring well-equipped picnic facilities and a boat launch.

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*Walla Hi Park* is a 160-acre park located in southwestern Manitowoc County about four miles outside of the city of Kiel. The scenic kettle moraine landscape of the park ranges from wooded areas to open grassy spaces. In addition, small springs and streams flow through the park. Popular activities at the park include fishing, hiking, cross-country skiing, and picnicking.

### ***Marinette County***

*12-Foot Falls Park* is a 160-acre park located in the Town of Dunbar on the North Branch of the Pike River featuring red pine plantations, a waterfall, rustic camping, and trout fishing.

*Dave's Falls Park* is a 66-acre park located south of Amberg featuring a spectacular waterfall, picnic area, and a bridge over the Pike River.

*Goodman Park* is a 240-acre park located in the Town of Silver Cliff that offers trout fishing, a bridge over Strong Falls, huge red pines, 2 day-use lodges, a hiking-skiing trail, and camping.

*Lake Noquebay Park* is a 12-acre park east of Crivitz that provides a beach, a boat landing, a day-use lodge, a bathhouse for swimmers, and picnic facilities.

*McClintock Park* is a 320-acre park in the Town of Silver Cliff on the Peshtigo River with three bridges over some rapids, a picnic area, camping, trout fishing, and an attractive hardwood-hemlock timber stand.

*Menominee River Park* is a 65-acre park located north of Marinette that provides a beautiful view of the Menominee River, a picnic area, and a boat landing.

*Michaelis Park* is a 2-acre park located south of Marinette, next to the Little River Golf Course. It provides a view of Green Bay with swimming and picnicking.

*Morgan Park* is a 160-acre park on Timm's Lake in the Town of Niagara that provides a campground with electricity for each site, swimming and a beach on Timm's Lake, a lodge, lake and stream fishing, a boat landing, a playground, a rock outcroppings and an overlook.

*Old Veteran's Lake Campground* is an 80-acre campground on Old Veteran's Lake and High Falls Reservoir that provides boating, fishing, camping, and swimming.

*Thunder Mountain Park* is a 160-acre park with a view of western Marinette County, including High Falls Flowage. It provides hiking, picnicking, fishing, swimming and camping.

*Twin Bridges Park* is a 90-acre park on the High Falls Reservoir of the Peshtigo River that provides camping with electricity on each site, picnicking, boating, swimming, fishing, a playground and a scenic, rocky outlook on High Falls Flowage.

*Veteran's Memorial Park* is a 320-acre park located west of Crivitz on the Thunder River. It offers a bridge over a waterfall, a pool at the bottom of the falls, camping, trout fishing, and a large day-use area.

### ***Oconto County***

*D.E. Hall County Park* is located on the bay of Green Bay just north of the city of Oconto. The park provides swimming, fishing, a boat launch, and picnic tables on three acres of county owned land.

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*Fischer (Chute Pond) Memorial Park* is located south of the town of Mountain on Chute Pond. The park is 145 acres of county owned land with 100 campsites, group camping, swimming, fishing, a boat launch, picnic tables, grills, a shelter, and a playground.

*Grange County Park* is located northwest of the city of Oconto on two acres of county land on Little River. The park offers swimming, fishing, picnic tables, and a shelter.

*North Bay Shore Recreation Area* is located north of the city of Oconto in the bay of Green Bay. The recreational area includes 20 acres of county owned land with 33 campsites, swimming, fishing, a boat launch, and picnic tables.

*Patzner Park* is a county owned park located on the Oconto River north of the city of Gillett on County Highway H. The park includes a boat landing, a pier, and benches.

*Pioneer Park* is a small park located in Stiles that provides picnic facilities and hiking trails.

*Riverside Park* is located south of the city of Gillett on three acres of county land on the Oconto River. The park includes a swimming and fishing area, a boat launch, and picnic tables. Riverside Park is owned by Oconto County and is located approximately one mile south of the city of Gillett on County Highway BB.

*Wheeler Lake Picnic Ground* is a 5-acre park located in Lakewood featuring picnic facilities, a boat launch, and fishing.

### ***Sheboygan County***

*Broughton Sheboygan Marsh Park* is a 30-acre developed park featuring the Marsh Lodge, a full service restaurant and tavern, and Broughton Lodge, a multi-purpose facility. The park also offers 64 fully developed campsites that include showers, playground equipment, picnic areas, a boat launch, and fishing piers. County snowmobile trails are also accessible during the winter months.

*Gerber Lakes Public Fish & Wildlife Area* is open to the public for multiple outdoor recreation uses. No development is planned on parklands other than to provide for off-road parking.

### **State Scientific and Natural Areas**

Prior to European settlement, Wisconsin contained a variety of natural communities. More than 75 unique types of natural communities made up Wisconsin's pre-settlement landscape. Over the decades since intensive settlement began, those communities have been significantly degraded by urbanization, agriculture, industry, and by the ecological impact of fire suppression and the spread of exotic plant species. Map 5.16 depicts the pre-settlement vegetation cover of the Bay-Lake Region and Map 5.17 depicts the 2001 land cover for the Region. "State Scientific and Natural Areas" are the remnant native landscapes of pre-settlement Wisconsin.

The Wisconsin State Natural Area program was established to formally designate sites in natural or near natural condition for scientific research, the teaching of conservation biology, and most importantly, preservation of their natural values and genetic diversity for the future. These areas have been designated to serve the mission of the Natural Areas Program, and are not intended for intensive recreational use. The mission of the Natural Areas Program is to locate and preserve a system of State Natural Areas harboring all types of biotic communities, rare species, and other significant natural features native to Wisconsin. Map 5.18 displays the State Natural Areas of the



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Bay-Lake Region, as well as the State Wildlife and Fishery Areas, which are discussed in the next section.

### ***Brown County***

*Holland Red Maple Swamp* contains 300 acres of state owned lands and features a northern hardwood swamp and a northern wet-mesic forest. The site is currently recovering from heavy logging which occurred in the area over 100 years ago.

*Red Banks Alvar State Natural Area* is one of the best examples in Wisconsin of an alvar community. This natural area contains a mesic forest and unusual variants of the prairie-savanna and cedar forest communities. This site is one of the most important areas in Wisconsin for rare land snails that primarily occur at the moist cliff bases.

### ***Door County***

*Baileys Harbor Boreal Forest and Wetlands* is a 434-acre site containing a boreal forest, that is dominated by Balsam fir and white spruce, which eventually grades into a northern wet-mesic forest. The forest supports a variety of plant and animal species including the federally threatened dwarf lake iris. The area also protects over 1.5 miles of undeveloped Lake Michigan shoreline, which is one of the few nesting areas in the state for the common goldeneye.

*Bayshore Blufflands* contains 124 acres of land owned by the Door County Land Trust and the Nature Conservancy. The site is located along more than three miles of the Niagara Escarpment and rises 150-200 feet above the bay of Green Bay. The carbonate cliffs and outcroppings that form the bluffs are home to a variety of land snails including the state threatened cherrystone drop snail. This area of the escarpment is also home to several uncommon plant species such as climbing fumitory, mountain maple, bulbet fern, common polypody, and fragile fern. Located above the escarpment is a beautiful dry-mesic forest that is dominated by red and white pine and red oak, which slowly grades into a richer, mesic forest with a small wet-mesic forest. The forested area also contains many rare plant species including the federally threatened dwarf lake iris.

*Big and Little Marsh* is a 167-acre site located on Washington Island. The site features an intricate landscape of boreal rich fen, northern wet-mesic forest, and a large emergent aquatic marsh on marl that supports a wide variety of plant and animal species.

*Coffey Swamp*, located on Washington Island, occupies 108 acres of a former embayment of Lake Michigan. The site features a shallow, hard water seepage pond that is surrounded by a treeless, boreal rich fen containing wire-leaved sedges, sweet gale, and hoary willow. The site also contains a northern wet-mesic forest that is dominated by white cedar.

*Detroit Harbor* is a 75-acre site owned by the Door County Land Trust that supports a diverse landscape of intermittent, emergent, and forested wetlands. The wetlands in the area support many species of migratory birds, such as the Caspian tern, the redhead duck, the American white pelican, and the bald eagle, by providing a stopover point and breeding habitat. The natural area also contains the Richter Bayou, which is an important smallmouth bass nursery.

*Ellison Bluff* lies on 170 acres along Ellison Bay and features densely wooded two-tiered rock terraces, which are part of the Niagara Escarpment. Cliffs in this area contain enough ledges to support heavy forests containing white cedar, Canada yew, mountain maple, red pine, basswood,

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and red elderberry. The site is part of Ellison Bluff County Park, which is owned and maintained by Door County.

*Europe Bay Woods*, located on an isthmus between Lake Michigan and Europe Lake, is made up of 200 acres of land that lies within Newport State Park. The site features over one mile of Great Lakes dunes and beaches, red pine groves, boreal forest, and northern dry-mesic and mesic forests.

*Kangaroo Lake* is 357-acre site located just outside of Baileys Harbor that is owned by The Nature Conservancy and the Door County Land Trust. This natural area is significant in that it contains one of a very few undeveloped marl lakes. The lake is fed by Piel Creek, which is a critical habitat for the federally endangered Hine's emerald dragonfly as it is one of only two known reproducing populations in the country. Kangaroo Lake is surrounded by northern upland forest, northern wet-mesic forest, and marsh. The entire natural area supports a variety of rare and endangered species including the federally threatened dwarf lake iris, the dorcas copper butterfly, federally threatened bald eagle, state threatened osprey, and state threatened Caspian tern.

*Jackson Harbor Ridges*, located on Washington Island, is a small sheltered harbor that features examples of Lake Michigan beach with low, sandy, and marshy areas, low dunes, and stabilized ridges. Behind the dunes is a mixed conifer-hardwood forest. This harbor serves as an excellent plant refuge because it contains numerous coastal and critical species and is home to several federal and state listed threatened species.

*Marshall's Point* lies on a peninsula between Lake Michigan and North Bay in the town of Liberty Grove. This natural area is an outstanding area exhibition of Lake Michigan's rocky shoreline and a boreal forest of white cedar, balsam fir, and other conifers and hardwoods over dolomite bedrock. Because of its cool microclimate, the area is rich in mosses and liverworts as well as a variety of other rare and restricted vascular plants. The northern mesic forest located in this area has remained undisturbed for over 100 years. The soils in this area are raw humus rendzina, which is undecomposed organic soil over calcareous rock, and are extremely rare.

*Mink River Estuary* is a 1,465-acre site owned by the Wisconsin chapter of The Nature Conservancy that is located outside of Ellison Bay. The site contains one of the most pristine freshwater estuarine systems in the country. The natural area includes a 2-mile widespread of the Mink River that is subject to the water level fluctuations of Lake Michigan. A number of springs feed into the marsh and extensive shrub and conifer swamps surround the wetland area. The estuary is an important site for fish spawning and provides a stopover area for migratory birds. A beach located in this area that lies along Rowley's Bay contains the federally threatened dune thistle and patches of the federally threatened dwarf lake iris.

*Moonlight Bay Bedrock Beach* is a 112-acre site that protects 5 acres of undisturbed, dolomite bedrock beach. When the bedrock is exposed, due to water level fluctuations of Lake Michigan, several rare plant species colonize the area including small fringed gentian, tufted hair grass, and bird's-eye primrose. A boreal forest lies along the ambient shoreline and contains white spruce, white cedar, paper birch, white pine, hemlock, and balsam fir.

*Mud Lake Wildlife Area* contains 1,941 state-owned acres. This site consists of a 155-acre shallow drainage lake, with a maximum depth of five feet, which is surrounded by an extensive shrub and timber swamp. The wetlands and lake provide habitat for a plethora of wildlife,

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including the federally endangered Hine's emerald dragonfly, as well as a nesting area for many species of waterfowl. This site contains farmland and is part of a county-run snowmobile trail.

*Newport Conifer-Hardwoods* contains 140 acres that features a mix of northern forest types. 60 acres are northern hardwoods with white birch, sugar maple, American beech, and ash. The natural area also features a 3 to 8 foot high dolomite wall running from the northeast to southwest that represents the former shoreline sculpted during the Lake Nipissing stage of Lake Michigan. A hemlock hardwood forest covers another 20 acres of the natural area.

*North Bay*, located outside of Sister Bay, stretches across 225 acres of land and contains one of the last undeveloped stretches of Lake Michigan shore in Door County. The natural area features a variety of landscapes including northern sedge meadow, calcareous fen, northern wet, wet-mesic, and mesic forest, boreal forest, springs and spring runs, coastal marshes, and a complex of Lake Michigan dunes. North Bay is a very important spawning area for a majority of Lake Michigan's whitefish population and provides a critical habitat for rare birds (including the federally threatened bald eagle and the state threatened osprey), shorebirds, waterfowl, and migratory bird species.

*Peninsula Park Beech Forest* is a 30-acre piece of land that lies within Peninsula State Park. The park features a range of forest types including a northern mesic forest containing sugar maple, American beech, basswood, and hemlock, along with several large red oak and white pines scattered throughout the forest. There are undeveloped woodlands to the west and north, and undeveloped frontage to the east along Eagle Harbor. This natural area is considered well protected from development because of its location in the state park.

*Peninsula Park White Cedar Forest*, located within Peninsular State Park, is a 53-acre upland white cedar-white birch forest that lies on low cliffs of Niagara dolostone. Open marsh dominated by bluejoint and reed grass, and an open calcareous meadow on an abandoned beach zone lies below the upland forest. A northern dry-mesic forest can be found above and to the east of the cliffs. An extensive northern dry-mesic forest lies adjacent to the area on three sides, and a marsh buffer zone lies to the west. Critical plant species are present. White pine and hemlock occur occasionally along the cliff. The natural area is located in the southwestern portion of the Peninsula State Park and is bordered by undeveloped woodlands to the south, and the unincorporated village of Fish Creek further south. Undeveloped woodlands border the east and north, and marshlands border the west. The natural area is well protected from development because of its state park status, and the adjacent area offers limited development pressures.

*Rock Island Woods* is a 700-plus-acre island located one mile northeast of Jackson Harbor on Washington Island that is entirely publicly owned. Its forest consists of white birch, American beech, and sugar maple. Unusual plant species are found on the islands shaded cliffs and narrow beaches. French artifacts, a Native American cemetery, and other significant items have been discovered through archeological exploration.

*Sister Islands* consists of two low-lying dolostone gravel islands in Green Bay that are considered significant gulleries. An estimated 1350-1650 breeding pairs of herring were present in 1964. Bird banding and several research projects on gulls have taken place on the islands. High water levels in the early 1980s have greatly reduced the size of the islands. In fact, during the low water levels of the 1960s the islands were connected. Vegetation is primarily composed of pioneering weedy herbs and shrubs.

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*The Ridges Sanctuary* was established in 1937 as is recognized as a National Natural Landmark. The 1,070-acre natural area, located in Bailey's Harbor, features a series of crescent-shaped sandy ridges of which each represents a former beach line of Lake Michigan. Many of the ridges are forested with black spruce, white spruce, balsam fir, and white pine, while others remain wet and open. The Ridges Sanctuary is home to many rare and endangered plant species, including the federally threatened dwarf lake iris and over 25 different species of orchid, and is known to contain the largest population of the federally endangered Hine's emerald dragonfly.

*Thorpe Pond* is a 184-acre site located in Egg Harbor featuring a 6.4-acre hard-water bog as well as a variety of wetland communities including boreal rich fen, northern wet-mesic forest, and hardwood swamp. The boreal rich fen surrounds the bog, which provides support to a very diverse plant community including tussocks of state threatened coast sedge and tufted bulrush. The fen gives way to a widespread, mature forest that features white cedar, tamarack, black spruce, and black ash.

*Toft Point* is a 686-acre site located on a peninsula between Bailey's Harbor, Lake Michigan, and Moonlight Bay. The natural area contains over a mile of Lake Michigan frontage with cobblestone and rock, dolomite beach. The greater part of the site is forested with a mesic forest that is dominated by sugar maple, yellow birch, hemlock, balsam fir, and white pine. In addition to the forested area, the natural area features a calcareous sedge meadow along Moonlight Bay as well as extensive wetlands containing pockets of tamarack swamp and alder thicket. Toft Point is rich in biodiversity as it contains over 440 species of vascular plants and supports 17 different species of nesting warblers.

*White Cliff Fen and Forest*, which is owned by the Door County Land Trust, lies on 57 acres in the Town of Gibraltar. The natural area lies at the base of the Niagara escarpment and features a deep, undisturbed forest of white cedar and hardwoods that surrounds a calcareous fen. The fen is fed by alkaline ground water rich in calcium and magnesium bicarbonates and is dominated by woolly-fruit sedge and hard-stem bulrush.

*Whitefish Dunes* is a 230-acre site located within Whitefish Dunes State Park. This natural area contains the best developed sand dunes and high quality beach within the state of Wisconsin. The lakeside fore dune is sandy and well vegetated with species such common milkweed, beach pea, and several beach grasses including the state threatened thick-spice wheat grass and the federally threatened dune thistle. The lakeside rear dune is forested with white birch, balsam fir, and white cedar. The forested area is also heavily covered with Canada yew. The dunes located further away from the lake feature northern mesic forest dominated by sugar maple, large-toothed aspen, eastern hemlock, and American beech.

### ***Florence County***

*Brule River Cliffs* is a 105-acre site located within Chequamegon-Nicolet National Forest that lies along the southern shore of the Brule River. The natural area features cliffs that rise to heights of over 300 feet and talus slopes. The outcroppings are heavily shaded therefore providing a cold, wet habitat that is ideal for mosses, liverworts, and ferns including the state-endangered green spleenwort and state threatened Braun's holly fern. A northern mesic forest dominated by sugar maple, yellow birch, paper birch, white cedar, and aspen surrounds the cliffs.

*Fox Maple Woods*, located in west central Florence, lies on 41 acres of land within Chequamegon-Nicolet National Forest. The natural area features a large, undisturbed northern

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mesic forest that is dominated by old-growth sugar maple, basswood, hemlock, and yellow birch. The herbaceous flora within the forest is rich and includes vegetation such as Carolina spring-beauty, yellow dog-tooth violet, Dutchman's-breeches, and the rare Assiniboine sedge. The site also features a small 5-acre kettle depression that supports a sedge meadow.

*Grandma Lake Wetlands* is made up of 495 acres of land that surrounds Grandma Lake within Chequamegon-Nicolet National Forest in the Town of Long Lake. The wetland area features a 44-acre soft water bog lake surrounded by an open mat of sphagnum moss, sedges, rushes, and low ericaceous shrubs. The open mat supports a wide variety of plant species including bog club-moss, horned bladderwort, and bulrush. A conifer swamp containing tamarack and black spruce surrounds the open bog. The wetland area supports a number of rare birds including the black tern, common loon, merlin, and American bittern.

*Spread Eagle Barrens* is one of the last remaining pre-settlement ecosystems in the state. It contains an undulating mosaic of sun-swept bracken grasslands, solitary oaks, pines, and some large stands of timber. The Pine River bisects the Barrens on an east-west axis, while the Menominee River forms its irregular eastern boundary. Although the Barrens are traversed by several roads and trails, the area is essentially as undeveloped as it was thousands of years ago.

*Wisconsin Slough* is a rich landscape of wetlands located within Chequamegon-Nicolet National Forest in the Town of Tipler. Within the natural area is a 5.6-acre hard water spring pond that contains aquatic plants such as stonewort, sago pondweed, and white water crowfoot. The pond is surrounded by a diverse sedge meadow and conifer swamp. The slough supports many bird species including great blue heron, belted kingfisher, sharp-skinned hawk, raven, and golden-crowned kinglet.

### ***Manitowoc County***

*Cherney Maribel Caves* is located on the West Twin River and contains a 50-foot limestone bluff, a rare occurrence within the glaciated region of Wisconsin. The "caves" in the side of the bluff are shallow indentations caused by gaps in the black dolostone. Young beech-maple woodland dominates the uplands and contains a showy spring flora. The shaded cliff contains polypody, bulbet, and walking ferns. An endangered plant species is also present. At the cliff base and throughout the floodplain are large white cedars. The river bottom forest has many birds usually found farther north. Among these are winter wren, solitary vireo, Blackburnian warbler, and yellow-bellied flycatcher.

*Point Beach Ridges* natural area features a series of 11 alternating ridges and swales that represent old beaches formed over 8,000 years ago by the lowering of glacial Lake Nipissing. Dunes and beaches run parallel to Lake Michigan while the rest of the area is forested with a wide variety of conifers and hardwoods. The dunes here support a wide variety of plants including state threatened species such as dune thistle, clustered broom-rape, thick-spike wheatgrass, prairie sand-reed, and dune goldenrod. This site is also the only known area in Wisconsin known to contain the endangered sand dune willow. A substantial amount of swamp timber and brush marsh lies landward from the ridge-swale complex.

*Two Creeks Buried Forest* is a unit of the Ice Age Scientific Reserve. It is an area of natural interest to Pleistocene geologists around the world. A soil and glacial till profile exposed by Lake Michigan illustrates a sequence of events that occurred prior to the last glacial advance. The remains of spruce forest are blanketed with lacustrine deposits from a glacial lake, which are

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in turn covered by layers of glacial till from over 11,000 years ago. According to *Manitowoc County Outdoors* (1967), similar forest remains are found when digging wells throughout much of the Fox River Valley.

*VanderBloemen Bog*, owned by Silver Lake College, lies on 24 acres of land in the Town of Liberty. The natural area features an undisturbed quaking bog without open water that contains species such as pitcher plant, sundews, moccasin flower, and cranberries. The area surrounding the bog is primarily forested with tamarack, black spruce, white pine, white birch, red maple, and black ash.

*Wilderness Ridge* natural area lies on 8 acres of land and consists of two perpendicular transects, each 66 feet wide, located on and across ridges and swales of the abandoned beach lines of glacial Lake Nipissing. The east-west transect is sedge dominated with ridge and swale topography while the transect running north south is composed of a northern conifer-hardwood forest dominated by red and white pine, hemlock, and yellow birch.

*Woodland Dunes* is a 387-acre forested tract that lies within the city of Two Rivers. The natural area features ridges of former glacial lakes levels that are wooded with scattered hemlock and pine with aspen. Small elm, cedar, and brush are present in the lowland areas. Woodland Dunes are an important stopping place for a variety of migratory birds and songbirds.

### ***Marinette County***

*Bloch Oxbow and Pines* lies on 614 acres of level, sandy upland a few feet above the floodplain of the Peshtigo River. The natural area protects one of the best remaining examples of northern dry-mesic forest, which has the integrity of an undisturbed forest, dominated by black and red oak, red maple, and white pine. The site also contains a good diversity of overstory and understory trees and shrubs. Bloch Oxbow is a critical habitat for sensitive bird species such as bald eagle, Caspian, Forster's terns, red-shouldered hawk, and osprey.

*Dunbar Barrens* contains 1,320 state-owned acres. It is mostly open forest and welcomes activities such as hiking, berry picking, and observing the wildlife present in the area. This site features a Pine Barrens community that is part of a large, open landscape located on a gently rolling pitted glacial outwash plain. Logging, grazing, and periodic fires have maintained the open character of the barrens in addition to the action of frost in low pockets. Today, aspen, oak, and jack pine forest surround the opening, and low granite outcrops are found scattered through the area.

*Marinette County Beech Forest*, located in the Town of Silver Cliff and owned by Marinette County, features 40 acres of beech-dominated northern mesic forest that is present at its range limit in Wisconsin. The natural area lies on granite and greenstone bedrock overlain by glacial till and contains soils that are mildly podzolized sandy loams on rough rolling topography.

*Miscauno Cedar Swamp* features a northern wet-mesic forest in a steep-sided basin along the South Branch of Miscauno Creek. The timber varies from nearly pure stands of white cedar to mixtures of white cedar, balsam fir, and black spruce, with black ash and elm along the stream. Tamarack snags indicate a former forest of this species that was likely logged in the past.

*Seagull Bar* is a 120-acre site located in the City of Marinette just south of the Menominee River. The natural area features the only true dune complex along Green Bay. Beach and shore

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vegetation, submerged aquatics, and coastal wetland during low water periods are important features. Seagull Bar is known for its attraction to migrating shorebirds and waterfowl.

### ***Oconto County***

*Barney Creek* is a small, spring-fed stream located within Chequamegon-Nicolet National Forest in the Town of Townsend. The natural area covers 325 acres of land and features second-growth hardwood forest along the banks of the creek with a rich mesic forest in the surrounding areas. The area supports several notable plant species including state threatened Braun's holly fern and Wisconsin's largest known population of the state endangered foam flower.

*Charles Pond* is a wetland complex stretching across 110 acres in the town of Pensaukee on Green Bay. The site originally contained a hardwood swamp forest on lacustrine deposits, however high water levels during the 1980's obliterated most of the forest. Currently, this area is used for monitoring long-term geologic processes and the effects of fluctuating water levels on these lands.

*Glocke Lake* natural area encompasses 130 acres of land within Chequamegon-Nicolet National Forest in the town of Townsend. The site contains Glocke Lake, which is a 28-acre muck-bottomed hard water seepage bog surrounded by well-developed sphagnum moss, sedge, and mats of ericaceous plants, such as Labrador-tea, bog-laurel, bog-rosemary, and cranberries. The site is commonly used by many birds during breeding season and other wildlife including black bear, snowshoe hare, muskrat, and white-tailed deer.

*Hagar Mountain*, located within Chequamegon-Nicolet National Forest, features an exposed igneous bedrock habitat containing numerous fissures and crevices. The existence of various cliffs, slopes, and depressions allows the natural area to support a wide variety of unusual and rare plant communities. The site is also significant in that it is one of the northern-most and largest turkey vulture roosting sites in Wisconsin.

*Snow Falls Creek* natural area lies on 350 acres within Chequamegon-Nicolet National Forest. The natural area features a high gradient trout stream surrounded by a forested area dominated by white cedar, black ash, and balsam fir. The stream is bordered by rolling morainal uplands.

### ***Sheboygan County***

*Butler Lake and Flynn's Spring* natural area lies on 158 acres within Kettle Moraine State Forest in the Town of Mitchell. Butler Lake is a 7-acre shallow hard bottom lake of which Flynn's Spring flows into the south end. The area provides habitat for unicorn clubtail dragonfly and the plant swamp spreadwing, which are two rare species. Also featured within the natural area is Parnell Esker, which is a well-known geologic feature that rises five to 35 feet in height and runs northeast southwest for about four miles.

*Cedar Grove Hawk Research Station* is a 30-acre tract located close to Lake Michigan on low, abandoned dunes. The natural area is positioned along a major migratory route and as a result has been used as a trapping and banding station, used primarily for raptors, for over 50 years.

*Crooked Lake Wetlands* features a 65-acre natural lake that provides a spawning place for northern pike. The wetlands surrounding the lake supports diverse landscapes including northern wet forest, southern dry-mesic forest, southern sedge meadow, shrub-carr, open bog, and one additional unnamed shallow seepage lake.

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*Johnson Hill Kame* natural area contains 14 acres of land within the Kettle Moraine State Forest Northern Unit. The area is known for its geologic significance as a “moulin” kame, which is a pointed hill made up of sand and gravel formed from subglacial meltwater streams that poured downward through cylindrical holes in the glacier. The kame is surrounded by northern and southern dry-mesic forest.

*Kettle Hole Woods* natural area is located on 83 acres within the Kettle Moraine State Forest. The area features mature southern mesic and dry-mesic hardwood forests that contain scattered ephemeral ponds. The natural area provides habitat for two-state threatened birds, red-shouldered hawk and Acadian flycatcher.

*Kettle Moraine Red Oaks* encompasses 316 acres of land within the Northern Unit of Kettle Moraine State Forest featuring a mature southern dry-mesic forest that is over 100 years old. The large forested area serves as habitat for forest interior birds including the state threatened species Acadian flycatcher, red-shouldered hawk, and cerulean warbler.

*Kohler Park Dunes*, located within Kohler-Andrae State Park, contains three uncommon Great Lakes shore habitats present in this area: a Lake Michigan dunes consisting of large, active portions surrounded by stabilizing dunes; a one-quarter mile of beach community; and two small remnants of white pine forest. The area is rich in coastal plant species and there are numerous critical plant species present. A 10-acre buffer zone has been established on the west edge of the scientific area.

*Rhine Center Bog* lies on 53 acres of land in the Town of Rhine. The natural area features a classic lake bog surrounded by a second-growth southern mesic forest and a vast amount of wetlands.

### **State Wildlife and Fishery Areas**

Since 1876, the State of Wisconsin has been acquiring State Wildlife Areas (SWAs) and State Fishery Areas (SFAs) to meet conservation and recreation needs. SWAs and SFAs are public lands and/or waters managed by the Wisconsin Department of Natural Resources.

The Bay-Lake Regional Planning Commission researched SWAs and SFAs from the online files of the WDNR State Wildlife Recreation program and parcel maps to locate the sites in the Bay-Lake Region. The Bay-Lake Region has 24 WDNR designated State Wildlife and Fishery Areas, which are listed in Table 5.5 along with the county in which each is found. Map 5.18 displays the State Wildlife and Fishery Areas of the Bay-Lake Region, as well as the State Natural Areas, which were discussed in the previous section.



Table 5.5: State Wildlife and Fishery Areas of the Bay-Lake Region

	State Wildlife and Fishery Areas of the Bay-Lake Region	County
1	Littletail Unit - Green Bay West Shores	Brown
2	Longtail Unit - Green Bay West Shores	Brown
3	Sensiba Unit - Green Bay West Shores	Brown
4	Peats Lake Unit - Green Bay West Shores	Brown
5	Holland Wildlife Area	Brown
6	C.D. Besadny Fish and Wildlife Area	Kewaunee
7	Collins Marsh Wildlife Area	Manitowoc
8	Kiel Marsh Wildlife Area	Sheboygan/Manitowoc
9	Pine-Popple Wild Rivers	Florence
10	Mud Lake Wildlife Area	Door
11	Gardner Swamp Wildlife Area	Door
12	Miscauno State Wildlife Area	Marinette
13	Town Corner State Wildlife Area	Marinette
14	Amberg State Wildlife Area	Marinette
15	Lake Noquebay State Wildlife Area	Marinette
16	Peshtigo Harbor State Wildlife Area	Marinette
17	Peshtigo Brook Wildlife Area	Oconto
18	Oconto River Fishery Area (South Branch)	Oconto
19	Rush Point Unit - Green Bay West Shores	Oconto
20	Oconto Marsh Unit - Green Bay West Shores	Oconto
21	Pecor Point Unit - Green Bay West Shores	Oconto
22	Pensaukee Unit - Green Bay West Shores	Oconto
23	Charles Pond Unit - Green Bay West Shores	Oconto
24	Tibbett Suamico Unit - Green Bay West Shores	Oconto

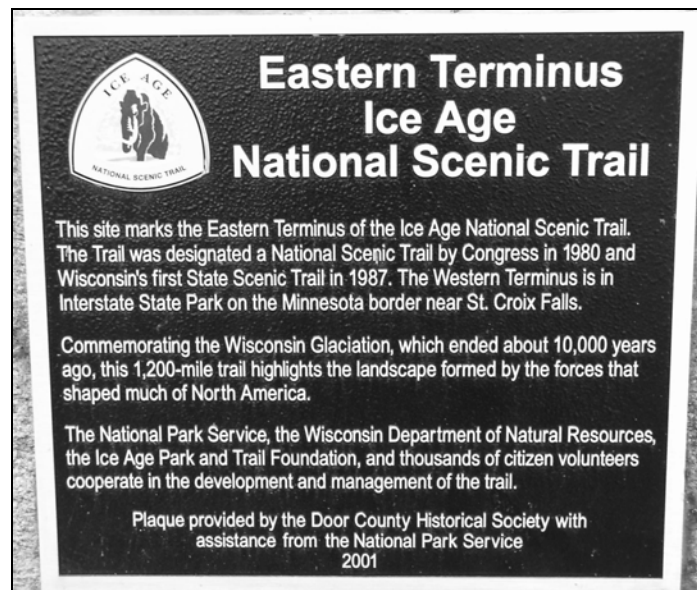
Source: Wisconsin Department of Natural Resources; 2005.

## Recreation Trails

### *Ice Age National Scenic Trail*

One of only eight national scenic trails in the United States, the Ice Age Trail will eventually be a thousand-mile walking/hiking trail located in, and unique to, Wisconsin. About 600 miles of the Trail are now available for use. The route of the trail approximates the last stopping point on the terminal edge of the most recent continental glaciations. The trail varies to include features of the glacial landscape, communities, and portions of the "Driftless Area" of southern Wisconsin. Congress recognized the national

significance of the trail by designating it a National Scenic Trail (NST) in 1980. The State of Wisconsin designated the trail a State Scenic Trail in 1987. The Ice Age National Scenic Trail



Source: Bay-Lake Regional Planning Commission. 2005.

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has its terminus in Potawatomi State Park in Door County. Currently additions to the trail are being developed in Kewaunee and Manitowoc counties.

### ***Ahnapee State Trail***

The Ahnapee State Trail, a former railroad line, is a multi-use trail that spans about 30 miles between Casco, Algoma, and Sturgeon Bay. The eight to 10-foot wide limestone trail winds through farmlands and wetlands. The trail is used for biking, hiking, horseback riding, snowmobiling, and cross-country skiing. It interconnects with 95 miles of snowmobile trails in Kewaunee County and 275 miles of trail in Door County.

### ***Fox River State Recreational Trail***

The Fox River State Recreational Trail stretches 13.5 miles from downtown Green Bay to Greenleaf. From the Trailhead, approximately 5.4 miles of the urban section of the trail is asphalt-paved. The portion of the trail located south of Heritage Road allows horseback riding on bridle paths along side the trail corridor. During the summer of 2002, St. Vincent WholeHealth developed a "Health Trail" along a portion of the Fox River Trail in Allouez, providing trail users with an outdoor fitness challenge course. Also located in the Allouez section of the Fox River Trail is St. Francis Park that contains a picturesque gazebo and park benches that overlook the Fox River. St. Francis Park provides a relaxing resting spot for trail users and picnickers.

### ***Mountain-Bay State Trail***

The Mountain-Bay State Trail is a county-operated 80.5-mile rail bed trail that passes through a wide variety of landscapes between the Wausau and Green Bay areas. Named for two geological features it connects - Rib Mountain in Marathon County and Green Bay in Brown County - the trail is built on the former Chicago and Northwestern right-of-way. Trail users must use streets and roads through Shawano. The trail allows hiking, touring bikes, and snowmobiles.

### ***Nicolet State Trail***

Nicolet State Trail is a county-operated 44.5-mile former rail corridor through forests and farms of northeast Wisconsin. The northern half is surrounded by the Nicolet National Forest.

### ***Oconto River State Trail***

Oconto River State Trail is a county-operated 18-mile trail between the Oconto and Stiles junction. It goes near Copper Culture State Park and parallels the Oconto River offering opportunities to fish, or float part of the river then hike or bike back on the trail.

## **Beaches**

Beaches are popular recreational areas in the Bay-Lake Region. There are 98 Lake Michigan beaches within the Region offering a variety of shoreland and water activities. However, the beaches may not be as clean as one might think. Since 2003, after an amendment to the Clean Water Act required beach monitoring of all Great Lakes beaches, the region has seen a significant increase in beach closing due to unhealthful conditions. Map 5.19 displays the beaches of the Bay-Lake Region.

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### ***Beach Closings***

In recent summers, many beaches in Wisconsin and elsewhere have closed for days at a time, due to harmful bacteria in the water. The worst offender is *Escherichia coli* (commonly known as *E. coli*), which can infect people who ingest food or water contaminated with human or animal feces. *E. coli* can have serious health effects.

While most cases of *E. coli* illness have been traced back to contaminated food, sickness can also occur after swimming in water that is contaminated with the bacteria. That is the problem being experienced at Wisconsin's beaches. The causes for high levels of bacteria in Lake Michigan are varied. Weather conditions like high winds and heavy rainfall can cause a rise in bacteria levels, as can hazy skies and warm days. Conversely, several dry, windless days in a row can lead to stagnant water - perfect for producing certain bacteria.

In the Bay-Lake Region, the likely contributions of bacteria are attributed to human waste from aging sewer pipes and/or storm sewer overflows, runoff from nearby farms and fields, and the huge flocks of seagulls and geese that live along Wisconsin shores.

While the increase in beach closings is likely a result of more diligent testing and reporting, the health of the beaches in the region is nevertheless disturbing to those who live and play on Lake Michigan's shores. In addition, many beaches in the region have no monitoring programs in place so beaches stay open even when bacteria levels may be high.

As of 2005, Wisconsin has no uniform standards for monitoring the bacteria levels on its beaches, but some counties, including Door and Kewaunee, are working with the EPA, WDNR, UW-Milwaukee Water Institute, University of Wisconsin - Oshkosh, and local health departments to make statistics available to the public on a daily basis via website or telephone.

### **Wisconsin Beach Health Program**

In 2003, the Wisconsin Department of Natural Resources, in cooperation and collaboration with local, state, and federal authorities, began implementation of the federal BEACH (Beaches Environmental Assessment and Coastal Health) Act of 2000. The BEACH Act is an amendment to the Clean Water Act requiring all coastal states, including Great Lakes states, to develop programs for effective water quality monitoring and public notification at coastal recreational beaches. EPA has made grants available to participating states to develop and implement a statewide beach program.

Under the Wisconsin Beach Program, the WDNR gives grants to communities along Lake Michigan and Lake Superior to monitor beach water for elevated bacteria levels. This information is made available to the public so beach visitors can make informed choices about how to use beach water resources. For more information about the Beach Program and updates on beach water quality, visit the Beach Health website at [www.wibeaches.us](http://www.wibeaches.us).

### **Recreational Marinas**

A survey of all recreational marinas operating within the Bay-Lake region was conducted in the fall of 2002 - and updated through 2003. The survey found that there were more than 50 recreational marinas operating within the region, that the marinas provided 2,510 slips to accommodate seasonal customers and there were approximately 340 transient slips available for rent by the day or week (See Map 8.3 and Refer to Chapter 8 for additional information).

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## Other Parks and Recreational Areas

*Baird Creek Park* in Brown County contains both northern and southern dry-mesic forest. A red and white oaks and white pine forest line the clay and sand ravines feeding into Baird Creek. The ground flora is fairly diverse.

*Bay Beach Wildlife Sanctuary* is a 700-acre urban wildlife refuge located in the City of Green Bay. Open year round the wildlife sanctuary provides educational programming, picnic areas, horse-drawn wagon rides, over 6 miles of trails for hiking and cross-country skiing, and other various programs and activities.

*Cofrin Arboretum* is a 270-acre natural area located on the University of Wisconsin-Green Bay campus. The arboretum has many hiking and cross-county ski trails for the public to utilize for viewing the variety of ecosystems. The arboretum's goal is to preserve existing natural communities and to develop examples of other communities of the area. The Niagara escarpment provides additional height for an observation tower at the eastern edge of the campus along Bay Settlement Road.

*Crescent Beach and Boardwalk* in the City of Algoma in Kewaunee County offers scenic views of Lake Michigan as well as access to the Algoma visitor center and the Algoma marina.

*Dyckesville Iris Woods* area is situated one and one-half miles southeast of the unincorporated village of Dyckesville in the region of Green Bay. It is a 19,000-acre natural area of extensive swamps and upland forests with scattered and extensive populations of Wisconsin threatened Dwarf Lake Iris the only station outside of Door County. Dwarf Lake Iris is found mainly along drainageways that are vegetated with scattered white cedar, with some populations occurring in roadside ditches. The natural area is broadened by large areas of entirely agricultural land use to lie to the east, south, and southwest, and State Highway 57 and agricultural land lie to the north. Over half of the natural area is considered wetlands. The integrity of this natural area seems to be intact; however, private ownership and current zoning provide conditions conducive for development. Further agricultural or residential development could threaten portions of the natural area.

*Egg Harbor Escarpment* in Door County is a 500-acre stretch of Niagara Escarpment dolostone that extends over three miles. This wooded ridge (primarily with white cedar) rises 150 to 200 feet above the terrace adjacent to Green Bay. This ridge is located two miles west and north of the village of Carlsville in the region of Egg Harbor.

*Hutchinson's Bog* was formerly called "Blueberry Marsh". The area is unique since it is a perched acid bog on top of alkaline rock (dolostone). It is similar in many ways to bogs of northern Wisconsin, although less diverse and with no apparent open water or sedge mats. It is mostly dominated by the low shrubs, leatherleaf, bog laurel, and Labrador tea. Many other typical bog plants are also present, especially the shrubs in the dense shrub zone around the perimeter, such as bog birch. It has apparently been disturbed in the past, probably through grazing, and possibly fire. The edges of Hutchinson's Bog are currently being developed.

*Point Au Sable*, which is owned by the University of Wisconsin-Green Bay, consists of a rough triangular-shaped point projecting into the east shore Lower Green Bay. It is made up of significant areas of emergent marsh along the east shore. It is composed of narrow sand spits or ridges surrounding emergent marsh, shrub, and forest communities, and varying expanses of open water. Wequiock Creek, an intermittent runoff stream, enters the interior portion of the marsh from the east, and drains through the area, entering Green Bay along the southern edge of

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the point. It contains a variety of major plant communities and receives significant use by many species of wildlife. The area has experienced significant past disturbance, but remains valuable due to the presence of migrant and resident birds and other wildlife, recreational values, and potential historical/archaeological significance.

*Sheboygan County Memorial Arboretum* in Sheboygan County is a wet lacustrine swamp that is made up primarily of black ash and American elm with alder in the understory. The somewhat open tree canopy contains many plant species throughout the swamp, and there is little local relief. Trails run along the east and west fringes of the swamp.

*Wild Rivers Interpretive Center* located in Florence County provides valuable information about the natural environment of the area. The center also supports a variety of educational stewardship programs to promote youth education and community involvement in preservation and conservation efforts throughout the county.

*Whisker Lake Wilderness Area* located in northern Florence County is the second largest wilderness area in the state of Wisconsin. The area is densely wooded and has been subject to little human disturbance other than a series of hiking trails and primitive hiking.

### **Historical/Archaeological Sites**

The preservation of ancient and historic sites offers residents and visitors a special sense of place and a feeling of continuity and association with the past. As communities plan for growth, they should preserve archaeological, historical, and cultural places, from rural landscapes to urban neighborhoods. Archaeological, historical, and cultural resources provide aesthetic, educational, and economic benefits that will continue to improve the quality of life. The Bay-Lake Regional Planning Commission acquired the locations of historic and archaeological sites from the Federal and State Historical Society files, existing archaeological reports and community maps.

The National Historic Register recognizes properties of local, state, and national significance. Properties are listed in the National Register because of their associations with significant persons and events, their architectural or engineering significance, or because they contain important information about historic districts. The Wisconsin Register of Historic Places, created under s. 44.36 Wis. Stats., was designed to preserve and protect historical and archaeological sites in Wisconsin.

### **Historic Districts**

Portions of the Bay-Lake Region have been settled since the 1700s. Subsequently, there are many buildings of historical importance within the region. For the purpose of this plan, only historic districts on the state and/or national registry have been listed. Care should be taken when excavation is done within the Bay-Lake Region, since there is the possibility of disturbing a historical or archeological site. The State of Wisconsin requires any findings of human bones to be reported enabling the State Historical Society to investigate Wisconsin Statute 157.70. Land developers trying to obtain state permits from the Wisconsin Department of Natural Resources on any development involving federal monies are required to be in compliance with Section 106 of the National Historic Preservation Act and 36 CFR Part 800: Protection of Historic Properties.

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### **Brown County**

*Astor Historic District* was listed in the State and National Register on February 27, 1980. The District is situated on 1,535 acres consisting of 444 buildings from the period between 1835 and 1929.

*Broadway Dousman Historic District* was listed in the State and National Register on March 12, 1989. It is situated on 30 acres consisting of 12 commercial buildings from the late 19<sup>th</sup> and 20<sup>th</sup> century revival from the period between 1873 and 1947.

*Broadway Walnut Historic District* was listed in the State and National Register on July 8, 1999. It is situated on 50 acres consisting of over 20 late 19<sup>th</sup> and early 20<sup>th</sup> century commercial buildings in northeastern Green Bay. Most of the buildings retain significant integrity as examples of the predominately vernacular architecture that typifies the developmental history of that area.

*De Pere Lock and Dam Historic District* was listed in the State and National Register on December 7 1993. It is situated on 28 acres consisting of two buildings and three structures from the period 1930 and 1941.

*Little Kaukauna Lock and Dam Historic District* was listed in the National Register on December 7, 1993. It is situated on 42 acres consisting one building and three structures.

*North Broadway Street Historic District* was listed in the State and National Register on September 8, 1983. It is situated on 280 acres consisting of over 47 late Victorian mixed housing that contains styles from two different periods between 1836 and 1923.

*Oakland Dousman Historic District* was listed in the State and National Register on April 27, 1988. It is situated on 80 acres consisting of 19 late Victorian, late 19<sup>th</sup> and 20<sup>th</sup> century revivals and early 20th century American movements from the period between 1862 and 1930.

*Wisconsin State Reformatory* was listed in the State and National Register on May 3, 1990. It is situated on 540 acres consisting of seven buildings and one structure in Italianate and Romanesque style from the period between 1898 and 1939.

### **Door County**

*Anderson Dock Historic District* was listed in the State and National Register on June 11, 1985. It is situated on 22 acres consisting of six commercial buildings from the period between 1858 and 1932.

*Baileys Harbor Range Light* was listed in the National Register on September 21, 1989. It is situated on 22 acres consisting of six buildings from the periods between 1869 and 1939.

*Little Lake Archaeological District* was listed in the State and National Register on February 27, 2002. It consists of two sites that contain archeological/prehistoric remains from 1000 to 1400 and archeological/historic - non-aboriginal remains from 1850 to 1860.

*Louisiana Street/Seventh Avenue Historic District* was listed in the State and National Register on September 22, 1983. It is situated on 209 acres consisting of 28 buildings in Queen Anne and Classical Revival from the period between 1890 and 1920.

*Namur Belgian-American Rural Historic District* was listed in the State and National Register on November 6, 1989. It is situated on 3,500 acres consisting of over 180 buildings from the period

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between 1880 and 1930. Namur was settled in 1853 by French-speaking Belgian immigrants, most of which farmed in their European homeland and brought their agrarian skills with them. It is the Nation's largest rural settlement of Belgian nationality where the importance of farmsteads and landscape play a key role. The Namur Historic District exemplifies the character of Belgian-American vernacular architecture.

*Third Avenue Historic District* was listed in the State and National Register on October 6, 1983. It is situated on 117 acres consisting of 38 buildings in Queen Anne and Classical Revival from the period between 1865 and 1935.

*Thordarson Estate Historic District* was listed in the State and National Register on March 21, 1985. It is situated on 150 acres consisting of 10 buildings.

*Welcker's Resort Historic District* was listed in the State and National Register on April 14, 1997. It is situated on 50 acres consisting of 13 buildings in Gothic Revival from the period between 1896 and 1946.

### ***Kewaunee County***

*Marquette Historic District* was listed in the State and National Register on November 4, 1993. It is situated on 200 acres consisting of over 40 buildings in Italianate, Queen Anne, and Colonial Revivals from the period between 1870 and 1938.

*St. Lawrence Catholic Church* was listed in the National Register on February 21, 1989. It is situated on 40 acres consisting of two buildings in Pueblo and other styles from the period between 1892 and 1930.

### ***Manitowoc County***

*Central Park Historic District* was listed in the State and National Register on December 1, 2000. It is situated on 100 acres consisting of 20 buildings in Italianate, late 19<sup>th</sup> and 20<sup>th</sup> century Revivals and Art Deco from the period between 1850 and 1948.

*Eighth Street Historic District* was listed in the State and National Register on March 17, 1988. It is situated on 323 acres consisting of over 70 buildings in late Victorian, Classical Revival, and Beaux Arts from the period between 1857 and 1937.

*Frenchside Fishing Village* was listed in the State and National Register on January 6, 1987. It is situated on 94 acres consisting of over 30 domestic and agricultural buildings from the period between 1855 and 1920.

### ***Oconto County***

*West Main Street Historic District* was listed in the State and National Register on May 14, 1979. It is situated on 136 acres consisting of 20 domestic single dwellings in Greek Revival and late Victorian from the period between 1800 and 1900.

### ***Sheboygan County***

*Cole Historic District* was listed in the State and National Register on December 1, 1988. It is situated on 10 acres consisting of five commercial and domestic dwellings in Greek Revival and other styles from the period between 1837 and 1867.

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*Downtown Historic District* was listed in the State and National Register on December 27, 1984. It is situated on 65 acres consisting of over 30 buildings in late Victorian, 19<sup>th</sup> and 20<sup>th</sup> Century Revivals and other styles from the period between 1835 and 1928.

*Mission House Historic District* was listed in the State and National Register on December 20, 1984. It is situated on 100 acres consisting of five buildings in Colonial Revival, Classical Revival and late Gothic Revival from the period between 1879 and 1934.

Though Florence and Marinette Counties do not have designated historic districts, both counties have many historic sites listed on the National Register. These sites include the Amberg Town Hall, the Florence County Courthouse and Jail, the Fern School, the Lauerman Building and House in Marinette, and the Peshtigo Fire Museum.

## **Cultural Facilities**

### **Museums**

*Door County Maritime Museum* is a series of museums located along the Door Peninsula that are supported by the Lighthouse Preservation Society, Inc. The museum in Sturgeon Bay focuses on the shipbuilding industry that began in the area during the early 20<sup>th</sup> century, while the Gills Rock location features displays on ships, shipwrecks, lifesaving, and the fishing industry. The museum at Cana Island highlights its historic lighthouse facilities.

*Kewaunee County Jail Museum* was originally built in Algoma in 1876 to serve as the sheriff's residence, office, and the local jail. Today the museum houses displays of local history including the original cellblocks and a scale model of the USS Pueblo, a ship built in Kewaunee in 1944. The museum is open seasonally from Memorial Day to Labor Day.

*Neville Public Museum*, located in downtown Green Bay, is a general museum of art, history, and science that is dedicated to the collection and preservation of artifacts relevant to Northeast Wisconsin. Currently the museum holds over two million items within its collection. The museum provides a variety of educational activities for both groups and individuals at various times throughout the year.

*National Railroad Museum* in Brown County serves to increase understanding of railroading and its significance in American history. The Eisenhower collection, which includes Dwight D. Eisenhower's WWII command train, is the museum's most popular exhibit.

*Peshtigo Fire Museum* was erected to memorialize the Peshtigo fire that occurred on October 8, 1871. The fire destroyed almost the entire town of Peshtigo, which is located within Oconto County. The museum's collection includes the few items that survived.

*Sheboygan County Museum* features a complex of historical buildings built in the 19<sup>th</sup> Century as well as temporary exhibits that exemplify the historical significance of the area.

*Wisconsin Maritime Museum* located in Manitowoc displays the rich maritime history of Wisconsin and the Great Lakes region. The museum's permanent collection features information on Wisconsin's early shipbuilding and shipping industry as well as the USS Cobia (SS-245), a World War II fleet submarine that was declared a National Historic Landmark in 1986. The museum is open year round and supports a variety of educational activities throughout.



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## **Other Cultural Facilities**

*Heritage Farm*, located in Kewaunee County and developed by Agricultural Heritage and Resources Inc., serves to educate the public about the agricultural history of the area. Today the farm hosts a plethora of activities, ranging from music festivals to tractor rallies, designed to support an appreciation of community heritage.

*Green Bay Ethnic Trail* follows the original Chicago to Green Bay highway that guided many immigrants into the region. The path is part of the larger Wisconsin Ethnic Settlement Trail (W.E.S.T.), which is the largest concentration of 19<sup>th</sup> century old-world settlements in America.

*John Michael Kohler Arts Center* was established in 1967 with the intent to encourage and support study in the arts and to promote exchange between a national community of artists and a broad public to realize the significance of art. The center supports a wide variety of educational programs, artistic displays, and performing arts productions.

*Stephanie H. Weill Center for the Performing Arts* in Sheboygan County was originally built in 1928 to serve as a movie theater. Today the building continues to serve the theater arts with events including movie showings and various musical concerts.

*Weidner Center for the Performing Arts* is part of the University of Wisconsin Green-Bay. The mission of the center is to exhibit a variety of cultural, entertainment, and educational performing arts to the Northeastern Wisconsin community as well as provide a stage for local and University performing arts ensembles. Shows are scheduled year round at the Weidner Center.

## ***Wisconsin's Rustic Roads***

In 1973, the Wisconsin State Legislature established the Rustic Roads program to help identify and preserve remaining scenic, lightly traveled country roads. Each road within the program is labeled with a unique brown or yellow sign that also contains a small placard identifying the road by its numerical number within the statewide system. To qualify for the Rustic Road program, a road should have outstanding natural features along its borders or include open areas that singly or in combination uniquely set this road apart from other roads, be a lightly traveled local access road, and be one not scheduled nor anticipated for major improvements, which would change its rustic characteristic. Table 5.6 displays those roads in the Bay Lake Region that have been designated as part of the Rustic Roads program.

Table 5.6: Rustic Roads within the Bay Lake Region

County	Length (miles)	Location	Surface
Brown	3	Between Flintville and Suamico	Paved and gravel portions
	4.6	Highway J to County FF	Paved
	1.3	Along Old Plank Road west of WIS 57	Paved and gravel portions
Door	6.7	Along County Highway T	Paved
	2.5	Cana Island Road off County Q	Paved
	2.5	Ridges Road off WIS 57	Paved
	3.5	County TT	Paved
Florence	32.5	Between WIS 139 and County Highway C	Gravel
Kewaunee	3.5	Between WIS 29 and WIS 163	Paved
Manitowoc	5.2	Sandy Bay Road	Paved
Marinette	26.6	Parkway Road and Goodman Park Road	Paved
	6.5	Right-of-Way Road and South Right-of-Way Road east of Sumac Lane	Paved
Sheboygan	2.4	County S beginning at intersection of WIS 23	Paved and gravel portions

Source: Wisconsin Department of Transportation, 2005.

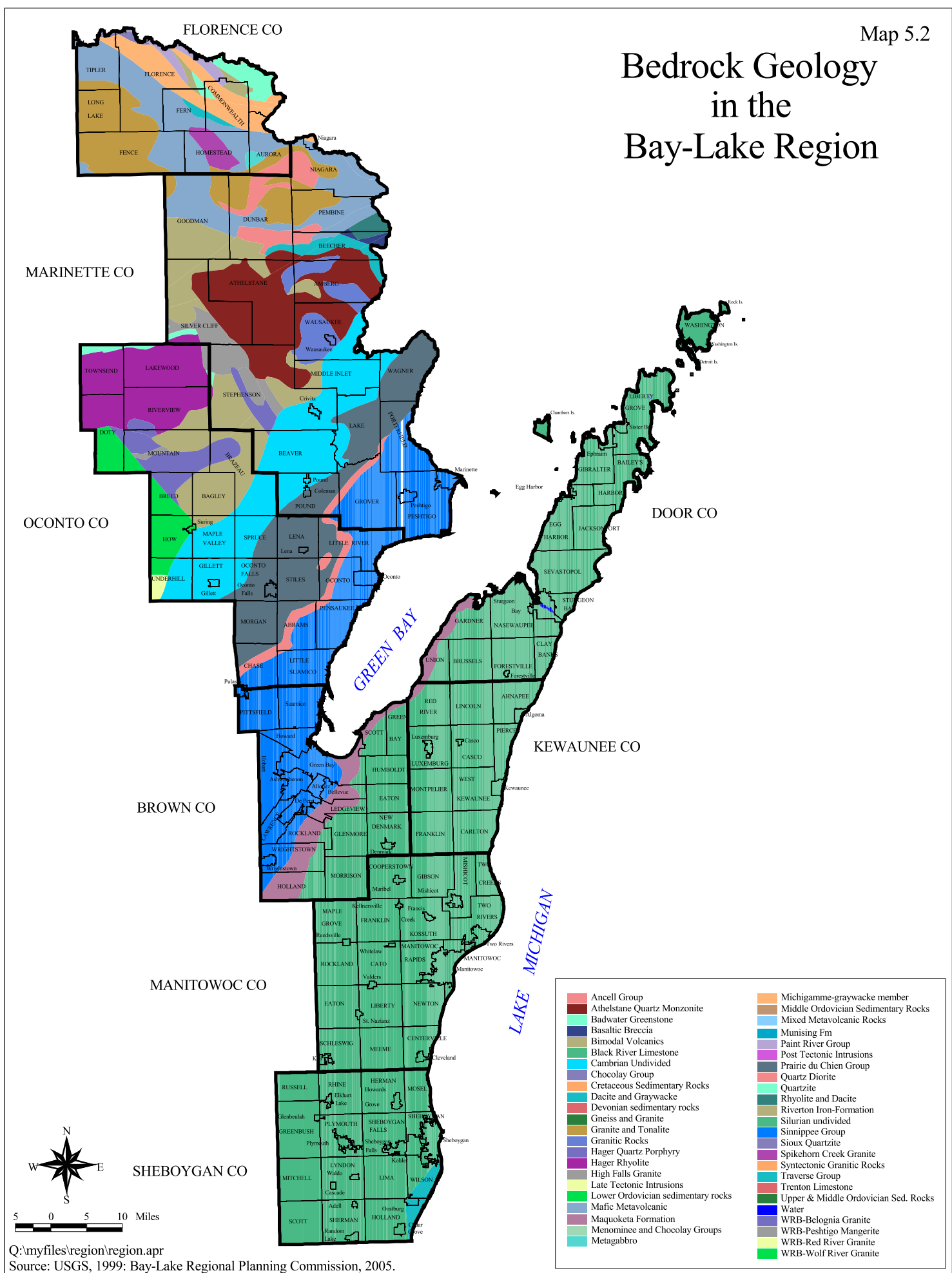








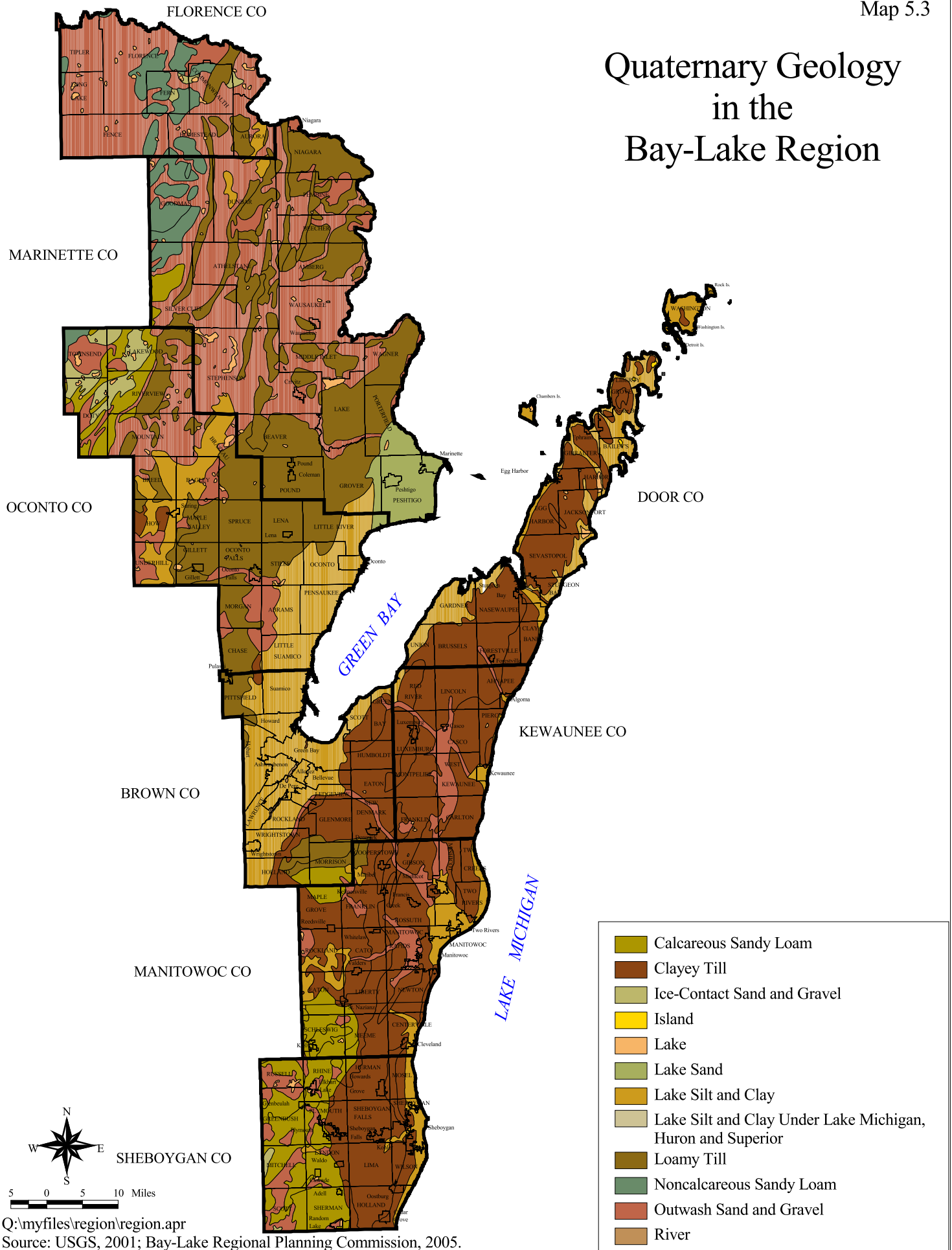
# Bedrock Geology in the Bay-Lake Region



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Source: USGS, 1999; Bay-Lake Regional Planning Commission, 2005.



# Quaternary Geology in the Bay-Lake Region

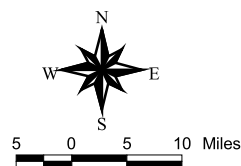
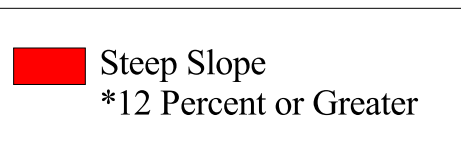






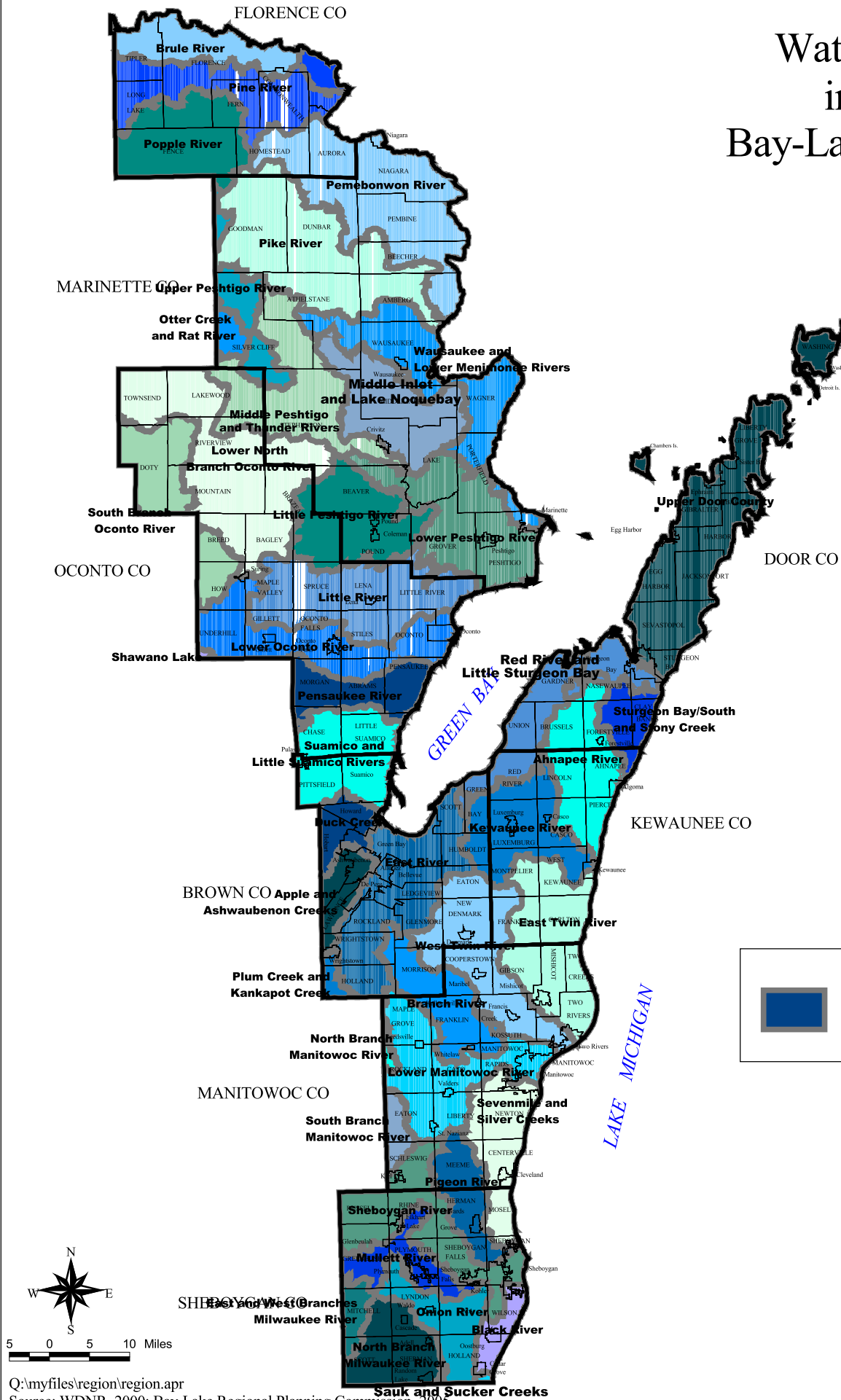








# Watersheds in the Bay-Lake Region

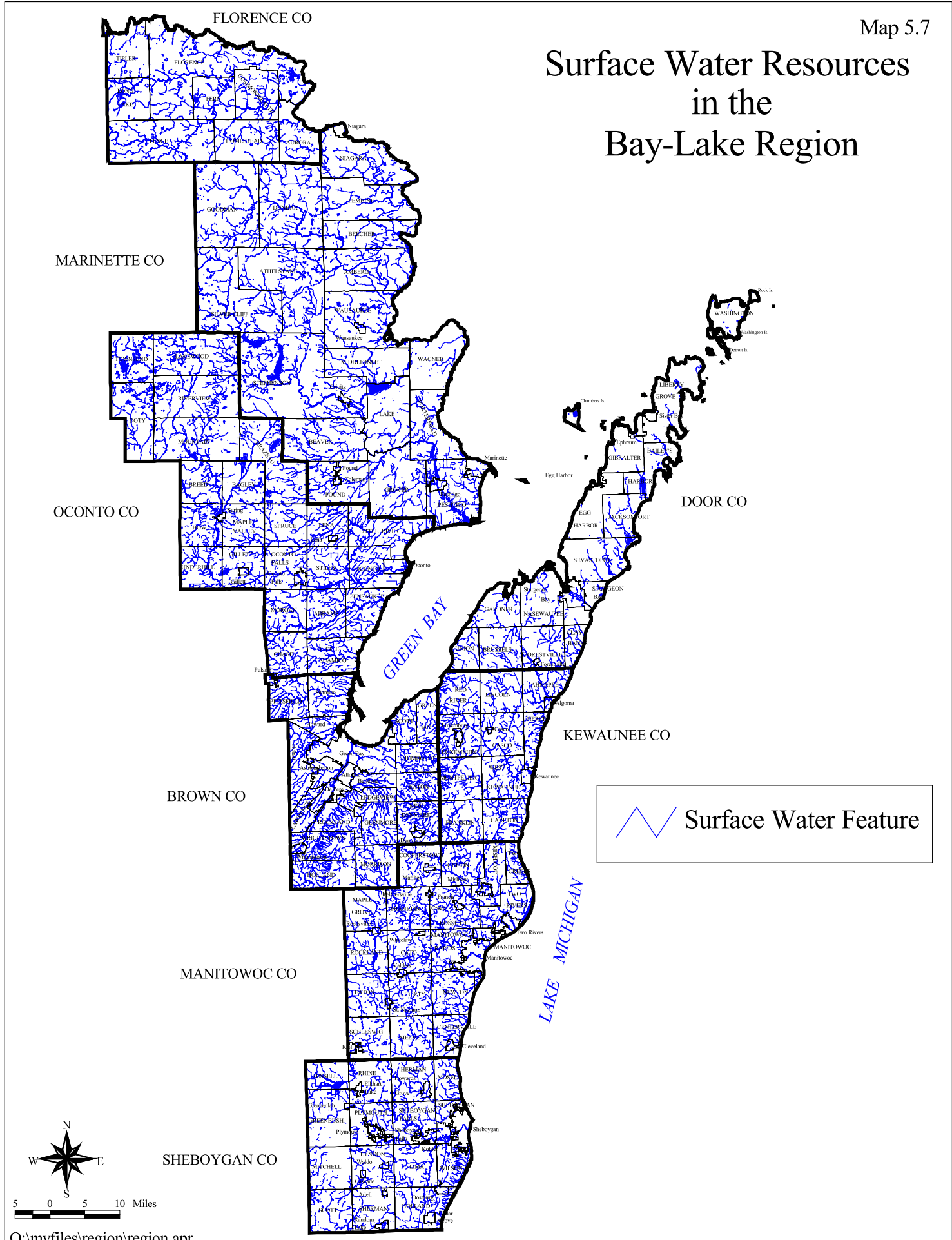



Watershed

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Source: WDNR, 2000; Bay-Lake Regional Planning Commission, 2005.



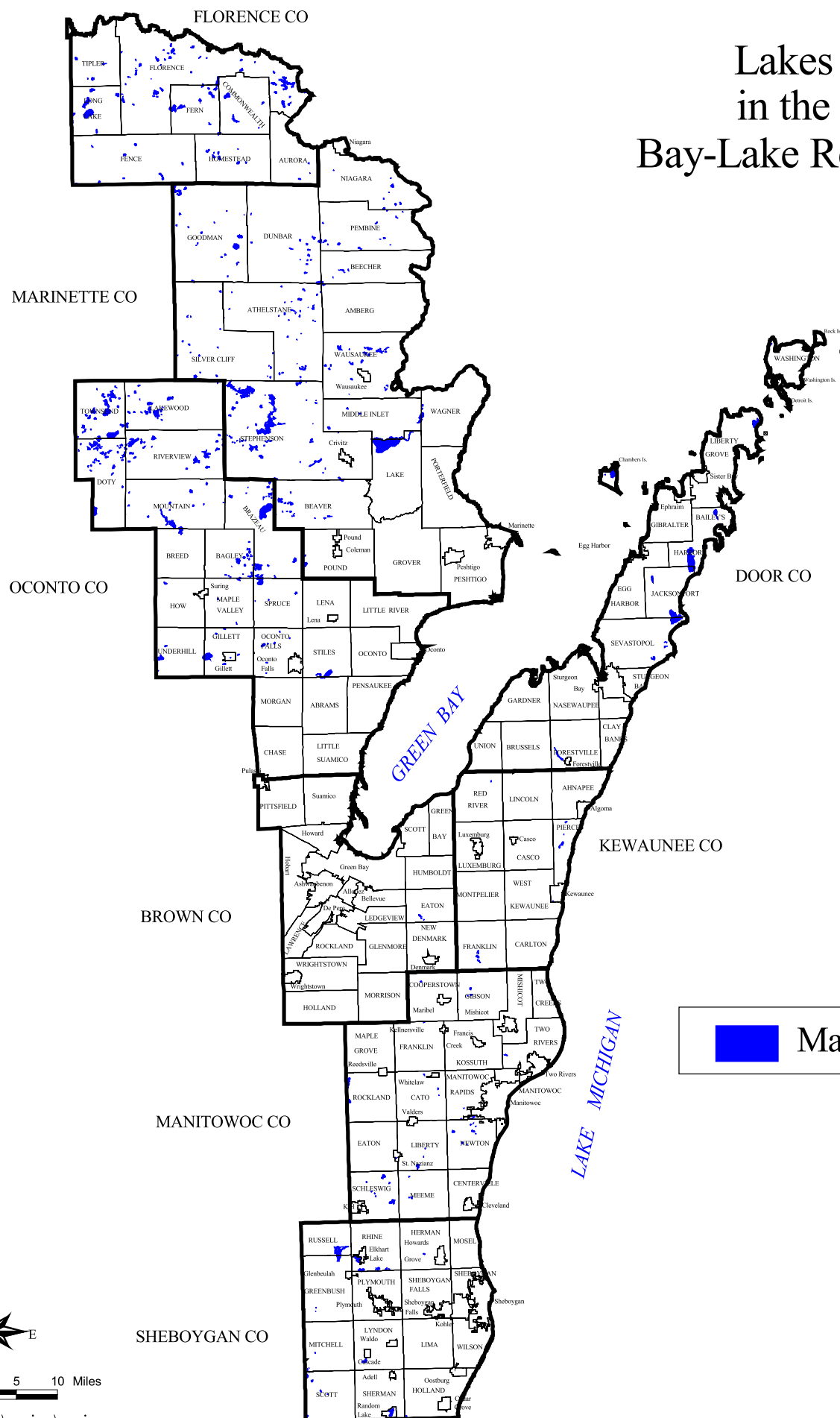
# Surface Water Resources in the Bay-Lake Region



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Source: WI DNR, 2002; Bay-Lake Regional Planning Commission, 2005.



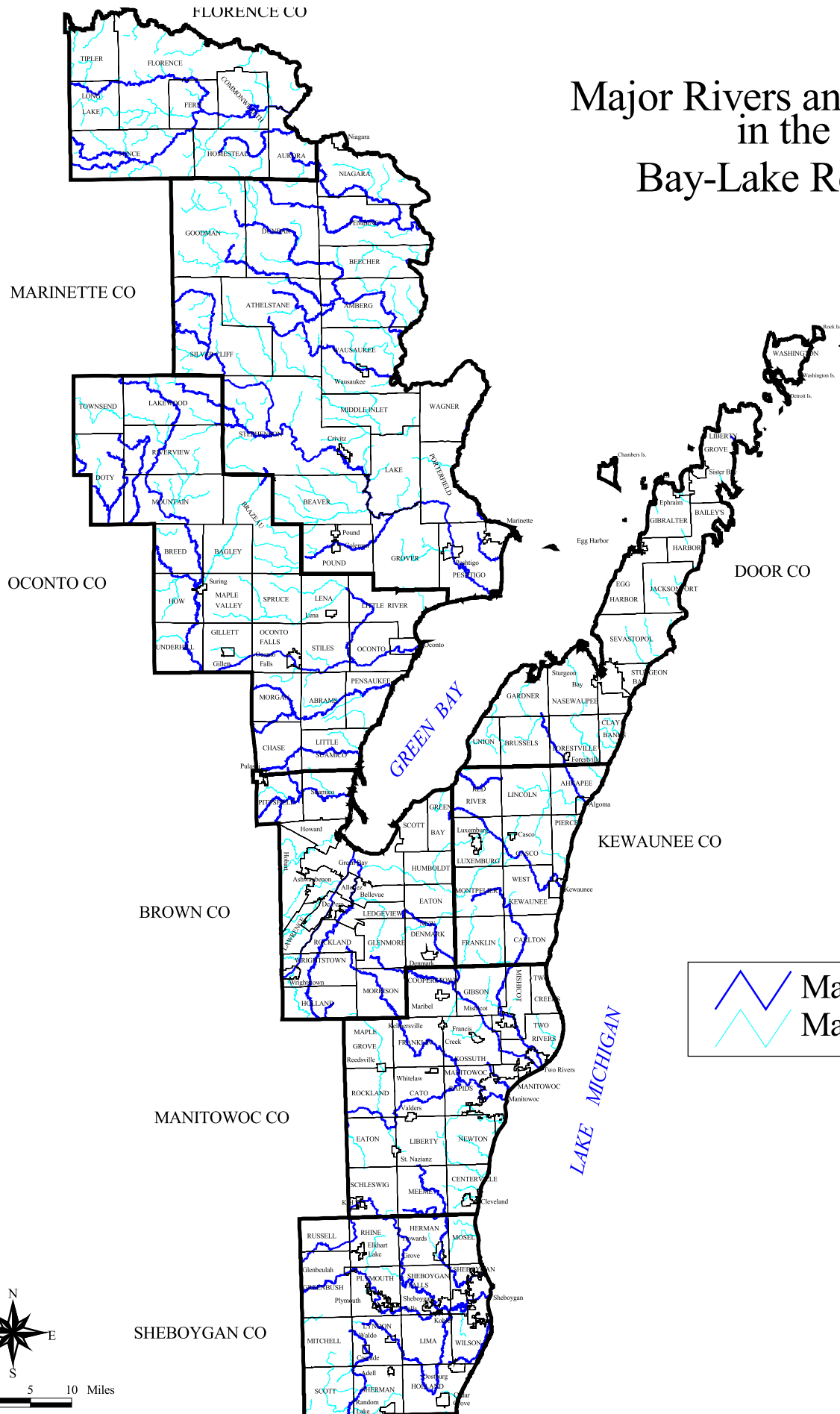




Source: Bay-Lake Regional Planning Commission, 2005.



# Major Rivers and Streams in the Bay-Lake Region



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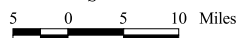
Source: Bay-Lake Regional Planning Commission, 2005.





2030 Regional Comprehensive Plan



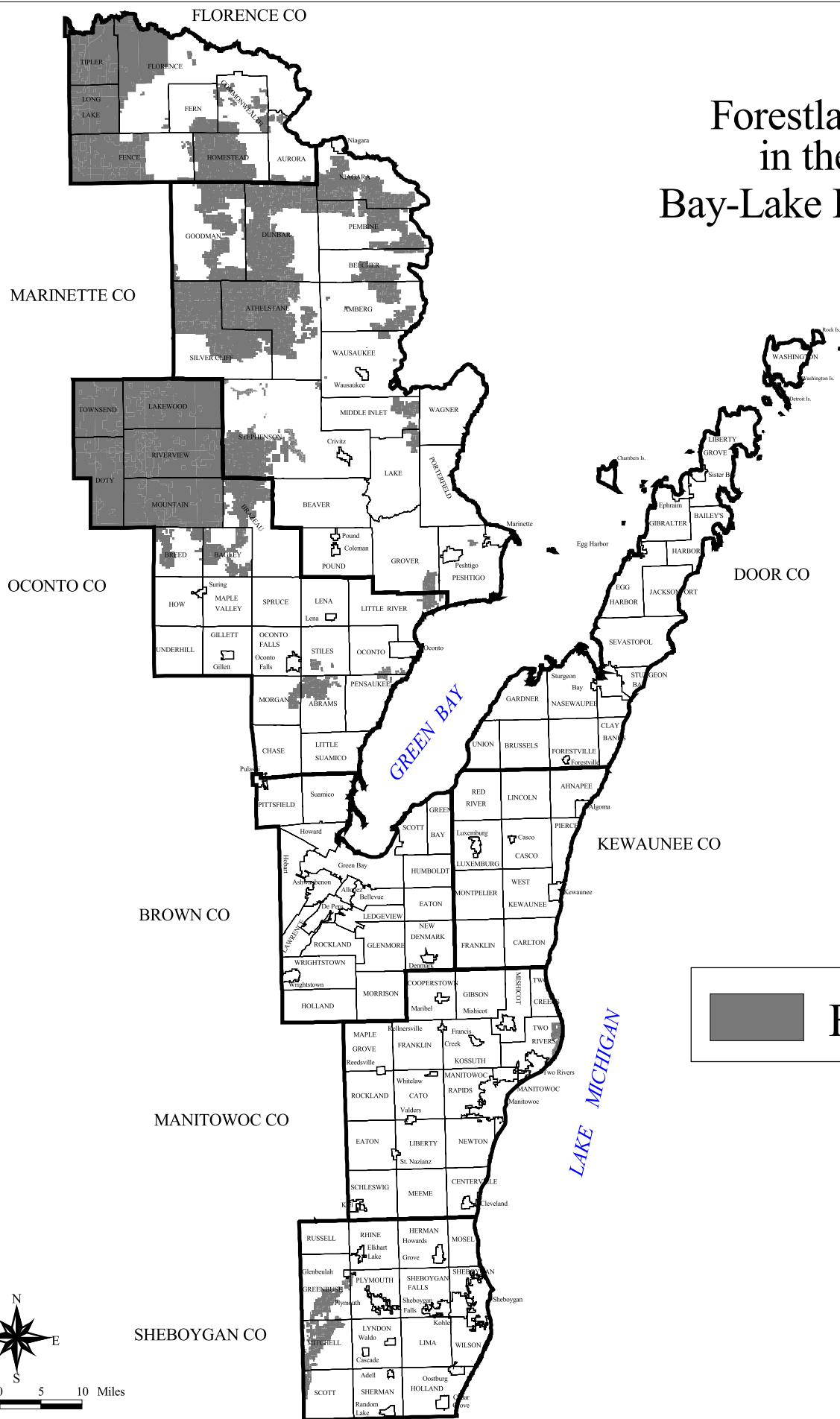


Source: WDNR, 1996; Bay-Lake Regional Planning Commission, 2005.





# Forestlands in the Bay-Lake Region

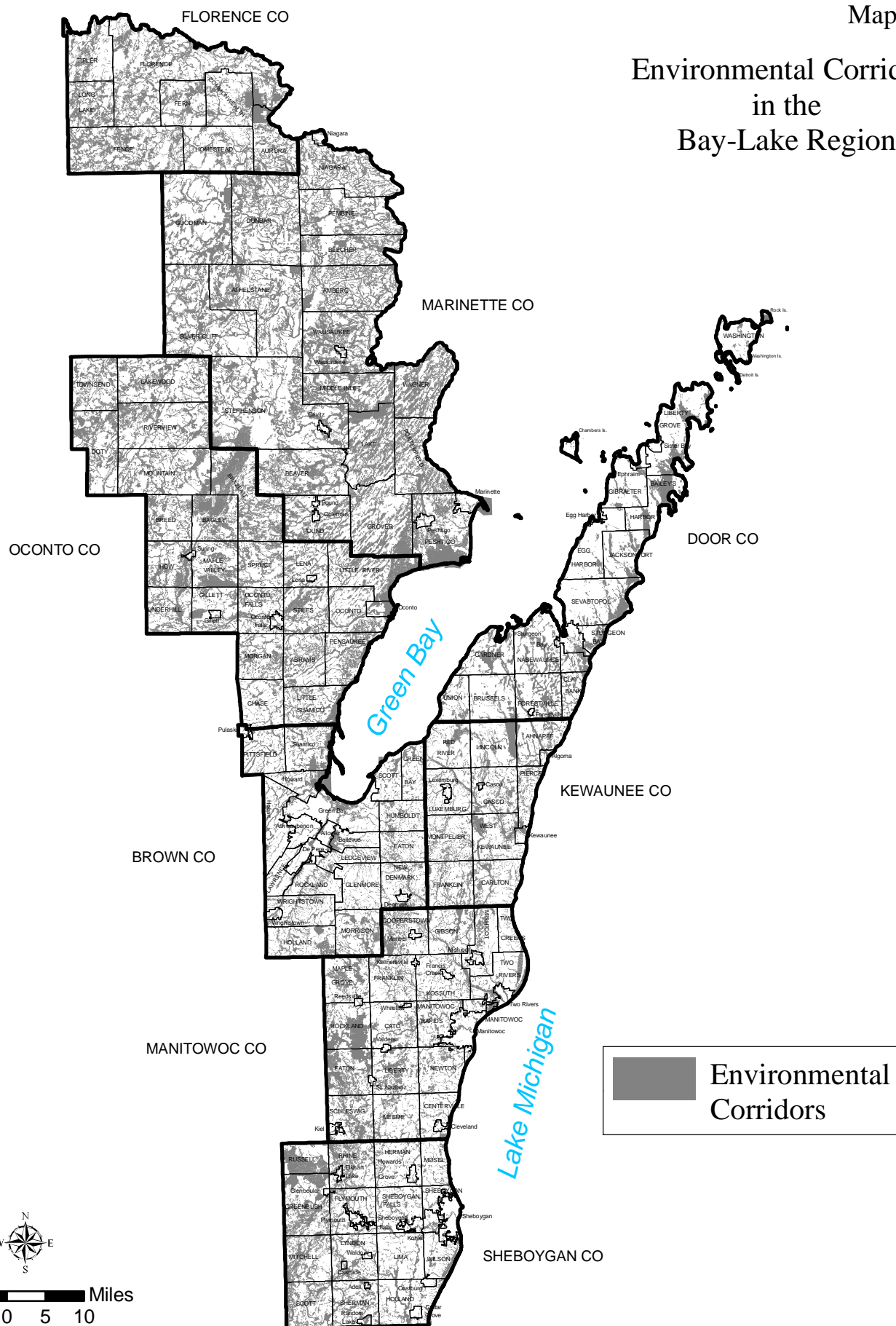


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Source: USFS, 2001; WDNR, 2004; Bay-Lake Regional Planning Commission, 2005.



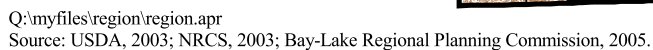
# Environmental Corridors in the Bay-Lake Region



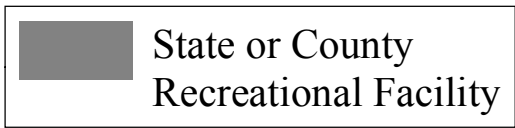
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Source: WDNR; FEMA; NRCS; Bay-Lake Regional Planning Commission, 2005





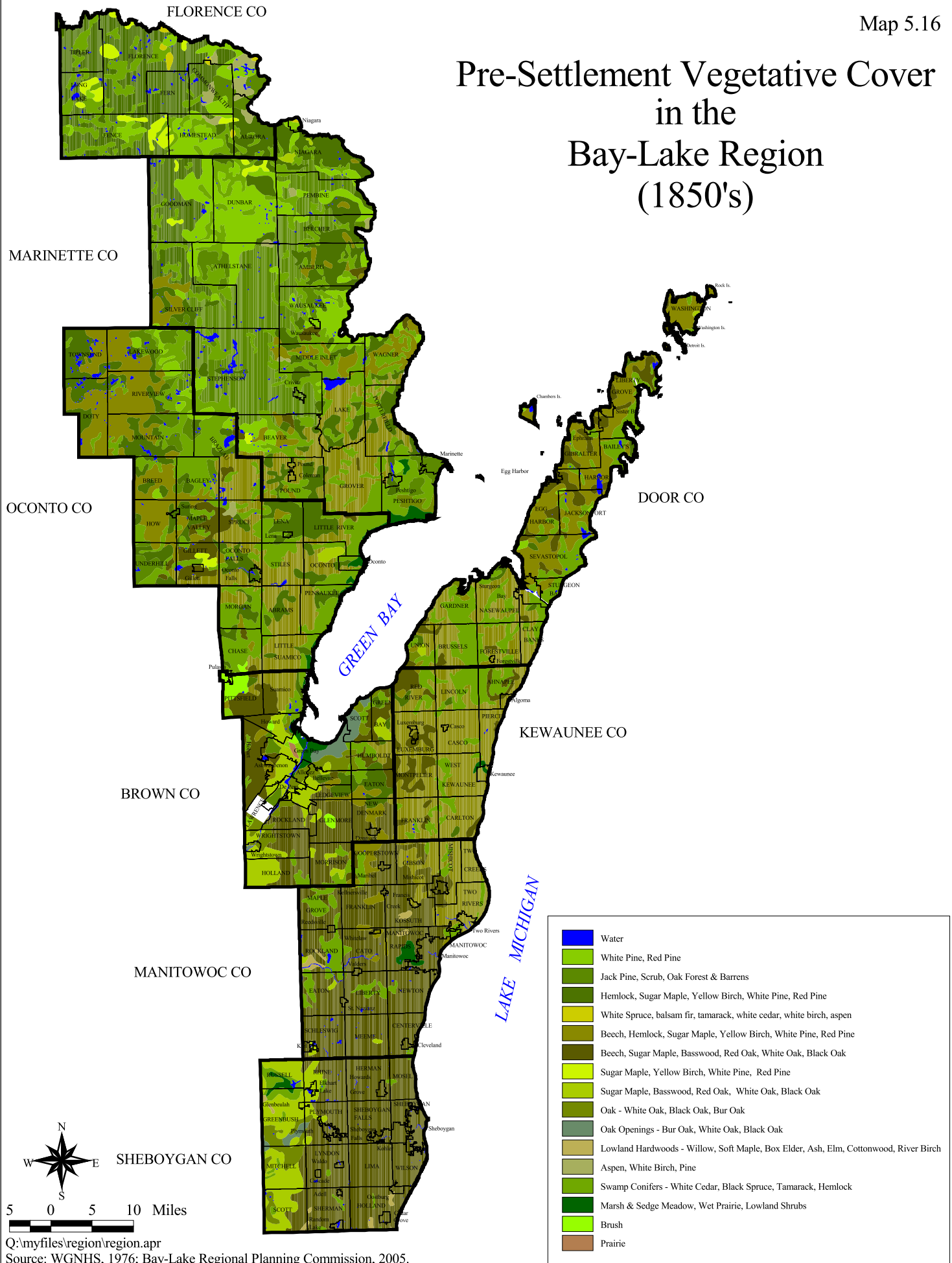








# Pre-Settlement Vegetative Cover in the Bay-Lake Region (1850's)

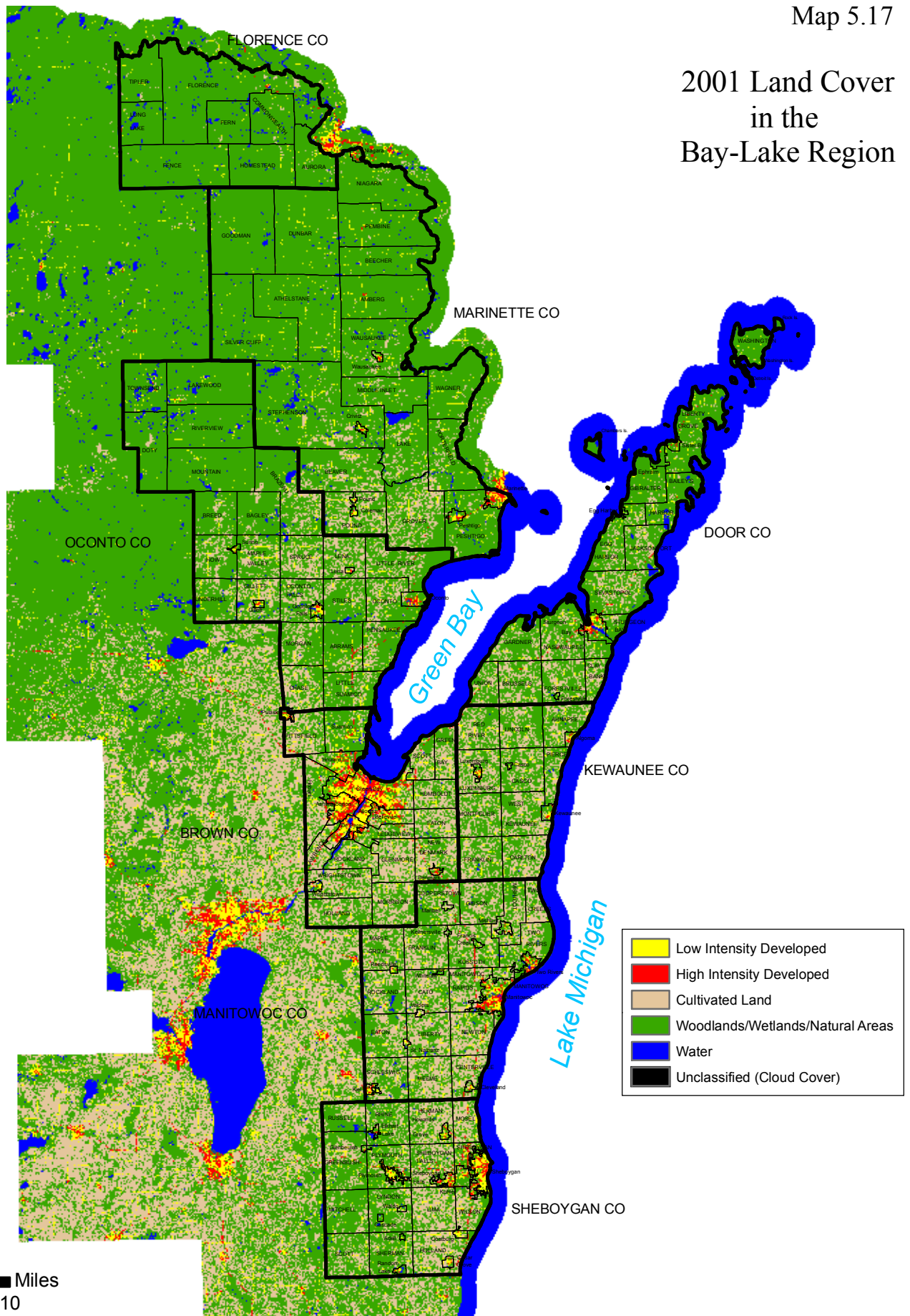


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Source: WGNHS, 1976; Bay-Lake Regional Planning Commission, 2005.



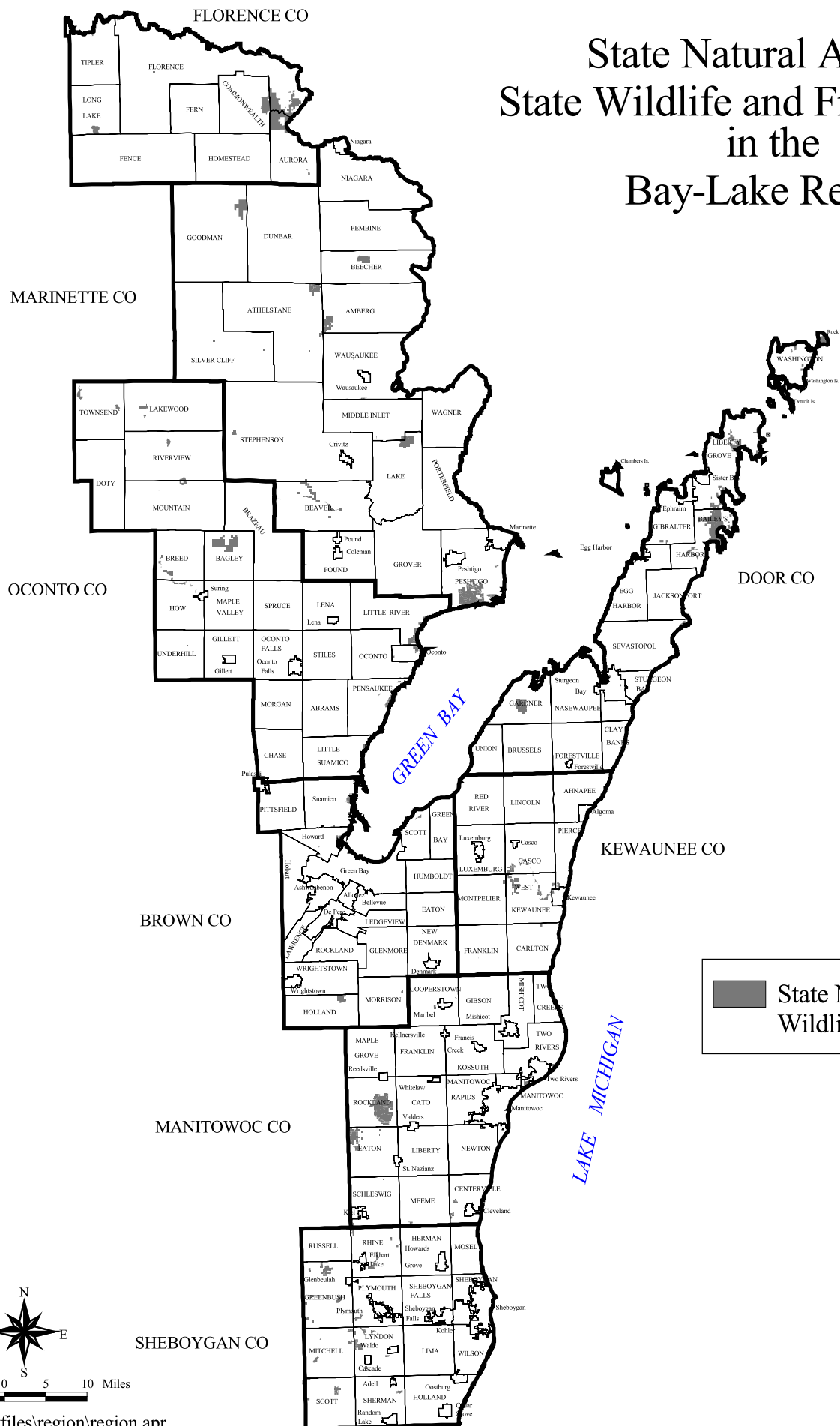
# 2001 Land Cover in the Bay-Lake Region



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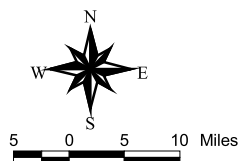
Source: NOAA, 2001; Bay-Lake Regional Planning Commission, 2005





Source: WDNR, 2004; Bay-Lake Regional Planning Commission, 2005.





Source: WI DNR, USGS; Bay-Lake Regional Planning Commission, 2005.





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## **CHAPTER 6 - HOUSING AND POPULATION**

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### **INTRODUCTION**

Population change is the primary component in tracking the past growth of an area as well as predicting future population trends. Population characteristics relate directly to the Region's housing, educational, community and recreational facility needs, and to its future economic development. It should be noted that over time there are fluctuations in local economies and populations that generally cannot be predicted. These fluctuations and changes can greatly influence regional population growth and characteristics. This chapter will identify population and housing trends that may affect the future of the Bay-Lake Region.

### **SUMMARY OF THE REGION**

1. The largest age group is between 30 and 49 year olds, which is the age group traditionally having the highest earning power.
2. The population in 2000 was 554,556 or an 11.17 percent increase from 1990.
3. According to Wisconsin Department of Administration (WDOA), the population is projected to increase to 663,973 persons by 2030, which represents a 14.2 percent increase.
4. The median age in 2000 was nearly 39 years indicating an aging adult population. Implications are that an aging community will need additional specialized services to accommodate these age groups in the future.
5. The number of housing units in the Region has seen a steady increase from 1990 to 2000. There has been a 68.1 percent increase in housing units since 1970.
6. The household size is expected to decline over the next 25 years from 2.46 to 2.20 persons per household.
7. At approximately 2.20 persons per household, it can expect between 81,000 and 187,000 new housing units will be built by 2030.
8. Of the 248,916 housing units, 23.0 percent (57,146) were built before 1940.
9. In 2000, approximately 27 percent of renters were living in "non-affordable" housing because they were paying 30 percent or more of their incomes towards rent.
10. In 2000, 16 percent of home owners were paying 30 percent or more of their incomes towards housing payments.

The region's population has risen markedly over the course of the last four decades. Projections developed after the 2000 Census indicates that the region's population was likely to increase through 2015, though at a slower rate than has been seen from the 2000 Census. The region has experienced (over the past three decades) an age structure shift towards the older age groups. This may lead the region to spend more on services to accommodate an aging population over the next twenty years. Likewise, the aging population can also mean additional business opportunities. The elderly have been shown to import income into a community, living on prior savings or investments in the form of social security, private pensions, stocks, etc. This aging population requires basic services such as groceries, housing and health care, but they tend to

spend their incomes locally. Well planned and financed services and programs directed towards the elderly can go a long way in keeping the buying power of the retired community within the region.

## **HOUSING GOALS**

**Goal 1:** To provide for a variety of quality, affordable housing opportunities for all segments of the Region's current and future population.

**Goal 2:** To promote new housing development in areas where it is needed and can be done in an environmentally and cost effective manner.

## **POPULATION CHARACTERISTICS**

### **Historical Population Levels**

The population of the Bay-Lake Region increased from 440,926 persons in 1970 to a total of 554,565 persons in 2000, an increase of 123,919 persons (Table 6.1). During the period 1990 to 2000, the region's growth rate was recorded at 11.17 percent which was slightly higher than the state rate of 9.65 percent. As shown in Table 6.1 and Figure 6.1, all areas, except Kewaunee and Manitowoc counties, have been increasing in population since 1970. These two counties also showed the smallest levels of growth from 1970 to 1980 and again from 1990 to 2000. The Bay-Lake Region accounted for approximately 10 percent of the total population of the state throughout this period.

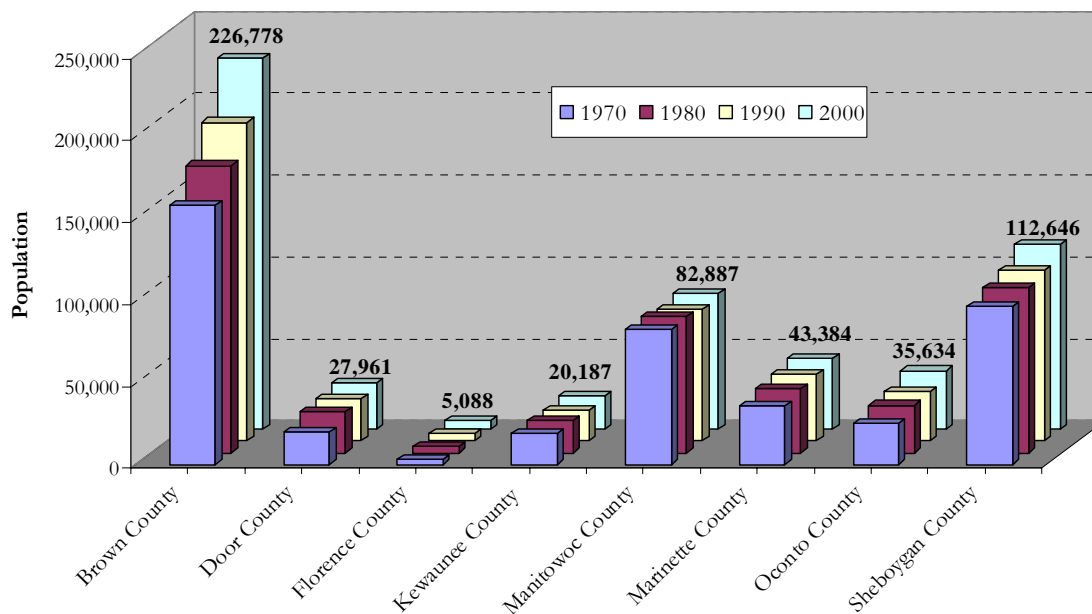
Between 1970 and 2000, the Region's populations increased by 25.8 percent, while the total population of Wisconsin increased by only 21.4 percent. Florence County had the largest growth rate at 54.3 percent, followed by Brown County (43.3 percent), Door County (39.1 percent), and Oconto County (39.5 percent). All four counties had growth rates higher than Kewaunee County (6.47 percent), Manitowoc County (0.7 percent), Marinette County (21.1 percent), and Sheboygan County (16.5 percent). Brown County had the greatest population increase between 1970 and 2000 while Florence County had the lowest increase during this 30 year time period. Maps 6.1, 6.2, and 6.3 indicate the distribution and change in population from 1990 to 2000.

Table 6.1: Historic Population Levels, 1900-2000, Bay-Lake Region

County	Census				Percent Change				Percent of Region 2000
	1970	1980	1990	2000	1970-1980	1980-1990	1990-2000	1970-2000	
Brown County	158,244	175,280	194,594	226,778	10.77	11.02	16.54	43.3%	40.9%
Door County	20,106	25,029	25,690	27,961	24.49	2.64	8.84	39.1%	5.0%
Florence County	3,298	4,172	4,590	5,088	26.50	10.02	10.85	54.3%	0.9%
Kewaunee County	18,961	19,539	18,878	20,187	3.05	-3.38	6.93	6.5%	3.6%
Manitowoc County	82,294	82,918	80,421	82,887	0.76	-3.01	3.07	0.7%	14.9%
Marinette County	35,810	39,314	40,548	43,384	9.78	3.14	6.99	21.2%	7.8%
Oconto County	25,553	28,947	30,226	35,634	13.28	4.42	17.89	39.5%	6.4%
Sheboygan County	96,660	100,935	103,877	112,646	4.42	2.91	8.44	16.5%	20.3%
Bay-Lake Region	440,926	476,134	498,824	554,565	7.99	4.77	11.17	25.8%	100.0%
Wisconsin	4,417,821	4,705,335	4,891,769	5,363,675	6.51	3.96	9.65	21.4%	NA

Source: U.S. Bureau of the Census, Census of Population and Housing for the years cited; and Bay-Lake Regional Planning Commission, 2004.

Figure 6.1: Historic Population Levels, 1900-2000, Bay-Lake Region



Source: U.S. Bureau of the Census, Census of Population and Housing for the years cited; and Bay-Lake Regional Planning Commission, 2005.

### **Population Trends and Forecasts**

In 2004, the Wisconsin Department of Administration (WDOA) Demographic Services Center prepared population projections to the year 2030 for all communities and counties in the state (Table 6.2). The WDOA utilized a projection formula that calculates the annual population change over three varying time spans. From this formula, the WDOA projections indicated that the Bay-Lake Region will have a population of 663,973 persons in 2030. This is an increase of 109,408 persons, or 19.7 percent. Marinette County is anticipated to show the smallest change proportionately (3.1 percent) while Brown County will show the highest change (28.7 percent).

Table 6.2: WDOA Population Projections 2000-2030 Bay-Lake Region and Related Counties

WDOA Projections	1970	1980	1990	2000	2010	2020	2030
Brown County	158,244	175,280	194,594	226,778	248,529	269,812	291,862
Door County	20,106	25,029	25,690	27,961	30,112	30,800	29,241
Florence County	3,298	4,172	4,590	5,088	5,348	5,444	5,275
Kewaunee County	18,961	19,539	18,878	20,187	21,343	22,457	23,266
Manitowoc County	82,294	82,918	80,421	82,887	86,307	89,860	91,327
Marinette County	35,810	39,314	40,548	43,384	44,557	45,251	44,710
Oconto County	25,553	28,947	30,226	35,634	39,670	43,018	45,261
Sheboygan County	96,660	100,935	103,877	112,646	119,411	126,540	133,031
Bay-Lake Region*	440,926	476,134	498,824	554,565	595,277	633,182	663,973

\*Values may be subject to rounding

Source: US Bureau of the Census, 1990; Wisconsin Dept. of Administration, Demographic Services Center, Official Population Projections, 2003; and the Bay-Lake Regional Planning Commission, 2003.

## Seasonal Population

The estimated seasonal population was found by multiplying the number of seasonal housing units by the average number of persons per household (Table 6.3). In 2000, the Region had 23,358 seasonal housing units. The 2000 estimated seasonal population for the Region was 57,694 persons, which is 12.4 percent of the population. Areas that have seasonal populations over 100 percent of the year-round population indicate that there is a greater seasonal population than full time population. The County of Florence had by far the greatest percentage of its population at 90.5 percent as being seasonal among those Counties compared.

Table 6.3: Estimated Seasonal Population, 2000, Bay-Lake Region and Related Counties

	Geographic Location								
	Brown County	Door County	Florence County	Kewaunee County	Manitowoc County	Marinette County	Oconto County	Sheboygan County	Bay-Lake Region
Population	226,778	27,961	5,088	20,187	82,887	43,384	35,634	112,646	554,565
Average Household Size	2.51	2.33	2.35	2.61	2.49	2.38	2.52	2.50	2.47
Total Housing Units	90,199	19,587	4,239	8,221	34,651	26,260	19,812	45,947	248,916
Total Seasonal Housing Units*	414	6,970	1,959	270	518	7,586	4,837	804	23,358
Percent of Housing Units Seasonal	0.5	35.6	46.2	3.3	1.5	28.9	24.4	1.7	9.4
Estimated Seasonal Population**	1,039	16,240	4,604	705	1,290	18,055	12,189	2,010	57,694
Percent Population Seasonal	0.5	58.1	90.5	3.5	1.6	41.6	34.2	1.8	10.4

\*Seasonal Housing includes seasonal, recreational, or occasional use units, does not include other vacant

\*\*Estimated Seasonal Population = Seasonal Housing Units x Persons Per Household

Source: U.S. Bureau of the Census, 2000; and Bay-Lake Regional Planning Commission, 2004.

## Revised Population Projections

An area's future population projections provide an important basis for planning and making public policy. These projections are an important factor necessary to assess the area's future need for housing, community facilities, transportation, and other population-related facilities. They can also be used to forecast the area's future expenditures, revenues, and tax receipts. The Commission has prepared alternative population projections to determine an approximate range in the growth rate for the Region using the WDOA population projections to 2030, and Census information (see Figure 6.2)

A "Linear" projection was created using the 1970, 1980, 1990 and 2000 Census figures (Table 6.4). The Linear projections indicate the population of the Bay-Lake Region will increase by 18.3 percent by 2030; this is an increase of 101,670 persons.

The "Growth" projection was developed by using the 1970, 1980, 1990 and 2000 Census figures and creating a growth trend series to the year 2030 (Table 6.4). Population will increase by 25.6 percent by the year 2030; representing an increase of 141,917 persons.

Table 6.4 Population Projections, 2000-2030, Bay-Lake Region and Related Counties

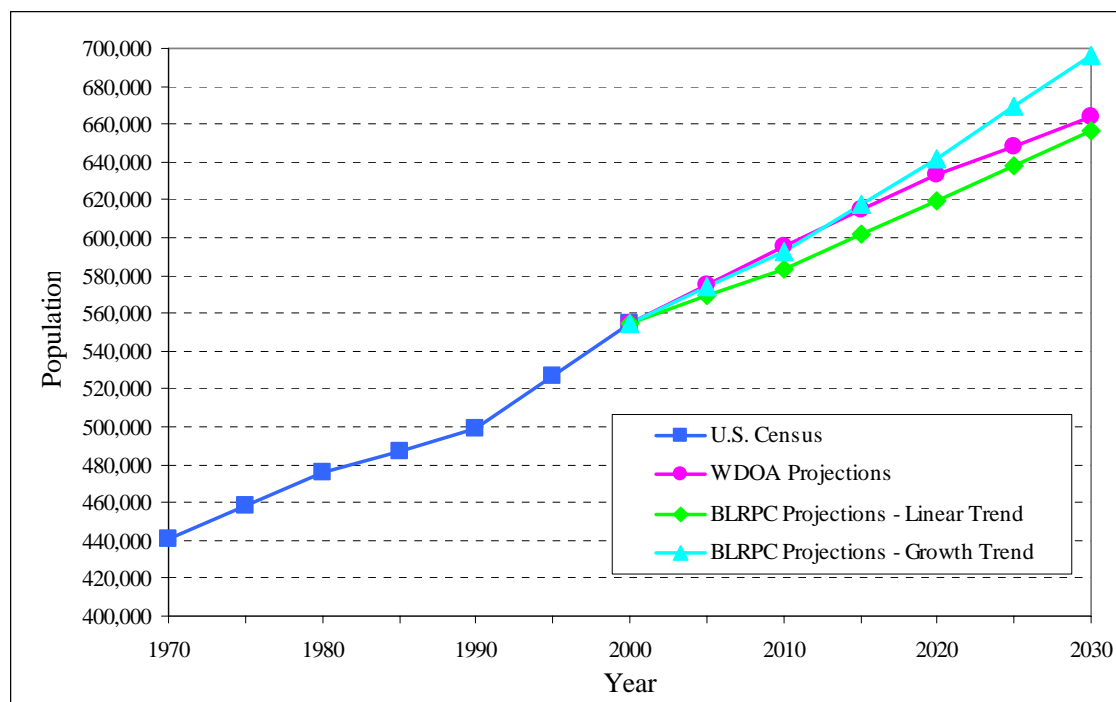
Linear Trend	1970	1980	1990	2000	2010	2020	2030
Brown County	158,244	175,280	194,594	226,778	244,953	267,445	289,936
Door County	20,106	25,029	25,690	27,961	30,753	33,176	35,598
Florence County	3,298	4,172	4,590	5,088	5,734	6,313	6,892
Kewaunee County	18,961	19,539	18,878	20,187	20,146	20,447	20,749
Manitowoc County	82,294	82,918	80,421	82,887	81,951	81,879	81,807
Marinette County	35,810	39,314	40,548	43,384	45,753	48,149	50,544
Oconto County	25,553	28,947	30,226	35,634	37,971	41,123	44,275
Sheboygan County	96,660	100,935	103,877	112,646	116,255	121,345	126,435
Bay-Lake Region*	440,926	476,134	498,824	554,565	583,514	619,875	656,235

Growth Trend	1970	1980	1990	2000	2010	2020	2030
Brown County	158,244	175,280	194,594	226,778	251,479	283,090	318,673
Door County	20,106	25,029	25,690	27,961	31,606	34,984	38,723
Florence County	3,298	4,172	4,590	5,088	6,002	6,902	7,936
Kewaunee County	18,961	19,539	18,878	20,187	20,143	20,454	20,771
Manitowoc County	82,294	82,918	80,421	82,887	81,938	81,864	81,790
Marinette County	35,810	39,314	40,548	43,384	46,165	49,051	52,118
Oconto County	25,553	28,947	30,226	35,634	38,756	43,007	47,725
Sheboygan County	96,660	100,935	103,877	112,646	116,776	122,614	128,745
Bay-Lake Region*	440,926	476,134	498,824	554,565	592,865	641,967	696,482

\*Values may be subject to rounding

Source: US Bureau of the Census, 1990; Wisconsin Dept. of Administration, Demographic Services Center, Official Population Projections, 2003; and the Bay-Lake Regional Planning Commission, 2003.

Figure 6.2: Population Trends and Projections, 1970-2030, Bay-Lake Region.



Source: U.S. Bureau of the Census, 2000; Wisconsin Dept. of Administration, Demographic Services Center, Official Population Projections, 2004; and the Bay-Lake Regional Planning Commission, 2004.

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## Population by Age and Sex

From 1990 to 2000, several notable population distribution trends were observed in the region (Table 6.5). Most of the population is within the middle age groups of 20 to 64. In 2000, approximately 49.8 percent was male, while 50.2 percent was female. The overall male population increased by 31,170 individuals (12.72 percent). The overall female population increased by 24,571 persons (9.68 percent).

There have been moderate shifts in the distribution of the male population distribution in the region. There are more males in the younger age groups, both in 1990 and 2000. In both 1990 and 2000, the largest numbers of males were under 40 years old. Proportional decreases were observed in distribution groups 25 to 29 years (-14.86 percent) and 30 to 34 (-7.90 percent). Other minor decreases were seen between the ages of 0 to 9 years. The largest proportional increases were observed in distribution groups from 40 to 59 years old. All groups within these age brackets increased by a minimum of 31.46 percent; the largest observed increase was the distribution group 45 to 49 years old (59.33 percent). These trends indicate an aging male population.

From 1990 to 2000, there have been moderate shifts in the female distribution within age groups in the region. In 1990, age groups between 20 and 39 years old had the largest distribution. In 2000, this shifted to age groups between 40 and 59 years old. Individual distribution groups changed as much as 53.3 percent (50 - 54 years old). All distribution groups in the 40 to 59 range increased by at least 28.1 percent. These trends also indicate an aging female population as well.

The number of persons in the age groups consisting of 70 years and older is increasing, both in absolute numbers and as a percent of the region's total population. For males, each distribution group increased by at least 9.92 percent; ages 90 and over increase the most (50.7 percent). For females, each distribution group 75 years and older increased by at least 5.37 percent. The distribution groups 80 to 84 and 90 and over years also showed the greatest increases; these groups increased by 21.04 percent and 42.67 percent, respectively.



Table 6.5: Male and Female Distribution by Age and Sex, Bay-Lake Region, 1990-2000

Age Groups	Male				Female				Both Sexes			
			Numeric	Percent			Numeric	Percent			Numeric	Percent
	1990 Census	2000 Census	Change 1990-2000	Change 1990-2000	1990 Census	2000 Census	Change 1990-2000	Change 1990-2000	1990 Census	2000 Census	Change 1990-2000	Change 1990-2000
0 - 4	18,756	17,749	-1,007	-5.37	18,155	16,911	-1,244	-6.85	36,911	34,660	-2,251	-6.1
5 - 9	19,955	19,894	-61	-0.31	19,071	19,081	10	0.05	39,026	38,975	-51	-0.13
10 - 14	19,294	21,309	2,015	10.44	18,186	20,400	2,214	12.17	37,480	41,709	4,229	11.28
15 - 19	17,807	21,252	3,445	19.35	16,827	20,006	3,179	18.89	34,634	41,258	6,624	19.13
20 - 24	16,758	17,405	647	3.86	16,294	15,829	-465	-2.85	33,052	33,234	182	0.55
25 - 29	20,194	17,194	-3,000	-14.86	20,305	15,987	-4,318	-21.27	40,499	33,181	-7,318	-18.07
30 - 34	21,729	20,013	-1,716	-7.9	21,316	18,735	-2,581	-12.11	43,045	38,748	-4,297	-9.98
35 - 39	20,246	23,521	3,275	16.18	19,675	22,765	3,090	15.71	39,921	46,286	6,365	15.94
40 - 44	17,304	23,892	6,588	38.07	16,801	22,717	5,916	35.21	34,105	46,609	12,504	36.66
45 - 49	13,311	21,208	7,897	59.33	13,311	20,367	7,056	53.01	26,622	41,575	14,953	56.17
50 - 54	11,128	17,500	6,372	57.26	11,116	17,066	5,950	53.53	22,244	34,566	12,322	55.39
55 - 59	10,032	13,188	3,156	31.46	10,516	13,474	2,958	28.13	20,548	26,662	6,114	29.75
60 - 64	10,409	10,773	364	3.5	11,022	11,164	142	1.29	21,431	21,937	506	2.36
65 - 69	9,098	9,165	67	0.74	10,923	10,031	-892	-8.17	20,021	19,196	-825	-4.12
70 - 74	7,542	8,461	919	12.19	10,033	9,873	-160	-1.59	17,575	18,334	759	4.32
75 - 79	5,825	6,403	578	9.92	8,689	9,156	467	5.37	14,514	15,559	1,045	7.2
80 - 84	3,409	4,227	818	24	6,051	7,324	1,273	21.04	9,460	11,551	2,091	22.1
85 - 89	1,631	2,153	522	32	3,600	4,752	1,152	32	5,231	6,905	1,674	32
90 & Over	574	865	291	50.7	1,931	2,755	824	42.67	2,505	3,620	1,115	44.51
Total	245,002	276,172	31,170	12.72	253,822	278,393	24,571	9.68	498,824	554,565	55,741	11.17

Source: US Bureau of the Census, Census of Population and Housing, 1990 and 2000, STF 1A and STF1; and Bay-Lake Regional Planning Commission, 2004.

### School Age, Working Age, and Retirement Groups

Table 6.6 lists the school, working, and retirement age populations in the region and state. The school age group comprises 21.98 percent of the region's population; this is similar to the State of Wisconsin (22.18 percent). Likewise, the Region is very similar to Wisconsin's percentage of retirement persons. The retirement age group comprises 13.5 percent of the region while it comprises 13.1 percent of Wisconsin's population. The region and Wisconsin have similar percentages of working age residents; this group comprises 79.5 percent of the region, while it comprises 79.0 percent of Wisconsin.

Table 6.6: Population by School Age, Working Age, and Retirement Age, 2000, Bay-Lake Region &amp; Selected Areas

Age Groups	Brown County	Door County	Florence County	Kewaunee County	Manitowoc County	Marinette County	Oconto County	Sheboygan County	Region	Wisconsin
School Age										
5-11	16,686	1,720	334	1,385	5,791	2,676	2,502	7,881	38,975	379,484
12-14	16,801	1,943	367	1,617	6,434	3,252	2,868	8,427	41,709	403,074
15-17	17,012	1,825	341	1,567	6,225	3,390	2,588	8,310	41,258	407,195
Working and Voting Age										
16+	177,638	24,850	4,157	15,992	65,816	35,234	28,238	89,125	441,050	4,238,795
16-64	153,424	17,976	3,268	12,915	52,813	26,540	22,850	73,393	363,179	3,536,224
18+	167,655	21,789	3,924	14,970	61,786	33,183	26,474	83,871	413,652	3,994,919
18-64	143,441	16,692	3,035	11,893	48,783	25,556	21,086	68,139	338,625	3,292,366
Retirement Age										
65+	24,214	5,235	889	3,077	13,003	7,627	5,388	15,732	75,165	702,553
Total Population	226,778	27,961	5,088	20,187	82,887	43,384	35,634	112,646	554,565	5,363,675

Source: U.S. Bureau of the Census, 1990 Census of Population and Housing, STF 1A, General Profiles, Table P012; and Bay-Lake Regional Planning Commission, 2004.



## **Household Relationship**

In 2000, 216,709 of persons residing in the region lived in a household (Table 6.7). Of this number, 69,997 were non-family household. The region had 57,276 householders living alone; with 22,377 of them being age 65 years and older.

Table 6.7: Household Relationship, 2000, Bay-Lake Region & Selected Areas

	Brown County	Door County	Florence County	Kewaunee County	Manitowoc County	Marinette County	Oconto County	Sheboygan County	Region
Population	226,778	27,961	5,088	20,187	82,887	43,384	35,634	112,646	554,565
Person per household	2.51	2.33	2.35	2.61	2.49	2.38	2.52	2.50	--
Households	87,295	11,828	2,133	7,623	32,721	17,585	13,979	43,545	216,709
Family Households (families)	57,539	7,997	1,441	5,548	22,364	11,840	10,046	29,936	146,711
Married-couple family	46,469	6,867	1,250	4,753	18,683	9,922	8,479	25,273	121,696
Female householder	7,797	763	128	504	2,440	1,300	958	3,197	17,087
Nonfamily households	29,756	3,831	691	2,075	10,357	5,745	3,933	13,609	69,997
Householder living alone	23,151	3,322	596	1,788	8,784	4,978	3,283	11,374	57,276
Age 65 and over	7,367	1,507	266	901	3,950	2,344	1,492	4,550	22,377

Source: U.S. Bureau of the Census, 2000 Census; and Bay-Lake Regional Planning Commission, 2004.

## **Median Age**

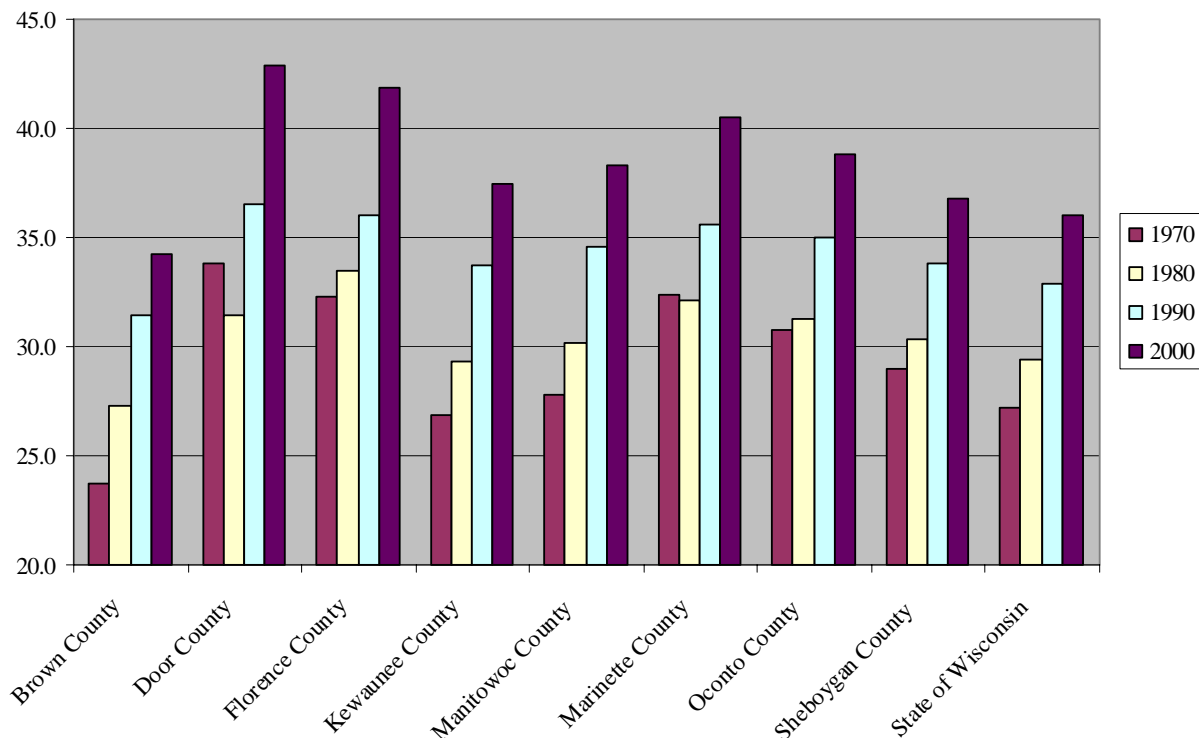
For the period 1970 to 2000, the median age for the Bay-Lake Region and each of its eight counties has shown to be steadily increasing (Table 6.8). In general, the population of the entire U.S. is expected to continue to shift to an increasing older population. Only Door and Marinette County realized a decrease in the median age during the period (Figure 6.3). The median age for the region in 1970 was recorded at 29.6 years. In 2000, the median age grew to 38.9 years. In 2000, the youngest county in the region, based on the median age, was Brown County with a median age of 34.2 years. The oldest county in 2000 was Door County. This national trend of an aging population seen throughout the region should be noted when planning for future needs for the region. There will most likely need to be adjustments in the housing stock, labor force, transportation, health care, as well as many other areas.

Table 6.8: Median Age, 1970-2000, Bay-Lake Region by County

Geographic Area	1970	1980	1990	2000
Brown County	23.7	27.3	31.4	34.2
Door County	33.8	31.4	36.5	42.9
Florence County	32.3	33.5	36.0	41.9
Kewaunee County	26.9	29.3	33.7	37.5
Manitowoc County	27.8	30.2	34.6	38.3
Marinette County	32.4	32.1	35.6	40.5
Oconto County	30.8	31.3	35.0	38.8
Sheboygan County	29.0	30.3	33.8	36.8
Bay-Lake Region	29.6	30.7	34.6	38.9
State of Wisconsin	27.2	29.4	32.9	36.0

Source: U.S. Bureau of the Census, Census of Population, *General Population Characteristics*, Wisconsin, 1970 Tables 33,35; 1980 Table 44; 1990 STF 1A, General Profile, Census 2000; and Bay-Lake Regional Planning Commission, 2004.

Figure 6.3: Median Age, 1970-2000, Bay-Lake Region by County



Source: U.S. Bureau of the Census, Census of Population, *General Population Characteristics*, Wisconsin, 1970 Tables 33,35; 1980 Table 44; 1990 STF 1A, General Profile, Census 2000; and Bay-Lake Regional Planning Commission, 2004.

## **HOUSING INVENTORY**

### **Total Housing Unit Levels by Decade**

The total number of housing units within the Region has steadily been increasing since 1970 (Table 6.9 and Figure 6.4). Between 1970 and 1980, the rate of housing unit growth ranged from 19.7 percent in Sheboygan County to 57.7 percent in Florence County; during this same time frame, the Region experienced a 31.7 percent increase, while Wisconsin recorded a 26.6 percent increase. For the period 1980 to 1990, Brown County had the greatest percentage of housing unit growth with a 20.0 percent increase, while Manitowoc County experienced the lowest growth rate of 5.7 percent; during this time frame, housing units in the Region increased by 13.5 percent overall, while they only increased by 10.3 percent in Wisconsin. From 1990 to 2000, Brown County had the greatest housing unit increase at 20.7 while Marinette County had the least housing unit increase; during the same time period, housing units within the Region increased by 12.4 percent while Wisconsin increased by 12.9 percent. Overall, for the last three decades, Florence County has experienced the greatest housing unit growth in the area with a 100.1 percent increase for 1970 to 2000, while Manitowoc County had the lowest increase at 36.4 percent. The overall number of housing units in the Region increased (68.1 percent) at a significantly higher rate than Wisconsin (57.6 percent) between 1970 and 2000. With the exception of Kewaunee and Manitowoc Counties, the individual counties experienced larger

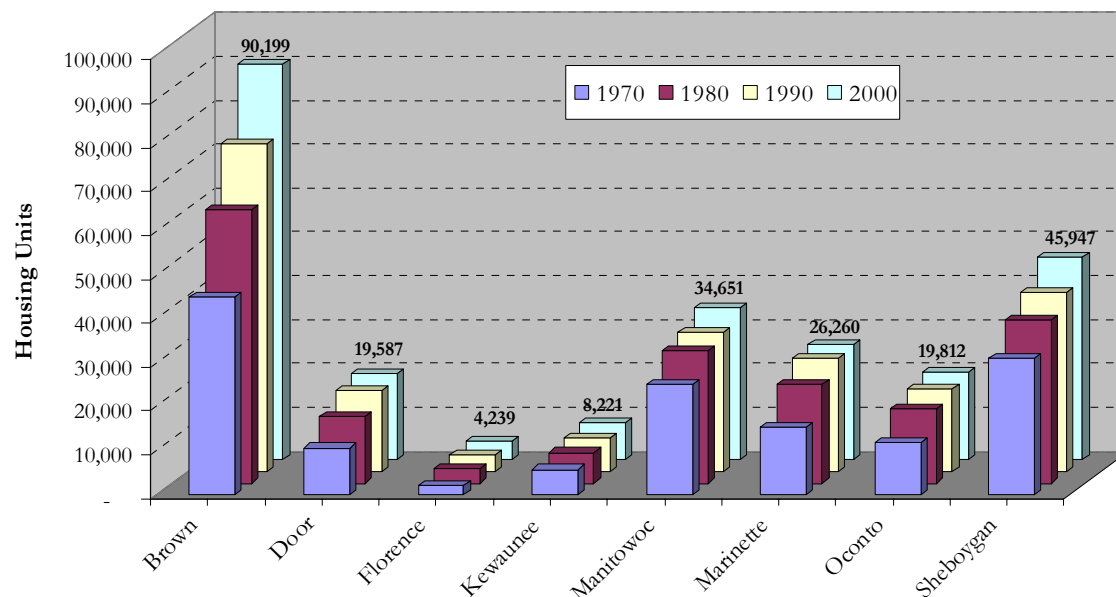
increases than the Region. If these trends continue in the counties and their communities, planning will become increasingly important to ensure a wise use of land and resources. Maps 6.4, 6.5, and 6.6 indicate the distribution and change in housing units from 1990 to 2000.

Table 6.9: Total Housing Units, 1970-2000, Bay-Lake Region

Area	Year				Percent Change		
	1970	1980	1990	2000	1970-1980	1980-1990	1990-2000
Brown County	45,198	62,282	74,740	90,199	37.8	20.0	20.7
Door County	10,779	15,324	18,307	19,587	42.2	19.5	7.0
Florence County	2,118	3,341	3,775	4,239	57.7	13.0	12.3
Kewaunee County	5,888	7,023	7,544	8,221	19.3	7.4	9.0
Manitowoc County	25,411	30,140	31,843	34,651	18.6	5.7	8.8
Marinette County	15,487	22,559	25,640	26,260	45.7	13.7	2.4
Oconto County	11,947	16,940	18,832	19,812	41.8	11.2	5.2
Sheboygan County	31,207	37,351	40,695	45,947	19.7	9.0	12.9
Bay-Lake Region	148,035	194,960	221,376	248,916	31.7	31.7	31.7
Wisconsin	1,472,466	1,863,897	2,055,774	2,321,144	26.6	26.6	26.6

Source: U.S. Bureau of the Census, 1970 Census of Population and Housing, Series 100, Table 2; 1980 Census of Population and Housing, Table 45; 1990 Census of Population and Housing, STF1A, Census 2000; and Bay-Lake Regional Planning Commission, 2004.

Figure 6.4: Total Housing Units, 1970-2000, Bay-Lake Region



Source: U.S. Bureau of the Census, 1970 Census of Population and Housing, Series 100, Table 2; 1980 Census of Population and Housing, Table 45; 1990 Census of Population and Housing, STF1A, Census 2000; and Bay-Lake Regional Planning Commission, 2004.

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### **Historic and Projected Household Size**

According to the WDOA, household size projections for the counties within the Bay-Lake Region are projected to decrease throughout the planning period. Table 6.10 indicates that the number of persons per household will consistently decrease from 2.46 in 2000 to 2.22 in 2030 for the region as a whole. Door and Florence Counties are expected to see the smallest household sizes, of 1.98 and 2.00 persons per household respectively by 2030 reflecting an increase in the number of people living alone.

Table 6.10: Historic and Projected Household Size, 2000

Area	1990	2000	2005	2010	2015	2020	2025	2030
Brown County	2.62	2.51	2.47	2.43	2.40	2.38	2.35	2.33
Door County	2.52	2.33	2.26	2.17	2.10	2.04	2.00	1.98
Florence County	2.57	2.35	2.29	2.19	2.12	2.06	2.02	2.00
Kewaunee County	2.77	2.61	2.58	2.53	2.49	2.46	2.44	2.41
Manitowoc County	2.62	2.49	2.46	2.41	2.37	2.35	2.33	2.30
Marinette County	2.55	2.38	2.31	2.24	2.19	2.15	2.12	2.10
Oconto County	2.65	2.52	2.49	2.42	2.36	2.32	2.29	2.26
Sheboygan County	2.63	2.51	2.49	2.46	2.44	2.42	2.40	2.38
Bay-Lake Region	2.62	2.46	2.42	2.36	2.31	2.27	2.24	2.22
Wisconsin	2.61	2.50	2.46	2.42	2.39	2.37	2.35	2.33

Source: Wisconsin Department of Administration, Wisconsin Household Projections, December 2003; and Bay-Lake Regional Planning Commission, 2004.

### **Projected Housing Units**

In formulating a “best guess” for the future residential needs of the region, three growth scenarios were used to determine a range in housing projections to 2030.

Using the Census housing counts from 1970 to 2000, the Commission calculated a linear trend in housing units to the year 2030. This created a housing unit projection which indicated that by 2030 the region would have 351,398 total housing units or an increase of 102,482 housing units over the 2000 Census count (Table 6.11 and Figure 6.5).

A growth trend was also developed to the year 2030 using the Census housing counts. This created a housing unit projection which indicated by 2030 the region would have 436,837 total housing units, or an increase of 187,921 housing units over the 2000 Census count.

A third growth scenario was calculated using the WDOA Population Projections and Household Size Projections. The percent of occupied housing units was held constant for the planning period for each county in order to calculate the number of housing units that could be expected by 2030. This created a housing unit projection which indicated by 2030 the region would have 330,531 total housing units or an increase of 81,615 housing units over the 2000 Census count.

Table 6.11: Projected Housing Units, 1970-2030, Bay-Lake Region &amp; Counties

<i>Projected Housing Units</i>			<i>Census</i>		<i>Linear Trend</i>		
Area	1970	1980	1990	2000	2010	2020	2030
Brown County	45,198	62,282	74,740	90,199	104,970	119,716	134,462
Door County	10,779	15,324	18,307	19,587	23,351	26,292	29,232
Florence County	2,118	3,341	3,775	4,239	5,068	5,747	6,427
Kewaunee County	5,888	7,023	7,544	8,221	9,049	9,801	10,553
Manitowoc County	25,411	30,140	31,843	34,651	37,867	40,809	43,752
Marinette County	15,487	22,559	25,640	26,260	31,337	34,877	38,417
Oconto County	11,947	16,940	18,832	19,812	23,255	25,803	28,352
Sheboygan County	31,207	37,351	40,695	45,947	50,691	55,447	60,204
Bay-Lake Region				248,916	285,587	318,492	351,398

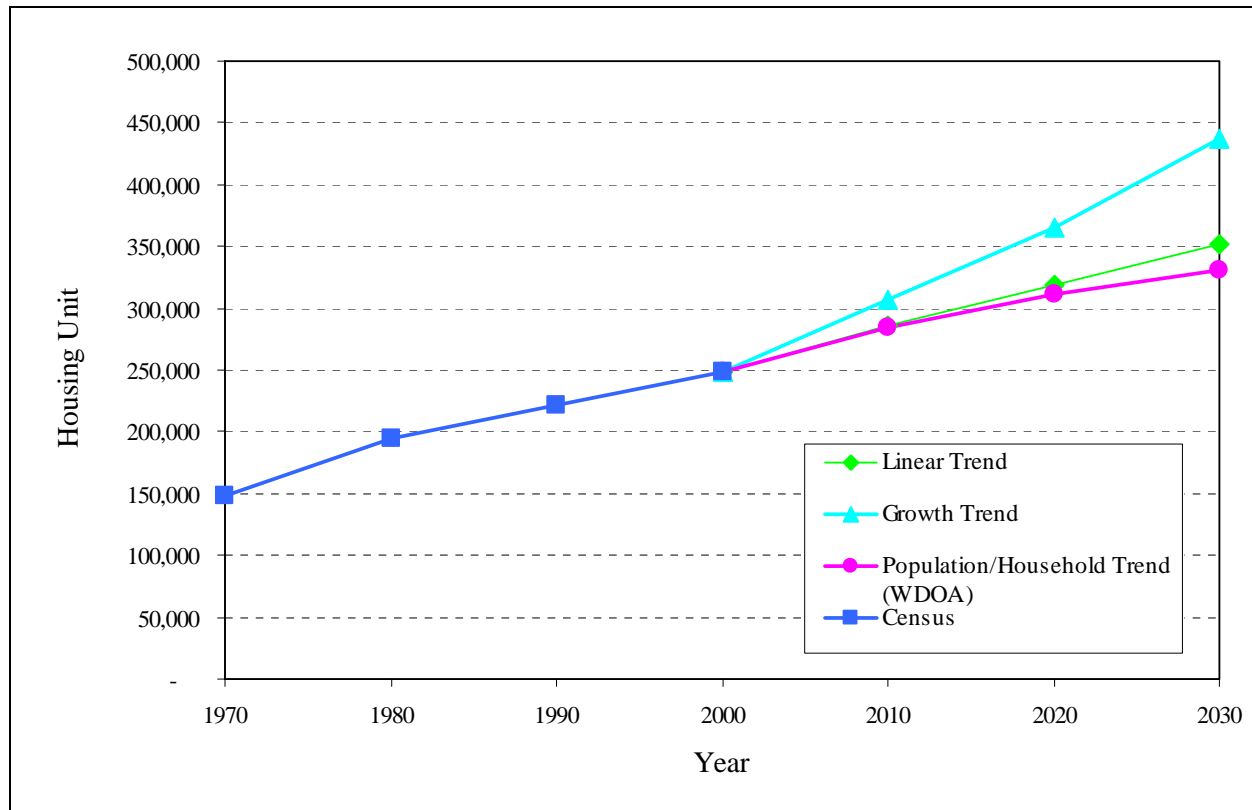
<i>Projected Housing Units</i>			<i>Census</i>		<i>Growth Trend</i>		
Area	1970	1980	1990	2000	2010	2020	2030
Brown County	45,198	62,282	74,740	90,199	115,989	145,332	182,098
Door County	10,779	15,324	18,307	19,587	25,526	31,083	37,850
Florence County	2,118	3,341	3,775	4,239	5,659	7,054	8,794
Kewaunee County	5,888	7,023	7,544	8,221	9,306	10,359	11,533
Manitowoc County	25,411	30,140	31,843	34,651	38,789	42,806	47,239
Marinette County	15,487	22,559	25,640	26,260	33,789	40,099	47,587
Oconto County	11,947	16,940	18,832	19,812	24,874	29,258	34,415
Sheboygan County	31,207	37,351	40,695	45,947	52,469	59,433	67,321
Bay-Lake Region				248,916	306,401	365,426	436,837

<i>Projected Housing Units</i>			<i>Census</i>		<i>Population/Household Trend (WDOA)</i>		
Area	1970	1980	1990	2000	2010	2020	2030
Brown County	45,198	62,282	74,740	90,199	105,651	117,349	129,340
Door County	10,779	15,324	18,307	19,587	22,941	24,967	24,517
Florence County	2,118	3,341	3,775	4,239	4,844	5,255	5,250
Kewaunee County	5,888	7,023	7,544	8,221	9,088	9,837	10,423
Manitowoc County	25,411	30,140	31,843	34,651	37,894	40,544	41,961
Marinette County	15,487	22,559	25,640	26,260	29,726	31,405	31,820
Oconto County	11,947	16,940	18,832	19,812	23,221	26,316	28,329
Sheboygan County	31,207	37,351	40,695	45,947	51,223	55,130	58,891
Bay-Lake Region				248,916	284,587	310,802	330,531

Source: U.S. Bureau of the Census, 2000; WDOA, 2004; and Bay-Lake Regional Planning Commission, 2004.

Figure 6.5: Projected Housing Units, 1970-2030, Bay-Lake Region & Counties



Source: U.S. Bureau of the Census, 2000; WDOA, 2004; and Bay-Lake Regional Planning Commission, 2004.

### **Housing Types - Units in Structure**

The majority of housing types in the Region are one unit, detached structures, a total of 172,415 units, of which 57,000 units are in Brown County and 3,529 units in Kewaunee County. There are 8,143 two units in Brown County and 40 two units in Florence County. There are 4,298 mobile units in Marinette County and 468 mobile units in Florence County (Table 6.12).

Table 6.12: Units in Structure, 2000, Bay-Lake Region & Counties

Area	1 unit Detached	1 unit Attached	2 units	3 or 4 units	5 to 9 units	10 to 19 units	20 or more units	Mobile Home
Brown County	57,000	4,428	8,143	3,554	6,214	4,032	5,172	1,649
Door County	15,188	737	529	619	601	269	307	1,320
Florence County	3,529	42	40	50	2	14	50	468
Kewaunee County	6,521	111	522	186	131	106	79	558
Manitowoc County	24,890	683	3,831	1,083	830	684	1,259	1,383
Marinette County	19,383	187	743	356	343	287	576	4,298
Oconto County	15,356	127	465	219	337	125	175	2,975
Sheboygan County	30,548	1,303	6,456	1,756	1,474	1,150	1,906	1,328
Bay-Lake Region	172,415	7,618	20,729	7,823	9,932	6,667	9,524	13,979
Wisconsin	1,531,612	77,795	190,889	91,047	106,680	75,456	143,497	101,465

Source: Wisconsin Department of Administration, Wisconsin Household Projections, 2004; and Bay-Lake Regional Planning Commission, 2004.

## Housing Occupancy and Tenure

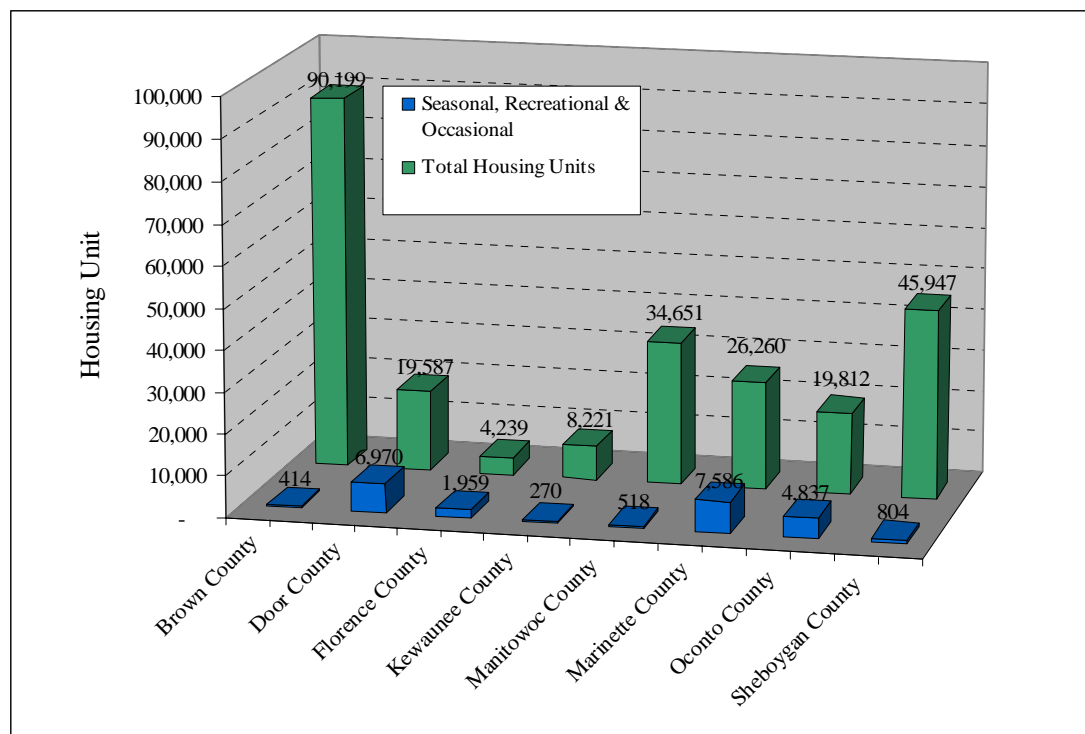
In 2000, there were 32,207 vacant housing units in the Region of a total 248,916 housing units. Of those vacant units 23,358 were for seasonal, recreational, or occasional use, with 7,586 units in Marinette County and 6,970 units in Door County (Table 6.13 & Figure 6.6). There are 49,926 units occupied by the owners in Brown County and 1,142 units in Florence County. Of 59,214 rented units, 29,965 units are in Brown County and 273 units in Florence County.

Table 6.13: Housing Occupancy and Tenure, 2000; Bay-Lake Region & Counties

Area	Total Housing Units	Occupied Units				Vacant Units		
		Total	Percent	Owner	Renters	Seasonal, Recreational & Occasional	Total	Other
Brown County	90,199	87,295	96.8%	49,926	29,965	2,904	414	2,490
Door County	19,587	11,828	60.4%	6,374	2,280	7,759	6,970	789
Florence County	4,239	2,133	50.3%	1,142	273	2,106	1,959	147
Kewaunee County	8,221	7,623	92.7%	4,211	1,286	598	270	328
Manitowoc County	34,651	32,721	94.4%	19,753	7,665	1,930	518	1,412
Marinette County	26,260	17,585	67.0%	9,158	3,384	8,675	7,586	1,089
Oconto County	19,812	13,979	70.6%	7,428	2,113	5,833	4,837	996
Sheboygan County	45,947	43,545	94.8%	25,326	12,248	2,402	804	1,598
Bay-Lake Region	248,916	216,709	87.1%	123,318	59,214	32,207	23,358	8,849
Wisconsin	232,114	2,084,544	89.8%	1,122,467	641,672	236,600	142,313	94,287

Source: U.S. Bureau of the Census, 2000 Census; and Bay-Lake Regional Planning Commission, 2004.

Figure 6.6: Housing Occupancy, 2000; Bay-Lake Counties



Source: U.S. Bureau of the Census, 2000 Census; and Bay-Lake Regional Planning Commission, 2004.

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### **Age of Housing**

According to following table, 23 percent of the housing units in the Bay-Lake Region were built prior to 1940. This is very much like the state percentage recorded at 23.4 percent. A housing boom took place between the 1970s and the 1980s. During that period, the region's housing stock grew by 43,528 new housing units. This total accounted for 11.1 percent of all the housing growth in the state. When looking at the total number of new housing units that were built since 1990, it appears that another housing boom has taken place at the region level. Since 1990, 44,782 new homes were built in the Bay-Lake Region (Table 6.14).

With three of the counties in the region (Kewaunee, Manitowoc, and Sheboygan) having over one-third of their housing stock built prior to 1940, there is concern for the condition of the housing stock in these areas. This could indicate that there is potential for a significant portion of the populations in these counties to be living in sub-standard housing units.

**Table 6.14: Housing Units by Year Structure Built, 2000, Bay-Lake Region & Counties**

Area	1999 to Mar. 2000	1995- 1998	1990-1997	1980- 1989	1970-1979	1960-1969	1940- 1959	1939 or Earlier	% Built Pre-1940
Brown County	2,172	8,271	8,879	13,292	17,449	11,400	16,686	12,050	13.4
Door County	702	1,878	1,373	3,033	3,246	1,510	3,316	4,529	23.1
Florence County	133	452	332	595	761	517	682	767	18.1
Kewaunee County	198	594	419	697	1,354	685	1,500	2,774	33.7
Manitowoc County	548	2,090	1,985	2,588	5,053	3,516	7,291	11,580	33.4
Marinette County	659	1,819	1,693	3,631	5,171	2,797	4,710	5,780	22.0
Oconto County	705	1,903	1,293	2,677	3,656	2,016	3,386	4,176	21.1
Sheboygan County	888	2,869	2,927	4,288	6,838	4,717	7,930	15,490	33.7
Bay-Lake Region	6,005	19,876	18,901	30,801	43,528	27,158	45,501	57,146	23.0
Wisconsin	50,735	170,219	168,838	249,789	391,349	276,188	470,862	543,164	23.4

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, and Bay-Lake Regional Planning Commission, 2004.

### **Substandard Housing**

Determining the number of substandard housing units in the region will be an indication of the condition of the overall housing stock. Those units that are determined to be substandard should not be considered as part of the overall housing supply. The substandard housing can be defined in various ways. Often, determining a structure to be substandard can be based solely on the age of the structure. However, many older housing units have been remodeled or renovated and should not be considered substandard. In 2000, there were 57,146 housing units built prior to 1940, many of which were not substandard. However, in 2000 there were 880 housing units in the region that lacked complete plumbing facilities, 742 that lacked complete kitchen facilities, and 2,711 that did not have telephone. For the purpose of this document these units should be considered substandard and not be counted as part of the 2000 housing supply (Table 6.15).



Table 6.15: Housing Units Lacking Selected Services, 2000, Bay-Lake Region &amp; Counties

Service	Brown County	Door County	Florence County	Kewaunee County	Manitowoc County	Marinette County	Oconto County	Sheboygan County	Bay-Lake Region	Wisconsin
No Plumbing	286	26	35	37	112	159	69	156	880	10,648
No Kitchen	212	27	19	32	140	115	55	142	742	12,580
No Telephone	1,096	101	27	87	385	295	238	482	2,711	34,208
Total Units	1,594	154	81	156	637	569	362	780	4,333	57,436

Source: U.S. Bureau of Census, 2000 Census of Population and Housing; and Bay-Lake Regional Planning Commission, 2004.

### **Housing Values**

In 2000, the majority of housing units in the Bay-Lake Region were valued between \$50,000 and \$99,999 (Table 6.16). Median values of homes in the various counties ranged from a low of \$69,800 in Marinette County, to a high of \$120,800 in Door County. There are 2,487 housing units costing less than \$50,000 in Marinette County and 241 units in Door County. There were 60 units in Brown County costing \$1,000,000 or more but none in Florence and Marinette Counties.

Table 6.16: Value of Specified Owner-Occupied Housing Units, 2000, Bay-Lake Region &amp; Counties

AREA	Less than \$50,000	\$50,000- \$99,999	\$100,000- \$149,999	\$150,000- \$199,999	\$200,000- \$299,999	\$300,000- \$499,999	\$500,000- \$999,999	\$1,000,000 or more	Median Value(\$)
Brown County	938	17,420	18,535	7,741	3,903	1,116	213	60	\$116,100
Door County	241	2,181	1,613	850	776	447	238	28	\$120,800
Florence County	301	432	233	105	52	17	2	0	\$82,200
Kewaunee County	384	2,096	1,106	379	174	51	5	16	\$92,100
Manitowoc County	1,434	10,440	5,040	1,765	811	200	41	22	\$90,900
Marinette County	2,487	4,497	1,334	513	273	44	10	0	\$69,800
Oconto County	1,021	3,335	1,727	814	434	81	12	4	\$89,900
Sheboygan County	559	10,688	8,789	3,260	1,433	478	113	6	\$106,800
Bay-Lake Region	7,365	51,089	38,377	15,427	7,856	2,434	634	136	--
Wisconsin	73,450	396,893	343,993	173,519	95,163	30,507	7,353	1,589	\$112,200

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing; and Bay-Lake Regional Planning Commission, 2004.

### **Housing Costs-Rents and Mortgage**

Providing affordable housing which meets the future needs of exiting and prospective residents is an important element of planning. Housing influences the economy, transportation, infrastructure, natural features and various other aspects of a comprehensive plan. According to the U.S. Department of Housing and Urban Development (HUD), housing affordability is defined as paying no more than 30 percent of household income for housing. According to the 2000 US Census, the 1999 median household income in the region ranged from \$34,750 to \$46,500; the 1999 median per return income ranged from in \$17,500 to \$21,800 according to the Wisconsin Department of Revenue. Based on these income ranges, the monthly amount a household could afford for housing would be approximately \$869 to \$1,161.

### **Rent and Income Comparison**

According to the 2000 census, the median gross rent for renter-occupied housing units in the region was \$445. The lowest median rent in the region was in Florence County at \$385, while Brown County was the highest at \$520 which was still below the state median rent of \$540.

Overall, 27 percent of renters paid more than 30 percent of their income towards rent with the greatest percent in Door County (33.6 percent) and the smallest percent in Florence County (20.5 percent).

### Owner Costs and Income Comparison

In 2000, Census figures indicated that 71 out of 341 specified owner-occupied housing units paid 30 percent or more of their 1989 income for selected monthly owner costs. The median mortgage in 2000 was \$875 for owner-occupied housing units with a mortgage for all areas of the region. Brown County had the highest median mortgage at \$1,038, just slightly higher than the state, while Marinette County was the lowest at \$746. More than 17 percent of owner-occupied units in the region had no mortgage with the highest percentage in Manitowoc County. Throughout the region, 16.2 percent of owners paid more than 30 percent of their income towards owner costs with the greatest percent in Door County (20.7 percent) and the smallest percent in Manitowoc County (14.4 percent).

Table 6.17: Mortgage, 2000, Bay-Lake Region & Counties

	Brown County	Door County	Florence County	Kewaunee County	Manitowoc County	Marinette County	Oconto County	Sheboygan County	Bay-Lake Region	Wisconsin
<b>Total Housing Units</b>	<b>90,199</b>	<b>19,587</b>	<b>4,239</b>	<b>8,221</b>	<b>34,651</b>	<b>26,260</b>	<b>19,812</b>	<b>45,947</b>	<b>248,916</b>	<b>2,321,144</b>
With a Mortgage	36,163	3,747	597	2,519	12,203	5,505	4,666	17,327	82,727	770,996
Percent of Total Housing Units	40.1%	19.1%	14.1%	30.6%	35.2%	21.0%	23.6%	37.7%	33.2%	33.2%
Median Mortgage	\$ 1,038	\$ 894	\$ 754	\$ 877	\$ 860	\$ 746	\$ 853	\$ 976	\$ 875	\$ 1,024
No Mortgage	13,763	2,627	545	1,692	7,550	3,653	2,762	7,999	40,591	351,471
Percent with No Mortgage	15.2%	13.4%	12.8%	20.5%	21.7%	13.9%	13.9%	17.4%	17.2%	15.1%
Renters	29,965	2,280	273	1,286	7,665	3,384	2,113	12,248	66,212	641,672
Percent of Total Housing Units	33.2%	11.6%	6.4%	15.6%	22.1%	12.9%	10.7%	26.7%	26.6%	27.6%
Median Rent	\$ 520	\$ 481	\$ 385	\$ 428	\$ 433	\$ 400	\$ 429	\$ 482	\$ 445	\$ 540

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing; and Bay-Lake Regional Planning Commission, 2004.

## **ANALYSIS AND DEVELOPMENT OF COMMUNITY POLICIES AND PROGRAMS**

The following text (as well as the above housing and population data) were presented to the Commission's Housing Advisory Committee for review and consideration and assisted in determining the overall policies and programs the Commission will follow over the planning period in order to provide the desired housing conditions within the region. These identified actions appear at the beginning of the chapter.

All communities in Wisconsin have a number of implementation options available to them. One important implementation option is ongoing education of citizens and local officials about the contents of this housing chapter and on the role of housing within the community. Citizens need to understand the relationship of housing to economic development, land use, community facilities, and transportation.

Other implementation options available to communities include regulatory tools, such as zoning and subdivision ordinances, governmental and private non-profit programs available to encourage the maintenance and development of affordable housing.

### **Housing Programs**

A number of federal and state housing programs are available to help local communities promote the development of housing for individuals with lower incomes and certain special needs. Some

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communities may also want to explore developing their own programs. Appendix H contains local, state and federal programs available to provide housing, financial and technical assistance.

*Note: Not each program is available to every community, nor is each recommended. The programs are described in order to educate residents on specific agencies with their programs and to be an inclusive information source during planning discussions.*

### **Housing Plan**

Below is a discussion of how communities in the Region can achieve their desired housing for all of their residents utilizing information provided by the UW-Extension along with state programs. The three housing requirements as defined by s 66.1001(2)(b) are detailed below - along with options/actions presented to meet these state requirements. An overall recommended housing strategy is formulated at the beginning of this chapter which states specific policies and programs the Commission will follow to meet these requirements. Appendix H contains a housing plan with detailed information for local communities to meet these strategies.

*Requirement 1. Promoting the development of housing which provides a range of housing choices to meet the needs of persons of all income levels and of all age groups and persons with special needs.*

An increasing number of people cannot find housing in their community that is suitable for their stage of life--from young wage earners to couples with grown children. Local communities and their governments need to pursue strategies that encourage the development of a range of housing choices to meet the needs of people with different income levels and with various needs. People with special needs typically include the elderly, physically and mentally disabled persons and may include other classifications such as farm workers and migrant laborers. As the general population of Wisconsin ages, affordability, security, accessibility, proximity to services, transportation, food, and medical facilities will all become very important.

*Requirement 2. Promoting the availability of land for the development or redevelopment of low-income and moderate-income housing.*

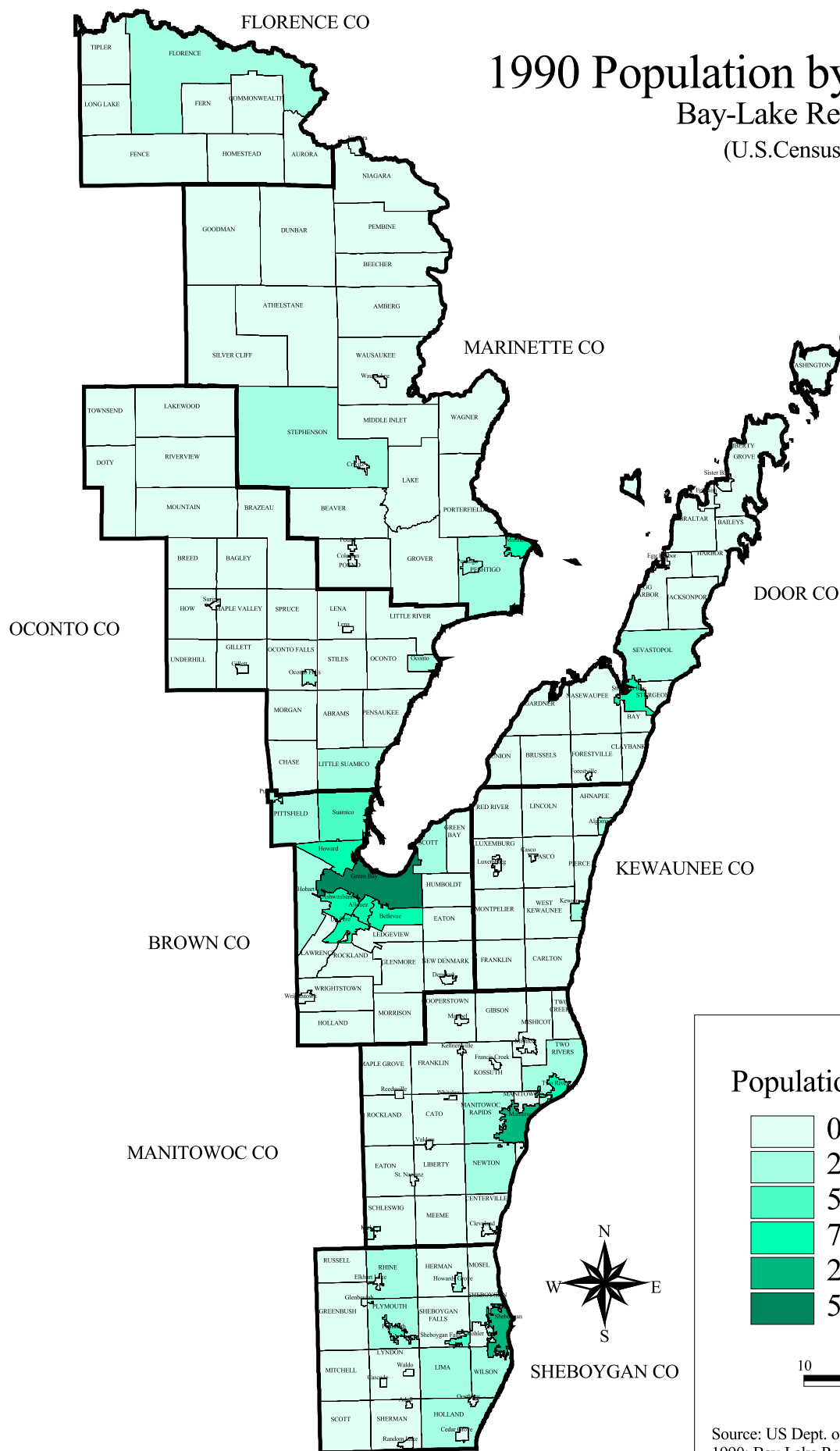
Communities must promote the availability of undeveloped or underused land as one way to meet the low and moderate-income housing needs identified in the housing element of s66.1001. Several options are available to communities. For example, communities should insure an adequate supply of land is planned and zoned for multifamily housing and for development at higher densities to meet forecasted demand.

Promoting the availability of land for low- and moderate-income housing also can be integrated with other planning issues. For example, urban communities may try to identify areas near transit lines or where new transit might be feasible because of higher density and mixed-use development.

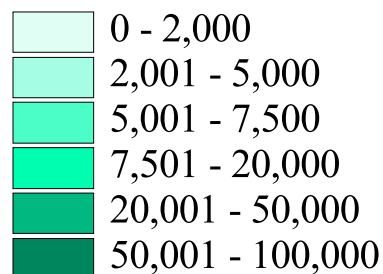
*Requirement 3. Maintaining or rehabilitating existing housing stock.*

It is important that the communities housing plan consider conservation of the communities existing housing stock. The existing stock often is the primary source of affordable housing. In many communities this existing housing is aging and may need investment to maintain its utility. Communities and local governments should develop strategies that prevent neglect and encourage reinvestment in the existing housing stock.

# 1990 Population by Community Bay-Lake Region (U.S.Census)



## Population Per Community



10 0 10 Miles

Source: US Dept. of Commerce, Bureau of the Census, 1990; Bay-Lake Regional Planning Commission, 2005.

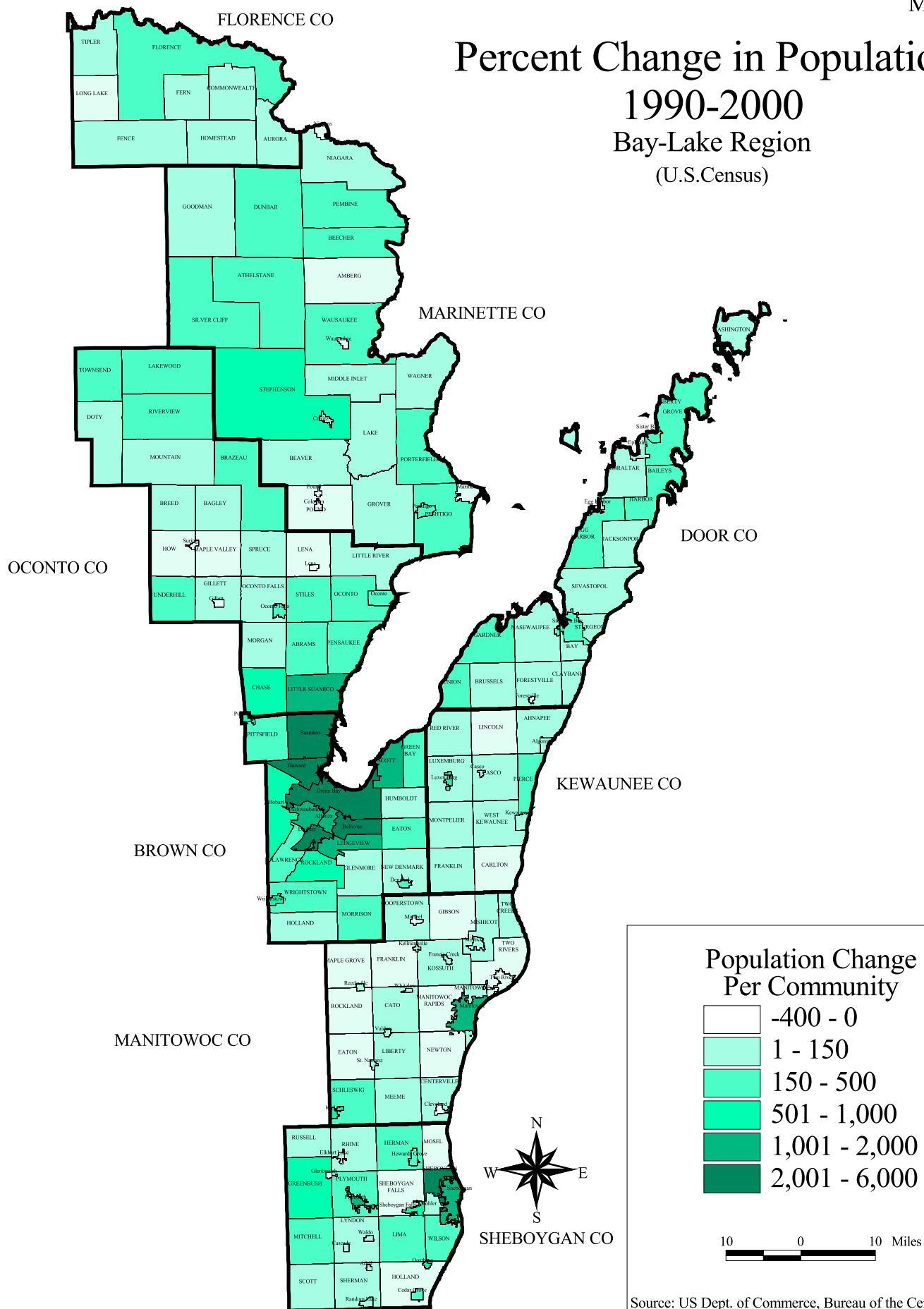




Source: US Dept. of Commerce, Bureau of the Census, 2000; Bay-Lake Regional Planning Commission, 2005.



# Percent Change in Population 1990-2000 Bay-Lake Region (U.S.Census)

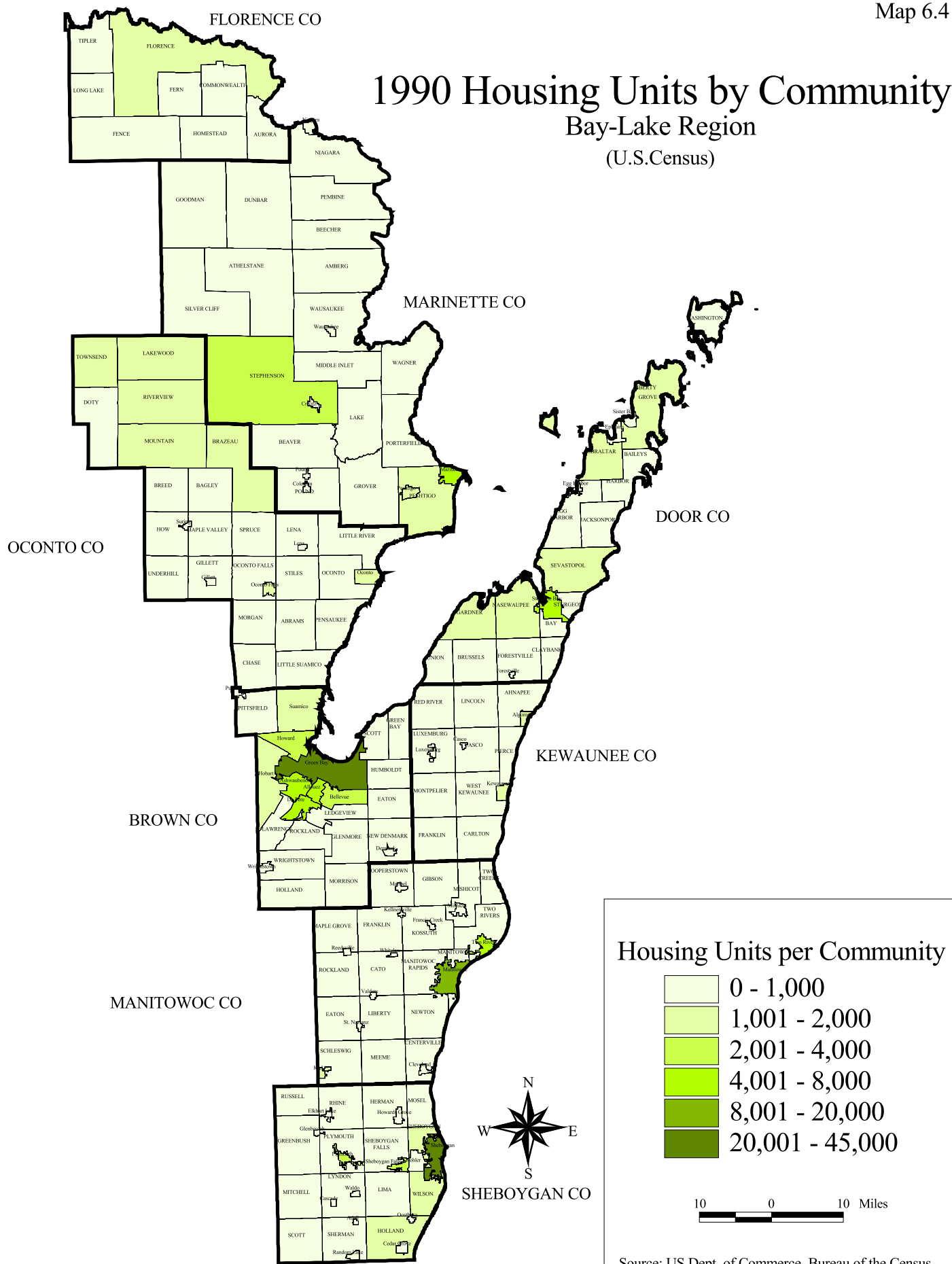


Source: US Dept. of Commerce, Bureau of the Census, 1990, 2000; Bay-Lake Regional Planning Commission, 2003.





# 1990 Housing Units by Community Bay-Lake Region (U.S.Census)

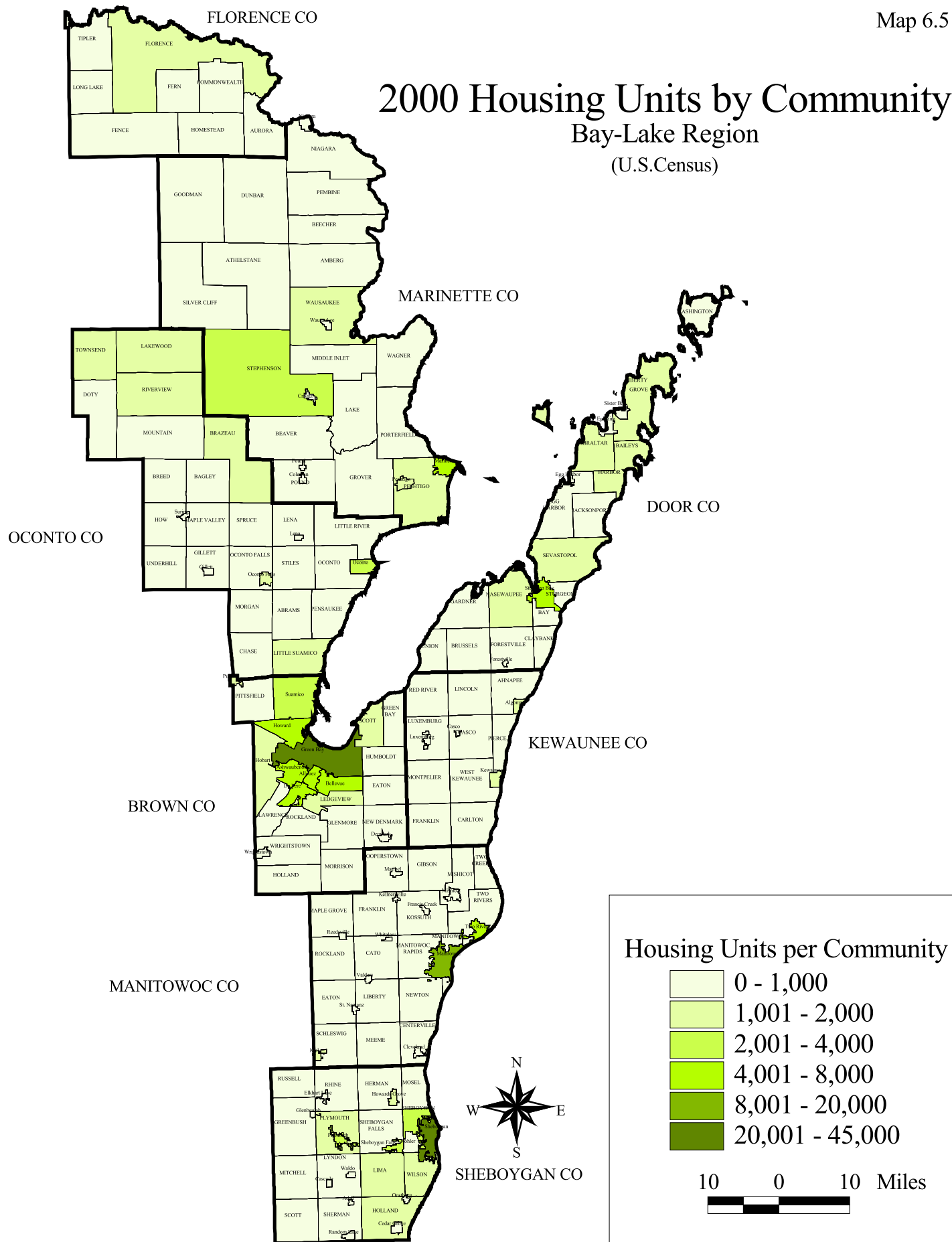


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Source: US Dept. of Commerce, Bureau of the Census, 2000; Bay-Lake Regional Planning Commission, 2005.

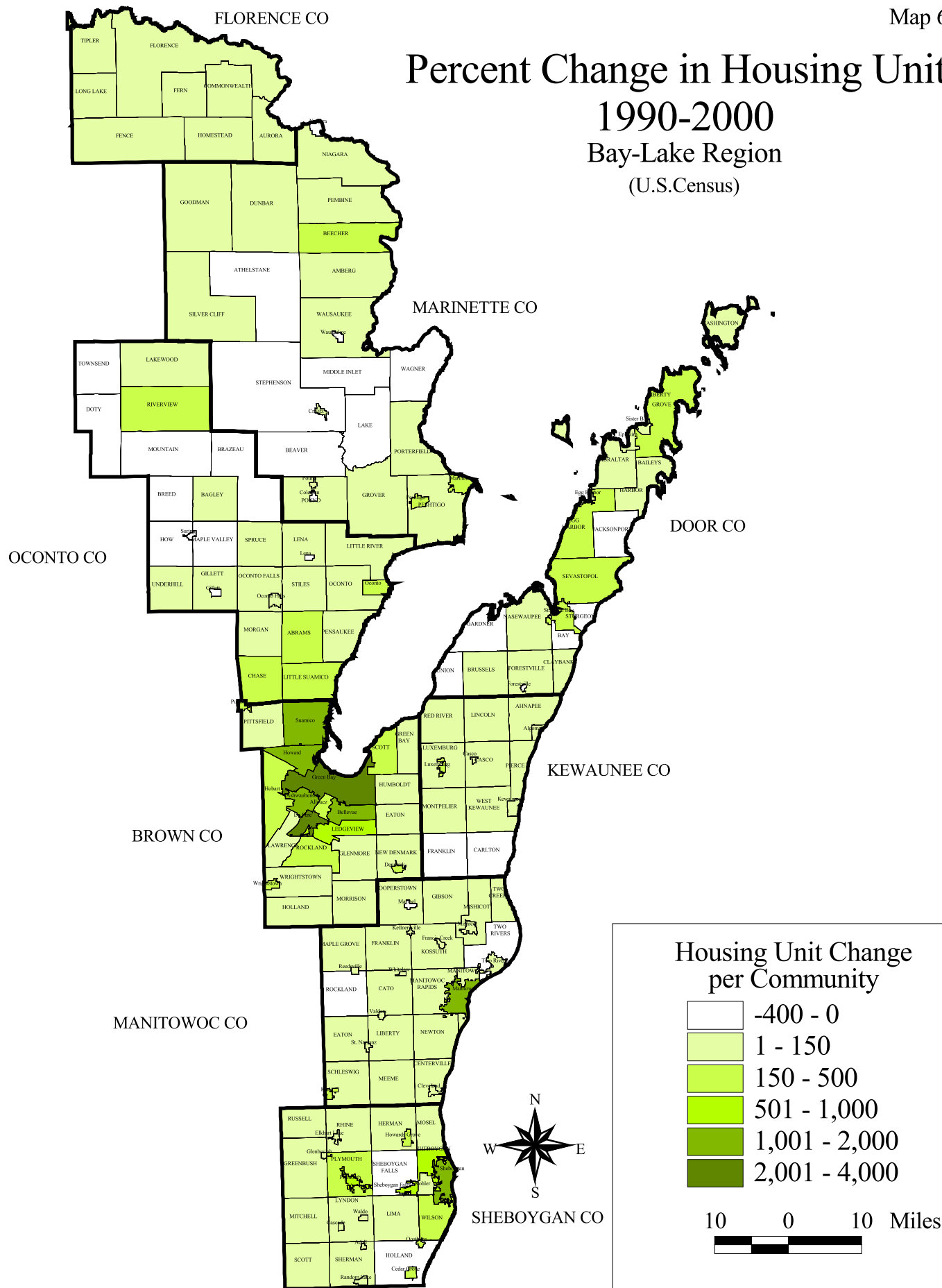


# 2000 Housing Units by Community Bay-Lake Region (U.S.Census)





# Percent Change in Housing Units 1990-2000 Bay-Lake Region (U.S.Census)





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## CHAPTER 7 - ECONOMIC DEVELOPMENT

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### **INTRODUCTION**

The Economic Development Element of the Regional Comprehensive Plan is based on the statutory requirement for the establishment of goals, objectives, policies, maps, and programs to promote the stabilization, retention, or expansion of the economic base and quality employment opportunities through an analysis of the labor force and economic base of the region. An assessment of the region will include:

- Categories or particular types of new business;
- Industries that are desired;
- Strengths and weaknesses to attracting and retaining businesses and industries; and
- Sites available for such businesses and industries.

In addition, this element will evaluate and promote the use of environmentally contaminated sites for commercial or industrial uses. A complete list of county, regional, state, and federal economic development programs are provided.

### **ECONOMIC DEVELOPMENT PLANNING GOALS**

Of the 14 state goals established by the comprehensive planning legislation, two are related directly to economic development. They are:

1. Promoting the expansion or stabilization of the current economic base and the creation of a range of employment opportunities at the state, regional, and local levels.
2. Promotion of the redevelopment of lands with existing infrastructure and public services and the maintenance and rehabilitation of existing residential, commercial and industrial structures.

There are four related goals – protection of economically productive areas to include farmland and forests; strengthening of community by revitalizing main streets and enforcing design standards; providing adequate infrastructure and public services; and setting aside an adequate supply of developable land to meet existing and future market demand for residential, commercial and industrial uses. Local units of government are encouraged to use this document to assist them in the creation and implementation of their own goals, objectives, policies, and programs for their economic development plans. The specific Economic Development Goals of this Regional Comprehensive Plan include:

**Goal 1:** To expand the number of employers in the Region through business expansion, retention, development, and recruitment.

**Goal 2:** To increase the quantity and quality of the labor force.

**Goal 3:** To improve community facilities, services, and infrastructure needed to foster economic growth in the rural and urban areas of the Region.

**Goal 4:** To promote the wise use and conservation of natural resources.

**Goal 5:** To encourage planning efforts that will guide and promote regional economic development.



Each year, the Commission prepares a *Comprehensive Economic Development Strategy (CEDS) Annual Report* for the purpose of fostering and promoting economic growth in the region. The report describes the Commission; the past year's community economic development activities; annual changes in population and economic demographics; a list of potential community economic development projects submitted by counties and communities; and the region's economic development goals. The CEDS is to work in conjunction with other local, state, and federal initiatives to improve the state's overall tax and business climate and maximize the labor force capabilities within the state. The Regional Comprehensive Plan supports and expands upon the Commission's *CEDS Annual Report*.

## **LABOR FORCE CHARACTERISTICS**

The labor force is comprised of employed persons and those seeking employment, and excludes persons in the armed forces and those under age 16. Variations in the number of persons in the labor force are the result of many factors. Shifts in the age and sex characteristics of the population, changes in the number of residents aged 16 and over, the proportion of this group (16 and over) working or seeking employment, and seasonal elements are all factors affecting the size of the labor force.

### **Place of Work**

Approximately 83.5 percent of workers in 2000 who were 16 years and older in the Bay-Lake Region worked in their county of residence (Table 7.1). Brown County appears to provide the most employment opportunities for its residents. Florence, Kewaunee, and Oconto Counties each reflected significantly lower percentages of residents working in their own counties, indicating that many residents in these counties must commute outside their counties to find work. In the case of Florence County, over half of these workers are leaving both their county and the state to find work. Brown County, with the most workers and 91.6 percent of its residents working in the county, appears to be the county with the most employment opportunities. Retaining the workforce and creating new employment opportunities within each of the counties are key for future economic development of the region.

Table 7.1: Place of Work, 2000, Bay-Lake Region & Selected Areas

Area	Total	Worked in State of Residence		Worked in County of Residence		Worked Outside County of Residence	Worked Outside of State
		Number	Percent	Number	Percent		
Brown County	118,872	118,451	99.6	108,890	91.6	9,561	421
Door County	13,614	13,448	98.8	12,058	88.6	1,390	166
Florence County	2,296	1,105	48.1	870	37.9	235	1,191
Kewaunee County	10,580	10,556	99.8	5,858	55.4	4,698	24
Manitowoc County	42,406	42,267	99.7	33,840	79.8	8,427	139
Marinette County	19,991	17,332	86.7	15,050	75.3	2,282	2,659
Oconto County	17,444	17,313	99.2	8,784	50.4	8,529	131
Sheboygan County	58,546	58,328	99.6	51,484	87.9	6,844	218
Bay-Lake Region	283,749	278,800	98.3	236,834	83.5	41,966	4,949

Source: Bureau of the Census, SF 3A, 2000; and Bay-Lake Regional Planning Commission, 2003.

## **Occupation**

In 2000, the majority of employed persons 16 years and older in the Bay-Lake Region were in management, professional and related occupations (27.5 percent). Two other important occupations in the region include the sales and office occupations and the production, transportation, and material moving occupations with 24.1 percent and 23.9 percent of employment, respectively. Less than 10 percent of the region's workforce over 16 years is in the construction, extraction, and maintenance occupations. Only 1.2 percent of the employed persons in the region work in the farming, fishing and forestry occupations (Table 7.2).

Table 7.2: Employed Persons by Occupation, 2000, Bay-Lake Region

		Management, professional, and related	Service	Sales and office	Farming, fishing, and forestry	Construction, extraction, and maint.	Production, trans., and material moving	Total
Brown County	Number	36,846	15,148	34,321	617	11,053	22,545	120,530
	% of Total	30.6	12.6	28.5	0.5	9.2	18.7	100.0
Door County	Number	3,828	2,172	3,285	267	1,847	2,502	13,901
	% of Total	27.5	15.6	23.6	1.9	13.3	18.0	100.0
Florence County	Number	513	431	458	45	307	529	2,283
	% of Total	22.5	18.9	20.1	2.0	13.4	23.2	100.0
Kewaunee County	Number	2,826	1,238	2,128	367	1,346	2,798	10,703
	% of Total	26.4	11.6	19.9	3.4	12.6	26.1	100.0
Manitowoc County	Number	10,448	5,793	8,880	820	4,264	12,748	42,953
	% of Total	24.3	13.5	20.7	1.9	9.9	29.7	100.0
Marinette County	Number	4,981	3,308	4,427	372	2,107	5,141	20,336
	% of Total	24.5	16.3	21.8	1.8	10.4	25.3	100.0
Oconto County	Number	4,234	2,504	3,580	428	2,093	4,841	17,680
	% of Total	23.9	14.2	20.2	2.4	11.8	27.4	100.0
Sheboygan County	Number	15,422	8,084	12,831	527	4,898	17,692	59,454
	% of Total	25.9	13.6	21.6	0.9	8.2	29.8	100.0
<b>Bay-Lake Region</b>	<b>Number</b>	<b>79,098</b>	<b>38,678</b>	<b>69,910</b>	<b>3,443</b>	<b>27,915</b>	<b>68,796</b>	<b>287,840</b>
	<b>% of Total</b>	<b>27.5</b>	<b>13.4</b>	<b>24.3</b>	<b>1.2</b>	<b>9.7</b>	<b>23.9</b>	<b>100.0</b>

Source: U.S. Census Bureau, American Fact finder, P50, SF3; and Bay-Lake Regional Planning Commission, 2005.

## **Unemployment Rate**

Table 7.3 displays the number and percent of unemployed persons in the Bay-Lake Region for the years 1992 through 2004. The unemployment rate fell to a low of 2.8 percent in 1999, at which time the economy began to experience some difficulties. In 2000, unemployment in the region began to rise, not unlike most of the nation. By 2002, the annual average unemployment rate for the region was recorded at 5.6 percent. Almost 18,000 civilians were out of work on average during that year. In June of 2003, the unemployment rate in the region ranged from 5.0 percent in Sheboygan County to 10.0 percent in Oconto County. The civilian labor force for the region grew continuously throughout the 10-year period, increasing by 47,128 civilians.

Table 7.3: Civilian Labor Force Estimates, 1992-2004, Bay-Lake Region

Year	Civilian Labor Force	Unemployed	Percent Unemployed	Employed	Percent Employed
1992	271,341	14,605	5.4	256,737	94.6
1993	276,043	13,754	5.0	262,290	95
1994	286,660	13,908	4.9	272,752	95.1
1995	292,880	11,300	3.9	281,849	96.2
1996	300,640	11,167	3.7	289,473	96.2
1997	301,879	11,032	3.7	290,847	96.3
1998	305,107	10,030	3.3	295,077	96.7
1999	300,969	8,539	2.8	292,430	97.1
2000	305,332	9,470	3.1	295,862	96.8
2001	315,042	14,332	4.5	300,710	95.4
2002	318,469	17,924	5.6	300,545	94.3
2003	323,326	19,307	6.0	304,019	94.0
2004	326,151	16,377	5.0	309,754	95.0
Avg.	301,834	13,211	4.4	288,642	95.6

Source: Wisconsin Department of Workforce Development, Civilian Labor Force Estimates, 1992-2002; and Bay-Lake Regional Planning Commission, 2005.

### **Employment by Industry**

According to the 2000 Census, there are seven major industry sectors as shown in Table 7.4. They are: 1) Agriculture, forestry, fishing, hunting and mining; 2) Construction; 3) Manufacturing; 4) Wholesale trade; 5) Retail trade; 6) Transportation and warehousing, and utilities; and 7) Services. 43.5 percent or 125,253 people are employed in the Services sector. 17.18 percent, or 49,453 employees, work in the educational, health and social services area. The manufacturing sector, with 80,718 employees, or 28.04 percent of total regional employment was the second highest employment sector in the region (see Figure 7.1).

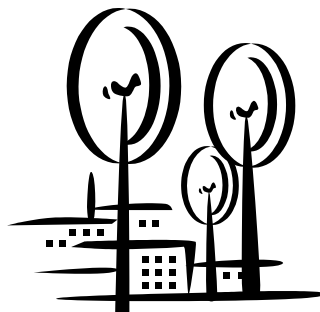


Table 7.4: Employment in the Bay-Lake Region by Industry Group, 2000

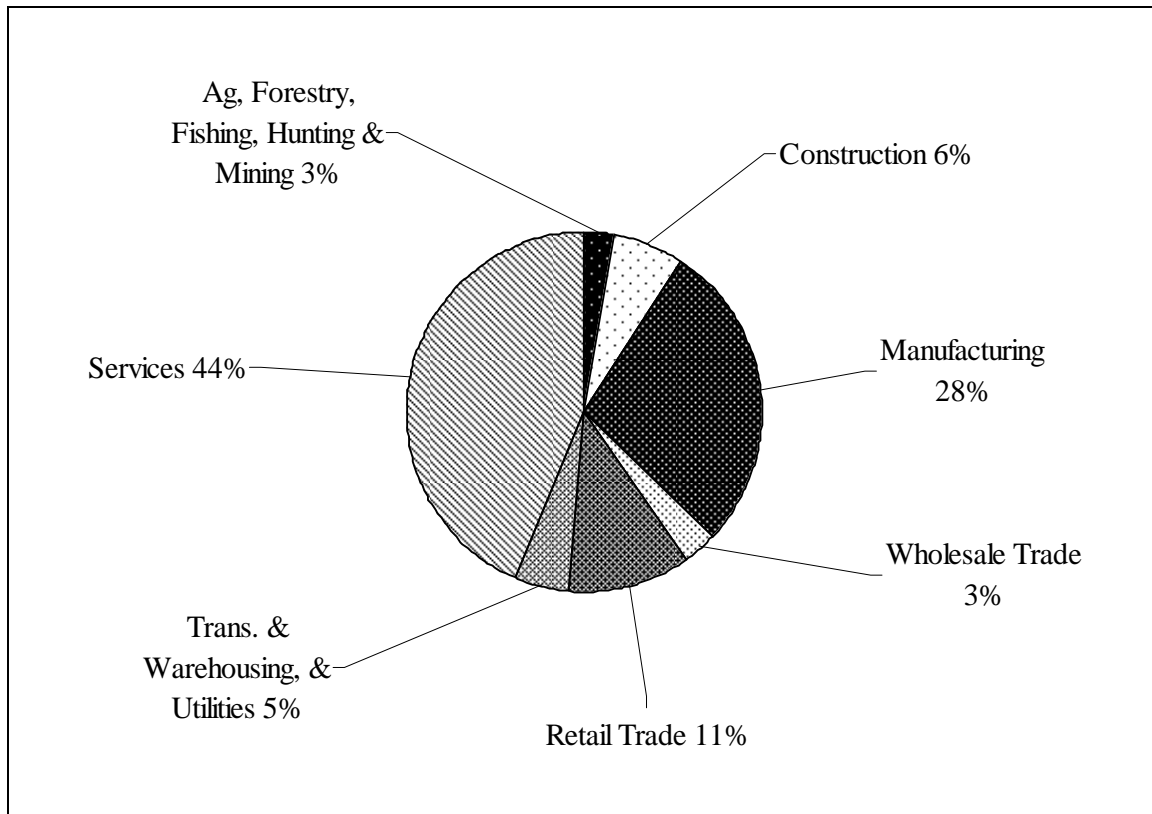
(Number) Industry	Brown County	Door County	Florence County	Kewaunee County	Manitowoc County	Marinette County	Oconto County	Sheboygan County	Bay-Lake Region
Agriculture, forestry, fishing, hunting and mining	1,503	625	112	1,076	1,814	800	1,112	1,158	8,200
Construction	7,436	1,392	236	1,004	2,566	1,137	1,346	3,290	18,407
Manufacturing	25,449	2,607	508	3,128	15,123	6,017	5,126	22,760	80,718
Wholesale trade	4,808	200	49	246	1,052	408	463	1,479	8,705
Retail trade	15,245	1,881	228	1,012	4,287	2,410	1,517	5,717	32,297
Transportation and warehousing, and utilities	7,455	388	112	659	1,910	853	1,263	1,690	14,330
Services	58,634	6,808	1,108	3,578	16,201	8,711	6,853	23,360	125,253
Information	2,425	198	29	97	618	334	210	810	4,721
Finance, insurance, real estate and rental and leasing	9,805	717	82	442	1,392	749	733	2,490	16,410
Professional, scientific, management, administrative, and waste management services	7,546	865	83	392	1,642	629	730	2,879	14,766
Educational, health and social services	21,228	2,096	481	1,473	7,209	4,015	2,723	10,228	49,453
Arts, entertainment, recreation, accommodation & food	8,789	1,919	204	577	2,714	1,700	1,286	3,844	21,033
Other services (except administration)	5,377	572	116	395	1,594	713	640	1,918	11,325
Public administration	3,464	441	113	202	1,032	571	531	1,191	7,545
Total	120,530	13,901	2,353	10,703	42,953	20,336	17,680	59,454	287,910

(Percent) Industry	Brown County	Door County	Florence County	Kewaunee County	Manitowoc County	Marinette County	Oconto County	Sheboygan County	Bay-Lake Region
Agriculture, forestry, fishing, hunting and mining	1.25%	4.50%	4.76%	10.05%	4.22%	3.93%	6.29%	1.95%	2.85%
Construction	6.17%	10.01%	10.03%	9.38%	5.97%	5.59%	7.61%	5.53%	6.39%
Manufacturing	21.11%	18.75%	21.59%	29.23%	35.21%	29.59%	28.99%	38.28%	28.04%
Wholesale trade	3.99%	1.44%	2.08%	2.30%	2.45%	2.01%	2.62%	2.49%	3.02%
Retail trade	12.65%	13.53%	9.69%	9.46%	9.98%	11.85%	8.58%	9.62%	11.22%
Transportation and warehousing, and utilities	6.19%	2.79%	4.76%	6.16%	4.45%	4.19%	7.14%	2.84%	4.98%
Services	48.65%	48.97%	47.09%	33.43%	37.72%	42.84%	38.76%	39.29%	43.50%
Information	2.01%	1.42%	1.23%	0.91%	1.44%	1.64%	1.19%	1.36%	1.64%
Finance, insurance, real estate and rental and leasing	8.13%	5.16%	3.48%	4.13%	3.24%	3.68%	4.15%	4.19%	5.70%
Professional, scientific, management, administrative, and waste management services	6.26%	6.22%	3.53%	3.66%	3.82%	3.09%	4.13%	4.84%	5.13%
Educational, health and social services	17.61%	15.08%	20.44%	13.76%	16.78%	19.74%	15.40%	17.20%	17.18%
Arts, entertainment, recreation, accommodation & food	7.29%	13.80%	8.67%	5.39%	6.32%	8.36%	7.27%	6.47%	7.31%
Other services (except administration)	4.46%	4.11%	4.93%	3.69%	3.71%	3.51%	3.62%	3.23%	3.93%
Public administration	2.87%	3.17%	4.80%	1.89%	2.40%	2.81%	3.00%	2.00%	2.62%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: U.S. Bureau of the Census, Census 2000 SF 3, Profile of Selected Economic Characteristics: 2000, and Commission, 2003, and Bay-Lake Regional Planning Commission, 2003.

Figure 7.1: Employment by Industry, Bay-Lake Region, 2000



Source: U.S. Bureau of the Census, Census 2000 SF 3, *Profile of Selected Economic Characteristics: 2000*, and Bay-Lake Regional Planning Commission, 2003.

## **AGRICULTURE**

Farming is of vital importance to the economy of the Bay-Lake Region. The number of farms in the district has been decreasing; while the average size of each farm has been increasing (a farm is defined as a place that sells \$1,000 or more of agricultural products per year).

The amount of agricultural land being diverted to other uses has remained consistent from 2001-2004 (Table 7.5). Land sales in Brown County continue to comprise 1/3 of the total sales of the region. The strong growth around the Green Bay metro area has pushed per acre costs to over \$14,000 compared to \$2,076 per acre in Marinette County. The strong agriculture industry in Kewaunee County has limited the amount of land being diverted to other uses to fewer than 550 acres for this four year period of time. Florence experienced the greatest decline in agriculture land being diverted to other uses from 437 to 97 acres, or a 78 percent decrease.

Table 7.5: Agricultural land being diverted to other uses, 2001-2004

Area	2001		2002		2003		2004		Total Acres Sold From 2001-2004
	Acres Sold	Dollars per acre	Acres Sold	Dollars per acre	Acres Sold	Dollars per acre	Acres Sold	Dollars per acre	
Brown	706	10,653	745	7,546	1,336	21,584	1,379	14,786	4,166
Door	386	2,142	543	2,670	431	3,936	256	8,016	1,616
Florence	437	831	35	2,337	58	1,313	97	3,000	627
Kewaunee	72	1,399	153	3,942	40	1,963	265	4,013	530
Manitowoc	595	1,846	604	3,740	286	3,560	118	7,373	1,603
Marinette	139	1,085	215	1,628	238	2,555	528	2,076	1,120
Oconto	440	2,607	307	2,169	888	3,050	577	2,873	2,212
Sheboygan	295	4,597	471	5,972	615	6,785	614	10,308	1,995
Region	3,070	NA	3,073	NA	3,892	NA	3,834	NA	13,869
Wisconsin	49,337	3,448	44,494	2,251	47,057	5,500	44,403	7,165	185,291

Source: Wisconsin Agricultural Statistics Service: *Agricultural Land Sales: Total Agricultural Land, WI, 2004* and Bay-Lake Regional Planning Commission, 2005.

Note: Includes both land with and without buildings and other improvements.

With the continued trend of urban sprawl and restructuring of farming causing the loss of farmland, the State of Wisconsin established a statute authorizing the development of farmland preservation plans. Financial assistance from the state has given counties the opportunity to define where the prime agricultural land is located in the county and to provide tax incentives to farmers to maintain this land in agricultural use. All eight counties in the district have adopted farmland preservation plans. In many areas, implementation measures are being taken in the form of exclusive agricultural zoning district. Table 7.6 shows that over the two-year period, 6,143 acres of agricultural land was sold and diverted to other non-agricultural uses. On average, approximately 3,070 acres of farmland is lost in the region per year.

The agriculture industry has a significant impact on jobs, income, and expenditures in the Bay-Lake District (Table 7.6). Agriculture accounts for 420,000 jobs in Wisconsin, of which 40,298, or 9.5 percent, are in the Bay-Lake District alone. The amount of economic activity agriculture provided to the District in 2005 was \$6,318,600. Each county benefited from the positive impact of the agriculture industry in 2005 (Florence County data was not available).



Table 7.6: Agriculture's Impact, 2005, Bay-Lake Region, Counties &amp; State

Area	No. of Jobs Provided	Amount Provides in Economic Activity (in millions)	Amount Contributes to Total Income (in millions)	Amount Pays in Taxes (in millions)
Brown	16,759	3,000.0	844.5	75.0
Door	2,199	188.9	42.1	4.6
Florence	NA	NA	NA	NA
Kewaunee	2,199	188.9	42.1	4.6
Manitowoc	6,061	836.3	213.8	18.6
Marinette	1,216	86.6	21.8	2.4
Oconto	2,694	317.9	74.2	7.8
Sheboygan	9,170	1,700.0	478.2	44.2
Region	40,298	6,318.6	1,716.7	157.2
Wisconsin	420,000	51.5 billion	16.8 billion	NA

Source: University of Wisconsin-Extension, Cooperative Extension, Wisconsin Farm Bureau Federation, Wisconsin Milk Marketing Board and Bay-Lake Regional Planning Commission, 2005.

## **TOURISM**

Tourism is the third largest industry in the State of Wisconsin behind manufacturing and agriculture. Expenditures are what travelers spent on lodging, food, retail sales, recreation, etc. Local revenues are property taxes, sales taxes, lodging taxes, etc. collected as a result of travelers. The District has three counties ranking in the top ten in tourism expenditures. According to the Wisconsin Department of Tourism, Brown County ranks 5<sup>th</sup> in the state with annual expenditures of nearly \$475,000,000, followed by Door County at 7<sup>th</sup> at with just under \$400,000,000 and Sheboygan County coming in at a strong 9<sup>th</sup> with \$271,000,000. For the remaining four counties in the District; Manitowoc ranked 20<sup>th</sup>, Marinette 35<sup>th</sup>, Oconto 45<sup>th</sup>, Kewaunee 62<sup>nd</sup>, and Florence 69<sup>th</sup>. Brown saw the largest loss of local revenue of 20 percent between 2003 and 2004 while Florence experienced the greatest increase during those same two years of 27.5 percent (Table 7.7).

Table 7.7: County by County Tourism Expenditures, 2003-2004, Bay-Lake Region

Area	Expenditures \$		Difference	Percent Change	Local Revenue \$		Difference	Percent Change
	2003	2004			2003	2004		
Brown	441,063,960	474,998,270	33,934,310	7.7%	25,074,000	20,060,046	-5,013,954	-20.0%
Door	394,400,306	397,627,137	3,226,831	0.8%	19,713,000	19,875,000	162,000	0.8%
Florence	14,804,569	17,531,102	2,726,533	18.4%	591,719	754,222	162,503	27.5%
Kewaunee	37,957,663	33,978,548	-3,979,115	-10.5%	1,517,119	1,434,978	-82,141	-5.4%
Manitowoc	134,353,774	137,099,831	2,746,057	2.0%	5,369,950	5,789,976	420,026	7.8%
Marinette	94,511,287	95,650,915	1,139,628	1.2%	3,777,496	4,115,089	337,593	8.9%
Oconto	68,373,360	65,034,864	-3,338,496	-4.9%	2,732,798	2,797,928	65,130	2.4%
Sheboygan	264,979,906	271,432,571	6,452,665	2.4%	10,590,910	11,677,562	1,086,652	10.3%
Region	1,450,444,825	1,493,353,238	42,908,413	3.0%	69,366,992	66,504,801	-2,862,191	-4.1%
Wisconsin	11,709,866,089	11,781,228,510	71,362,421	0.6%	545,908,000	555,691,000	9,783,000	1.8%

Source: WI Department of Tourism, and Bay-Lake Regional Planning Commission, 2005.

## **Employment Forecast**

In 2002, the Wisconsin Department of Workforce Development created projections for industries, occupations, and the labor force called the Bay Area (Northeast Wisconsin) 2002-2012. These projections cover 10 counties of Northeast Wisconsin to include the eight counties of the Bay-Lake Region. The study concluded that overall employment is expected to increase

by 11.9 percent within the region. Unemployment rates will remain in the 4.5-5.5 percent range for the area for the near future, and labor shortages may be common in some occupations. .

The manufacturing industry is projected to continue to be the industry with the largest share of employment. Although manufacturing jobs will continue to increase, that rate of increase will slow down dramatically to under one percent for this 10 year time period. Occupations anticipated to be lost in paper manufacturing are expected to be added in the manufacture of plastics and rubber and transportation equipment.

Service industry employers will add approximately 19,200 jobs to the region's labor market by 2012. The largest divisions within this industry group will be business and health services with a similar growth in professional or technical jobs. With the aging of the population, the demand for such services will continue to increase. Other than a decline in paper manufacturing occupations, the overall health of the Northeast Wisconsin economy is projected to be strong across all industry sectors.

### **Median Household Income**

In 1989, the average median household income (MHI) of the eight counties that make up the Bay-Lake Region was \$26,412. By 1999, the average recorded MHI in the region had grown to \$41,227 and \$46,305 by 2003 (Table 7.8). The two most populated counties, Brown and Sheboygan, recorded the highest MHI in 2003 at \$52,670 and \$52,803 respectively. Florence (18.2 percent) and Marinette (16.8 percent) experienced the greatest percent increase from 1999 to 2003. Map 7.1 depicts the change in median household incomes from 1990 to 2000.

Table 7.8: Median Household Income, 1989, 1999, & 2003 for Counties in the Bay-Lake Region

Area	1989	1999	2003	Dollar Increase	Percent Change
				1999-2003	1999-2003
Brown County	\$31,303	\$46,447	\$52,670	\$6,224	13.4
Door County	\$26,259	\$38,812	\$42,732	\$3,920	10.1
Florence County	\$22,416	\$34,750	\$41,075	\$6,325	18.2
Kewaunee County	\$26,927	\$43,824	\$46,897	\$3,037	7.1
Manitowoc County	\$27,467	\$43,286	\$48,177	\$4,891	11.3
Marinette County	\$22,396	\$35,256	\$41,179	\$5,923	16.8
Oconto County	\$22,927	\$41,201	\$44,909	\$3,708	9.0
Sheboygan County	\$31,603	\$46,237	\$52,803	\$6,566	14.2
County Average MHI	\$26,412	\$41,227	\$46,305	\$5,079	12.3
State of Wisconsin	\$29,442	\$43,791	\$49,528	\$5,737	13.1

Source: U.S. Economic Analysis Bureau and Wisconsin Department of Natural Resources 2005.

### **Per Capita Income**

The per capita income for residents in the Bay-Lake Region increased 53.7 percent for the period 1993 to 2003 (Table 7.9). As a percent, this increase was greater than the state increase over the same period. The highest per capita incomes (PCI) in the region, according to the 2000 Census, were recorded in Brown, Door and Sheboygan counties. PCI ranged from a low of \$17,492 in Marinette County to a high of \$21,784 in Brown County. Overall, the regional average of the eight PCIs in the Bay-Lake Region was \$19,778. Although this number is \$1,493 less than the



PCI recorded at the state level, the PCI in the Region appears to be growing at a faster pace than the state.

Table 7.9: Per Capita Income, 1993, 2003 & 2003, Counties in the Bay-Lake Region

Area	(Dollars)			Percent Change		Percent Change Compared to US	
	1993	2002	2003	1993-03	2002-03	1993-03	2002-03
Brown	21,159	31,348	32,076	51.6%	2.3%	1.09	1.07
Door	19,544	29,979	30,657	56.9%	2.3%	1.20	1.04
Florence	14,102	23,358	24,146	71.2%	3.4%	1.50	1.56
Kewaunee	17,356	24,640	25,536	47.1%	3.6%	0.99	1.68
Manitowoc	18,509	27,043	27,807	50.2%	2.8%	1.06	1.30
Marinette	16,532	24,506	25,448	53.9%	3.8%	1.14	1.77
Oconto	16,331	24,244	24,842	52.1%	2.5%	1.10	1.14
Sheboygan	20,747	30,460	31,251	50.6%	2.6%	1.07	1.20
Wisconsin	20,331	29,937	30,685	50.9%	2.5%	1.07	1.15
United States	21,346	30,804	31,472	47.4%	2.2%	1.00	1.00

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System (REIS), Table CAI-3 County Summary 1993-2003 and the Bay-Lake Regional Planning Commission, 2005. Table includes new estimates of 2003 county personal income and **revised** estimates for 2001-2002 that were released April 27, 2005.

Map 7.2 depicts the per capita income change from 1990 to 2000 at the local level. As shown, the northern forested area of the region is where the lowest per capita income is found. This is where most residents fall into the \$10,000 to \$20,000 per capita income range. The cities and the more populated areas tend to have the higher levels recorded at \$20,001 to \$30,000.

## **ECONOMIC BASE**

### **Employment by Economic Division**

The future of Bay-Lake Region's population requires an understanding of the local and county economies. The Economic Base Analysis technique divides the economy into basic and non-basic sectors. The basic sector is made up of local businesses that are dependent on external factors. Manufacturing and local resource-oriented firms (like logging or mining) are usually considered to be basic sector firms because their fortunes depend largely upon non-local factors, and they usually export their goods. The non-basic sector, in contrast, is composed of those firms that depend largely upon local business conditions. Economic Base Theory asserts that the means of strengthening and growing the local economy is to develop and enhance the basic sector.

There are nine basic economic divisions that are used for Economic Base Analysis. There are four goods-producing sectors: agriculture, forestry, and fishing; mining; construction; and manufacturing; and five services-producing sectors: transportation and public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services.

### **Location Quotient Analysis**

The Location Quotient analysis technique compares the local economy and Bay-Lake Region to the United States. This allows for identifying specializations in the region economy (Table 7.10). If the Location Quotient (LQ) is less than 1.0, all employment is considered non-basic, therefore that industry is not meeting local demand for a given good or service. An LQ equal to 1.0

suggests that the local employment is exactly sufficient to meet the local demand for a given good or service, employment is still considered non-basic. An LQ greater than 1.0 suggests that local employment produces more goods and services than the local economy can use, therefore these goods and services are exported to non-local areas, which makes them basic sector employment.

Table 7.10: Bay-Lake Region Employment Analysis 1990-2000

Item	1990 Employment	Percent of Total	2000 Employment	Percent of Total	Percent Change 1990-2000	1990 Location Quotient	2000 Location Quotient
Total full and part-time employment	289,796	100.0	366,677	10.6	26.5		
Farm employment	12,137	4.2	10,263	0.3	-15.4	1.9	1.5
Nonfarm employment	277,659	95.8	356,414	10.3	28.4	1.0	1.0
Private employment	248,350	85.7	322,820	9.4	30.0	1.0	1.0
Ag. Services, forestry, fishing, & other	2,189	0.8	3,263	0.1	49.1	0.7	0.7
Mining	403	0.1	358	0.0	-11.2	0.2	0.2
Construction	13,167	4.5	20,778	0.6	57.8	0.9	1.0
Manufacturing	74,323	25.6	87,530	2.5	17.8	1.8	2.1
Transportation and public utilities	14,087	4.9	18,975	0.6	34.7	1.0	1.1
Wholesale trade	11,653	4.0	14,044	0.4	20.5	0.8	0.8
Retail trade	51,143	17.6	60,532	1.8	18.4	1.1	1.0
Finance, insurance, and real estate	15,899	5.5	25,887	0.8	62.8	0.7	0.9
Services	65,478	22.6	90,054	2.6	37.5	0.8	0.8
Government and government enterprises	29,309	10.1	33,594	1.0	14.6	0.7	0.7
Federal, civilian	2,000	0.7	2,096	0.1	4.8	0.3	0.3
Military	2,668	0.9	2,027	0.1	-24.0	0.5	0.4
State and local	24,641	8.5	29,471	0.9	19.6	0.8	0.8
State	2,913	1.0	3,445	0.1	18.3	0.3	0.3
Local	21,728	7.5	26,026	0.8	19.8	1.0	0.9

Source: U.S. Department of Commerce, Bureau of Economic Analysis, REIS 1969-2000; and Bay-Lake Regional Planning Commission, 2002.

### Export Base (Basic Employment)

There are three areas within the Bay-Lake Region's economy in 2000 that could be considered basic employment areas: farm employment; manufacturing; and, transportation and public utilities. These three areas produce more goods and services than the local economy can use. When LQs increase over time, it suggests that these sectors of the Bay-Lake Region's economy are getting closer to reaching and exceeding local demand. For example, construction has gone from 0.9 in 1990, to 1.0 in 2000. Having basic employment also suggests that if a downturn in the local economy occurs, these sectors will not be strongly affected because they are dependent more on non-local economies. Having strong basic sector employment and industry helps to strengthen the local economy.

### Non-Basic Employment and Industry

Under private employment, there are five areas that can be considered non-basic: agricultural services, forestry fishing and other; mining; wholesale trade; finance, insurance, and real estate; and services. These industries are not meeting local demand for a given good or service. Only the finance, insurance and real estate area has seen an increase in LQ since 1990.

There are currently two industries with an LQ equal to 1.0 indicating that local demand is being met and services are not being exported including construction and retail trade.

### **Threshold Analysis**

Threshold Analysis indicates the average number of people required to support a business. These numbers are to be used as benchmarks that can be used for comparative purposes. Threshold figures are computed by dividing the estimated population by the number of businesses within an industry. The result is an average number of people needed to support a business in a particular area. It should be noted that even if an opportunity exists, it does not indicate the business will be successful. The success of the business will depend on other figures to include the management of the business. Local chambers of commerce, economic development professionals, bankers and entrepreneurs can benefit from using threshold analysis as a tool to identify opportunities within their local economies.

### **Programmatic Capabilities**

#### **Available Government Services**

There are numerous governmental services provided throughout the Bay-Lake Region. Government assistance comes from the various Town, Village, and County Boards, City Councils, Plan Commissions, Municipal Clerks, local planning departments, and the Bay-Lake Regional Planning Commission. Several State and Federal agencies also provide services upon request throughout the region.

#### **Specific Inhibitors of Economic Development**

There are areas within the Bay-Lake Region, especially in the north, that lack adequate infrastructure for industrial and other types of economic development. Some communities do not have adequate sewer and water systems available to attract new industry or accommodate expansion of existing employers. In addition, some areas of the region are not properly serviced with electricity or other readily-available sources of energy or the necessary technology infrastructure to enable residents and employers alike to conduct.

Although the overall transportation system in the region is fairly good, there are areas within the region that have no direct link to good transportation making it difficult, and sometimes costly, for industry to transport raw materials in and their finished products out of the area.

#### **Tax Base Comparisons**

The eight counties in the region had a 2001 Full Value of \$33,322,569,700 and collected \$707,609,620 in property taxes. Brown County had the highest full value followed by Sheboygan, Door and Manitowoc counties. Sheboygan County's tax rate was the highest while Door County's was the lowest of the eight counties in the region. The counties had a total debt of nearly \$175 million out of an available debt limit of \$1.67 billion. Table 7.11 provides information on the property values and 2001 debt of each of the counties in the region.

Table 7.11: Comparative Tax Appropriations and Debt, 2001, Counties in the Bay-Lake Region

County	Full Value	Property Tax	Gross	Effective	Debt Limit Value	Total County Debt	Debt Margin
Brown	12,613,926,600	292,820,014	0.02321	0.02171	630,696,330	65,530,641	565,165,689
Door	4,916,696,800	65,209,728	0.01326	0.01250	245,834,840	1,585,000	244,249,840
Florence	348,771,500	7,299,539	0.02092	0.01972	17,438,575	3,727,562	13,711,013
Kewaunee	984,161,200	20,232,546	0.02055	0.01920	49,208,060	53,956	49,154,104
Manitowoc	3,929,312,200	84,476,296	0.02149	0.02017	196,465,610	24,455,000	172,010,610
Marinette	2,374,272,000	47,306,536	0.01992	0.01852	118,713,600	33,730,575	84,983,025
Oconto	2,255,310,300	45,384,122	0.02012	0.01885	112,765,515	6,398,071	106,367,444
Sheboygan	5,900,119,100	144,880,839	0.02455	0.02299	295,005,955	39,119,003	255,886,952
Region	33,322,569,700	707,609,620	NA	NA	1,666,128,485	174,599,808	1,491,528,677

Source: Wisconsin Department of Revenue, *Town, Village, and City Taxes, 2001*, and *2001 Allowable vs. Actual Debt by Municipality*, and BLRPC, 2003.

## Aesthetics

The Bay-Lake Region is fortunate enough to have an abundance of various aesthetically pleasing amenities. Much of the area in the north consists of forest lands and small lakes. The entire region, excluding Florence County, is bordered by the bay of Green Bay or Lake Michigan, providing beautiful year-round scenery. Scattered throughout the region are scenic bluffs, waterfalls, sand dunes, and a multitude of lighthouses, miles of farm fields, wild and scenic rivers, and beautiful beaches. Waterfront redevelopment projects and the Main Street Program have made a presence in the region providing new jobs and private sector investment back into the communities. There is no shortage of “aesthetics” in the Bay-Lake Region.

## Environment

Within the region there are numerous areas of woodlands, farm fields, several lakes and rivers, and 1,000s of acres of wetland. The waters are open to fishing, while the lands are open to hunting and hiking. Within the region, the counties have ordinances and plans protecting and enhancing the environment. The U.S. Forest Service, U.S. Environmental Protection Agency (EPA), the Wisconsin Department of Natural Resources, Wisconsin Coastal Management Program, and other agencies work to protect the environment throughout the region.

## Education and Health Care

There are seven large hospitals located within the Bay-Lake Region. These hospitals include Aurora Bay Care, Bellin, St. Mary’s, and St. Vincent’s in Green Bay, Holy Family Memorial in Manitowoc, St. Nicholas in Sheboygan, and Door County Memorial in Sturgeon Bay. In addition, there are many new healthcare centers located throughout the region.

There are nine technical colleges and private colleges located throughout the region. These colleges include St. Norbert College in De Pere, Northland Baptist Bible College in Dunbar, Northeast Wisconsin Technical College in Green Bay, Marinette, and Sturgeon Bay, Silver Lake College in Manitowoc, Lakeshore Technical College in Cleveland, ITT Tech in Green Bay, and Lakeland College in Sheboygan. There are also four state universities located in the region including UW-Green Bay, UW-Manitowoc, UW-Marinette, and UW-Sheboygan.

## **SITES FOR BUSINESS AND INDUSTRIAL DEVELOPMENT**

### **Existing Site Inventory and Analysis**

Every county in this region has at least one fully serviced industrial/ business park. There are currently 44 industrial or business parks in the region with more in the planning stage. A majority of parks are located in Brown County. Almost all of the parks offer a full range of utilities such as municipal water, gas, sewer, and electricity. More than half are connected to rail and all are within a five mile radius of a major highway. Table 7.12 provides a summary of size, service, and acres available in these parks. Map 7.3 provides the location of each park within the region.

Table 7.12: Industrial Park Sites by County, 2005

#	Park Location/ Name	Size (Acres)	Available Utilities				Rail	Access Highway	Avail. Acres ('05)
			Water	Sewer	Gas	Electricity			
1	Village of Howard / Lancaster Creek Business Park	101	Y	Y	Y	Y	N	STH29	16
2	Village of Howard / Howard Industrial Park	640	Y	Y	Y	Y	Y	US41	28
3	Village of Ashwaubenon/ Ashwaubenon Business Park	285	Y	Y	Y	Y	Y	US41	70
4	Village of Ashwaubenon/ Ashwaubenon Industrial Park	700	Y	Y	Y	Y	Y	US41	50
5	Village of Denmark/ Woodrow Business Park	100	Y	Y	Y	Y	N	I-43	4
6	City of DePere/ DePere Business Park	920	Y	Y	Y	Y	Y	US41	130
7	City of DePere/ DePere Industrial Park	411	Y	Y	Y	Y	Y	STH57	130
8	City of DePere/Southbridge Business Park	200	Y	Y	Y	Y	Y	US41	200
9	City of Green Bay/ I-43 Business Center	820	Y	Y	Y	Y	N	I-43	75
10	City of Green Bay/ Packerland Industrial Park	345	Y	Y	Y	Y	Y	US 41	?
11	City of Green Bay/ Tower East Industrial Park	126	Y	Y	Y	Y	Y	I-43	?
12	City of Green Bay/State Highway 54/57 Business Park	1,100	Y	Y	Y	Y	N	STH54/57	1,100
13	Town of Lawrence/ Lawrence Business Park	140	Y	Y	Y	Y	N	US 41	60
14	Village of Pulaski/ Pulaski Industrial Park	215	Y	Y	Y	Y	Y	US32, 29	9
15	Village of Wrightstown/ Wrightstown Industrial Park	110	Y	Y	Y	Y	Y	US41	20
16	Village of Suamico/ Suamico Industrial Park	30	Y	Y	Y	Y	N	US41	30
17	City of Sturgeon Bay/Sturgeon Bay Industrial Park	266	Y	Y	Y	Y	N	US42,57	34
18	Town of Florence/ Florence In-Comm Center	200	Y	Y	Y	Y	N	US 2/141	60
19	City of Kewaunee/ Kewaunee Industrial Park	20	Y	N	Y	Y	N	US42	0
20	City of Algoma/ Algoma Industrial Park	62	Y	Y	Y	Y	N	US54	0
21	Village of Luxemburg/ Luxemburg Industrial Park	50	Y	Y	Y	Y	Y	STH54	15
22	City of Two Rivers/ Woodland Drive Industrial Park	173	Y	Y	Y	Y	N	I-43, US10	37
23	City of Two Rivers/ Columbus Street Industrial Park	40	Y	Y	Y	Y	N	I-43	8
24	City of Manitowoc/ I-43 Industrial Park	378	Y	Y	Y	Y	N	I-43	272
25	City of Kiel/ Rockville Industrial Park	30	Y	Y	Y	Y	N	STH 57	24
26	Village of St. Nazianz/ St. Nazianz Industrial Park	55	Y	Y	Y	Y	N	STH151	30
27	Village of Reedsville/ Reedsville Industrial Park	117	N	N	Y	Y	N	I-43, US10	3
28	City of Marinette/ Sandhill Industrial Park	75	Y	Y	Y	Y	Y	US41	70
29	City of Niagara/ Niagara Business Park	50	Y	Y	Y	Y	N	US141, 2, 8	40
30	City of Peshtigo/ Peshtigo Industrial Park	200	Y	Y	Y	Y	N	US41	25
31	Village of Crivitz/ Dyer Industrial Park	8	Y	Y	Y	Y	N	US141	4
32	Town of Goodman/ Goodman Industrial Park	90	Y	Y	Y	Y	Y	US8	83
33	City of Gillet/ Gillet Industrial Park	110	Y	Y	Y	Y	N	STH22, 32	42
34	Town of Mountain/ Mountain Industrial Park	30	N	N	Y	Y	N	STH32, 64	24
35	City of Oconto/Oconto Industrial Park	105	Y	Y	Y	Y	N	US41	30
36	Town of Lena/ Lena Industrial Park	115	Y	Y	Y	Y	Y	US141	54
37	City of Oconto Falls/ City Industrial Park	264	Y	Y	Y	Y	Y	US141,STH 2	47
38	Village of Suring/ Suring Industrial Park	55	Y	Y	Y	Y	N	STH32	15
39	City of Sheboygan/ Sheboygan Business Center	337	Y	Y	Y	Y	Y	I-43, STH28	78
40	City of Sheboygan Falls/ Sheboygan Falls Ind. Park	100	Y	Y	Y	Y	N	STH23,32	2
41	City of Plymouth/ Plymouth Industrial Park	107	Y	Y	Y	Y	Y	STH57	0
42	Town of Wilson/ Wilson Business Park	80	Well	Y	Y	Y	N	I-43	80
43	Village of Random Lake/ Random Lake Indust. Park	53	Y	Y	Y	Y	N	STH57	0
44	Village of Oostburg/ Oostburg Business Park	117	Y	Y	Y	Y	N	I-43	80

<sup>1</sup>Not

e: Numbers correspond to locations on Map 4.3.

Source: Bay-Lake Regional Planning Commission, 2005.

## Evaluation of Environmentally Contaminated Sites

Brownfields are defined as abandoned, idle or underutilized industrial or commercial facilities where expansion or redevelopment is complicated by environmental contamination. The WDNR Bureau of Redemption and Redevelopment (BRR) oversee the investigation and clean up of environmental contamination and the redevelopment of contaminated properties. The DNR and EPA have been urging the clean up of contaminated commercial or industrial sites so they may be utilized for more productive uses. In 1991 there were six sites in the Bay-Lake Region listed as Superfund sites; only one of these sites remains on the list. In October 1992 there were a total of 638 Leaking Underground Storage Tank Sites (LUST) in the region's eight counties. By 2003 this had been reduced to 451 LUST sites (Table 7.13).

Table 7.13: Environmentally Contaminated Sites by County and Activity Type

Activity Type	County							
	Door	Brown	Florence	Manitowoc	Marinette	Kewaunee	Oconto	Sheboygan
Abandoned Container	-	12	1	-	-	0	1	11
LUST	131	580	23	269	166	85	116	453
ERP	76	240	9	114	50	44	30	133
Spills	229	1,117	38	424	388	159	188	451
VPLE	1	5	-	3	-	2	1	7
General Property	4	14	2	10	6	2	9	8
Superfund	-	1	-	-	-	1	-	1
No Action Required	82	232	15	112	83	65	58	245
Total	523	2,201	88	932	693	358	403	1,309

Source: Wisconsin DNR, BRRTS, 2003; Bay-Lake Regional Planning Commission, 2003.

**Activity Type:** Activity type divides the data in BRRTS into these eight separate modules.

**Abandoned Container:** An abandoned container with potentially hazardous contents has been inspected and recovered. No known discharge to the environment has occurred. If the container discharged a hazardous substance, a spill should be recorded at this location (See Spills).

**LUST:** A Leaking Underground Storage Tank that has contaminated soil and/or groundwater with petroleum. Some LUST cleanups are reviewed by DNR and some are reviewed by the Department of Commerce.

**ERP:** Environmental Repair (ERP) sites are sites other than LUSTs that have contaminated soil and/or groundwater. Examples include industrial spills (or dumping) that need long term investigation, buried containers of hazardous substances, and closed landfills that have caused contamination. The ERP module includes petroleum contamination from above-ground (but not from underground) storage tanks.

**SPILLS:** A discharge of a hazardous substance or substances that may adversely impact, or threaten to adversely impact public health, welfare or the environment. Spills are usually cleaned up quickly.

**VPLE:** Voluntary Property Liability Exemptions (VPLEs) are an elective process in which a property owner conducts an environmental investigation and cleanup of an entire property and then receives limits on future liability for that contamination under s. 292.15, Wisconsin Statutes. An individual, business or unit of government can receive the liability exemption after a completed cleanup is approved.

**General Property:** This module containing records of various milestones related to liability exemptions, liability clarifications, and cleanup agreements that have been approved by DNR to clarify the legal status of the property.

**Superfund:** Superfund is a federal program to finance cleanup of the nation's worst contaminated sites listed on the National Priorities List. Thirty-eight of these sites are in the Superfund cleanup process in Wisconsin.

**No Action Required:** There was or may have been a discharge to the environment and, based on the known information, DNR has determined that the responsible party does not need to undertake an investigation or cleanup in response to that discharge.

## **Designation of Business and Industrial Development**

### *Commercial Uses*

The comprehensive plan indicates that throughout the planning period the Commission will work towards establishing well defined commercial areas/corridors to better enhance the region's look, to minimize conflicts between differing uses, and to maximize service efficiency. Commercial locations should have good visibility and access, and may require additional buffering and landscaping to meet the region's desired vision on community character.

### *Industrial Uses*

The Commission recommends that the majority of the future industrial uses be located within the region's existing industrial parks. However, if additional space is needed, well defined, well designed areas for industrial activities to accommodate those businesses needs to be well landscaped with a buffer to add aesthetic qualities. Lands off of main corridors will also need to be buffered in order to minimize the negative impacts to adjacent properties.

## **Acreage Projections**

The Commission will designate acreage associated with highway/community business needs as well as common use sizes for industrial development. For more information see the General Plan Design which has specified locations within the region along with approximate acreage totals.

## **COMMUNITY FINANCES**

Full value of all property in the Bay-Lake Region in 2001 was \$33,322,569,700. Total property tax generated from this property value is \$707,609,620. A county, as well as a community, must be concerned about its ability to generate sufficient public revenues to provide the types and levels of services demanded by its citizens. Table 7.11 provides information on the property values and 2001 debt of each of the counties in the region. It shows that within the region, the debt of all eight counties combined in 2001 was recorded at \$174,599,808. Debt ranged from \$53,956 in Kewaunee County to \$65,530,641 in Brown County. There was a total debt margin, or available bonding capacity of \$1,491,528,677 for the eight counties in the region.

## **STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS (SWOT) ANALYSIS**

This element of the plan looks at conditions and resources within the region as a strength, a weakness, an opportunity or a threat for retaining, expanding or attracting businesses and creating new jobs. These factors may greatly influence the future economic climate of the region over the next two decades and thus are important to identify as part of this plan in order to understand exactly the region's continued economic viability and future draw for new businesses. On May 20, 2003, a meeting of the Bay-Lake Regional Planning Commission's Economic Development Advisory Committee was held to undertake this SWOT Analysis. This portion of the element gives a perspective from an economic development point of view and reflects strengths, weaknesses, opportunities, and threats of the region. Results of the SWOT Analysis are as follows:

## **Strengths**

1. Many Areas with a Strong Industrial Base
2. Growing Health Care
3. Growing Retail Base
4. NWTC, UW-Marquette, St. Norbert, UW - Green Bay, Silver Lake, Lakeshore Tech, and UW Centers (CESA, apprenticeship programs)
5. Bay of Green Bay and Menominee River
6. Good Transportation System – Highways, Port, Air and Rail Facilities
7. Good Tourism Reputation - Green Bay Packers, Casinos/Gaming, Lake Michigan, Natural Resources in general, entertainment and cultural facilities, State parks, national forests, protected resources (dunes, cave pt.), hunting and fishing, winter sports
8. Low Crime Rate
9. Quality of Life – friendly place to raise a family, clean appearance, community identity
10. Diverse Ethnicity – Polish, Belgium, Hmong, Hispanic, African American, etc.
11. Paper Industry Cluster – Spin-offs, Secondary Industry – attracts diverse population/skills
12. Low Utility Rates – WPS and WE Energies, Utility Co-ops
13. Well-trained Workforce and Good Work Ethic
14. Embraces New Technology
15. EDC and Extensions, Regional Planning Commissions

## **Weaknesses**

1. Weak in White-Collar Industry
2. Areas of Small, Run-down Housing
3. Areas of Shrinking Population
4. Don't Embrace New Cultures and their Needs (i.e. jobs)
5. Large Amount of Wetlands (hinders economic development)
6. Regulatory Agencies – timing/permitting, etc.
7. Minority Unemployment Rate - high
8. High Taxes – per capita income
9. Employment Concentrated – need new infrastructure in some outlying areas
10. Brain Drain
11. CWD, PCB – poor air quality and water quality, polluted fish
12. Don't Partner with Regulatory Agencies when Dealing with the Problem (i.e. fines should be used to find solution to problem)
13. Aesthetics of Shoreline in Many Areas
14. Old Infrastructure in Cities
15. Losing Corporate Headquarters (losing corporate commitment)
16. State Regulatory Requirements on Businesses
17. Low Wages in Service Industries and Retail Assembly
18. High Dependency on Manufacturing
19. Lack of Comprehensive Planning and/or Lack of Follow Through



## **Opportunities**

1. Educational Opportunities
2. Tourism/Hospitality
3. Intergovernmental Cooperation
4. Local Governments Diversify Income Stream (ie. room tax, user fees)
5. Opportunity to Hire Minority Employees
6. Diverse Minority Businesses, lots of construction going on in region
7. Opportunity to Develop Clusters of Certain Types of Industry
8. Many Boat Building Companies; how do we make it grow?
9. Youth Apprenticeships and “Youth to Work”
10. Create Bilingual/Trilingual Workforce

## **Threats**

1. No Strength Behind “Hiring Minority Employees”
2. Global Competition
3. Cyclical Industries – Shipbuilding
4. Transportation – how do we move people to work and back, what’s adequate today may not be adequate tomorrow
5. Social Breakdown – crime, drugs
6. Regulatory Agencies Not Keeping Pace
7. Shrinking Budgets (funding from state/federal)
8. Rising Health Care Costs, Insurance Costs, Care Itself
9. Free Trade Without Domestic Job Protection – NAFTA
10. Loss of Local Bank Decision Making
11. Parochial Thinking Governments and School Districts
12. Loss of Manufacturing and Blue Collar Jobs
13. Diminishing Financial Resources (i.e. grants, free money, purchasing power)

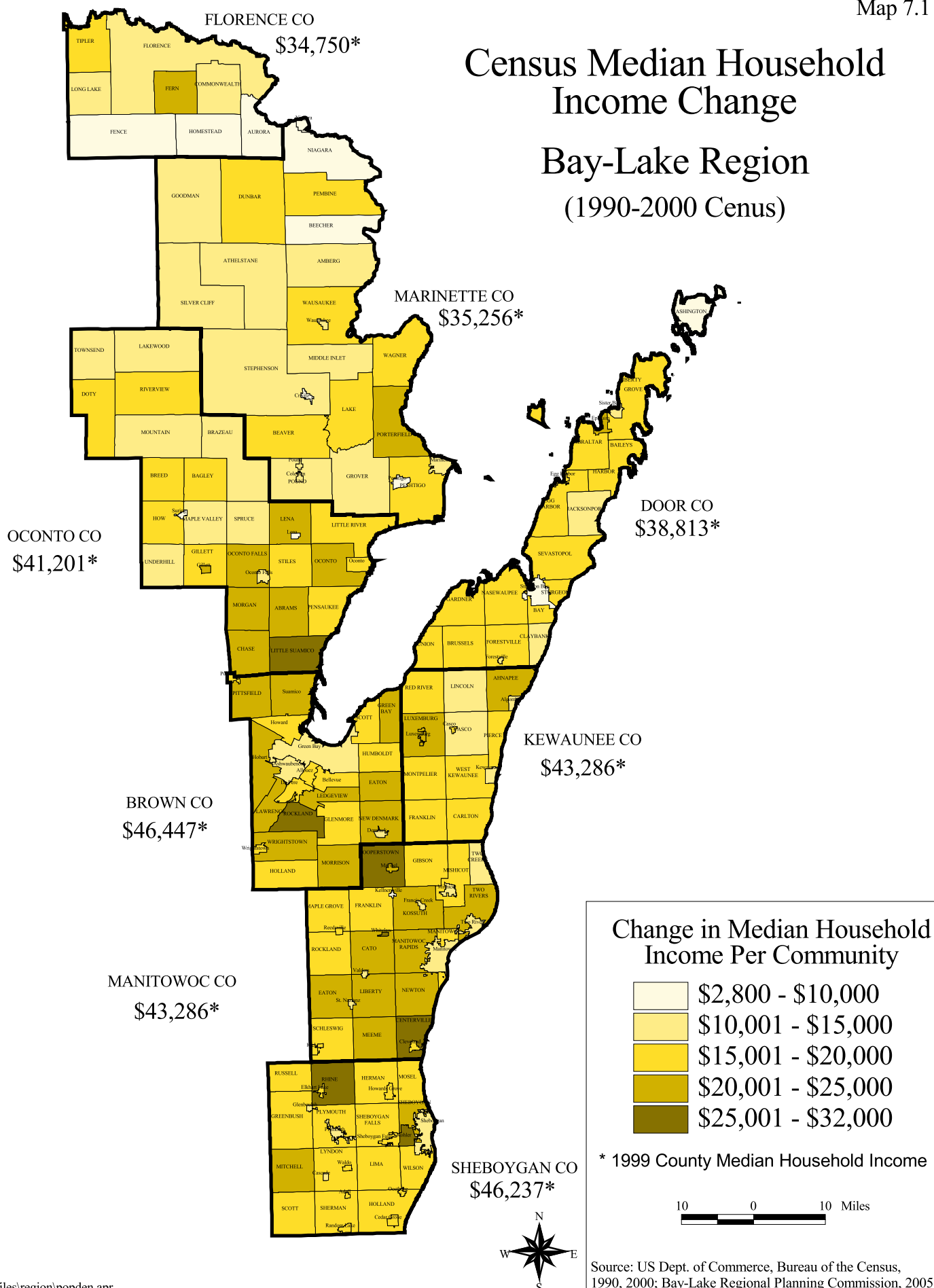
## **ECONOMIC DEVELOPMENT PROGRAMS AND RESOURCES**

Appendix I contains a list of programs and resources available on each government level that are designed to help build economic development capacity through infrastructure expansion and to provide resources necessary to develop and grow businesses.



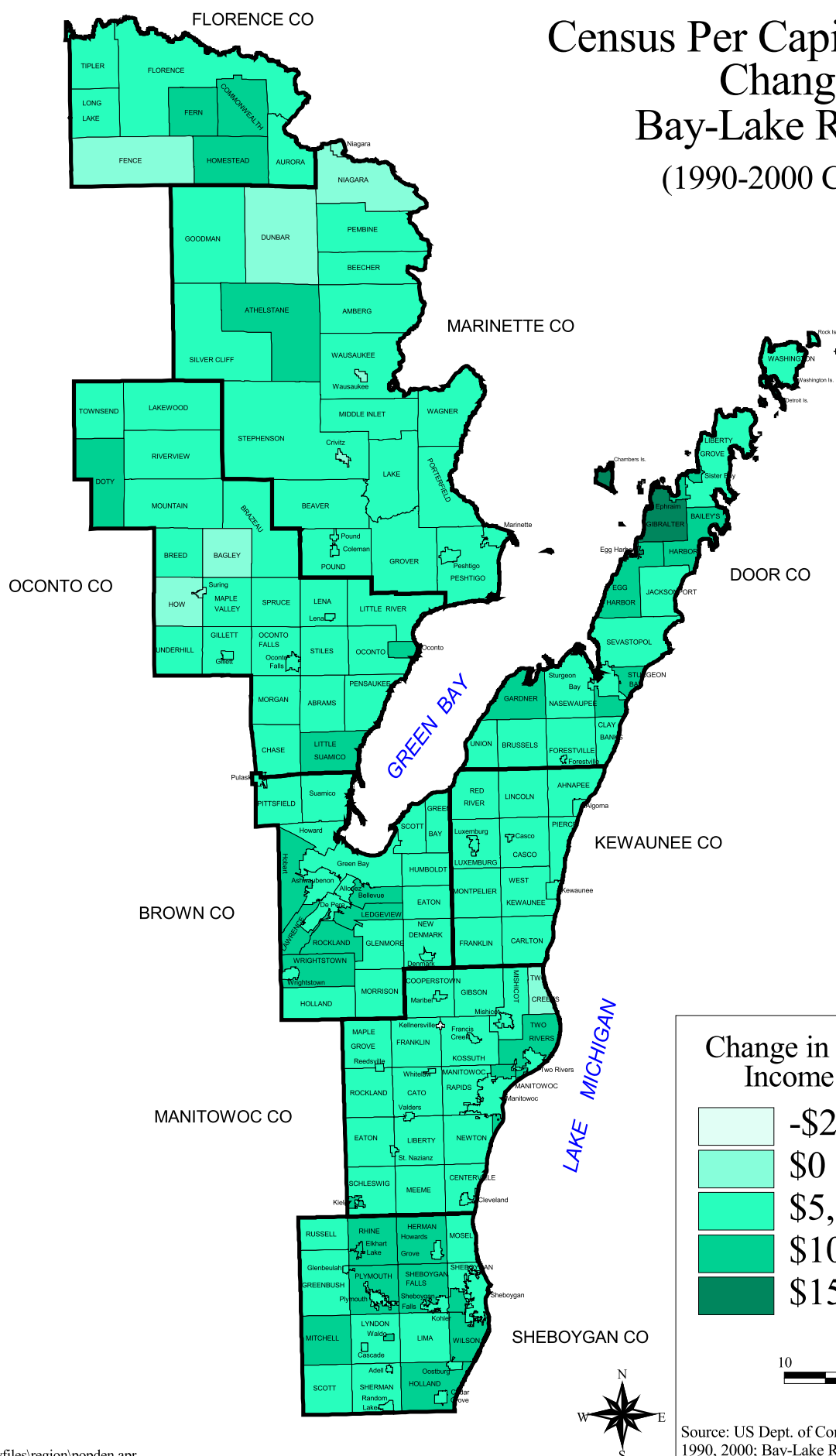
# Census Median Household Income Change

## Bay-Lake Region (1990-2000 Census)



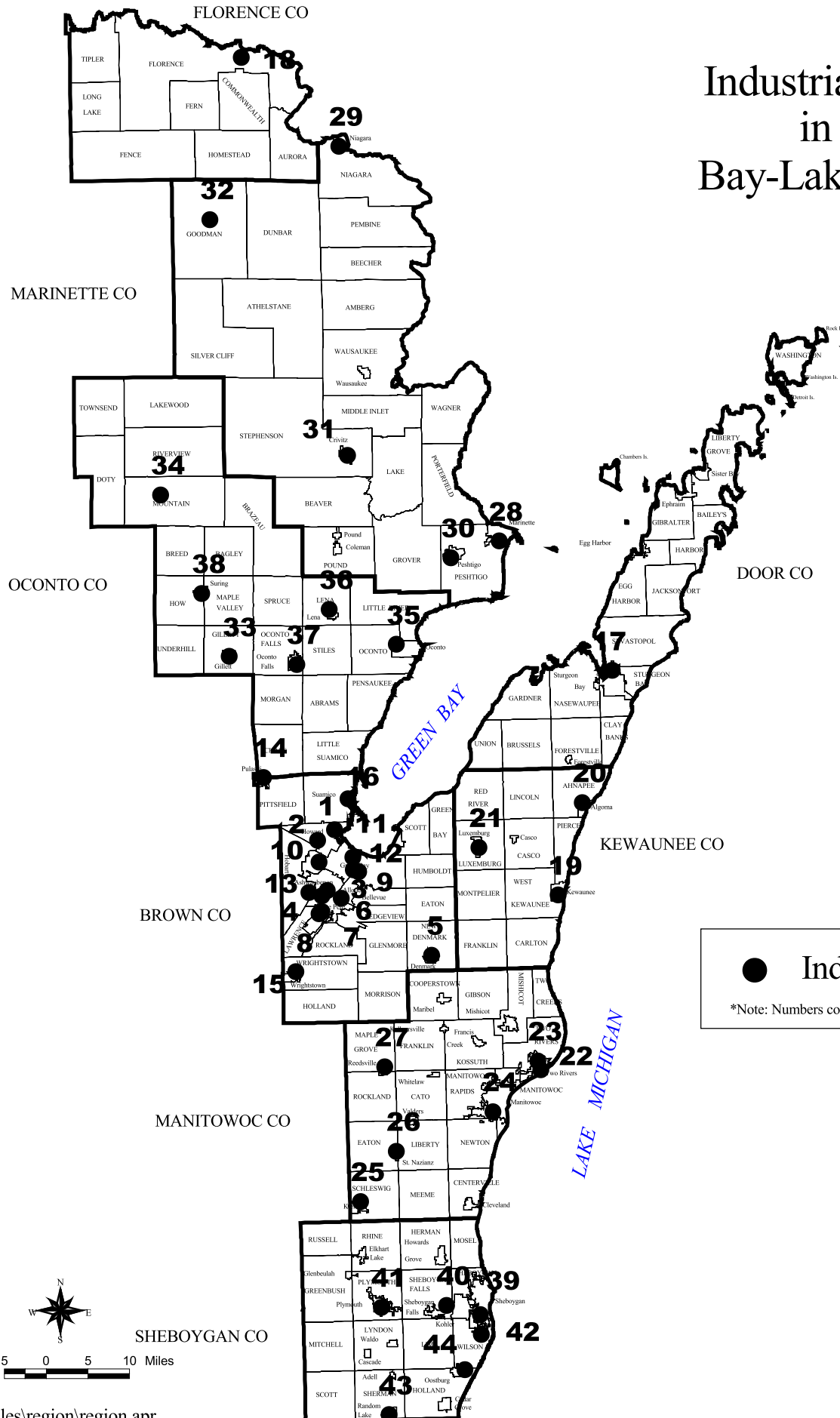


# Census Per Capita Income Change Bay-Lake Region (1990-2000 Census)





# Industrial Parks\* in the Bay-Lake Region



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Source: Bay-Lake Regional Planning Commission, 2005.





## **CHAPTER 8 - TRANSPORTATION**

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### **INTRODUCTION**

This chapter presents the Bay-Lake Region's transportation goals and policies, followed by an inventory of Wisconsin Department of Transportation programs that provide financial and technical assistance for planning, operation, improvement and maintenance of the region's transportation facilities and services.

This chapter also includes an inventory of the existing transportation facilities that serve the Bay-Lake Region. The inventory includes maps and tables depicting and describing the various modal elements of the Region's transportation system. Those elements include public transit systems, elderly and disabled transportation system, intercity bus, bicycle transportation, pedestrian transportation, waterborne, rail, air service, trucking, and the federal and state highway system.

Also included within this chapter is an inventory and synopsis of applicable state and regional highway transportation plans, transportation corridor plans, rural transportation plans, state airport plans, state railroad plans, state, regional and local bicycle plans, state pedestrian plans, state and local transit plans, and any other special transportation plans that are applicable.

The transportation element of the Regional Master Plan for the Bay-Lake Region fulfills the state statutory requirement for a "compilation of objectives, policies, goals, maps, and programs to guide the future development of the various modes of transportation including highways, transit, transportation systems for persons with disabilities, bicycles, walking, railroads, air transportation, trucking, and water transportation."

### **Summary**

Transportation services and facilities within the region consists of three urban bus systems serving the Green Bay, Manitowoc-Two Rivers, and Sheboygan urban areas; a shared-ride taxi system serving the city of Marinette; four commercial water ports at Green Bay, Manitowoc, Marinette and Sturgeon Bay; eight limited cargo or recreational ports serving the communities of Oconto, Pensaukee, Suamico, Washington Island, Algoma, Kewaunee, Two Rivers and Sheboygan; more than 50 recreational marinas; three railroads (the Canadian National, the Union Pacific, and the Escanaba & Lake Superior) operating on more than 290 miles of track; 10 public airport facilities serving the region; and more than 10,500 miles of interstate, state, and county highways and local roads. The transportation services and facilities, described herein, serve a land area of 5,433 square miles, or 9.7 percent of the area of the State of Wisconsin. In addition, the region has over 400 miles of coastal shoreline along Lake Michigan and Green Bay.

### **TRANSPORTATION STRATEGY**

**Goal 1:** To provide an efficient, integrated and intermodal transportation system for the Bay-Lake Region.

## **TECHNICAL AND FUNDING ASSISTANCE PROGRAMS**

The following section describes current Wisconsin Department of Transportation (WisDOT) programs that provide technical and financial support for the operation, maintenance and planning of the region's transportation systems.

### **Technical Support**

#### **Regional Rural Transportation Planning Program**

Transportation planning is conducted by the Wisconsin Department of Transportation (WisDOT) central and eight district offices in conjunction with the state's nine Regional Planning Commissions (RPCs) and local governments. WisDOT provides technical and financial assistance to the RPCs; this cooperative effort is designed to assist in RPC efforts to provide planning assistance on regional issues as well as providing assistance to local governments.

WisDOT's partnerships with local officials also represent a long-established consultative process in both planning and programming. Recognizing the link between community and transportation development, enhancing local development goals has been one of the main focal points of the WisDOT local planning and investment partnerships. The partnerships involve several different stakeholder groups, such as local planning commissions, local officials, real estate developers, and lending institutions. This ongoing consultation is supplemented by multiple plan-specific processes. Additionally, local officials with responsibility for transportation may influence decisions through contact with their state legislators.

#### **Metropolitan Planning Organizations**

The Bay-Lake Region has two metropolitan planning organizations (MPOs), one serving the Green Bay urban area and the other serving the Sheboygan urban area. WisDOT works closely with MPOs to ensure a comprehensive, coordinated approach to local, regional, and state transportation planning in Wisconsin's urbanized areas.

A metropolitan planning organization is an organization of primarily local elected officials who provide a forum for local decision-making on transportation issues of a regional nature. The federal government requires that an MPO be designated for each urbanized area with a population greater than 50,000. This designation must be agreed on by the governor and the units of general purpose local governments that together represent at least 75 percent of the affected population (including the central city or cities as defined by the Bureau of the Census).

Each MPO has a policy board that is generally comprised of chief elected officials who represent different parts of the region served by the MPO. This board is advised by a technical committee (typically referred to as a Technical Advisory Committee, or TAC) that consists of planning and engineering staff from jurisdictions within each region. The TAC develops high quality technical tools and analysis for the region, and advises the MPO policy board on technical and administrative issues related to regional transportation planning. Some MPOs also utilize a citizen advisory committee and other specialized committees to advise the policy board.

Funding for MPO transportation planning is provided through a combination of federal, state, and local funds.

A metropolitan planning organization (MPO) has several purposes. First, to develop a long-range transportation plan that will provide a multi-modal investment strategy for meeting the mobility needs of people and businesses throughout a metropolitan area.

Second, an MPO is responsible for developing the short-range transportation improvement program which prioritizes improvement projects for federal funding purposes. MPOs ensure that provisions of state and federal laws pertaining to regional transportation planning are implemented in each metropolitan planning area. The planning area is defined as the existing urbanized area plus the projected 20-year growth area. The planning area is mutually determined by the MPO and the state.

## **Financial Support**

### **General Transportation Aid (GTA)**

General Transportation Aids help defray the costs of constructing, maintaining, and operating roads and streets under local jurisdiction.

Connecting Highway Aids reimburse municipalities for maintenance and traffic control of certain state highways within municipalities.

Road improvements, construction and maintenance is funded, in part, through the state's disbursement of general transportation aids. The state provides a payment to each county and municipality in the state that pays a portion of local governments' costs for such activities as road and street reconstruction, filling potholes, snow removal, grading shoulders, marking pavement, and repair of curb and gutters. The statutory "rate per mile" is \$1,850 for 2003. Beginning in 2000, each municipality was required to establish and administer a separate segregated account from which moneys may be used only for purposes related to local highways and must deposit into that account all state or federal money for local highway purposes.

### **Local Mileage Certification**

Each local government that increased or decreased the mileage of its roads and streets is required to file a certified plat with DOT by December 15 of each year. Local governments that have no changes in total local road miles are required to file a certified plat or a certified statement that no mileage statements have occurred. In addition, towns are required to report significant road maintenance and construction or reconstruction projects to WisDOT. State GTA payments are based on the certified mileage of each local unit of government.

### **Local Roads Improvement Program (LRIP)**

This program provides funding to local units of government for the costs associated with improving seriously deteriorating county highways, town roads, and municipal streets in cities and villages under the authority of the local unit of government. Projects are required to have a minimal design life of 10 years. This is a biennial program and all funds are distributed the first year. Applications are submitted through the county highway commissioners by November 15 of the odd numbered years.

There are three entitlement components for funding road improvements: 1) County Highway Improvement component (CHIP); 2) Town Road Improvement component (TRIP); and 3) cities and villages under Municipal Street Improvement component (MSIP).

In addition LRIP funds three statewide discretionary programs; CHIP-D County Highway Discretionary Improvement Program; 2) Trip-D Town road Discretionary Improvement Program; and 3) MISP-D Municipal Street Discretionary Improvement Program for cities and villages.

All LRIP projects are locally let, with up to 50 percent of the costs reimbursed by WisDOT upon completion, and the remainder matched by the local unit of government. Eligible projects include but are not limited to design and feasibility studies, bridge replacement or rehabilitation, reconstruction, and resurfacing. Ineligible projects include, but are not limited to: new roads, seal coats, ditch repair, and/or curb and gutter construction.

### **Local Bridge Program**

This program includes two separate programs 1) a statewide local bridge entitlement program and 2) a high cost local bridge program (High cost bridges are those that cost more than \$5 million and exceed 475 feet in length.)

This program funds 80 percent of project costs to replace and rehabilitate structures on the Federal Bridge Register, in excess of 20 feet. Bridges with sufficiency ratings less than 50 are eligible for replacement and those with sufficiency ratings less than 80 are eligible for rehabilitation.

Counties set priorities for funding within their area, with projects funded on a statewide basis.

Local bridge projects are solicited by local WisDOT transportation Office (District 3) staff in winter of the odd numbered years, with program approval in summer of the odd numbered years. The program has a three-year cycle.

### **Flood Damage Aids**

This program provides local governments with financial assistance for replacing or improving roads or roadway structures that have had major damages caused by flooding.

### **County Forest Aid Program**

This program provides assistance to counties that have eligible roads located within county forests. It is intended to defray the costs for the improvement and maintenance of public roads within a county forest.

### **Rural and Small Urban Area Public Transportation Assistance Program - Section 5311**

Allocations to the State are set at the federal level. Funds may be used for operating assistance, and capital assistance. Eligible public transportation services include public transportation service operating or designed to operate in non-urbanized areas (a non-urbanized area is one that has a population of 50,000 or less).

### **Specialized Transportation Assistance Program for Counties - Section 85.21**

Allocations under this formula program are based upon the proportion of the state's elderly and disabled population located in each county, subject to two minimums: no county can receive less than a ½ percent of the total annual appropriation; and no county can receive an allocation smaller than they received in 1992. A local match of 20 percent is required.

Eligible expenditures include:

- directly provided transportation service for the elderly and disabled;
- purchase of transportation service from any public or private organization;
- a user-subsidy for the elderly or disabled passenger for their use of the transportation service;
- volunteer driver escort reimbursement;
- performing or purchasing planning or management studies on transportation;
- coordinating transportation services;
- performing or purchasing in-service training relating to transportation services; and/or
- purchasing capital equipment (buses, vans etc.) for transportation services.

The following provides a brief description of competitive (transportation related) grant programs that are federally and state funded:

### **Local Transportation Enhancement Program (TE)**

Administered by WisDOT the TE program provides funding to local governments and state agencies for projects that enhance a transportation project. There are 12 eligible project categories:

- providing facilities for bicycles and pedestrians;
- providing safety and educational activities for pedestrians and bicyclists;
- acquiring scenic easements and scenic or historic sites;
- sponsoring scenic or historic highway programs; including the provision of tourist and welcome centers;
- landscaping and other scenic beautification;
- preserving historic sites;
- rehabilitating and operating historic transportation buildings and structures;
- preserving abandoned railway corridors;
- controlling and removing outdoor advertising;
- conducting archaeological planning and research;
- mitigating water pollution due to highway runoff or reducing vehicle caused wildlife mortality; and
- establishing transportation museums.

Federal funds will cover up to 80 percent of the project, while the project sponsor is responsible for providing at least a 20 percent match.

### **Surface Transportation Program - Discretionary (STP-D)**

This program encourages projects that foster alternatives to single occupancy vehicle trips. Such as rehabilitation and purchase of replacement vehicle for transit systems, facilities for pedestrians and bicycles, system-wide bicycle planning, and a wide range of transportation demand management (TDM) projects. Communities over 5,000 are eligible to apply for the funds through the competitive application process.

## **Transportation Demand Management Programs**

Transportation Demand Management consists of policies and programs designed to reduce the number of single occupant vehicles (SOV) trips in a region, especially during peak travel periods.

There are two grant programs: TDM Grant Program; and Wisconsin Employment Transportation assistance Program (WETAP).

### **TDM Grant Program**

The TDM Grant program provides funding to successful grant recipients to implement projects that encourage innovative solutions and alternatives to reducing Single Occupancy Vehicle (SOV) trips. WisDOT accepts applications annually. Eligible applicants may include local governments, chambers of commerce, and others as defined by the program. The required local match is 20 percent of the project costs.

### **Wisconsin Employment Transportation Assistance Program (WETAP)**

As a joint program between the Wisconsin Department of Workforce Development (DWD) and WisDOT, it provides funding to help low-income people access, or retain or advance in employment with the goal of meeting the entire population's transportation needs. This program is funded with combined federal and state dollars, and requires a local match.

Application requirements include the development of regional job access plans that identify the need for transportation services and illustrate the alternatives proposed for the program. Plans should be developed between public transit providers, local units of government, transportation planners, human service agencies, low-income individuals and other interested parties

### **Transportation Economic Assistance (TEA Grant) Program**

This program provides a 50 percent state grant to governing bodies, private businesses, and consortiums for road, rail, harbor and airport projects that are necessary to help attract employers to Wisconsin, or to encourage business and industry to remain and expand in Wisconsin.

## **INVENTORY OF TRANSPORTATION MODES**

The following inventory of transportation modes includes summary details of the transportation facilities, systems and programs providing urban transit, transportation for the elderly and disabled, intercity bus transportation, bicycle transportation, waterborne transportation, rail transportation, air transportation, trucking, and motor vehicle or highway transportation within the Bay-Lake Region.

### **Public Transit Systems**

Public transit is publicly subsidized and is, by definition, available to everybody. Public transit systems refer to fixed-route bus, intercity or intra-county bus systems, commuter rail systems, and shared-ride taxi systems operating in urban areas (population of 2,500 or more) and providing "mass transit" by providing the public with transportation on a regular and continuing basis (Map 8.1).

Public transit within the Bay-Lake Region is currently comprised of three fixed-route, urban bus systems operating in the Green Bay urban area, the cities of Manitowoc and Two Rivers, and in

the Sheboygan urban area. In addition to the three bus systems, one “door-to-door” shared-ride taxi transit service operates in the city of Marinette urban area.

### **Brown County Urban Area – Green Bay Transit**

The city of Green Bay has been operating the Green Bay Transit (GBT) system publicly since February 1973 when the Wisconsin Public Service Corporation was given permission to abandon service.

Currently, the GBT operates 15 “Full Service” and 14 “Limited Service” routes. Nine routes operate on 30-minute headways during peak time. The remaining 6 routes operate on 60-minute headways during peak time. All evening and Saturday service is operated on 60-minute headways. In 2003, fares were \$1.00 for adults and students. Cash, token, or monthly passes can be used to ride the GBT. The service hours are Monday through Friday from 5:15 a.m. to 10:45 p.m., and Saturday from 7:15 a.m. to 6:45 p.m.

### **City of Manitowoc and Two Rivers – Maritime Metro Transit System**

The Maritime Metro Transit System is owned and operated by the city of Manitowoc and contracts with the city of Two Rivers to provide service. The city of Manitowoc took over the management of operations of the privately owned Manitowoc Motor Coach Company in January 1978, with the city increasing available services at that time, leading to increases in ridership. Transit services were privately operated in Manitowoc between 1934 (when transit service began) and early 1978. Transit in Manitowoc involved a historical peak in ridership in the late 1940s, and involved its lowest levels of ridership in the late 1960s and portions of the 1970s preceding public takeover of the operation.

In 1992, the Maritime Metro Transit System initiated paratransit services under the Americans with Disabilities Act (ADA). This is a curb-to-curb service that provides transportation to the disabled population in the community that, in many cases, is unable to utilize the fixed route service. The Maritime Metro Transit System contracts these services to a local provider.

The Maritime Metro Transit System’s service is mostly a fixed-route, fixed-schedule bus system. However, much of the south loop of Route 5 involves demand response service. Demand response service for the disabled is operated through a contract with Assist to Transport LLC of Manitowoc.

### **City of Marinette Urban Area – Taxi Inc.**

The city of Marinette operates a shared-ride taxi transit system with services provided by a private contractor, Taxi Inc. Taxi Inc provides door to door and seven day a week service (excluding holidays) utilizing three mini-vans and a full size wheelchair accessible van (2003). Service is provided throughout the city of Marinette, as well as rural areas within a two-mile radius of the city, and the cities of Menominee and Peshtigo. The only requirement for service is that the trip must originate in or be destined for the city of Marinette. In 2002, elderly passengers were charged \$1.50 per ride, and all other passengers (adults and children) were charged \$2.50 per ride. An additional fare of \$5.00 is charged to passengers riding to or from the city of Peshtigo.

The funding for the deficit costs of the shared-ride taxi transit program is provided with state, federal and city assistance through an annual grant. In 2002, the state aid (the s. 85.20 urban

mass transit operating assistance program) and the federal aid (the Section 5311 program) provided approximately 67 percent of the total transit program's operating cost. Passenger fares and the city of Marinette provide the remainder of the programs operating cost.

### **Sheboygan County Urban Area – Sheboygan Transit**

Sheboygan Transit System operates twenty-nine buses, including a battery-powered trolley providing fixed route service for the cities of Sheboygan, Kohler, and Sheboygan Falls (see Table 8.1). The system operates weekdays: 5:15 a.m. to midnight, Saturday, 7:15 a.m. to 6:30 p.m. and Sunday: 8:45 a.m. to 3 p.m. Cash fares: \$1.25 or adult tokens 90 cents each and student tokens, 75 cents each (2003).

**Table 8.1: Public Transit Systems in the Bay-Lake Region**

<b>Transit System</b>	<b>Transit Type</b>	<b>Route Type</b>	<b>Major Route</b>	<b>Frequency (2003)</b>
Green Bay	Bus	Fixed	Nine routes in Green Bay, Allouez, Ashwaubenon, De Pere, UWGB, NWTC, and Oneida	6 days a week
Manitowoc	Bus (Manitowoc Motor Coach, Inc.)	Fixed	Five routes in Manitowoc Two routes in Two Rivers	6 days a week
Marinette	Shared-Ride Taxi	Door-to-Door	City of Marinette	7 days a week, excluding holidays
Sheboygan	Bus	Fixed	Six routes in Sheboygan, Kohler, and Sheboygan	7 days a week
Sheboygan	Bus (Tripper Service)	Fixed	22 routes to area schools	Runs only during school year and stops at all regular bus stops

Source: Bay-Lake Regional Planning Commission, 2003.

### **Elderly and Disabled (Special) Transportation Services**

The Region's elderly and disabled transportation systems refer to those transportation service programs that provide rides through scheduled bus services, volunteer programs with private vehicles etc. Within the Bay-Lake Region, elderly and disabled transportation programs are operated at the county level and prioritize medical and nutrition program trips. In addition, the programs also provide grocery, employment, social, and personal trips. Elderly and disabled transportation is provided by all of the Region's eight counties through public and private, non-profit service providers (see Appendix J).

### **Brown County**

The transportation of elderly and disabled persons within Brown County is provided by the American Red Cross of Brown County, the Green Bay Transit (GBT) and Medi-Vans (on behalf of the GBT through state and county funding, as well as donations in the case of the Red Cross.

The Red Cross transportation services are provided on a scheduled door-to-door basis and also on a phoned appointment, as-needed basis. A portion of the funding for the special transportation services is provided through state, county assistance aids under the 85.21 program, county health and social services funds, private donations and passenger fares.



The GBT operates 15 “Full Service” and 14 “Limited Service” routes. Nine routes operate on 30-minute headways during peak time. The remaining 6 routes operate on 60-minute headways during peak time. All evening and Saturday service is operated on 60-minute headways.

Medi-Vans (on behalf of the GBT) is a Door to Door ADA Paratransit Service throughout the municipalities that GBT buses operate. ADA Paratransit eligible can obtain service during all hours and days that the GBT fixed-route service operates.

Transportation services for the elderly and disable in Brown County are also provided by Lamers, A-1 Medi Mobile, Medical Transport, and Travel-Aide. However, the costs of these services tend to be higher.

## **Door County**

Current transportation services for elderly and disabled persons living within Door County are provided through programs administered by the Door County Commission on Aging. Transportation is provided by wheelchair accessible buses, an eight-passenger van and by volunteer drivers using personal vehicles. The Door County Department of Human Services also provides limited transportation service to the county’s disabled population. Service is provided by appointment, and involves door-to-door transportation.

Medical related and nutritional related trip purposes receive priority, followed by work related and recreational and/or business related trip needs. A four member advisory committee to the County’s Commission on Aging provides coordination of the special transportation services that are available within the town. The committee sets policy and oversees transportation services. The transportation is provided by paid and volunteer staff utilizing both publicly and privately-owned vehicles. The cost of the special transportation services is borne by state subsidy through the Wisconsin Department of Transportation’s Section 85.21 (*Special Transportation for the Elderly and Disabled Transportation*) grant program, county funds (20 percent of the state grant), donations and fares collected from passengers.

The following section consists of general operational profiles for the two agencies that are now providing the primary transportation services to the elderly and disabled population of Door County.

### ***The Door County Senior Resource Center***

The Door County Senior Resource Center is a public agency which operates one-vehicle, a fifteen passenger minibus, on a fixed schedule, door-to-door, demand responsive basis for elderly persons throughout the county. The program is available to elderly persons who are 55 years or older. Trips are provided for medical appointments, nutrition programs, personal business and to various service agencies (social security office, etc.). The bus operates on a dial-a-ride system for people living in Sturgeon Bay and the immediate urban area. The bus provides transportation for those living in or near the city of Sturgeon Bay on Monday, Wednesday, and Friday. Elderly residents of northern Door County are provided service on Tuesday, and in the summer of 1997, elderly residents of southern Door County will be provided service on Thursdays. Currently, there is no regularly scheduled transportation service to the residents of southern Door County.

The agency operates a single, 15-passenger bus, which logs an average of 57,000 miles annually. Donations, which range in cost depending on the distance of the trip, are requested from riders,

although not required. The agency provides service to the more economically disadvantaged and isolated elderly persons residing in the rural areas of Door County. This agency provides transportation primarily to the urban areas of the county.

### ***Sunshine House***

The Sunshine House is a sheltered employment facility which is located in the city of Sturgeon Bay. The facility provides services to persons 16 years old or older who have mental and/or physical disabilities. The services provided include sheltered employment, education, recreation therapy, day services, and community support.

Financial support for activities conducted by the Sunshine House is derived from the county, sales of goods manufactured by clients, government service contracts, and United Way donations.

The facility operates two passenger buses, both equipped for wheelchairs and two vans, one of which is wheelchair accessible. The service is provided within the framework of a fixed route system, with the route determined by the home location of the clients. Although the primary area of operations is in the immediate area of the city of Sturgeon Bay, Sunshine House does provide transportation to clients throughout the county.

### ***Other Related Special Transportation Services***

In addition to the Senior Resource Center and the Sunshine House, there are at least three private (for-profit) entities providing transportation services within Door County. These companies are primarily providing transportation for medical purposes, with the cost of the ride borne by fares and state/federal medical assistance. Northeast Wisconsin Transportation Service Inc (NEW Transport) operates four (wheelchair accessible) vans within Door County and is also under contract with the Door County Senior Resource Center to provide rides to Door County residents to medical facilities and services located in Green Bay. In addition, Medivan of Green Bay operates four (wheelchair accessible) vans, and Para Tran of Sturgeon Bay operates one van and one minivan which is also wheelchair accessible.

### **Florence County**

The Florence County Aging Unit provides the only form of public transportation service in Florence County. The transportation services are funded through state assistance in the form of 85.21 aids, county contributions and customer donations.

Service is provided door-to-door by vehicles owned by the Florence County Aging Unit and Resource Center utilizing paid drivers. In addition, rides are provided by volunteer driver-escorts using personal vehicles, County Aging Unit employees using personal vehicles, private-for profit taxi services and specialized medical transports, and charter buses.

The route followed in a given day is scheduled according to the demand for service and is flexible to provide for maximum utilization and convenience of its customers.

The Florence County Aging unit gives priority to travel for medical, nutrition and work related activities of its elderly and disabled customers. Social and recreational trips are also allowed when a demand for one of the priority service areas is not present.

Requests for service are made on a reservation basis. Twenty-four hour notice is requested. Transportation service is made available to the general public on a space available basis.

### **Kewaunee County**

Elderly and disabled transportation systems refer to those programs that provide rides through scheduled bus services, volunteer programs with private vehicles etc. Current transportation services for elderly and disabled persons living within the Town of Franklin are provided through programs coordinated and administered by the Aging Resource Center of Kewaunee County. Kewaunee County Human Services, Kewaunee County Aging Resource Center and East Shore Industries provide specialized transportation services to the elderly and disabled.

Kewaunee County Aging Resource Center provides service by utilization of a wheelchair accessible bus and by volunteer drivers using personal vehicles.

East Shore Industries (ESI) provides specialized transportation services for rehabilitation programs for disabled county residents utilizing four vans, all of which have been converted to provide wheel chair spaces, and one bus, which is also wheelchair accessible. Currently, ESI provides a fixed-route service for approximately 60 clients, to and from the rehabilitation center located at city of Algoma, for employment, social/recreational, nutritional and medical purposes.

The Kewaunee County Human Services Department also provides service utilizing private vehicles and eleven volunteer drivers. Medical related and nutritional related trip purposes receive priority, followed by work related and recreational and/or business related trip needs.

The elderly and disabled transportation services are coordinated by an advisory committee to the Kewaunee County Board, who sets county policy. The Aging Resource Center also has a sub committee that oversees operations.

### **Manitowoc County**

The Manitowoc County Aging Unit provides the only form of public transportation service in Manitowoc County. The transportation services are funded through state assistance in the form of 85.21 aids, county contributions and customer donations.

Service is provided door-to-door by vehicles owned by the Manitowoc County Aging Unity and Resource Center utilizing paid drivers. In addition, rides are provided by volunteer driver-escorts using personal vehicles, County Aging Unit employees using personal vehicles, private-for profit taxi services and specialized medical transports, and charter buses.

The route followed in a given day is scheduled according to the demand for service and is flexible to provide for maximum utilization and convenience of its customers.

The Manitowoc County Aging unit gives priority to travel for medical, nutrition and work related activities of its elderly and disabled customers. Social and recreational trips are also allowed when a demand for one of the priority service areas is not present.

Requests for service are made on a reservation basis. Twenty-four hour notice is requested. Transportation service is made available to the general public on a space available basis.

## **Marinette County**

Elderly and disabled transportation systems refer to those programs that provide rides through scheduled bus services, volunteer programs with private vehicles etc. Current transportation services for elderly and disabled persons living within the Town of Grover are provided through programs administered by the Marinette County Elderly Services and Marinette County Health and Human Services.

The following section consists of general operational profiles for the two agencies that are now providing the primary transportation services to the elderly and disabled population of Marinette County.

### ***Marinette County Elderly Services***

Marinette County Elderly Services (a not-for-profit agency located in Crivitz) provides rural transportation for medical, nutrition, employment, personal business (shopping, recreation) trips to eligible riders on a first call - first serve basis. Door to door service is provided following fixed routes and fixed schedules. Service is obtained by calling a volunteer area captain before 6:00 PM the day before the ride is needed. Elderly over 60 years old and their spouses have priority, followed by persons with disabilities, and the general public if space is available.

The program is funded through the s.85.21 funds, the county, and passenger fares. Passenger fares are based on the distance between destinations and the number of destinations for multi-purpose trips; i.e. doctors appointment, shopping, banking, etc. Special accommodations are made for those unable to afford the co-payment.

Service (in 2001) is provided with three vehicles that are handicapped accessible, two 8-passenger mini-buses and one modified van, in addition to two (14-passenger) standard vans.

### ***Marinette County Health and Human Services Department***

Marinette County Health and Human Services Department contracts with Wausaukee Enterprises, a Rehabilitation Agency to provide transportation to eligible clients in the northern half of Marinette County. Clients are adults with developmental disabilities. The service provides door to door transportation from the client's home to Wausaukee Enterprises, where vocational support and training services are provided. Wausaukee Enterprises operate one 15 passenger van, one 12 passenger van, and one 7 passenger van; none of which are wheelchair accessible.

## **Oconto County**

Elderly and disabled transportation systems refer to those programs that provide rides through scheduled bus services, volunteer programs with private vehicles etc. Current transportation services for elderly and disabled persons living within the Town of Oconto are provided through programs administered by the Oconto County Commission on Aging. Transportation is provided by wheelchair accessible buses, an eight-passenger van and by volunteer drivers using personal vehicles. The Oconto County Department of Human Services also provides limited transportation service to the county's disabled population. Service is provided by appointment, and involves door-to-door transportation.

Medical related and nutritional related trip purposes receive priority, followed by work related and recreational and/or business related trip needs. A four member advisory committee to the

County's Commission on Aging provides coordination of the special transportation services that are available within the town. The committee sets policy and oversees transportation services. The transportation is provided by paid and volunteer staff utilizing both publicly and privately-owned vehicles. The cost of the special transportation services is borne by state subsidy through the Wisconsin Department of Transportation's Section 85.21 (*Special Transportation for the Elderly and Disabled Transportation*) grant program, county funds (20 percent of the state grant), donations and fares collected from passengers.

### **Sheboygan County**

The door-to-door specialized transportation of elderly and disabled persons within Sheboygan County is provided by the Sheboygan County Health and Human Services Department. The Sheboygan County Health and Human Services Department contracted the provision of this service in May of 1993. With this service, priority trips include medical, nutritional and work-related activities, as well as adult day care/day programming, personal appointments and grocery shopping. If the schedule cannot accommodate a medical appointment, a volunteer driver is located to transport the person; this service is not available for medical appointments by residents of nursing homes.

The Health and Human Services Board of the Sheboygan County Board has been designated by the County Board Chairman as the Transportation Coordination Board. This board is comprised of six County Board Supervisors and three citizens, and is a standing board of the County Board. Sheboygan County has a high degree of coordination of transportation services for elderly and disabled persons. All other groups who operate transportation programs are aware of the Health and Human Services Transportation Program, and contact the Sheboygan County Health and Human Services Department office to supplement their service. Some specific examples of coordinated service include daily service to the Rehabilitation Center of Sheboygan (RCS), handling all requests for transportation services and daily service to nursing homes for visitors.

Hours for this service are 6:00 a.m. to 9:00 p.m. Monday through Friday. Fares for this service are 65 cents for trips to county operated meal sites, \$1.25 for local round trips, and \$2.20 for trips to peripheral portions of the county.

### **Intercity Bus Systems and Services**

The last two decades have seen great changes in intercity bus transportation, both in Wisconsin and throughout the nation. Until 1982, the intercity bus system operated under federal regulation that specified which cities would be served and what fares would be charged. Deregulation of intercity bus passenger transportation in 1982 brought significant changes to the industry, affecting fares charged and places served. As carriers gained greater flexibility in setting fares, as well as routes and service frequency, many rural areas lost service as operators abandoned money-losing routes. A Government Accounting Office study estimated that 7,000 communities lost service in the first ten years of deregulation (Anderson, 1993).

The loss of protective regulation led to considerable financial upheaval among the industry's largest providers. Greyhound, the largest, merged with Trailways in 1987, despite the initial reluctance of the Interstate Commerce Commission (ICC) to approve the proposal. By 1990, the combined carrier's operating revenues constituted more than 85 percent of the industry's total. Its patronage continued to shrink, however, and the firm entered Chapter 11 bankruptcy protection

in 1990. Laidlaw, an international transportation provider headquartered in Canada, subsequently purchased the firm.

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 addressed the loss of service with a mandate that 15 percent of Federal funds for rural transportation be allocated to intercity bus service. Structured to encourage flexibility in state approaches, the program allows for a variety of approaches to meeting rural transportation needs, and allows diversion of the funds for other rural programs if the state's governor certifies that no need exists for intercity bus funds.

Within the Bay-Lake Region, with the exception of a terminal location at Green Bay, communities that are adjacent to the intercity bus routes are served by limited service facilities that generally operate in conjunction with other businesses such as gas stations. Limited “intercity bus services” refer to those facilities at which one of the following conditions likely applies: scheduled Greyhound service to smaller service locations, a scheduled stop of another carrier connecting to Greyhound; a local airport or transit center which serves as a scheduled stop for Greyhound buses; a stop along a highway route, without an enclosed waiting area.

### **Bicycle Transportation Facilities**

The following inventory of the Region’s bicycle transportation facilities includes only the existing bicycle transportation facilities that are specifically designated for bicycle use, including existing bicycle paths, bicycle lanes, and signed bicycle routes; facilities providing access to transit stations and vehicles; and identified bicycle touring routes within the Region.

It is important to note that in conjunction with the existing bicycle facilities that most bicycle use can and does legally occur on almost all public roadways in the Region and that those roads and streets are not specifically designated for such use. State law permits bicycle use on all public roadways except expressways and freeways or where signs have been posted prohibiting such use on those roadways where the local governments concerned have specifically acted to prohibit bicycle use.

### **Existing Bicycle Facilities**

For inventory purposes, existing bicycle facilities were grouped by the following facility types: shared roadways with no bikeway designation, signed shared roadways, shared use paths, and bike lanes or bicycle lanes. Signed shared roadways include publicly defined routes and locally defined routes. Shared use paths include bicycle paths located within street rights-of-ways, off-street bicycle paths, and recreational trails.

The Green Bay and Sheboygan urban areas have the most extensive systems of bicycle facilities within the Bay-Lake Region, including separated paths, marked bicycle lanes and signed routes. The cities of Manitowoc and Two Rivers have developed and continue to expand a separated trail along the Lake Michigan shoreline that connects the two cities and will eventually provide access to the Point beach State Park. Multi-purpose recreational trails (off-road trails used to accommodate multi-purpose uses) have been developed in Brown, Door, Kewaunee, Oconto, and Sheboygan County.

## **Waterborne Transportation Facilities**

The inventory of commercial waterborne transportation facilities grouped waterports into four functional categories. The facilities were classified according to the origin, destination and type of freight handled at the various ports.

### **Commercial Port Classification**

Gateway Ports: gateway ports are those ports whose service area extends beyond the immediate port area. In addition, they handle a wide range of cargoes both foreign and domestic.

Diversified Cargo Port: Ports in this category handle more than one or two types of freight, but the origins and destinations of the cargo are still limited to the immediate vicinity of the port.

Limited Cargo Ports: This type of port is similar in nature to a recreational port, but differs in the fact that it handles one or two types of cargo for use by industries in the immediate vicinity of the port.

Recreational Ports: These ports are used mainly for recreational boating and sport fishing, chartered sport fishing excursions, and commercial fishing.

### **Description of Harbors in the Bay-Lake Region**

In total, the Bay-Lake Region has one gateway port, two diversified cargo ports, one limited cargo port, and eight recreational ports. Map 8.2 illustrates the classified waterports located along the 420 miles of shoreline in the Bay-Lake Region. The major classified ports are at Green Bay, Manitowoc, Marinette-Menominee, Sheboygan, Kewaunee, Sturgeon Bay, Two Rivers, Detroit Harbor (Washington Island), Suamico, Pensaukee, Oconto and Algoma.

Although freight traffic has continued to decline over the past three decades, the waterports in the Bay-Lake Region continue to exhibit unique features in terms of water transportation. The Port of Green Bay handled more than 1.9 million metric tons of cargo in 2003, providing efficient and low-cost transportation of coal, limestone and other bulk raw materials into the region. Collectively, Sturgeon Bay and Marinette represent two of the largest shipbuilding centers on the Great Lakes. The S.S. Badger continues to provide cross-lake passenger and automobile ferry service between Manitowoc and Ludington, Michigan, making more than 300 trips per season, and serving more than 14,000 travelers. Harbors at Algoma, Kewaunee, Pensaukee, Oconto and Sheboygan provide essential ports of refuge, docking facilities and services for commercial fishing and for recreational boaters. Detroit Harbor provides port facilities for the Washington Island Ferry Line, providing a vital and indispensable link between Washington Island and Gills Rock.

### **Commercial Ports**

This portion of the plan will describe the commercial port and harbor facilities located within the Bay-Lake Region. In addition, this section will contain an inventory of recreational marinas and the number of permanent and transient boat slips (dock space) available at those facilities.

The region's commercial ports are major economic hubs generating significant employment, taxes and direct and indirect sales into the economy each year. Statewide, in 2002, Wisconsin's commercial ports handle more than 40 million metric tons of cargo valued at more than \$7 million (Table 8.2).

Table 8.2: Commercial Ports in the Bay Lake Region Commodities Shipped Tonnage 2002

City	Highway Access	Rail	Cargo Handled	Annual Tonnage (2001) (metric tons)
Green Bay	I 43, US 41-141, STH 29, STH 32, STH 57	Wisconsin Central (WCL) a Division of Canadian National (CN)	Coal, limestone, salt, cement, liquid asphalt, liquid bulk, misc. bulk, tallow, and pig iron	1.8 million
Manitowoc	US HWY 10, STH 42	Wisconsin Central (WCL) a Division of Canadian National (CN)	Cement, rock, stone, coal, and newly constructed yachts	443,300
Marinette	USH 41 to local streets	No direct service to Port Facility; Escanaba and Lake Superior and Sault Ste Marie Bridge Co. service city	Salt, pig iron, limestone, and wood pulp; Construction and repair of military vessels	300,000
Sturgeon Bay	STH 42 & STH 57 to local streets	None	Construction and repair of lake carriers, commercial and military vessels, and luxury yachts	0

Source: Wisconsin Department of Transportation, 2002, and the Bay-Lake Regional Planning Commission, 2003.

## Recreational Marinas

A survey of all recreational marinas operating within the Bay-Lake region was conducted in the fall of 2002 - and updated through 2004 (Appendix J). The survey found that there were more than 50 recreational marinas operating within the region, that the marinas provided a total of 2,510 slips to accommodate seasonal customers and that there were approximately 340 transient slips available for rent by the day or week (Map 8.3).

## Freight and Passenger Rail

This section of the Regional master plan provides background information on the Region's freight and passenger rail operations. Twelve freight railroads in Wisconsin (three of which operate in the Bay-Lake Region) operate on a system of over 3,600 route miles. Combined, they handled over 2.5 million cars and almost 150 million tons of freight in 2000.

Wisconsin's freight rail network mirrors the nation's. The state network is comprised of major railroads that serve large portions of North America, regional railroads that serve a small combination of states, and small, short-line railroads that serve local areas. Based on federal Surface Transportation Board (STB) definitions, Wisconsin is served by four major (Class I) railroads, three regional railroads, and four local railroads. Table 8.3 and Map 8.4 depict the railroads operating in Wisconsin.

Table 8.3: Wisconsin Railroad Miles Operated in 2003

Class I Railroads		Regional Railroads		Local Railroads	
Canadian National (CN)	1,781	Wisconsin & Southern (WSOR)	531	Escanaba & Lake Superior (ELS)	109
Union Pacific (UP)	584	Iowa, Chicago & Eastern (IC&E)	15	Wisconsin Great Northern (WGN)	19
Canadian Pacific Railway (CPR)	326	Duluth, Missabe & Iron Range (DMIR)	12	Municipality of East Troy (METWR)	7
Burlington Northern Santa Fe (BNSF)	276			Tomahawk Railway (TR)	4

Source: Wisconsin Department of Transportation, 2003; and, Bay-Lake Regional Planning Commission, 2003.



Over the last ten years, the amount of Wisconsin track-miles owned by railroads has declined, due in large part to the consolidation of railroad operators and the subsequent elimination of duplicate routes. Since the merger of the Canadian National Railway Company (CN) and Wisconsin Central Transportation Corporation (WC) in 2001, four Class I railroads now own approximately 80% of the lines within Wisconsin. The Canadian National owns nearly 1,800 miles of track in the state, nearly half the total mileage. In the Bay-Lake Region the Canadian National owns approximately 50 percent of the 293 miles of rail lines still in operation, the Escanaba & Lake Superior owns approximately 37 percent or 109 miles and the Union Pacific owns approximately 13 percent or 39 miles of the lines still in operation within the Region.

Historically, Wisconsin has had an imbalanced freight system—more freight flows into the state than out, and a large portion flows through the state. Freight shipments fluctuated considerably from 1996 to 2000 due to a variety of factors. These included changes in the national economy, changes in contracts for commodity movements by rail, changes in haulage agreements between railroads, and service disruptions caused by mergers and acquisitions that took place during this time period. Table 8.4 provides a synopsis of state freight rail flows from 1996-2000.

Table 8.4: Wisconsin Freight Rail Shipments 1996-2000 (millions of tons)

Type Shipment	1996	1997	1998	1999	2000	Avg.
Originating Tons	12.9	20.6	16.7	17.6	16.7	16.9
Terminating Tons	64.2	87.2	76.9	78.7	70.6	75.5
Overhead Tons	52.4	61.7	65.1	68.1	67.2	62.9
Total Tonnage	129.5	169.5	158.7	164.5	154.6	155.4

Source: Wisconsin Department of Transportation analysis of the STB Waybill Sample, 2002; and Bay-Lake Regional Planning Commission, 2003

### **Airport Facilities**

Airports, aviation, and industries associated with aviation play a significant role in the overall economic development of communities throughout the state and the Bay-Lake Region. Airports provide vital transportation, product distribution, and direct and indirect increases in community employment.

Both in terms of business and tourism, air travel is a significant component of the state and regional transportation system. The following component of the transportation element of the Regional Master Plan provides an overview of air service and the air service industry in the Bay-Lake Region.

According to *The Economic Impact of the Aviation Industry in Wisconsin*, a research project conducted by the WisDOT in 1999, the aviation industry generated a total of over \$2 billion in output to the economy of Wisconsin in just 1995 alone; and provided over 9,000 jobs. In addition, \$972 million was directly generated in the State economy by airports; \$345 million in personal income for Wisconsin residents came from spending by air travelers; and air traveler spending supported over 22,000 jobs in retail, lodging, restaurants and service businesses.

The following inventory includes several facilities that, although, located outside of the Bay-Lake Region, by virtue of their size and location, provide service or the potential for service to area businesses, industries and residents (Appendix J).

## **Public Use Airports Serving the Bay-Lake Region**

### ***Austin-Straubel International Airport***

Austin-Straubel International Airport is owned by Brown County and maintained by the Director (Fixed-Base Operator (FBO)). It is located 7 miles southwest of the city of Green Bay in the village of Ashwaubenon and is accessed from STH 172, west of USH 41. The facility is classified as an Air Carrier/Air Cargo (AC/AC), indicating that the airport can accommodate virtually all sizes and types of aircraft. Austin-Straubel International Airport is a full service regional connector that is currently providing direct service flights to four major cities, including Milwaukee, Wisconsin; Chicago, Illinois; Detroit, Michigan; and Minneapolis, Minnesota. Flights are provided on six airlines with approximately 32 arrivals and departures daily. The airport had 692,212 enplanements (passengers boarding or alighting) in 2001. Austin-Straubel has two concrete, grooved runways, one is 7,699 feet long, and the other is 8,200 feet in length.

Available services include fuel, a traffic-control tower, major airframe and power plant repair, charter, rental and instructional services.

### ***Crivitz Municipal Airport***

Crivitz Municipal Airport is located in the town of Stephenson, 3 miles southwest of the village of Crivitz. The airport is owned by the town of Stephenson and maintained by the Manager (FBO). It can be accessed by County trunk W, off of U.S. highway 141. The facility is classified as a Basic Utility-A (BU-A) airport, indicating that it is designed to accommodate aircraft of less than 6,000 pounds gross weight, with approach speeds below 91 knots and wingspans of less than 49 feet, typically single-engine piston. This airport has one asphalt runway that is 2,155 feet long and one turf runway that is 1,270 feet long. This facility provides no additional services.

### ***Door County Cherryland Airport***

Door County Cherryland Airport located in Sturgeon Bay provides a seasonal passenger service as well as corporate service for Door County. The facility is owned by Door County and maintained by the Director (FBO). It can be accessed by County trunk C, off of State highway 57. Cherryland Airport is classified as a Transport/Corporate (T/C) facility indicating that the facility can serve and accommodate corporate jets, small passenger and cargo jet aircraft used in regional service and small airplanes (piston or turboprop) used in commuter air service. Currently the facility has two asphalt paved runways, 4,600 feet and 3,200 feet in length. Available services include fuel, minor airframe and power plant repair, charter, rental, air ambulance and instructional services.

### ***Ephraim-Gibraltar Airport***

Ephraim-Gibraltar Airport, located southeast of Eagle Harbor and STH 42 on Norway Road, is classified as a Basic Utility-A (BU-A) airport facility. This indicates that the facility is designed to accommodate aircraft of less than 6,000 pounds gross weight, with approach speeds below 91 knots and wingspans of less than 49 feet. Such aircraft are typically single-engine piston. The facility is owned jointly by the town of Gibraltar and the village of Ephraim and it is maintained by various, appointed fixed-base operators from the town of Gibraltar. It can be accessed by STH 42. The facility has one asphalt runway, 2,700 feet long and one turf runway, 2,000 feet long. Available services include minor airframe and power plant repair.

### ***Ford Airport***

Ford Airport, located in Dickinson County, near Kingsford, Michigan, is classified as a General Utility Two facility, which denotes that it is capable of serving large aircraft up to 60,000 pounds with wingspans of less than 118 feet. These aircraft range from typical corporate aircraft (including jets) to commuter airline aircraft. This facility has two asphalt paved runways, the longest of which is 6,500 feet. The facility is owned by Dickinson County and maintained by Superior Aviation (FBO). The airport can be accessed by State Highway 95, off of U.S. 2/141. Dickinson County/Ford Airport has a fixed base operator offering a full line of services. In addition, a regional commuter, Superior Airlines provides two flights daily to and from Minneapolis, Minnesota; and one flight daily, to and from Chicago, Illinois. The airport had 17,306 enplanements (passengers boarding or alighting) in 2001. Available services include fuel, major airframe and power plant repair, charter, rental and instructional services.

### ***General Mitchell International Airport***

General Mitchell International Airport (GMIA) is located in Milwaukee, serving northern Illinois, as well as the Milwaukee, Racine, and Kenosha metropolitan areas. The facility is owned by Milwaukee County and can be accessed by Interstate 43/94. The facility is classified as an Air Carrier/Air Cargo (AC/AC), indicating that the airport can accommodate virtually all sizes and types of aircraft. GMIA has a relatively large originating passenger base and is the major hub for Midwest Express Airlines, which enplanes more passengers at GMIA than any other airline serving the airport. Thirteen carriers service GMIA, with 211,512 flights made in 2001. This facility has two asphalt and concrete, grooved runways that are 9,690 feet and 8,012 feet in length; two concrete runways, 5,868 feet and 4,183 feet long; and one asphalt runway, 4,800 feet long. Available services include fuel, a traffic-control tower, major airframe and power plant repair, air ambulance, charter, sales, rental and instructional services.

### ***Iron County Airport***

Iron County Airport is located 6 miles southeast of Crystal Falls, Michigan. The facility is owned by Iron County and can be accessed by U.S. highway 2/141. This airport has one asphalt runway that is 3,700 feet long and one turf runway that is 2,700 feet long. This facility provides no additional services.

### ***Manitowoc County Airport***

Manitowoc County Airport, located in the city of Manitowoc, is a Transport/Corporate (T/C) airport. A T/C facility indicates that the facility can serve and accommodate corporate jets, small passenger and cargo jet aircraft used in regional service and small airplanes (piston or turboprop) used in commuter air service. The facility is owned by Manitowoc County and maintained by Magnus Aviation (FBO). The airport can be accessed by CTH Q, from Interstate-43 and STH 310. The Manitowoc County Airport has two asphalt covered runways that are 3,343 feet and 5,002 feet in length. Available services include fuel, minor airframe and power plant repair, charter, rental, sales and instructional services.

### ***New Holstein Municipal Airport***

New Holstein Municipal Airport is located 1 mile west of New Holstein and is classified as a Basic Utility-B (BU-B) airport. A BU-B airport is designed to accommodate aircraft of less than

12,500 pounds gross weight, with approach speeds below 121 knots and wingspans of less than 49 feet, typically either single-engine or twin-engine piston. The facility is owned by the city of New Holstein and maintained by the Manager (FBO). It can be accessed by County trunk H and A, off of State highway 57/32. This airport has one asphalt runway that is 3,600 feet long and one turf runway that is 2,970 feet long. Available services include fuel, minor airframe and power plant repair, rental, and instructional services.

### ***Oconto Municipal Airport***

The Oconto Municipal Airport is classified as General Utility-B (GU-B) airport facility and is capable of handling single and larger twin engine aircraft as well as smaller corporate jets. Oconto County and the city of Oconto jointly own this facility on approximately 240 acres located in the town of Oconto, immediately to the southwest of the city of Oconto, adjacent to the east of Airport Road, and can be accessed from USH 41. The facility has one asphalt runway, 3,199 feet long and one turf runway, 1,845 feet long. Available services include fuel, rental and instructional services.

### ***Outagamie County Regional Airport***

Outagamie County Regional Airport is located 3 miles west of Appleton. This airport has two concrete, grooved runways, one runway is 7,001 feet long, and the other is 6,501 feet long. Available services include fuel, a traffic-control tower, major airframe and power plant repair, air freight, charter, sales, rental, and instructional services. The facility is classified as an Air Carrier/Air Cargo (AC/AC), indicating that the airport can accommodate virtually all sizes and types of aircraft. The airport is owned by Outagamie County and maintained by MaxAir (FBO) and can be accessed by USH 10, from USH 41.

### ***Shawano Municipal Airport***

Shawano Municipal Airport is located 1-mile northeast of the city of Shawano, on Shawano Lake. The facility is classified as a General Utility (GU) airport, indicating that it is intended to serve virtually all small general aviation single and twin-engine aircraft, both piston and turboprop, with a maximum takeoff weight of 12,500 pounds or less. These aircraft generally have approach speeds below 121 knots and wingspans of less than 79 feet. Typically, these aircraft are used for business and charter flying, and personal reasons. The facility is owned jointly by the city of Shawano and Shawano County and maintained by the Manager (FBO). It can be accessed by County trunk H, off of State highway 29. This airport has one asphalt runway that is 3,900 feet long, one turf runway that is 1,780 feet long, and one water runway (Shawano Lake) that is 12,000 feet long. Available services include fuel, major airframe and power plant repair, charter, rental, and instructional services.

### ***Sheboygan County Memorial Airport***

The Sheboygan County Memorial Airport is classified as a Transport/Corporate (T/C) Airport. T/C class facilities can serve aircraft weighing as much as 60,000 pounds provided that approach speeds are less than 121 knots, with wingspans less than 80 feet in length. The facility is owned by Sheboygan County and maintained by Magnus Aviation (FBO) and can be accessed by County Trunk 0, off of State highway 42. The primary runway is nearly 5,399 feet in length and 100 feet in width, while the crosswind runway is nearly 4,693 feet in length and 75 feet in width. Corporate charter and limited commuter service are available at this airport. Available services

include fuel, major airframe and power plant repair, charter, rental, sales and instructional services.

### ***Menominee-Marinette Twin County Airport***

The Twin City Airport is located to the west of the city of Menominee, Michigan, just north of the City of Marinette. Marinette County provides limited support to the airport. The facility has two asphalt runways; 6,000 and 5,100 feet in length. Available services include fuel, charter flights, and aircraft manufacturing services. The facility is owned jointly by the cities of Marinette, Wisconsin and Menominee, Michigan. It is maintained by Enstrom Helicopters, Corp. (FBO).

### ***Washington Island Airport***

Washington Island Airport is classified as a Basic Utility-B (BU-B) airport facility indicating that the facility is designed to accommodate aircraft of less than 12,500 pounds gross weight with approach speeds below 121 knots and wingspans of less than 49 feet. Such aircraft can be either single-engine or twin-engine piston. The facility has two turf runways; 1,340 and 2,230 feet in length.

### **Trucking**

Nationwide the trucking industry provides efficient and safe transportation service to customers throughout the country. In the year 2001, trucking handled 87.5 percent of the nation's total freight bill, an increase of 1 percentage point from 1998. In terms of freight volume (tons), trucks transported 67.6 percent of the total volume in 2001, an increase of 4.3 percentage points from 1998.

Of the 542,363 interstate motor carriers on file with the U.S. DOT in 2001, 74 percent operated six or fewer trucks and 82 percent had 20 or fewer trucks. U.S. DOT also reports that 55 percent of all heavy trucks travel less than 30,000 miles annually.

Wisconsin's economy depends on trucks for freight movement. Trucks carry 83 percent of all manufactured freight transported in Wisconsin and over 77 percent of all Wisconsin communities are served exclusively by trucks.

### **Highways**

The State highway system (including U.S. and Interstate Highways) is comprised of more than 11,800 miles of roadway and more than 4,600 bridges. Although the state highway system accounts for only 11 percent of the state's total roadway mileage, it carries more than 60 percent of the state's total traffic. The remainder of the highway and road system is comprised of collector roads (primarily county trunk highways), and local roads and streets.

### **Functional Class**

Functional classification is the process by which highways are grouped into classes according to the character of service they are intended to provide, ranging from a high degree of travel mobility to land access functions. Table 8.5 lists the miles of rural functionally classed highways in the Bay-Lake Region by county and by rural functional classification.

Rural areas are the places in the state located outside of urban and urbanized areas. Roads and highways in these places are classified under the rural functional classification system and are classified into the following functional types:

Rural Principal Arterials: Principal arterials serve corridor movements having trip length and travel density characteristics of an interstate or interregional nature. These routes generally serve urbanized (populations 50,000 and over) and urban (populations 5,000 to 49,999) areas. In the Bay-Lake Region 285.76 miles of highway are classified as Principal Arterials.

Rural Major Arterials: Major arterials, in conjunction with principal arterials, serve moderate to large-sized places (cities, villages, towns, and clusters of communities), and other traffic generators providing intra-regional and inter-area traffic movements. These routes generally serve places with populations of 1,000 and over. In the Bay-Lake Region 521.93 miles of highway are classified as Major Arterials.

Rural Major Collectors: Major collectors provide service to smaller-to-moderate sized places and other intra-area traffic generators, and link those generators to nearby larger population centers (cities, villages, and towns) or higher function routes. These routes generally serve places with populations of 100 and over. In the Bay-Lake Region 1,232.76 miles of highway are classified as Major Collectors.

Rural Minor Collectors: Minor collectors provide service to all remaining smaller places, link the locally important traffic generators with their rural hinterland, and are spaced consistent with population density so as to collect traffic from local roads and bring all developed areas within a reasonable distance of a collector road. These routes generally serve places with populations of 50 and over. In the Bay-Lake Region 881.98 miles of highway are classified as Minor Collectors.

Rural Local Roads: Local roads provide access to adjacent land and provide for travel over relatively short distances on an inter-township or intra-township basis. All rural roads not classified as arterials or collectors will be local function roads. In the Bay-Lake Region 10,517.73 miles of highway are classified as Rural Local Roads.



Table 8.5: Functional Classification of Rural Highways and Roads in the Bay-Lake Region (2001)

County	Interstate Hwy (mi)	Principal Arterial (mi)	Major Arterial (mi)	Major Collector	Minor Collector (mi)	Local Roads (mi)	Total (mi)
Brown	9.93	46.12	42.75	163.01	91.45	866.9	1,220.16
Door	–	22.01	75.29	119.06	133.4	818.56	1,168.32
Florence	–	14.46	35.88	64.3	59.69	350.52	524.85
Kewaunee	–	2.9	58.25	88.27	93.56	574.1	817.08
Manitowoc	32.39	22.44	76.35	186.67	91.88	987.78	1,397.51
Marinette	–	93.19	56.07	265.45	147.02	1,679.95	2,241.68
Oconto	–	42.78	99.64	211.42	152.62	1,491.38	1,997.84
Sheboygan	18.6	41.86	77.7	134.58	112.36	765.19	1,150.29
<b>Regional Total</b>	<b>60.92</b>	<b>285.76</b>	<b>521.93</b>	<b>1,232.76</b>	<b>881.98</b>	<b>7,534.38</b>	<b>10,517.73</b>
<b>State Total</b>	<b>583.01</b>	<b>3,413.02</b>	<b>5,009.67</b>	<b>13,595.69</b>	<b>6,413.37</b>	<b>66,106.51</b>	<b>95,121.27</b>

Source: Wisconsin Department of Transportation, 2003; and, Bay-Lake Regional Planning Commission, 2003.

Urban/urbanized and rural areas provide a framework for the placement of routes within Wisconsin. An urban area is defined as any place or cluster of places within a designated urban boundary that has a population between 5,000 and 49,999. An urbanized area is defined as a cluster of places within a designated urbanized boundary, with a population of 50,000 or greater. Streets and highways within urban and urbanized areas are classified under the urban functional classification system. Table 8.6 lists the miles of urban functionally classed highways in the Bay-Lake Region by county and by urban functional classification.

Table 8.6 : Functional Classification of Urban Highways and Streets in the Bay-Lake Region (2001)

Urban Areas	Interstate Hwy (mi)	Principal Arterial (mi)	Major Arterial (mi)	Collectors (mi)	Local Roads (mi)	Total (mi)
Green Bay	12.73	88.42	109.65	102.76	678.25	991.81
Manitowoc	1.51	15.41	24.29	21.33	116.98	179.51
Marinette	–	7.82	9.17	7.3	55.57	79.86
Plymouth	–	3.1	6.83	5.64	31.54	47.11
Sheboygan	6.16	17.82	42.94	40.01	221.93	328.86
Sturgeon Bay	–	7.82	7.11	11.76	59.97	86.66
Two Rivers	–	9.26	6.52	6.94	46.06	68.78
<b>Regional Total</b>	<b>20.4</b>	<b>149.65</b>	<b>206.51</b>	<b>195.74</b>	<b>1,210.30</b>	<b>1,782.59</b>
<b>State Total</b>	<b>161.86</b>	<b>1,513.03</b>	<b>2,035.65</b>	<b>1,524.62</b>	<b>11,570.21</b>	<b>16,805.37</b>

Source: Wisconsin Department of Transportation, 2003; and, Bay-Lake Regional Planning Commission, 2003.

## APPLICABLE TRANSPORTATION PLANS

### State Highway Transportation Plans

#### **Corridors 2020**

The *Corridors 2020 Plan* (developed in 1986 and updated in 1994) identified a statewide network of improved and existing highway facilities comprised of two elements: 1) a 1,550-mile backbone system of multilane divided highways interconnecting all regions and major economic centers in the state and tying them to the national transportation network; and 2) a 2,100-mile system of two and four lane high quality connectors directly linking other significant economic

and tourism centers to the backbone system. Together, these two components created a 3,650-mile network linking Wisconsin communities to the nation's Interstate and multilane highway systems for improved access to national and world markets. Nearly all cities and villages in Wisconsin with a population over 5,000 will be within five miles of either a backbone or connector route. Furthermore, the *Corridors 2020* Plan sought to link state communities with intermodal connections throughout the state.

The plan identified a multilane backbone system that (when completed) would consist of 1,550 miles of interconnected freeways and expressways. Today, 1,200 miles are completed and the remaining 350 miles are programmed to be completed by the year 2005. The 1994 Corridors 2020 analysis showed that all of the previously designated backbone routes again meet the criteria for multilane backbone routes. Thus, there are no changes in the highways designated as part of the backbone system. A fundamental core of the completed backbone network is the 640-mile Interstate system.

Newly constructed portions of the backbone corridor system will generally be built as high quality four-lane expressways, designed to provide most of the safety and service characteristics of a freeway but at a lower cost, and with fewer environmental impacts. Typically, these highways will provide interchanges at high volume intersecting highways, with most highways intersecting at grade. Turning lanes will be provided at most intersections. Although some direct residential access to the highway may remain, commercial access will be available only through intersecting public roads. Bypasses of communities are planned where necessary to maintain constant highway speeds, but these bypasses will be built as close as possible to existing development. As future traffic needs warrant, some sections of the backbone system may be converted to freeways.

**Backbone categories.** The backbone routes were separated into two categories under the 1994 update.

**Backbone routes.** These backbone routes are either existing two-lane routes meeting the criteria for multilane backbone construction, or they are current multilane routes without predicted congestion problems to the year 2020.

Existing multilane backbone routes with congestion problems projected between now and year 2020, to be evaluated by the Congestion Management System. The federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) requires that each state develop by October 1, 1996, a Congestion Management System (CMS) that addresses highway congestion problems from a comprehensive perspective. The CMS will consider alternative intercity and urban modes, demand management techniques such as employee trip reduction and new technologies such as Intelligent Vehicle Highway Systems (IVHS), as well as conventional highway improvements. In urbanized areas, the CMS will be developed jointly with designated Metropolitan Planning Organizations (MPOS).

### **Connector System**

The primary purpose of the 2,100-mile connector system is to link other significant economic and tourism centers to the backbone system, thus better integrating them into the statewide and national transportation systems. The connector system will be designed as high-quality two-lane facilities providing the highest standards of roadway width, passing opportunities, safety and driving comfort, where economically feasible.



Additional passing, turning, and hill-climbing lanes will be provided where needed. Bypasses will be built around communities, if needed. To improve community visibility, larger signs will be provided to direct motorists to villages and cities served by each route. Currently, about 40 percent of the connectors are existing or programmed as multilane, or will be evaluated for multilane improvements under the Congestion Management System. Some segments of the connectors may be recommended for expansion to four-lane highways when traffic requires more than two lanes.

### **Translinks 21**

Adopted in 1996, Translinks 21 provided a framework for an ongoing examination of transportation and land use options by state and local officials. It featured intermodal passenger and freight transportation plans that envisioned a 25-year investment of \$38 billion or \$8.8 billion above current spending projections. The plan's scope extended well beyond the highway transportation corridors to include environmental and other key considerations.

At the core of Translinks 21 is the state's 12,000-mile State Trunk Highway System, including a 3,400-mile "backbone" connecting communities with populations of 5,000 or more. The plan updated recommendations included in the Corridors 2020 plan introduced in 1988 and proposed spending \$1.5 billion to rehabilitate and modernize the state's major road network.

The plan stressed the crucial role local roads play in the state's transportation system. It proposed "a strong partnership between state and local governments in providing quality local roads and streets that interconnect with state highways and other transportation facilities." WisDOT acknowledged that a dependable funding source for road maintenance and improvement is the litmus test of this state/local partnership.

While the plan focused on transportation issues, it recognized the strong links between land-use decisions and transportation system investments. WisDOT sought to incorporate local land use objectives into state transportation planning (and vice versa) and proposed a grant program to help develop local transportation corridor management plans. The agency also pledged to place a greater emphasis on the impacts that transportation facilities have on land use choices.

### **Wisconsin State Highway Plan 2020**

Wisconsin's State Trunk Highway system, consisting of approximately 11,800 miles of roads, is aging and deteriorating at the same time traffic congestion is increasing.

In response to this critical issue, WisDOT, in partnership with its stakeholders, developed the *State Highway Plan 2020*, a 21-year strategic plan which considered the highway system's current condition, analyzed future uses, assessed financial constraints and outlined strategies to address Wisconsin's preservation, traffic movement, and safety needs.

The plan will be updated every six years to reflect changing transportation technologies, travel demand and economic conditions in Wisconsin.

## **Other State Transportation Plans**

### **Wisconsin State Airport System Plan 2020**

The Wisconsin State Airport System Plan 2020 provides a framework for the reservation and enhancement of a system of public-use airports adequate to meet the current and future aviation needs of the State of Wisconsin.

The state airport plan determines the number, location and type of aviation facilities required to adequately serve the state's aviation needs over a 21-year planning period, 2000 through 2020. The plan defined the *State Airport System* and established the current and future role of each airport in the system. The plan also forecasted the level of public investment required to: upgrade substandard features of the system such as the widening of existing runways and taxiways to meet federal and state standards; preserve the airport system in the future such as the replacement of existing pavements and lighting systems to meet federal and state standards; and, enhance the system in the future such as the construction of runway extensions and new runways in order to meet forecast increases in aviation demand.

This plan is used by WisDOT's Bureau of Aeronautics to pre-qualify airport improvement projects submitted by airport sponsors for funding consideration. If a proposed airport project is not in conformance with the plan, the sponsor will need to satisfactorily demonstrate how the proposed project meets the planning and design guidelines established by the plan. If this is done, the plan will be amended accordingly.

This plan also provided a long-range perspective for public-sector investment decisions. Unlike the State Trunk Highway System, WisDOT does not own any of the airports comprising the *State Airport System* and does not initiate airport improvement projects. Airport owners initiate projects by submitting funding requests to either the Bureau of Aeronautics or to the Federal Aviation Administration (FAA). Consequently, the implementation of a system plan requires a continuing partnership between WisDOT and airport owners.

At the outset of the planning process, the *State Airport System* was defined to be 100 of Wisconsin's 143 public-use airports. At that time, 93 of Wisconsin's public-use airports were owned by a public body (i.e., county, city, village or town). These airports were automatically included in the *State Airport System*.

Thus, as of January 2000, the State Airport System was comprised of 95 publicly-owned, public-use airports and 5 privately-owned, public use airports. All airports included in the system are eligible for state airport improvement grants and 83 are eligible for federal grants as well.

### **Wisconsin State Rail Plan 2020**

The *Wisconsin State Rail Plan 2020* was initiated in 2001 and will be completed by 2005. The issues raised during WisDOT's rail planning process are critical to the future of Wisconsin's transportation network and economy. WisDOT is now planning to incorporate efforts originally initiated under the State Rail Plan 2020 process into [\*Connections 2030\*](#), the Department's long-range all-mode plan.

The [\*Connections 2030\*](#) process will provide a comprehensive multimodal perspective from which rail issues can be evaluated. The additional research and analysis that will be undertaken will help the state make the best decisions possible about future transportation investments.

WisDOT's rail planning efforts to date will be captured in the Wisconsin Rail Issues Report, which will be the foundation for the analysis of the rail mode under [\*Connections 2030\*](#). This report will document WisDOT's rail planning activities, list critical issues identified, and point out areas where additional research is needed. The report is scheduled for public distribution this fall.

### **Wisconsin Pedestrian Policy Plan 2020**

The Wisconsin Department of Transportation (WisDOT) developed the *Wisconsin Pedestrian Policy Plan 2020* to provide a long-range vision addressing Wisconsin pedestrian needs. The Pedestrian Plan is one of several plans recommended in Translinks 21, WisDOT's comprehensive transportation plan released in 1994.

The Pedestrian Plan provides a basic description of existing and emerging pedestrian needs over the next 20 years, with a set of recommendations to meet those needs. WisDOT's efforts ensure that this plan complements both existing and future long-range transportation plans.

### **Wisconsin State Bicycle Transportation Plan 2020**

In December of 1998, the Wisconsin State Bicycle Transportation Plan was published by the Wisconsin Department of Transportation, Division of Transportation Investment Management, Bureau of Planning. The Plan was developed by the State Bicycle Plan Advisory Committee with written and technical assistance from the Bureau of Transportation Safety.

The State Bicycle Plan has two primary goals: to increase levels of bicycling throughout Wisconsin (doubling the number of trips made by bicycles by the year 2010), and to reduce crashes involving bicyclists and motor vehicles by at least 10 percent by the year 2010. State Bicycle Plan objectives are structured around the 4-Es of transportation safety: engineering (and planning), education, enforcement and encouragement. There are two Engineering and Planning Objectives: (1) to plan and design new and improved transportation facilities to accommodate and encourage use by bicyclists; and (2) to expand and improve a statewide network of safe and convenient routes for bicycle transportation and touring (including safe and convenient access to and through the state's urban areas). The Education Objective is to expand the range of educational activities, (such as driver licensing and training, bicycle safety education, traffic law enforcement, and provision of public service information) to provide consistent safety messages and training to all roadway users. The Enforcement Objective is to improve enforcement of laws to prevent dangerous and illegal behavior by motorists and bicyclists. The Encouragement Objective is to encourage more trips by bicycles by promoting the acceptance and usefulness of this mode.

The recommendations of the State Bicycle Plan include intercity and urban/suburban improvement actions. Bicycle provisions for wide curb lanes, bike lanes, or paved shoulders should be made within urban areas. Where suitable accommodations for bicyclists now exist, new highway improvements will be planned to continue an acceptable level of service and safety for bicyclists. The State Bicycle Plan identifies general bicycling conditions within intercity areas. The two primary variables by which roads were classified for cycling were the volume of traffic and the paved width of roadway. The State Bicycle Plan indicates that "caution is advised" for bicycle travelers utilizing higher-volume roadways (such as major county trunk highways) due to the amount of traffic and the width of the road pavement. Lower-volume

roadways are designated as “suitable for bicycling” based on light traffic volumes and roadway width. Major arterial highways are classified as “not recommended for bicycling” because of relatively high traffic volumes, moderate to high truck traffic volumes, and narrow road shoulder width. The State’s Bicycle Transportation Plan only assesses conditions on state highways and county trunk highways. The plan assumes that all local town roads are suitable for bicycling, basing that assumption on the low traffic volumes currently on average town roads. Serious consideration should be given to the accommodation of bicyclists when roadway projects are planned and designed.

## **Regional and Local Bicycle Plans**

### **Bicycle Transportation Facility Plan for the Bay-Lake Region (2002)**

The *Bicycle Transportation Facility Plan for the Bay-Lake Region*, like the state plan, identified new and improved transportation facilities to accommodate and encourage use by bicyclists, and recommended development of a region-wide network of safe and convenient routes for bicycle transportation and touring, including safe and convenient access to and through the region’s urban communities. The primary focus of the plan was to identify routes connecting all communities and destination points (state and county parks etc.,) and to determine what improvements were needed to make those routes safer for bicycle travel.

### **Brown County Bicycle and Pedestrian Plan (1998 Update)**

The Brown County Planning Commission adopted a Bicycle and Pedestrian Plan for Brown County in December 1994. In June 1998, an updated plan was designed to include the recommendations in the Brown County Year 2020 Land Use and Transportation Plan and the Wisconsin Department of Transportation’s draft Wisconsin Bicycle Transportation Plan. The goal of the update is to create a system of appropriately spaced and continuous bicycle and pedestrian corridors throughout the county that can be implemented at a relatively low cost. Other goals of the plan include: (1) the creation of a seamless system of bicycle and pedestrian corridors at a minimal cost; (2) an increase in bicycling and walking throughout the county; (3) the development of a bicycle and pedestrian environment that provides confidence and safety to users, and (4) the promotion of bicycling and walking as modes of transportation. The Brown County Bicycle and Pedestrian Plan also utilizes the 4-Es of transportation safety: engineering, education, enforcement and encouragement.

The existing bicycle plan for the rural portion of Brown County recommends several routes on the county and state trunk highway system. These routes were chosen because traffic volumes are relatively low and the driving lanes are relatively wide. The plan includes a system of bicycle lanes connecting the Green Bay Metropolitan Area to the seven satellite communities, as well as a bicycle beltline along the state and county trunk highway system, connecting the satellite communities to one another. The urban area recommendation is to create a system of appropriately spaced and continuous bicycle and pedestrian corridors throughout the metropolitan area that can be implemented at a relatively low cost. The majority of these corridors (which would provide access to schools, government centers, major employers, shopping centers, and recreation areas) would be created through four methods. The four approaches to establishing bicycle and pedestrian corridors are: (1) striping existing roads; (2) including bike lanes in planned projects; (3) construction of lanes as conditions of jurisdictional transfers, and (4) restriping roads to create wide curb lanes.

The bicycle and pedestrian plan update identifies several planning, design, and policy recommendations. The Brown County Planning Commission will continue to provide planning assistance to all county jurisdictions, public participation will be included during the planning stage, and the plan will be updated every five years. The accommodation of bicycles should be considered during the planning, design, and construction of all transportation facilities in the street right-of-way. On all highways and roadways where bicycle facilities exist, improvements should be planned and implemented to maintain the level of existing service and safety for bicyclists. Highways and roadways should be striped to either create bicycle lanes or offer wide curb lanes subject to having available space.

### **Sheboygan Urbanized Area Bicycle Facilities Plan**

The Bay-Lake Regional Planning Commission published the Sheboygan Urbanized Area Bicycle Facilities Plan in September 1991. The Sheboygan Metropolitan Planning Organization was also involved in the development of the plan. The review committee for this plan included representatives from the county townships, the Sheboygan Public Works Department, the Sheboygan County Planning and Resources Department, and members of the public interested in improving bicycle travel in the area.

The major purposes of the bicycle plan are: (1) to develop goals, objectives, and policies for the development of bicycle facilities in the Sheboygan area; (2) to reach agreement on appropriate bicycle facilities within the Sheboygan area; (3) to evaluate these bicycle facilities in terms of a set of primary and secondary criteria determined by the review committee for this plan; and (4) to recommend an education and safety program for bicyclists of all ages in the Sheboygan Urbanized Area.

Six major goals are included in the Sheboygan Bicycle Plan. The first goal is to increase bicycle safety; this involves safer routes, road upgrades, law enforcement, and publication of bicycle safety literature. The second goal is the utilization of recreational and natural attractions. The main objectives of this goal include the increased usage of trail and route signage, incorporation of river corridors and greenways, and an interconnected area between paths and parks. The fourth goal of the bicycle plan is to provide auxiliary facilities, such as adequate bicycle parking and storage, to make bicycling a more attractive transportation option for area residents. The remaining goals involve the funding for the implementation and improvements of bicycle facilities, as well as the consideration of the bicyclist population and their needs in the bicycle facilities planning process.

Recommendations of the Sheboygan Urbanized Area Bicycle Facilities Plan include the identification of corridors providing important linkages to potential bicycle traffic generation sites, the development of bicycle paths or multipurpose recreational facilities, increased usage of bicycle lanes and wide curb lanes, the development of common roadway usage corridors, and the development of recommended bicycle facilities within identified principal bikeway corridors. The recommended width of bicycle paths and multipurpose recreational facilities is approximately 10 feet. Bicycle lanes and wide curb lanes have a recommended width of 5 feet. Common roadway usage corridors are areas identified by low traffic volumes and low average travel speeds. Development of recommended bicycle facilities within identified principal bikeway corridors has a well-defined set of potential bicycle traffic generators.

### **Marinette County Bicycle Route Plan**

The Marinette County Bicycle Route Plan was prepared by Tom Crowley, the UW Extension Community Resource Development Educator (retired), and by the Marinette County Economic Development/Tourism Committee (with assistance from representatives of the “Spokes and Folks” Bicycle Club). The plan was completed and published in October of 1999. Marinette County in cooperation with a local bicycle club and local tourism-related organizations, has developed a “Scenic Bicycle Route” brochure, which includes a map of bicycle routes. The bicycle routes identified in the brochure are a series of eight loops that travel along some of the more scenic roads in Marinette County. A majority of the routes are on local town roads, with only a few miles on state or county highways. Very few of the routes have designated bicycle lanes along the shoulders of the highways. The plan was developed to improve and expand the county’s scenic bicycle route system, as well as to make the county eligible for federal funding programs that assist in the construction of bicycle lanes along highways.

### **City of Manitowoc Bicycle Facilities Plan**

The Bay-Lake Regional Planning Commission published the City of Manitowoc Bicycle Facilities Plan on September 1, 1995. The Bicycle Facilities Plan Committee was comprised of representatives from the city’s Planning Department, Police Department, and Recreation and Parks Department. The plan is intended to encourage the use of the bicycle as an alternate mode of transportation. A primary focus of the plan is to explore ways, to make bicycling a safer pursuit for the bicyclist as well as for the motorist, both of whom must share the road and the responsibility of safe driving.

The primary purposes of the City of Manitowoc Bicycle Facilities Plan were: (1) to develop goals, objectives, implementation policies and strategies for the development of bicycle facilities that reflect the needs and wishes of the community; (2) to reach consensus on the types of bicycle facilities that should and can be developed within the community; (3) to evaluate existing bicycle routes and patterns in terms of safety and connectivity; and (4) to recommend and develop an education and safety program available to all cyclists regardless of age or experience.

Based on the goals and objectives that were developed by the City of Manitowoc’s Bicycle Facilities Plan Committee, a recommended system of proposed or potential bicycle routes and facilities was developed. These routes and facilities provide access to traffic generation sites, such as schools, parks, local tourist attractions, shopping areas, and areas of concentrated employment. The routes seek to provide safe, convenient connections between origins and destinations for local and transient cyclists alike. This plan will provide the City with a long range bicycle facilities development guide that will enhance the City’s transportation system, increase the safety of the cycling public, and encourage the use of alternative modes of transportation.

The primary recommendations which were developed by the Bicycle Facilities Plan Committee included: (1) consideration of the development of bicycle paths on abandoned rail beds within environmental corridors and in conjunction with the development of new and existing recreational facilities, where land acquisition costs and construction costs may be minimized; (2) consider development of a system of connected priority and secondary bicycle facility development routes utilizing wide curb lanes within a development timetable that coincides with the normal resurfacing, rehabilitation, or reconstruction of those streets that are designated as

integral to the system; (3) immediate and continued street enhancement to accommodate bicyclists; (4) continuation of an expanded education program for both youth and adult bicyclists to reduce bicyclist at-fault accidents; and (5) initiate a periodic review and update of the plan to ensure that the goals, objectives, policies, and recommendations stated within this plan are addressed to the best ability of the community.

### **Village of Howard Bicycle, Pedestrian, and In-Line Skate Plan**

The Village of Howard Bicycle, Pedestrian and In-Line Skate Plan was adopted by the Village Board on June 14, 1999. The mission and goal of the plan is to create safe, enjoyable recreation and transportation corridors for youth and families to travel throughout the Village of Howard. These corridors should be readily accessible to walkers, runners, bicyclists, and in-line skaters, with efforts to connect residential neighborhoods to schools, churches, parks, and shopping areas, and follow aesthetic environmental and utility corridors. The plan also intends to recognize that the cost of implementation is within the existing tax structure, to develop a cost-effective multi-modal facility, and to identify cost-effective links of existing and future centers so Howard can be an enjoyable and safe place to bike and walk.

The intent of the Village of Howard Bicycle, Pedestrian, and In-Line Skate Plan is to present long-range recommendations which the public and private sector can utilize as a guide when making development and infrastructure decisions. The plan is to be considered a supplement to the Brown County Bicycle and Pedestrian Plan and the Howard Outdoor Recreation and Open Space Plan. The plan recommends specific routes that provide transportation and recreation corridors to major destinations within the Village.

### **Wisconsin Department of Natural Resources State Recreational Trails Network Plan**

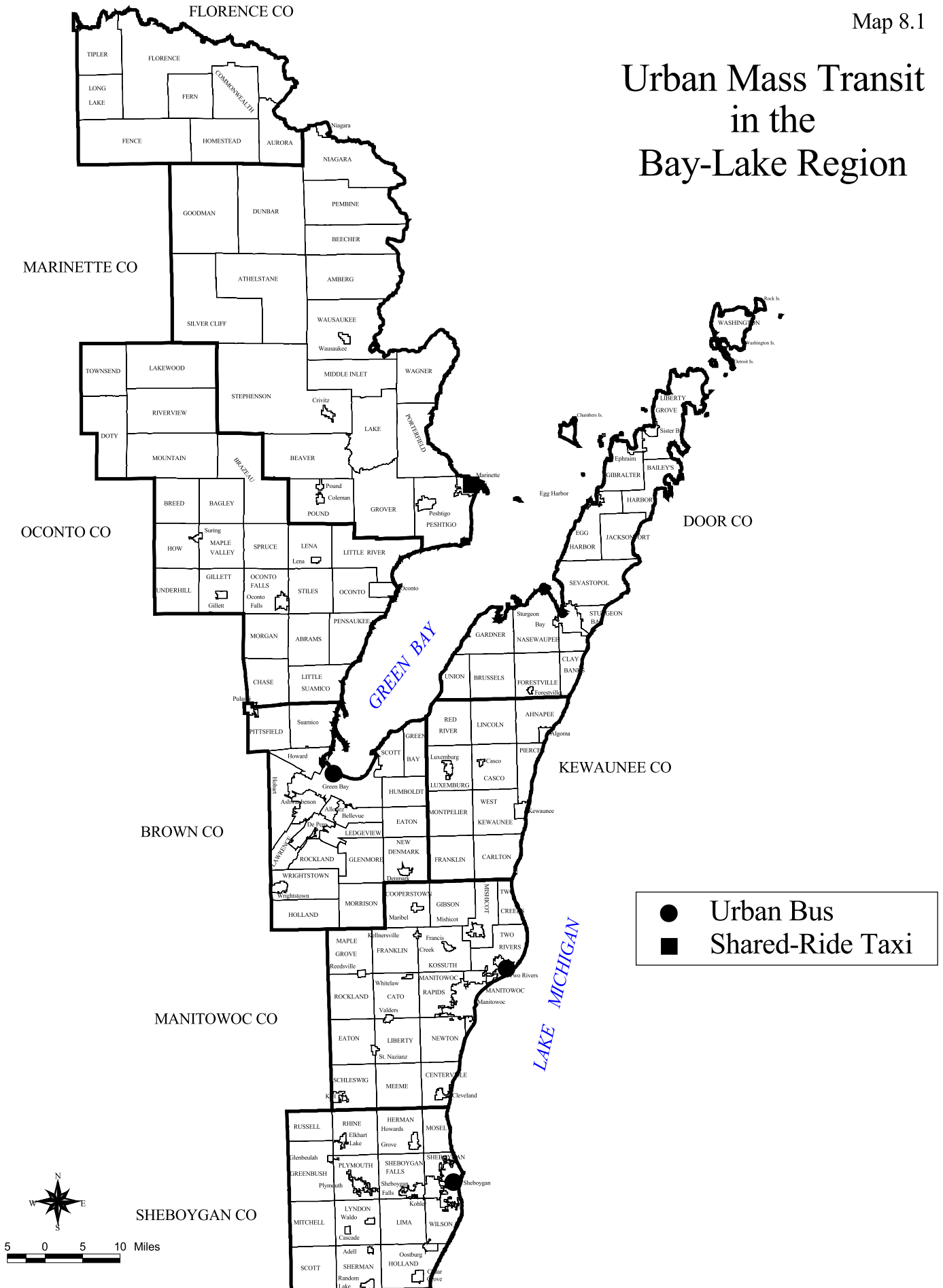
The Wisconsin Department of Natural Resources State Trails Network Plan identifies a statewide network of trails, and provides guidance to the DNR for effectively utilizing its limited funding for land acquisition and development. The network of trails is mainly comprised of rail-based trails, which occasionally use road or utility right-of-way connections. The plan, which was approved by the Natural Resources Board in January 2001, is an amendment to the *Wisconsin State Trails Strategic Plan*, and provides authorization for the DNR to pursue acquisition of any abandoned rail grade or other corridor identified in the plan. In addition, the State Trails Network Plan is also consistent with the Wisconsin Department of Transportation's Wisconsin State Bicycle Transportation Plan 2020.

The State Trails Network Plan identifies a series of potential trail corridors across Wisconsin, linking existing trails, public lands, natural features, and communities. The plan also identifies the rail corridors that the department may have an interest in, should they ever come up for abandonment. Some considerations in determining what should be included in the trail network are: the use of "natural features" corridors; proximity to metropolitan areas, for connecting these areas to a statewide network of trails; linkage to existing federal, state, and county trails; interstate trail connections (Illinois, Iowa, Minnesota, and Michigan); and providing long distance recreational trail opportunities.





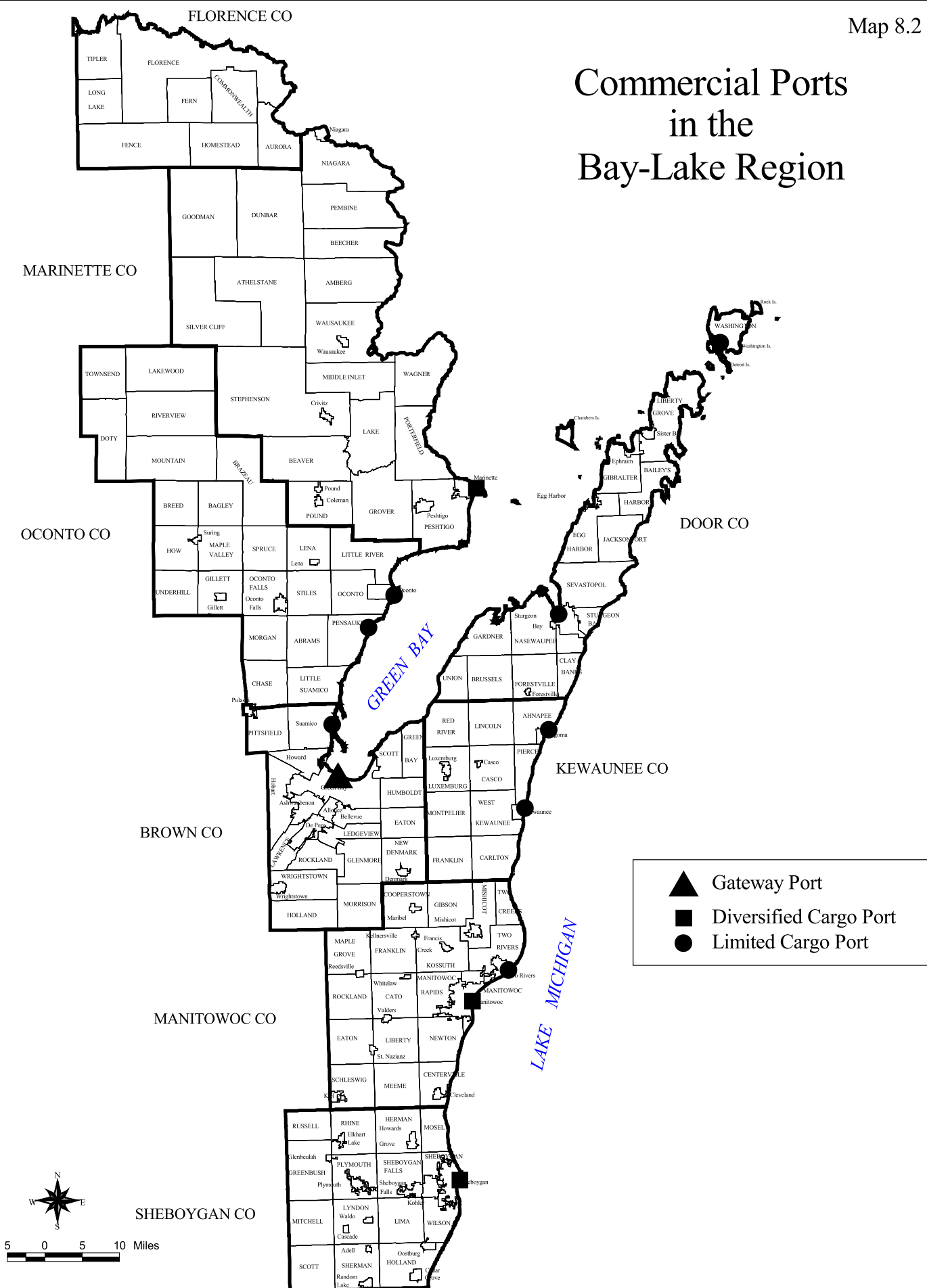
# Urban Mass Transit in the Bay-Lake Region



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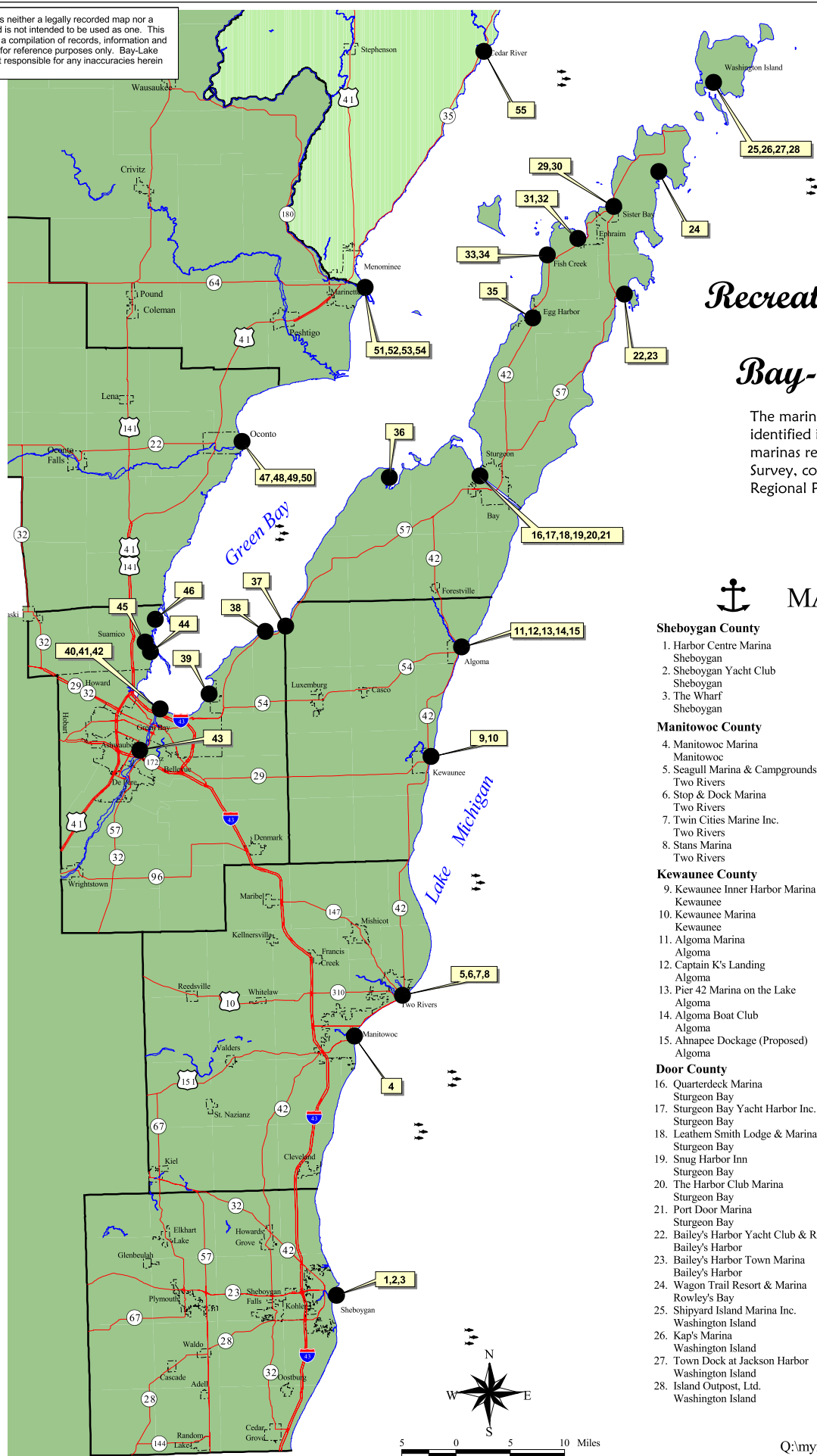
Source: WISDOT, 2002; Bay-Lake Regional Planning Commission, 2005.







This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only. Bay-Lake RPC is not responsible for any inaccuracies herein contained.



## Recreational Marinas in the Bay-Lake Region

The marinas delineated on this map and identified in the table represent those marinas responding to the 2002 Marina Survey, conducted by the Bay-Lake Regional Planning Commission.



### MARINAS



#### Sheboygan County

1. Harbor Centre Marina  
Sheboygan
2. Sheboygan Yacht Club  
Sheboygan
3. The Wharf  
Sheboygan

#### Manitowoc County

4. Manitowoc Marina  
Manitowoc
5. Seagull Marina & Campgrounds  
Two Rivers
6. Stop & Dock Marina  
Two Rivers
7. Twin Cities Marine Inc.  
Two Rivers
8. Stans Marina  
Two Rivers

#### Kewaunee County

9. Kewaunee Inner Harbor Marina  
Kewaunee
10. Kewaunee Marina  
Kewaunee
11. Algoma Marina  
Algoma
12. Captain K's Landing  
Algoma
13. Pier 42 Marina on the Lake  
Algoma
14. Algoma Boat Club  
Algoma
15. Ahnapee Dockage (Proposed)  
Algoma

#### Door County

16. Quarterdeck Marina  
Sturgeon Bay
17. Sturgeon Bay Yacht Harbor Inc.  
Sturgeon Bay
18. Leathem Smith Lodge & Marina  
Sturgeon Bay
19. Snug Harbor Inn  
Sturgeon Bay
20. The Harbor Club Marina  
Sturgeon Bay
21. Port Door Marina  
Sturgeon Bay
22. Bailey's Harbor Yacht Club & Resort  
Bailey's Harbor
23. Bailey's Harbor Town Marina  
Bailey's Harbor
24. Wagon Trail Resort & Marina  
Rowley's Bay
25. Shipyard Island Marina Inc.  
Washington Island
26. Kap's Marina  
Washington Island
27. Town Dock at Jackson Harbor  
Washington Island
28. Island Outpost, Ltd.  
Washington Island

#### Door County

29. Yacht Works Inc.  
Sister Bay
30. Sister Bay Public Dock  
Sister Bay
31. Eagle Harbor  
Ephraim
32. Ephraim Yacht Harbor  
Ephraim
33. Alibi Dock Marina  
Fish Creek
34. Fish Creek Municipal Dock  
Fish Creek
35. Egg Harbor Municipal Dock  
Egg Harbor
36. Wave Pointe  
Little Sturgeon Bay

#### Kewaunee County

37. All Seasons Marina  
Dyckesville

#### Brown County

38. Bayshore Co. Park Harbor of Refuge  
Green Bay
39. Eagles Nest Marina  
Green Bay
40. Green Bay Yachting Club  
Green Bay
41. Skippers Choice City Centre Marina  
Green Bay
42. South Bay Marina  
Green Bay
43. Allouez Yacht Harbor  
Green Bay
44. Shipyard Marine  
Suamico
45. Joe's Anchor Inn  
Suamico
46. Windjammer's Sailing Club  
Suamico

#### Oconto County

47. Harbor Cove  
Oconto
48. Oconto Yacht Club  
Oconto
49. Hi Seas Marina  
Oconto
50. Breakwater Harbor and Park  
Oconto

#### Marinette County

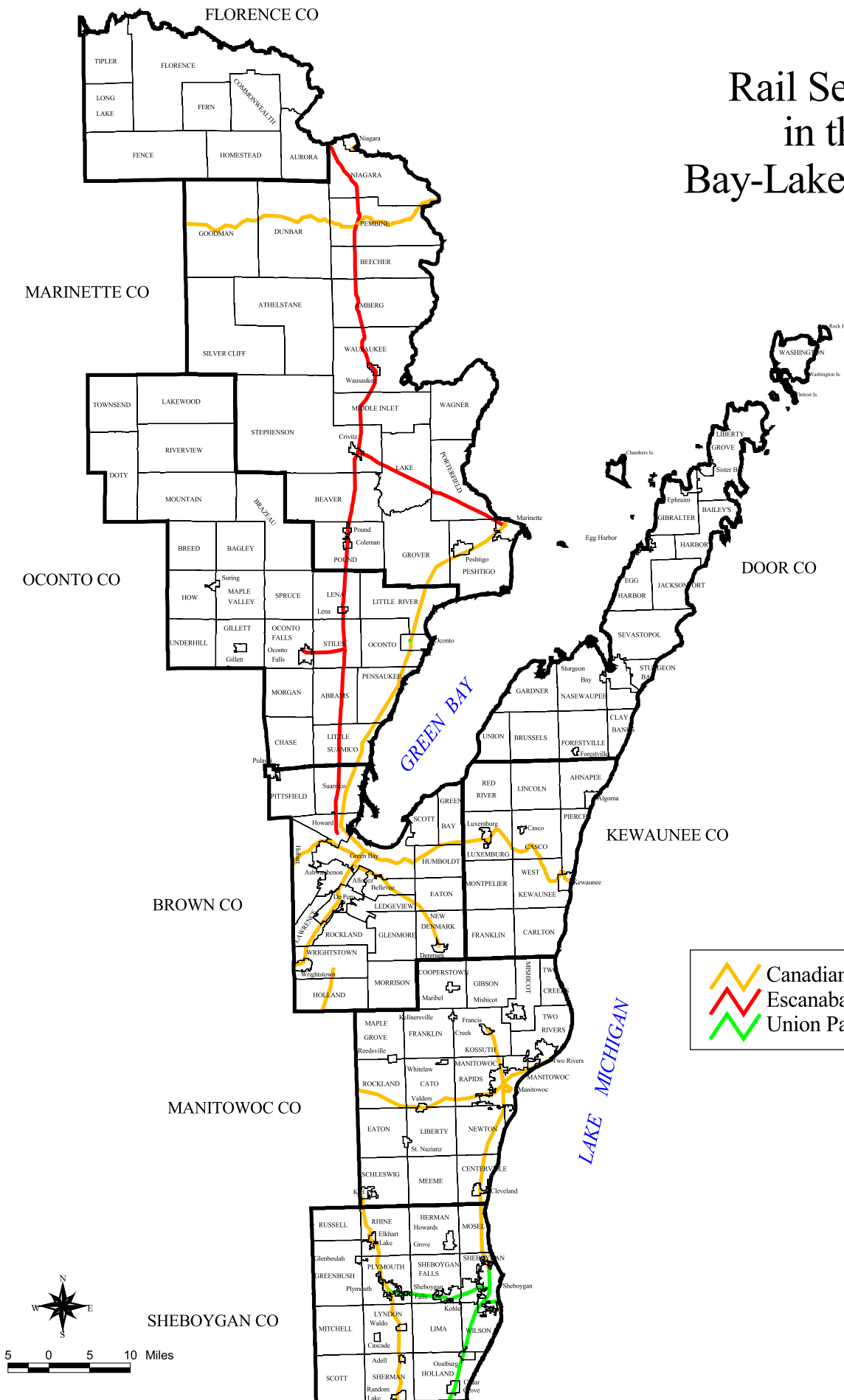
51. Nestegg Marina  
Marinette
52. Harbor Town Marine  
Marinette

#### Menominee, Michigan

53. Menominee Municipal Marina  
Menominee
54. M & M Yacht Club  
Menominee
55. Cedar River Harbor of Refuge  
Cedarville



# Rail Service in the Bay-Lake Region

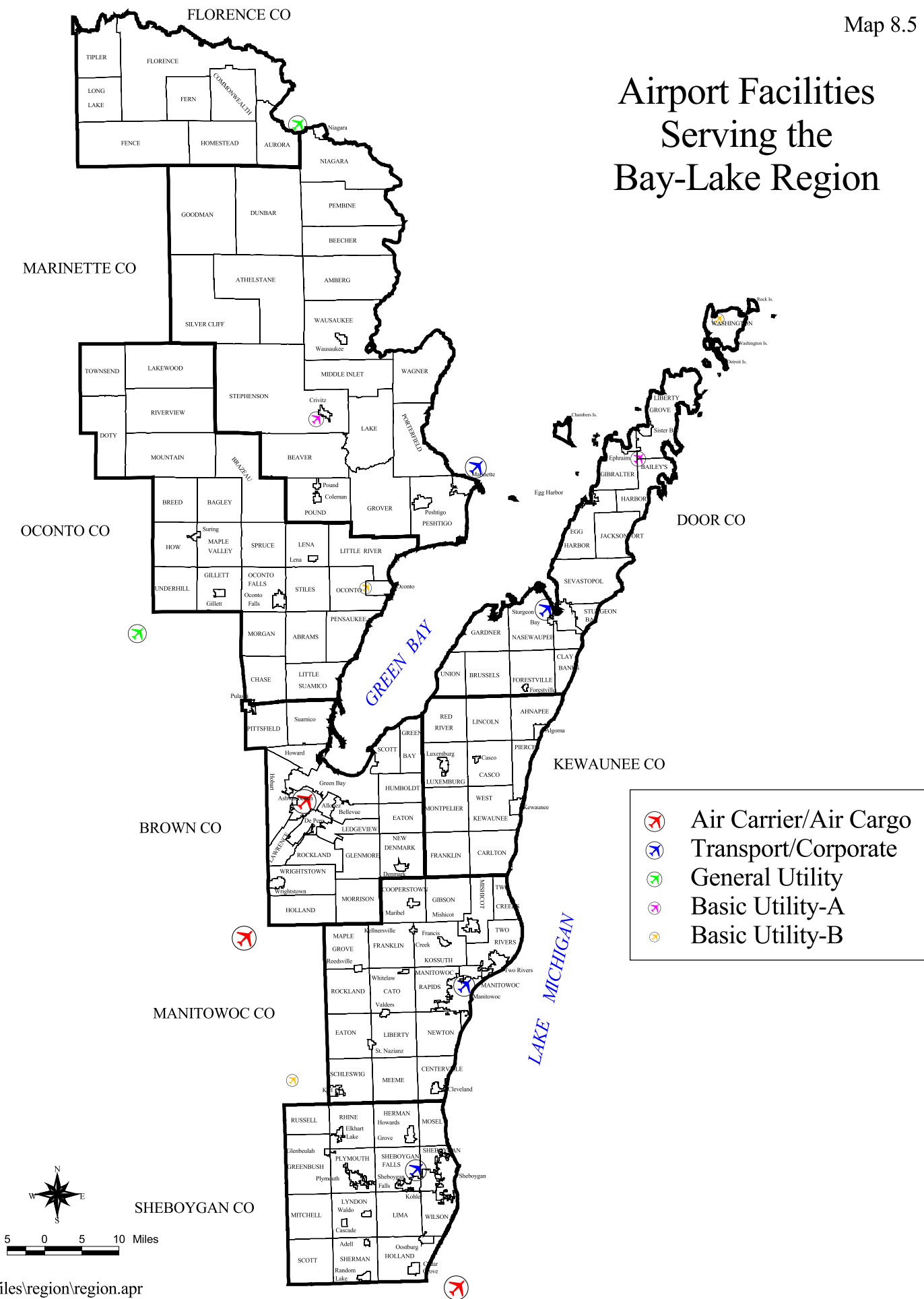


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Source: WISDOT, 2002; Bay-Lake Regional Planning Commission, 2005.

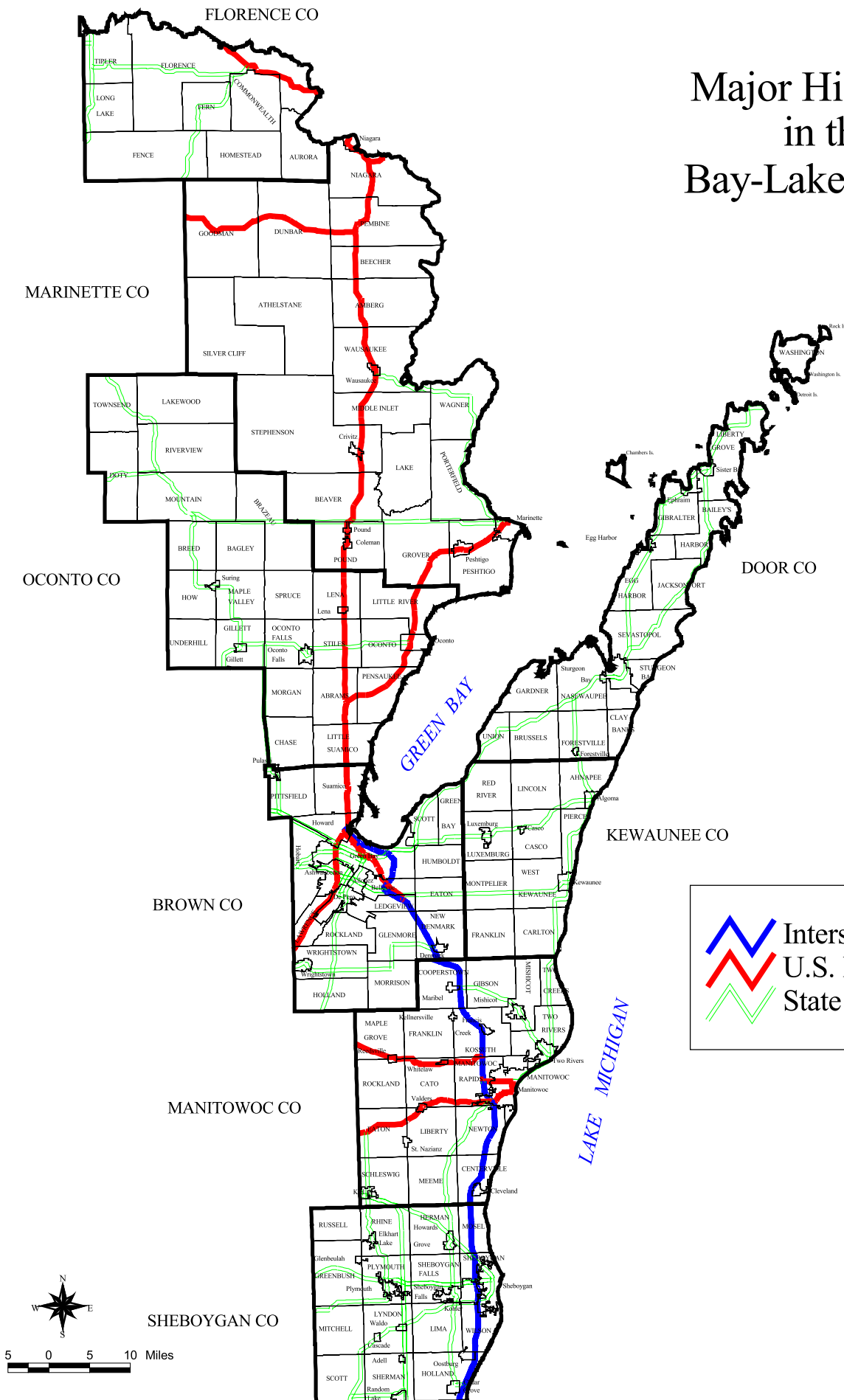








# Major Highways in the Bay-Lake Region



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Source: WISDOT, 2002; Bay-Lake Regional Planning Commission, 2005.



## **CHAPTER 9 - UTILITIES AND COMMUNITY FACILITIES**

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### **INTRODUCTION**

Utilities and community facilities are important components to promoting a healthy, safe environment for individuals to live, work and recreate. The level of services ranging from emergency services, to healthcare, to educational opportunities are all contributing factors to the attractiveness of a community and surrounding area. Other factors such as adequate sewer and water services, etc. can have a positive impact on the economic development of a community and the region.

This element of the Regional Master Plan inventories the location, use and capacity of the existing utilities and community facilities that serve the Bay-Lake Region. The existing conditions of these facilities are evaluated to determine deficiencies and ensure their adequacy to meet present and future developmental needs within the region.

### **UTILITIES AND COMMUNITY FACILITIES GOAL**

**Goal 1:** To advocate for quality utilities and community facilities and services that are planned in an efficient, coordinated and cost-effective manner for residents of the Region.

### **BOARDS AND COMMITTEES INVENTORY**

#### **Bay-Lake Regional Planning Commission**

The Bay-Lake Regional Planning Commission is a public agency that was established to provide planning service on area-wide issues, to represent local interests on state and federal planning program activities, and to provide local planning assistance to communities in the Bay-Lake Region. The Bay-Lake Regional Planning Commission covers the counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto and Sheboygan in northeastern Wisconsin.

#### **Bay-Lake Regional Planning Commission Executive Committee**

The Bay-Lake Regional Planning Commission Executive Committee, which is comprised of one representative from each county within the Bay-Lake Region, is authorized to prepare or amend the master plan and recommend the adoption of the adoption or amendment to the Commission. The Commission's by-laws require that any element of the Commission Master Plan must be approved by a two-thirds vote of the entire Commission.

#### **Regional Technical Advisory Committee (TAC)**

The Bay-Lake Regional Planning Commission designates its Regional Technical Advisory Committee (TAC) as the primary technical review body for the development of the Regional Master Plan. The TAC is comprised of county and community planners and administrators, state and federal agency staff (U.S. Army Corps of Engineers, WDNR, WisDOT, U.S. Fish and Wildlife Service, etc.), and county UW Extension staff.

The TAC meets on a quarterly basis to exchange information about ongoing planning activities, to discuss issues related to community development and to review the Commission's ongoing projects and programs.

## **PUBLIC UTILITIES INVENTORY AND ANALYSIS**

### **Electric Service**

Electric power in the Bay-Lake Region is provided by private, cooperative and municipal utility companies. The private utility companies generate and/or distribute the majority of the power in northeastern Wisconsin and portions of Upper Michigan, servicing residential, farm, commercial and industrial customers. The private utilities within the region include; We Energies, Wisconsin Public Service Corporation (WPS), Alliant-Wisconsin Power and Light and Madison Gas and Electric. In addition, independent power producers such as Calpine Corporation continue to develop power generating facilities like those in nearby Kaukauna and Fond du Lac that will produce enough energy to meet the future needs of northeast Wisconsin. Calpine is one of the largest generators of electricity in the United States and sells power to all of Wisconsin's major utilities.

The Oconto Electric Cooperative (OEC) and Washington Island Electric Cooperative are the two cooperative utility companies generating power in the Bay-Lake Region. The OEC provides power to rural Oconto, Marinette and Shawano counties and part of the Menominee Reservation. The Washington Island Electric Cooperative provides power to the Town of Washington in Door County.

The Bay-Lake Region also has several municipal utilities that generate and/or distribute power. Manitowoc Public Utilities, Two Rivers Water and Light and Kiel Utilities in Manitowoc County, Algoma Utility in Kewaunee County, Florence Water and Light in Florence County, Oconto Falls Water and Light in Oconto County, and Sturgeon Bay Utilities in Door County. Each of these utilities are members of the Municipal Electric Utilities of Wisconsin (MEUW). The MEUW is the state association representing the 82 locally-owned, locally-controlled municipal electric utilities in Wisconsin. All are operated on a not-for-profit basis, and overseen by a local governing board composed of local citizens and elected officials.

Wisconsin Public Power Inc. (WPPI) is a statewide power company owned by 37 municipalities that provides electric utilities to its members/owners. These community-owned utilities purchase all of their electric necessities from WPPI and supply power to their homes and businesses. WPPI member communities in the Bay-Lake Region include the cities of Oconto Falls, Sturgeon Bay, Algoma, Two Rivers, Plymouth and the community of Florence.

Several Bay-Lake RPC communities are also members of Great Lakes Utility (GLU). The purpose of GLU is to give its member communities the flexibility to arrange for their own power supply as the electric market evolves. The GLU organization deals with a variety of activities such as coordination of bulk power programs, the purchasing and selling of power to and from its members and others, and ownership of power facilities. The cities of Kiel, Manitowoc, Oconto Falls and Plymouth are four of the ten initial members of the GLU organization.

### **Natural Gas**

The major natural gas pipeline corridors within the Bay-Lake Region are owned by El Paso Corporation/ANR Pipeline Company (ANR). ANR controls approximately 70 percent of the Wisconsin natural gas market. The Bay-Lake Region contains four major ANR pipeline corridors that transport the natural gas supply throughout the area. The first corridor runs north along the west side of Lake Winnebago, enters Brown County from the southwest and connects

with the City of Green Bay. The second pipeline corridor runs north along the western edge of the Bay-Lake Region, enters Oconto County and travels to the Town of Goodman in northwest Marinette County. The third corridor runs northeast through Sheboygan County and continues to Two Rivers in Manitowoc County. A fourth major pipeline corridor in the region enters southern Oconto County from the west and continues on a northeastern route through Oconto and Marinette counties to Menominee, Michigan. Smaller feeder lines from the major pipelines supply natural gas to the various local distributors within the region including Wisconsin Public Service and We Energies. The Florence Utility Commission also provides natural gas to portions of Florence County.

As our country's fastest-growing major energy source, natural gas usage is expected to increase dramatically over the next few years, as more homes, businesses and new generation plants will be fueled almost exclusively by natural gas. In the eastern part of the state sufficient capacity exists in the system to supply future demands.

## **Power Generation Facilities and Transmission Lines**

### **Power Generation Facilities**

There are currently 30 power generating sites within the Bay-Lake Region. This includes seven fossil fuel (oil, gas and coal), two nuclear, along with several renewable energy facilities. The majority of the power (52 percent) in the region is generated by the fossil fuel facilities, the two nuclear facilities generate 47 percent of the power and the remainder of the power is generated by other sources (hydroelectric, wind, etc.). Table 9.1 lists the top power generating facilities in the Bay-Lake Region and Map 9.1 illustrates the location of these facilities within the region.

Table 9.1: Top Power Generation Facilities in the Bay-Lake Region

Facility Name	Location (County)	Power Source(s)	Capacity (MW)
Point Beach Nuclear Power Plant	Manitowoc	Uranium	1,092
Edgewater Generating Station	Sheboygan	Coal	770
Kewaunee Power Station	Kewaunee	Uranium	537
Pulliam Power Plant	Brown	Coal/Natural Gas	456
West Marinette Power Plant	Marinette	Natural Gas	251
De Pere Power Plant	Brown	Natural Gas	180
Manitowoc Power Plant	Manitowoc	Coal/Natural Gas	114

Source: Public Service Commission of Wisconsin, 2003.

Several additional power generating facilities are being constructed or considered in and adjacent to the Bay-Lake Region. With an increasing population and continued growth of the area, these facilities will help meet Northeastern Wisconsin's future energy needs. The future facilities include:

- Sheboygan Falls Energy Facility is 300 megawatts (MW) Natural Gas Power Plant that is scheduled to go on-line in June 2005. If needed, the facility could expand to 530-megawatts (MW) of generation.
- Fox Energy Center is located in the Town of Kaukauna immediately west of the Brown County border. This natural gas-fired facility will be able to generate 560 (MW) by December 2005.

- Fond du Lac Energy Center (Proposed) would be a natural gas-fired facility capable of producing 500 MW of power.

### ***Renewable Energy Sources***

Renewable Energy Sources are sources that can be replenished in a short period of time. Such sources include water, solar, wind and biomass (e.g., wood, manure, and other agricultural byproducts). Table 9.2 lists several of the renewable sources in the Bay-Lake Region.

Table 9.2: Renewable Energy Sources, Bay-Lake Region.

Facilities	Location (County)	Power Source	Total Capacity (MW)
Hydroelectric Facilities (17 Facilities)	primarily Florence, Oconto and Marinette	Water	31.0
Lincoln Energy Facility	Kewaunee County	Wind (14 Units)	9.0
Red River Energy Facility	Kewaunee County	Wind (17 Units)	11.0
Glenmore Energy Facility	Brown County	Wind (2 Units)	1.2

Source: Public Service Commission of Wisconsin, 2003.

Future renewable energy sources in the Bay-Lake Region include:

- Twin Creeks Wind Farm (49 units) in Manitowoc County (towns of Two Rivers, Two Creeks and Mishicot) would have a total capacity of 98 MW.
- Two wind farms (proposed) in Manitowoc County of eight to 10 units each.

The aforementioned existing and future renewable energies in the Bay-Lake Region will assist in meeting Wisconsin's Renewable Portfolio Standard (RPS) (Wisconsin State Statute 196.378(2)(a)). RPS's have emerged as an effective and popular tool for promoting a cleaner, renewable power supply. An RPS requires electric utilities to gradually increase the amount of renewable energy resources such as wind, solar, and bioenergy in their electricity supplies. The statute requires each electric provider to supply its retail customers a specified percentage of its total retail electric sales from renewable energy. Under the law, utilities are required to receive 2.2 percent of their retail electric sales from renewable energy by 2011.

With improving technologies the state's RPS standards can also be achieved through additional renewable energy sources that take advantage of waste materials and Wisconsin's agriculture industry. The following are several technologies that have been developed and continue to be researched regarding financials and efficiency:

- Anaerobic manure digestion is process by which organic matter is decomposed by bacteria in the absence of oxygen, producing methane and other byproducts. The complete mixture of this gas is called biogas.
- Biomass which is wood and agricultural crops that can be burned or converted to gas for power generation.
- Landfill gas which is methane gas that forms in landfills from the decay of organic materials. The gas can be collected and used for power generation.

Overall, Wisconsin utilities are currently in compliance with the RPS standard, and should meet the projected requirements through 2009 with no additional renewable capacity. In fact, the



Wisconsin RPS allows renewable generation in excess of the requirement in any given year to be “banked.” Because of banking in the early years, Wisconsin utilities had enough renewable generation in 2002 to meet their requirements for renewable power through 2011 without constructing any new renewable capacity. However, the state’s task force on Energy Efficiency and Renewables would like to see the RPS goals increase to 10 percent by 2015 which may result in a need for additional renewable energy facilities.

## **Transmission Lines**

The Bay-Lake Region’s high voltage electric transmission systems are owned and operated by the American Transmission Company (ATC). The ATC utilizes the concept of planning zones in its assessments of the transmission system within its service territory. Five planning zones have been defined representing distinct areas in a large portion of Wisconsin and Michigan’s Upper Peninsula. The Bay-Lake Region is within zone 2 (Michigan's Upper Peninsula and Northern Wisconsin) and zone 4 (Northeast Wisconsin).

The major transmission lines within the region include: four 345 kilovolts (kV) lines that originate from the Kewaunee and Point Beach nuclear facilities. These lines travel through Brown, Kewaunee, Manitowoc, and Sheboygan counties. Another two 345 kV lines traverses from the Edgewater Power Plant near Sheboygan to the South Fond du Lac Power Plant. In addition, another 345 kV line travels from the Morgan Substation in Oconto, north to the Plains Plant located in Dickenson County in the Upper Peninsula. Smaller electric transmission lines (69 kV to 138 kV) also traverse throughout the area, extending to areas north, south and west of the Bay-Lake Region (Map 9.1).

According to the ATC’s 10-year Transmission System Assessment, several transmission system performance issues exist within the two zones that cover the Bay-Lake Region:

### **Zone 2**

(Brown, Door, Kewaunee, Manitowoc, southern Marinette, Oconto and Sheboygan)

- Insufficient transformer capacity
- Limited transfer capability to and from Michigan’s Upper Peninsula
- Stability response of Kewaunee and Point Beach nuclear plants
- Aging facilities in poor condition
- Heavily loaded facilities in the Green Bay and Fox Valley

### **Zone 4**

(Florence & northern Marinette)

- Generator and voltage instability
- Overloaded lines and equipment
- Limited ability to import or export power
- Low system voltages

One major concern regarding transmission of electricity is the rising problem of low voltages in northern Door County. ATC proposes increasing the voltage to 138 kV along an existing 69 kV line in Door County, and adding a second 69 kV line in the area to also build redundancy into the system. For information on additional projects in and around the Bay-Lake Region contact American Transmission Company (<http://www.atcllc.com>).

## **Public Water Systems**

The Bay-Lake Region presently has 60 public water facilities serving residential, commercial and industrial users of the area. Attachment A and Map 9.2 identify the public water systems in the Bay-Lake Region. The majority of the facilities are located in cities and villages, with a small number found in the towns where dense development exists. Residents in the region not serviced by public systems have individual or shared wells that are owned and maintained by the property owner(s).

The region's water supply consists of either groundwater or surface water. The cities of Green Bay, Manitowoc, Two Rivers, Marinette and Sheboygan utilize surface water for their public water supply needs, whereas the other municipal systems in the region rely on groundwater as their water source. According to the WDNR, approximately 75 percent of Wisconsin's residents and 97 percent of Wisconsin's communities rely on groundwater to meet their water supply needs. Groundwater is also the primary source of water for irrigated agriculture and is very important for industry. Streams, lakes, and wetlands are fed by groundwater; thus fish and other wildlife are as dependent on abundant, clean groundwater as people.

The Bay-Lake Region's groundwater reserves are held in four principal aquifers:

- Sand and gravel aquifer
- Eastern dolomite aquifer
- Sandstone and dolomite aquifer
- Crystalline bedrock aquifer

In the Bay-Lake Region, most users of substantial quantities of groundwater tap into the sandstone aquifer.

Groundwater levels in shallow aquifers tend to fluctuate at greater frequency and extent than do groundwater levels in deeper aquifers and confined aquifers because recharge reaches the shallow aquifers more quickly. In spring, groundwater levels rise rapidly due to recharge from snow melt and rain. In summer, groundwater levels in the aquifers gradually decline because of uptake of infiltrating water by plants, decreased rainfall, increased evaporation, and groundwater discharge to lakes, streams and wetlands. Groundwater levels often rise in the fall due to reduced evaporation and increased precipitation. A decline during winter occurs because precipitation is stored on the surface as snow, frozen ground prevents infiltration and groundwater is still being lost by discharge to streams, lakes and wetlands.

According to the WDNR, the water levels in the aquifers continue to decline due to the increasing water demands of a growing population. This is especially true in the Green Bay area where the growing suburbs draw all of their water from the aquifers. Several issues as a result of declining groundwater levels may include increased pumping costs due to the need to pump water from a greater depth, depletion of an aquifer until it no longer can meet water supply needs, dry up nearby shallow wells (e.g., household wells), decrease natural groundwater discharge to lakes, streams, and wetlands that cause surface waters to recharge a depleted aquifer.

Groundwater quality concerns include hardness, high iron concentrations, contamination from surface sources etc. In addition, most municipal wells in the region do not, and will not be able to comply with the Environmental Protection Agency's (EPA) water quality standards for

radium by the December 2006 deadline. In order to meet federal water quality standards of five picocuries per liter, communities would endure substantial costs to not only treat the water, but also the added operation and maintenance costs associated with treatment for radium.

One way to ensure communities have a long-term source of clean water is to have wellhead protection programs in place. Wellhead protection is a preventive program designed to protect public water supply wells. The goal of wellhead protection is to prevent contaminants from entering public water supply wells by managing the land that contributes water to the wells. Presently, 21 communities in the Bay-Lake Region have wellhead protection programs in place (Attachment B).

Each community's water system should be sufficient to meet the everyday demands of the customer in addition to demands for higher volumes, as would be the case for fire protection. Each water system is suggested to have at least two developed water supply sources. Eleven of the region's systems do not meet this recommended standard. Multiple wells also help provide backup in the event of well malfunctions, contamination, etc. in order to provide continuous water service. Communities with only one well can also be vulnerable to water shortages. The distribution piping for water systems should also be sized for normal and high demand situations and should be looped with interconnections to provide good circulation of water.

Future expansion needs for each community's public water service areas will be dependant upon storage capacity and density of homes that could be accommodated using the existing systems of the community. As communities continue to develop, long-term drinking water supply and quality become more of an issue. With aquifer levels lessening, high water consumption demands, new water quality standards and the high price of treating drinking water, many municipalities are considering switching to surface water rather than groundwater as a primary water source.

- The City of Sheboygan Falls and the Village of Kohler currently purchase Lake Michigan water from the City of Sheboygan.
- In May 2004, the Village of Ashwaubenon decided to purchase Lake Michigan water from the City of Green Bay. The village is expected to receive water by summer 2006.
- In July of 2004, members of the Central Brown County Water Authority (villages of Allouez, Bellevue and Howard, the City of De Pere, and the towns of Lawrence and Ledgeview) signed a deal to purchase Lake Michigan water from the City of Manitowoc. The suburbs are expected to receive water by late 2006. As a 30-mile water pipeline is constructed from Manitowoc to the suburbs of Green Bay, communities near the pipeline corridor may also have the opportunity to connect to the system. The villages of Francis Creek and Denmark have agreed to hook into the pipeline. These and other potential connections could also result in sprawl development in the area.

### **Sanitary Sewer and Wastewater Treatment**

Wastewater in the urbanized and several developed rural areas of the Bay-Lake Region is treated by public and private wastewater treatment facilities. The sanitary "sewerage systems" consist of facilities for collecting, pumping, treating, and disposing of sewage discharged from the sanitary amenities of dwellings, office buildings, factories, etc. Private on-site wastewater treatment systems (POWTS), also known as "septic systems", provide waste disposal for the majority of the rural residents in the region.

According to the WDNR, the Bay-Lake Region currently contains over 70 public and private wastewater treatment facilities serving the area. Attachment C and Map 9.3 identify the public wastewater systems in the Bay-Lake Region. The majority of the sanitary sewer facilities operate as single municipality systems. However, public wastewater systems can also operate as a regional system such as sanitary districts or metropolitan sewerage districts (MSD). Green Bay Metropolitan Sewerage District is the only MSD within the region. The privately owned wastewater treatment facilities in the region consist of religious, health, educational and institutional facilities, Lake Districts, etc.

Most of the regions treatment facilities function adequately in terms of effluent quality and meet their permitted levels. The majority of the larger communities use an activated sludge process which involves the mechanical aeration of wastewater to speed bacterial consumption of the waste material. Other systems utilize aerated lagoons and stabilization ponds to treat waste. Phragmites, or Common Reed, is also used in several areas to treat domestic and industrial effluents. These systems carry oxygen through the plants stems into their root systems creating a natural purifying process where bacteria are created to oxidize impurities in the wastewater. This process allows chemicals to be naturally degraded into harmless components that can be released safely back into the environment. It should be noted that Phragmites is not indigenous to Wisconsin and therefore should only be used under controlled circumstances.

The WDNR designed a rating system called a Compliance Maintenance Annual Report (CMAR) that is a self-evaluation annual report used by municipal wastewater treatment facilities in Wisconsin to assess a treatment plant's performance and wastewater management activities. This diagnostic annual report helps ensure ongoing compliance with Wisconsin Pollutant Discharge Elimination System (WPDES) conditions and effluent standards. The CMAR rates various components of wastewater treatment and gives an overall rating ranging from 0 to over 540 points to a facility. The annual report has three range categories for determining recommendations for the treatment plant: voluntary range (0-70 points), departmental recommendation range (71-120) and departmental action range (greater than or equal to 121). According to the WDNR 2002 CMAR report, the average score in the Bay-Lake Region was 40. The Town of Holland Sanitary District in Brown County had a low score of 1 and the Gibbsville Sanitary District in Sheboygan County had the highest score with 194. Overall, based on the WDNR 2002 CMAR report the majority of the sanitary facilities in the region are adequate.

In an effort to anticipate future needs for wastewater treatment and protect from adverse water quality impacts, many municipalities have developed sewer service area plans (SSA). The SSA plans use 20-year population projections, local density standards and an inventory of areas identified as environmentally sensitive for projecting and evaluating wastewater treatment and collection system needs for 20 years into the future. Sewer service area plans are developed for individual communities and for multiple communities served jointly by one wastewater treatment plant. There are currently seven Sewer Service Area (SSA) Plans in place for wastewater treatment facilities within the region (see Map 9.3). The WDNR is responsible for working with regional planning commissions, county governments, municipalities, townships and the public to develop sewer service area plans. The Bay-Lake Regional Planning Commission administers sewer service areas for Manitowoc/Two Rivers urban area, City of Marinette urban area, City of Sheboygan urban area and Village of Luxemburg. Bay-Lake also acts in an advisory capacity to WDNR and provides conformance reviews, recommendations on various SSA plan updates, amendments, facilities plans, and sewer extensions.

The majority of the public wastewater systems are considered adequate; however some areas of the region may have to either expand or improve their respective system's capabilities to meet future demands. Many communities continue to plan (e.g., SSA plans) for the future of their wastewater systems in order to meet future growth and ensure the expansion of sewerage systems is done in a cost-effective and environmentally sound manner.

Most rural residents in the region utilize private on-site wastewater treatment systems (POWTS) for waste disposal. POWTS are treatment systems that discharge to groundwater through a subsurface infiltration system. POWTS in the Bay-Lake Region are primarily designed for each household based on the site's soil characteristics and capabilities.

The on-site systems primarily relied on drain-fields or mounds that spread waste without affecting ground water. Success of these systems was based on the depth and permeability of the soils where they were installed. Due to soil conditions, many acres of land in the region were considered unsuitable for development according to the state's former plumbing code. However, with new technologies, more private sewage systems are allowed under the revised COMM 83 health and safety code where they were not permitted previously. COMM 83 does not dictate the selection of certain POWTS, rather it sets parameters, options, prohibitions and limitations for the design of POWTS. The code allows the use of soil absorption systems on sites with at least six inches of suitable native soil, instead of the minimum 36 inches of soil required by the previous plumbing code. The revised code gives property owners the opportunity and flexibility to meet environmental performance standards with several treatment technologies. Housing and population density will likely increase due to the revised COMM 83 code. This in turn increases the need for land use planning and land use controls to address the potential impacts on the environment associated with increased development.

As the rural portions of the region experience more development, the use of shared on-site wastewater treatment systems should be explored. Shared wastewater systems allow for the consolidation of development and land resources. These shared systems provide a space-saving solution to wastewater treatment that is appropriate for sites with insufficient permeable soil or other geological or environmental limitations. Since the bulk of the shared system is confined to one area, residential construction in new subdivisions can be consolidated, providing more open area and common space. As a result, houses can be built on land with non-permeable soil, such as rock and clay, and the drainfield for the shared wastewater system(s) can be located on land that has permeable soil. These systems are applicable for projects ranging from a group of two homes to entire communities.

Communities should also consider examining the reuse and recycling of water in an effort to maintain a quality water supply. Recycled water is highly treated wastewater, which is then pumped to farms for irrigation, parks, golf courses, businesses and homes for reuse. It is not intended for drinking or personal use. Using recycled water is beneficial from an environmental and economic sense.

## **Storm Sewer System**

The storm sewer systems found in the Bay-Lake Region consist of curbed streets, gutters and a variety of storm pipeline in the urbanized areas, whereas the stormwater primarily drains through a series of ditches and culverts in virtually all rural areas of the region. The primary purpose of the storm sewer system is to drain excess rainfall, prevent flooding and provide drainage for roads and adjacent properties. From a regional standpoint, stormwater management in the Lake Michigan Basin has gained more attention with regards to water quality issues and flooding.

All development, regardless of location, how large or small, has an impact on the stormwater drainage system. As communities continue to grow, each development ultimately alters the natural infiltration capability of land through the creation of surfaces that do not allow the water to penetrate into the ground (e.g., rooftops, driveways, sidewalks, streets and parking lots). The stormwater and snowmelt that run off these impervious areas are higher in velocity, volume, temperature and discharge polluted runoff directly into nearby lakes, rivers, streams and groundwater without the benefit of wastewater treatment or filtration by soil or vegetation. According to studies conducted by the Center for Watershed Protection, land uses draining to a stream with greater than 10 percent impervious cover within a watershed can begin to deteriorate a stream. An area of medium density (e.g., anywhere from 25 percent to nearly 60 percent impervious cover) can permanently degrade stream quality. Also, in a study of 134 sites on 103 Wisconsin streams, researchers found that levels of urbanization as low as 10 to 20 percent were associated with severe impacts on the natural functions of the streams.

Other major sources that impact stormwater drainage include, but are not limited to, construction sites and fertilizers. Most construction sites deliver high sediment loads, out of proportion to their land area that can be washed away causing sedimentation in nearby waters. The phosphorus and nitrogen in fertilizers that are spread on many farm fields and lawns are essential for plant and animal growth. However, if the fertilizers exceed the plants needs, storm waters may wash excess fertilizer into nearby water features, causing heavy plant and algae growth. The runoff from construction sites and fertilizers results in negative impacts on the water features and fish habitat and can also reduce the recreational use of water features.

Overall, although storm sewer systems are efficient at dispersing water to avoid flooding, traditionally they have not included treatment of the water. This polluted storm water can destroy fish and their habitat, degrade drinking water quality and clog streams with sediment. As a result, in October 2002, the state established Runoff Management Administrative Rules to address the control of polluted runoff from urban and rural land use activities. These administrative rules establish a variety of best management practices, performance standards, regulations, permit issuance, etc. that farms, cities and construction sites are required follow to reduce polluted runoff. These rules also identify financial assistance available to eligible applicants to assist with the control of non-point sources of stormwater runoff.

The following are the eight rules written by the WDNR along with one rule by the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP):

- Priority Watershed and Priority Lake Program (NR 120)
- Runoff Management (Performance Standards and Prohibitions) (NR 151)
- Model Ordinances for Construction Site Erosion Control and Post-Construction Storm Water Management (NR 152)
- Targeted Runoff Management Grant Program (NR 153)
- Best Management Practices and Cost- Share Conditions (NR 154)
- Urban Nonpoint Source Water Pollution Abatement and Storm Water Management Grant Program (NR 155)
- Storm Water Discharge Permits (NR 216)
- Animal Feeding Operations (NR 243)
- Soil and Water Resource Management Program (ATCP 50)

In addition to the administrative rules and other programs, added regional and local bodies are available to manage stormwater runoff. Brown, Oconto and Sheboygan Counties currently contain drainage districts. Drainage districts are special purpose districts formed to drain land, primarily for agricultural purposes. Drainage districts control the flow of water in large areas of the state, and have a major impact on agriculture, land use and the environment. A county drainage board oversees all the drainage districts within each county; however the drainage districts in Sheboygan County are administered by Ozaukee County. DATCP helps county drainage boards comply with state drainage laws.

As the Bay-Lake Region continues to develop, stormwater management will take on more importance. More development equals greater runoff and increased susceptibility to water pollution. Bay-Lake communities will need to remain informed regarding changes to the Runoff Management Administrative Rules, in addition to working with their respective counties and neighboring jurisdictions to develop strategies that promote effective stormwater management through wise land use practices and planning.

## **COMMUNITY FACILITIES INVENTORY AND ASSESSMENT**

### **Solid Waste & Recycling Facilities**

The Wisconsin Solid Waste Management program whose major focus has been the regulation of existing solid waste landfills and assistance to local governments has been in existence for almost 30 years. In the early 1970's all operating solid waste facilities throughout the state were identified and licensed. Following this inventory, many of these facilities were ordered to close due to the fact that they were located in environmentally sensitive areas (i.e. within a floodplain, too close to navigable surface waters or within a wetland or other critical habitats). Additionally, several remaining landfills were monitored and had to close due to the fact that they were causing significant negative groundwater quality impacts.

In 1988, a revised set of solid waste rules was established based on data that was collected during the 1980's. These rules required that all landfills be designed with a 5-foot thick clay liner and a leachate collection system. In 1989, Wisconsin provided an incentive to municipalities to close their un-engineered landfills or dumps. Municipalities which closed their landfills between January 1, 1988 and October 1, 1992, were paid 50 percent of the cost of closure after deducting \$10 per capita. Wisconsin again revised its solid waste rules in 1996 to require all municipal landfills be designed with a composite liner and a composite final cover system.

The WDNR indicates that there are nine active landfills within the Bay-Lake Region. Four of the eight solid waste landfills are currently licensed by the WDNR (the Brown County East Landfill, the Kewaunee County Solid Waste Balefill and Compost Site, the Marinette – Oconto Landfill, and the Waste Management of Wisconsin - Ridgeview Recycling Disposal Facility in Manitowoc County). Three of the aforementioned landfill sites are county owned and operated, or jointly owned and operated by several counties (i.e., Marinette – Oconto Landfill), whereas the Washington Island Landfill is owned and operated by the town. The remaining five landfills are operated by private business. Of the five private landfills, four are used primarily for the disposal of manufacturing waste, whereas the Waste Management of Wisconsin - Ridgeview Recycling Disposal Facility (Manitowoc County) primarily handles municipal waste. According to the WDNR, the estimated life of the nine landfills ranges from 3 to 15 years.

The collection and disposal of solid waste in the region varies between the individual counties in the Bay-Lake Region. The counties of Door, Florence and Sheboygan have no solid waste program, therefore waste collection and disposal is the responsibility of the individual communities. Manitowoc County provides a site, through a contract with Waste Management - Ridgeview Landfill, as a disposal facility for solid waste for its municipalities. Waste Management also owns a waste transfer facility in Door County where the waste and recyclables are compacted and disposed of by private haulers. The remaining four counties of Brown, Kewaunee, Oconto and Marinette own and operate active landfills. The communities within the region have either curb side pickup or maintain drop-off sites. The waste is collected and disposed of either through private haulers or by the county/community public works department.

Recently, Brown County entered into a 25-year agreement with Winnebago and Outagamie counties to handle the disposal of solid waste and recycling within their respective counties. Consolidation of the recycling efforts began in 2002, while combining their landfill resources started in 2003.

Presently, recycling is regulated under Chapter 287 of the Wisconsin Statutes. Enacted in 1990, the Recycling Law effectively made recycling a mandatory activity by prohibiting certain materials from being disposed in landfills within the state. Since 1990, the Recycling Law has been the primary “driver” for municipal solid waste recycling programs in Wisconsin. The materials prohibited from landfill disposal (and specified for recycling) were selected based on toxicity or hazard to the environment (oil, lead acid batteries and appliances), ease of home management/potential hazard if landfilled (yard waste), and recyclables as raw material (cardboard, newspaper, magazines, office paper, bottles, cans, and tires). The landfill prohibitions were phased in beginning in 1991 (large appliances, car batteries, and waste oil), in 1993 (yard waste), and in 1995 (cardboard, aluminum, plastic and steel containers, combination steel and aluminum containers, foam polystyrene packaging, magazines, newspapers, office paper, and tires). The Recycling Law allows yard waste, waste oil, and waste tires to be burned with energy recovery. A Wisconsin community must have an approved recycling program in order to use a Wisconsin landfill for disposal of municipal solid waste generated in that community.

The Responsible Unit is the local government entity that is responsible for implementing recycling programs. Currently, the counties of Door, Florence and Oconto are the Responsible Units, while the individual municipalities within the remaining five counties of the Bay-Lake Region are the Responsible Units. Many of the communities in the region maintain drop-off sites



to provide residents a nearby facility to dispose of their recyclables. The recyclables are then taken to the nearest recycling center by private haulers or by the communities public works department.

Funds are available to provide financial assistance to local units of government to establish and operate effective recycling programs as per s. 287.23, Wis. Stats. "Responsible units" are eligible to apply on forms provided by the WDNR. Applications must be submitted by October 1 in the year preceding the year for which assistance is sought.

### **Telecommunications Facilities**

Telecommunications facilities in the Bay-Lake Region discussed in this section include broadcasting, two-way radio, fixed point microwave, commercial satellite, cellular radio, etc. Seven telephone companies; Frontier Communications, Verizon North, Inc., Northeast Communications, Inc., Niagara Telephone Company, Telephone & Data Systems, Inc. (TDS), SBC Communications, Inc. and Century Tel primarily provide local telephone service in the region. A number of smaller companies also have a presence in the region. Century Tel services a large portion of the region covering the majority of Oconto and Marinette counties, in addition to areas in Brown, Kewaunee and Door counties. Verizon North and SBC also service much of the Bay-Lake Region, covering a majority of Brown, Door, Kewaunee, Manitowoc and Sheboygan counties.

### **Cellular and Digital**

The nation-wide demand of cellular telephones and other cellular and digital telecommunication devices continues, and will persist into the future. However, many local concerns exist when such facilities, often hundreds of feet high, are constructed including: engineering, health, residential interference, property value impacts, wildlife impacts (i.e., migratory birds), etc. Communities should work together to discuss issues such as alternate structures (e.g., water towers), joint use of new and existing towers, and visual and other potential impacts of telecommunication facilities. Another area of concern is the number of "dead spots" that exist in the region for cellular phones. A dead spot is a local area where service is not available because the signal between the handset and the cell tower is blocked, usually by hilly terrain, excessive foliage or tall buildings. The bulk of this issue is found in the northern Bay-Lake Region which is hilly and heavily forested. Plans should be considered to resolve the issue of dead spots in the area.

Other telecommunication facilities offered in communities throughout the Bay-Lake region include cable television and special lines (i.e., Fiber Optics, DSL) for internet accessibility. In addition, many satellite providers are available for enhanced television viewing. Satellite providers can also offer broad band solutions to rural locations not serviced by DSL and Cable.

Overall, the telecommunication services in the region are adequate. Future improvement plans should include the continued expansion of telecommunications capabilities for emergency situations. Effective telecommunications facilitate timely recovery operations for serious disasters such as floods, terrorist attacks, etc. Quick response for disaster recovery operations requires immediate access to any public telecommunications capabilities at hand. These capabilities include not only the conventional telephone, but also cellular phones, Internet access via online terminals, wireless Personal Digital Assistants (PDAs), etc.

## **Cemeteries**

According to the publication, Cemetery Locations in Wisconsin, 1999, the Bay-Lake Region contains 501 public and private cemeteries. The document identifies each cemetery by name (if available), township and road location. Please note that some smaller cemeteries can be difficult to identify and may not be included in this inventory. According to the publication, Sheboygan County has the most cemeteries (109), whereas Florence County has the least (10). Many cemeteries in the region are closed to new burials, however several communities are expanding existing cemeteries or setting lands aside for future cemeteries. Overall, there is an adequate amount of cemetery space in the region.

In the future several of the private cemeteries that exist throughout the region may start lacking maintenance or be abandoned. If this occurs, Wisconsin Statute 157.115 requires the municipality in which the cemetery is located to take control, manage and maintain the cemetery if abandoned or not maintained for a period of five years.



## **Child Care Facilities**

The number of families needing child care is a significant consideration for families and employers alike, since it is becoming the norm that both parents are part of the workforce and more families are headed by a single parent. Within the Bay-Lake Region there are 434 child care facilities with a total capacity of 14,350. Table 9.3 identifies information on the number of regulated child care providers and their capacity by county. These figures are for licensed or certified child care providers only. The majority of the child care facilities are classified as family (up to 8 enrolled) and group (9 or more enrolled) that operate full-time, first shift (6 A.M. to 6 P.M.) hours. Information detailing each childcare facility's classification, hours, days of operation and capacity is available through the Wisconsin Department of Health and Family Services. However, information detailing how close to capacity each of the facilities/providers is not identified.

The Wisconsin Child Care Resource and Referral Network works with counties and the state in monitoring child care provision. According to the 2002 Data Report, there was an increase in referrals for evening, overnight or weekend child care. Of the 10,140 regulated child care providers in Wisconsin at the end of 2002, 19 percent provided child care during the evening, seven percent provided overnight care and 11 percent offered weekend care. In addition, there have been requests for specialized care for children with special needs. According to the report child care program turnover continued to be high in every part of the state due to a wide variety of factors. In some instances, the economy has had a direct influence since job closures can lead to declining enrollments.

Table 9.3: Licensed/Certified Childcare Facilities, Bay-Lake Region, 2004

County	Number*	Capacity
Brown	190	8,530
Door	21	573
Florence	1	29
Kewaunee	16	390
Manitowoc	67	1,634
Marinette	28	505
Oconto	26	516
Sheboygan	85	2,173
Bay-Lake Region	434	14,350

Source: Wisconsin Department of Health and Family Services, 2004

\* Includes County Regulated, State licensed, Nursery/Pre-Sch, School Age Prog. and Head Start

### **Police Services**

The Bay-Lake Region has 38 communities with police departments in addition to a sheriff's office in each county. The Oneida Tribe of Indians also has its own police department. In addition to local police and county sheriff departments, the State Patrol also provides law enforcement in the region. Brown, Door, Kewaunee, Manitowoc and Sheboygan counties are part of District 3 of the Wisconsin Division of State Patrol, while the counties of Florence, Oconto and Marinette are part of District 4.

There are 71 county jails within the state. All of the counties within the region have jails. There are also two state prisons in the region: the Green Bay Correctional Institution and the Kettle Moraine Correctional Institution which is located near the City of Plymouth.

### **Fire Protection**

Fire protection in Wisconsin is a major responsibility of local governments in the region. There are 72 public and volunteer fire departments or districts within the region.

#### **Insurance Service Office - Public Protection Classification (PPC)**

The adequacy of fire protection within the community is evaluated by the Insurance Service Office (ISO). ISO collects information on municipal fire-protection efforts in communities throughout the United States. In each of those communities, ISO analyzes the relevant data using their Fire Suppression Rating Schedule (FSRS) and assigns a Public Protection Classification (PPC) - a number from 1 to 10. Class 1 represents the best protection, and Class 10 indicates that the area's fire protection does not meet ISO's minimum criteria. Communities PPC numbers in the Bay-Lake Region range from Class 2 to Class 10.

A community's PPC depends on the analysis of several components of fire protection including:

- fire alarm and communication systems, including telephone systems, telephone lines, staffing, and dispatching systems;
- the fire department, including equipment, staffing, training, and geographic distribution of fire companies;

- the water supply system, including the condition and maintenance of hydrants, and a careful evaluation of the amount of available water compared with the amount needed to suppress fires.

In addition, according to the National Fire and Police Association, fire protection should meet the following standards

- A **high density residential**<sup>1</sup> community should have a fulltime staff and chief and an average response time of 4 minutes.
- A **medium density residential**<sup>2</sup> community should have a staff that is partly on-call and an average response time of 6 minutes.
- A **low density residential**<sup>3</sup> community should have all on-call staff, but does not need fulltime staff and an average response time of 8 minutes.

<sup>1</sup> - High density residential development is defined as residential development with 3 or more units per acre.

<sup>2</sup> - Medium density development with 1 to 2.99 units per acre

<sup>3</sup> - Low density development having less than one unit per acre.

ISO helps communities evaluate their public fire-protection services. The program provides an objective, countrywide standard that helps fire departments in planning and budgeting for facilities, equipment, and training. Throughout the United States, insurers of homes and business property use ISO's Public Protection Classifications in calculating premiums.

### **Forest Fire Program**

Not all parts of the state present the same kind of degree of fire problems, thus the state has been divided into different kinds of forest fire protection. The degree of protection has been determined by the amount of forested lands, hazards and risks present in various part of the state. The counties of Florence, Oconto, and Marinette are located in an Intensive Protection Area. These areas are the most heavily forested and contain the most fire hazards and risk in the state. They have more WDNR fire suppression resources and ranger stations. Fire detection is accomplished with fire towers, aerial detection and citizen reporting. These areas have the most restrictive debris burning laws in effect. These burning laws are regulated by the WDNR. The aforementioned three counties are protected by the WDNR Peshtigo "dispatch group" which consists of local fire departments that are members of the Fire Department Advisory Council (FDAC). The WDNR offers grant assistance to help these local fire departments fight fires.

The remaining counties in the Bay-Lake Region are located within the Northeast Region of the Cooperative Fire Protection Area. These areas are not sufficiently forested and do not contain the hazards and risks necessary to warrant intensive or extensive fire protection. WDNR ranger stations and suppression resources are not located in these areas. Towns have the responsibility for suppressing fires. This is accomplished through the local fire departments with the WDNR providing technical and financial assistance.

### **Chequamegon-Nicolet National Forest**

Fire protection in the Chequamegon-Nicolet National Forest is provided by the U.S. Department of Agriculture/Forest Service. These two national forests are managed as one and are divided

into fire management districts. The Nicolet portion of the forest, covering Florence and Oconto counties, is broken down into two districts: the Eagle River-Florence Ranger District and the Lakewood-Laona Ranger District. In the Bay-Lake Region, district offices are located in the Town of Florence in Florence County and the Town of Lakewood in Oconto County.

The fire districts contain fire stations and staff at numerous locations throughout the forest. The staff monitors the forest regularly, and moves from facility to facility within the forest district. Equipment to fight fires includes, but is not limited to various tanker trucks, bulldozers, helicopter, etc. Fires in the forest are reported to the dispatcher by citizens, fire towers or detection planes. Assistance for suppressing fires is provided by other forests throughout the nation. In addition, there are working agreements with the WDNR and participating local fire departments to provide assistance.

The U.S. Forest Service is continually updating equipment and resources to effectively fight forest fires. Presently, various projects are being developed to create analysis that will allow the Forest Service to plan ahead for potential fires nation-wide. Various factors include population density, ignition factors, vegetative cover, etc. Given the many factors, the Forest Service then has an indication of the amount of resources (e.g., staff, vehicles, etc.) it may need in a given year, if a fire were to occur.

### **Emergency Services**

All areas of the region are covered by an ambulance service provider. Overall, there are 41 municipal based (i.e., local, county and fire departments) and private based (i.e., non-profit, for-profit and hospital based) operators in the region (Table 4). Several of the operators serve more than one county and in some instances, local service areas extend into another county of the region.



The emergency medical service (EMS) care in Wisconsin is broken down into 5 levels: 1) First Responder, 2) EMT-Basic, 3) EMT-Basic IV, 4) EMT-Intermediate, 5) EMT-Paramedic. Brown County has five paramedic level providers, one Basic IV and a Basic; Door County contains two Paramedic and one Basic level unit; Florence County contains three Basic level, Kewaunee County has two Intermediate and one Basic unit; Manitowoc County has three Paramedic and three Intermediate units; Marinette County contains one Paramedic and seven Basic level units.; Oconto County contains six Basic units and Sheboygan County has one Paramedic, three Intermediate and one Basic level unit. In addition, there are numerous First Responder units within the Bay-Lake Region trained to stabilize a patient prior to the arrival of an ambulance. First Responders are prevalent in communities where ambulance response times exceed 20 minutes. Although training levels vary, many first responders are also EMTs, RNs, etc.

In addition to emergency medical services, some ambulance services also provide specialty care transports and Interfacility Patient Transfers (when patients are moved from medical centers to either another medical facility or their home). Overall, the emergency services are adequate throughout the Bay-Lake Region. However, communities should continue to work together to provide effective and efficient service to the citizens of the region and fill service gaps that may exist.

Table 9.4: Medical Transportation Providers, Bay-Lake Region, 2004

County	Municipal <sup>1</sup>	Private <sup>2</sup>	Total Providers
Brown	4	3	7
Door	2	1	3
Florence	3		3
Kewaunee	3		3
Manitowoc	4	2	6
Marinette		8	8
Oconto	4	2	6
Sheboygan	3	2	5
Bay-Lake Region	23	18	41

Source: Wisconsin Department of Health and Family Services, 2004

<sup>1</sup>Includes Local, County and Fire Departments

<sup>2</sup>Includes Non-profit, for profit and Hospital based

## Emergency Government

Each county and many local municipalities in the Bay-Lake Region have emergency government/management to prepare them through planning, education, training, exercise and mitigation to respond to, and recover from any natural or man made emergency or disaster that may occur. In addition, the Wisconsin Emergency Management (WEM) coordinates effective disaster response and recovery efforts in support of local governments.

### State

The WEM is located at the central office in Madison and has six regional offices. The Bay-Lake Region is covered by the northeast region, including Florence, Marinette and Oconto counties; and the east central region, covering Brown, Door, Kewaunee, Manitowoc and Sheboygan counties. Overall, WEM specializes in Hazard Mitigation, Warning & Communications, Emergency Police Services (EPS), Disaster Response & Recovery, Hazardous Materials & Emergency Planning and Community Right-To-Know Act (EPCRA), Radiological Emergency Preparedness, and Exercise & Training for the State of Wisconsin. The WEM also coordinates with state and federal agencies, as well as volunteer and private sector partners.

The Warning and Communications Program works with a variety of federal, state, local government agencies, volunteer groups and private industry in providing emergency communications in Wisconsin regardless of the type of disaster or emergency. The National Warning System Network (NAWAS) is the primary method of sharing warning information for severe weather activity and any other critical information. In Wisconsin, all five National Weather Service offices and all seven State Patrol District Communications Centers have NAWAS. Florence, Oconto and Door counties in the Bay-Lake Region do not have NAWAS terminals and must rely on relays either from a State Patrol District office or neighboring county.

### Federal

The Federal Emergency Management Agency (FEMA) is part of the Department of Homeland Security's Emergency Preparedness and Response Directorate. FEMA is tasked with responding to, planning for, recovering from and mitigating against disasters. Often FEMA works in

partnership with other organizations that are part of the nation's emergency management system. These partners include state and local emergency management agencies, 27 federal agencies and American Red Cross.

There are several grant programs available from WEM and FEMA for disaster equipment (e.g., mobile command centers, mobile data centers, etc.) pre-disaster mitigation, flood mitigation, hazard mitigation, etc. However, the majority of these programs require the units of government to have an approved all hazards mitigation plan to be eligible for grant funds.

Local emergency governments in the Bay-Lake Region are proactive and continue to plan for potential disasters. The government units, as well as, businesses and citizens should also continue to develop standardized actions with changes in the United States and the State of Wisconsin Homeland Security Threat Condition Advisory Systems. The Advisory Systems provide a framework for developing security response and deployment plans. Each government entity should develop specific implementation procedures appropriate for its size and density.

### **Education**

The Bay-Lake Region currently has 46 school districts within its boundaries (Map 9.4). Overall, total public and private school enrollment in the 2003 -2004 school year was 106,617. This number includes schools in all school districts that are found within the region. The Public school enrollment makes up 86 percent of the total enrollment in the region, while private enrollment accounted for 14 percent of the enrollment. The largest district in the Bay-Lake Region in 2003-'04 was the Green Bay Area School District (20,297 students) followed by the Sheboygan Area School District (10,321 students).

Since the 2000 school year, the majority of the counties in the Region have seen a decline in school enrollment. The decline of enrollment in several school districts in the region is a major concern and is becoming too costly to maintain facilities.

The Bay-Lake Region also has six Charter schools, which are public and created through a contract or "charter" between the operators and the sponsoring school board or other chartering authority. The majority of charter schools within the region focus on students who are at-risk, have behavioral challenges, feel uncomfortable or unsafe in a school setting, etc., however some charter schools also offer classes to gifted students.

There are nine higher education institutions found within the Bay-Lake Region: One state university (UW-Green Bay), and three satellite university sites (Marinette, Manitowoc and Sheboygan), and five private institutions (St. Norbert College in De Pere, College of Menominee Nation in Green Bay, Silver Lake College in Manitowoc, Lakeland College in Sheboygan and Northland Baptist Bible College in Dunbar).

The state is covered by 16 multi-county vocational technical and adult education districts, which are organized on a regional basis and financed primarily by local property taxes. Counties in the Bay-Lake Region are divided among two districts. The Northeast Wisconsin Technical College covers Brown, Door, Kewaunee, Florence, Oconto and Marinette counties. The main campus is located in Green Bay, with campus' also located in Marinette and Sturgeon Bay. Lakeshore Technical College covers the Bay-Lake counties of Manitowoc and Sheboygan. The main campus is located in the Village of Cleveland (Manitowoc County), with additional campuses

located in the cities of Manitowoc and Sheboygan. ITT Tech in Green Bay also provides higher educational opportunities involving technology.

## **Libraries**



There are currently 17 public library systems in Wisconsin, with three covering the Bay-Lake Region (Map 9.5). The purpose of library systems is to assure equal access to public library service by all state residents, no matter where they may live. Each of the 17 Systems is governed by a citizen Board of Trustees that represents a particular geographical area. Each system serves its member libraries according to a plan created by its Director and Staff, following guidelines of Wisconsin's Department of Public Instruction, Division for Libraries, Technology and Community Learning, with the approval of the System's own Board of Trustees. The individual Library Systems carry out service requirements set forth in Chapter 43 of the Wisconsin Statutes.

The following is a listing and description of the three library systems that cover the Bay-Lake Region:

### ***Eastern Shores (ESLS)***

Eastern Shores Library System consists of thirteen member libraries, eight in Sheboygan County and five in Ozaukee County. Mead Public Library, located in the City of Sheboygan, serves as the resource library for the ESLS.

The services provided by ESLS and its member libraries are for all persons in Sheboygan and Ozaukee counties to enjoy. Any person in the two counties has the right to use any of the thirteen libraries.

A van delivery service between the libraries and the System office allow you to return books and other materials to any convenient member library. Inter-Library Loan makes it possible for you to receive materials and information from other Wisconsin Libraries. In addition, ESLS has reciprocal agreements with other Wisconsin public library systems, allowing you to check out materials at other libraries when you're on vacation. The ESLS also operates a Bookmobile, which serves many of the communities in Ozaukee and Sheboygan Counties that do not have libraries.

### ***Manitowoc-Calumet (MCLS)***

The Manitowoc-Calumet Library System is a cooperative network of six public libraries in east central Wisconsin: Kiel, Manitowoc, and Two Rivers in Manitowoc County, and Brillion, Chilton, and New Holstein in Calumet County.

The MCLS, which is funded primarily by state aids, provides services such as interlibrary loan, delivery, backup reference, consulting, and continuing education for library staff, planning and support for library technology, and other assistance. MCLS offices are located in the Manitowoc Public Library, which is the System's resource library.

Residents of the six cities that maintain the MCLS libraries support those libraries with their city taxes. Each county reimburses the city libraries for serving rural residents. Each county has formally agreed to participate in MCLS, and each maintains a plan for library services.



### ***Nicolet Federated (NFLS)***

The Nicolet Federated Library System covers the Bay-Lake Region counties of Brown, Door, Florence, Kewaunee, Marinette and Oconto. There are 35 public libraries that cover the aforementioned six counties, and 43 public libraries overall in the Nicolet Federated System including member libraries in Shawano and Menominee counties. NFLS offices are located at the Brown County Library in the City of Green Bay.

The NFLS, which is funded by state taxes, provides services, equipment, monetary grants, professional consultation, and educational opportunities and coordinates library services with other public and other types of libraries through Northeast Wisconsin Intertype Libraries (NEWIL) in northeastern Wisconsin for the benefit of all the residents.

### **Health Care Facilities**

#### **Hospitals**

There are thirteen hospital facilities located within the Bay-Lake Region (Map 9.6). These hospitals include:

- Aurora Bay Care; Bellin; St. Mary's and St. Vincent's located in Green Bay
- Holy Family Memorial in Manitowoc
- Aurora Medical Center in Two Rivers
- Sheboygan Memorial and St. Nicholas located in Sheboygan
- Valley View Medical Center in Plymouth
- Door County Memorial in Sturgeon Bay
- Community Memorial in Oconto Falls
- Bond Health Center in Oconto
- Bay Area Medical Center in Marinette



In addition, there are many new healthcare centers located throughout the region.

#### **Adult Care/Assisted Living Facilities**

The Bay-Lake Region contains many adult care facilities including: Adult Family Homes (AFH), Community Based Residential Facilities (CBRF), nursing homes, Residential Care Apartment Complexes (RCAC) and Adult Day Cares (ADC).

- AFH's are facilities where three or four adults who are not related to the operator reside and receive care, treatment or services that are above the level of room and board and that may include up to seven hours per week of nursing care per resident.
- CBRF's are facilities where five or more unrelated people live together in a community setting. Services provided include room and board, supervision, support services, and may include up to three hours of nursing care per week.
- A nursing home is a place of residence for people who require constant medical care, at a lower level than a hospital. Usually the residents are elderly, but the term can apply to places of care for the mentally or physically ill.

- RCACs are independent apartment units in which the following services are provided: room and board, up to 28 hours per week of supportive care, personal care, and nursing services.
- ADC's are a day program that provides the elderly and other adults with services when their caregivers are at work or need relief.

Table 9.5 illustrates the number and capacity of the aforementioned facilities within the Bay-Lake Region by county.

Over the past 30 years, the Bay-Lake Region, and its eight counties, has experienced an increasing median age (from 29.6 years in 1970 to 38.9 years in 2000), resulting in adjustments in planning for housing stock, health care, etc. The demand for elderly housing/adult care facilities will become more important in the region over time as this national trend toward an increasing older population is expected to continue.

Table 9.5: Adult Care Facilities, Bay-Lake Region, 2005

County	AFH		CBRF		Nursing Homes		RCAC		ADC	
	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity	Number	Capacity
Brown	42	160	57	1,113	14	1,373	4	129	2	128
Door	4	12	7	135	3	228	1	42	-	-
Florence	-	-	1	5	1	73	-	-	-	-
Kewaunee	8	32	6	111	2	142	-	-	1	10
Manitowoc	7	28	33	360	6	782	2	75	1	20
Marinette	4	15	8	150	6	602	-	-	-	-
Oconto	3	11	8	107	4	268	1	25	1	16
Sheboygan	17	66	27	591	11	1,009	1	25	1	30
Region	85	324	147	2,572	47	4,477	9	296	6	204

Source: Wisconsin Department of Health and Family Services, 2005.

### **Parks and Recreation**

Given northeast Wisconsin's diverse landscape, the Bay-Lake Region provides many opportunities for recreation. The area is comprised of flat and rolling countryside in the central to southern portions of the region, vast forestland in the north, contains many inland water features and is bound by 400 miles of Lake Michigan shoreline.

At the local level, nearly every incorporated community in the region contains at least one recreational facility available to residents. Typically, the larger the population, the more locally owned parks and recreational facilities available to accommodate residents. One way of measuring adequacy of park lands is 10 acres of land for every 1,000 residents. However, this ratio may be too small to accommodate smaller communities.

Whenever possible, communities need to plan for all groups of the population. This may include accessibility for special needs citizens, activities for all ages, etc. In addition, diversity of activities (e.g., skate parks, disc golf, etc.) is growing, possibly resulting in the request of more recreational sites. Efforts to accommodate can be troublesome as financially local communities can have difficulty with the maintenance costs of up-keeping recreational facilities. As a result more joint park facilities are starting to be developed between multiple communities, school districts, etc.

In addition to the local recreational activities, the Bay-Lake Region boasts some of the most popular parks in the state as well as some of the most picturesque areas to serve the public. The Bay-Lake Region contains 17 State owned parks, trails and other recreational sites. Door County has more state parks (five) than any other county in the State, allowing visitors ample opportunity to utilize the region's shoreline. The region also boasts a large number of county parks and trails, in addition to state natural and scientific areas that can provide visitors with views of unique landforms (e.g., waterfalls, caves, etc.) and potential educational activities. In addition, the region offers vast forest lands and an abundance of lakes and other surface waters which provide recreational opportunities for residents and visitors. Specific information concerning the natural features and parks located within the region can be found in Chapter 2 of this document.

From a cultural standpoint, the region offers many options. The Lambeau Field complex in Green Bay is a major identifier for many sports fans. Home to the National Football League's Green Bay Packers, the complex is open to the public year round providing many activities in addition to professional football games. The region also contains several facilities that host semi-professional and collegiate sporting events, in addition to concerts and other entertainment activities. Other venues for cultural activities in the Bay-Lake Region include various centers for the performing arts as well as educational centers, such as museums. Additional information regarding such facilities is provided in Chapter 5 of this document.

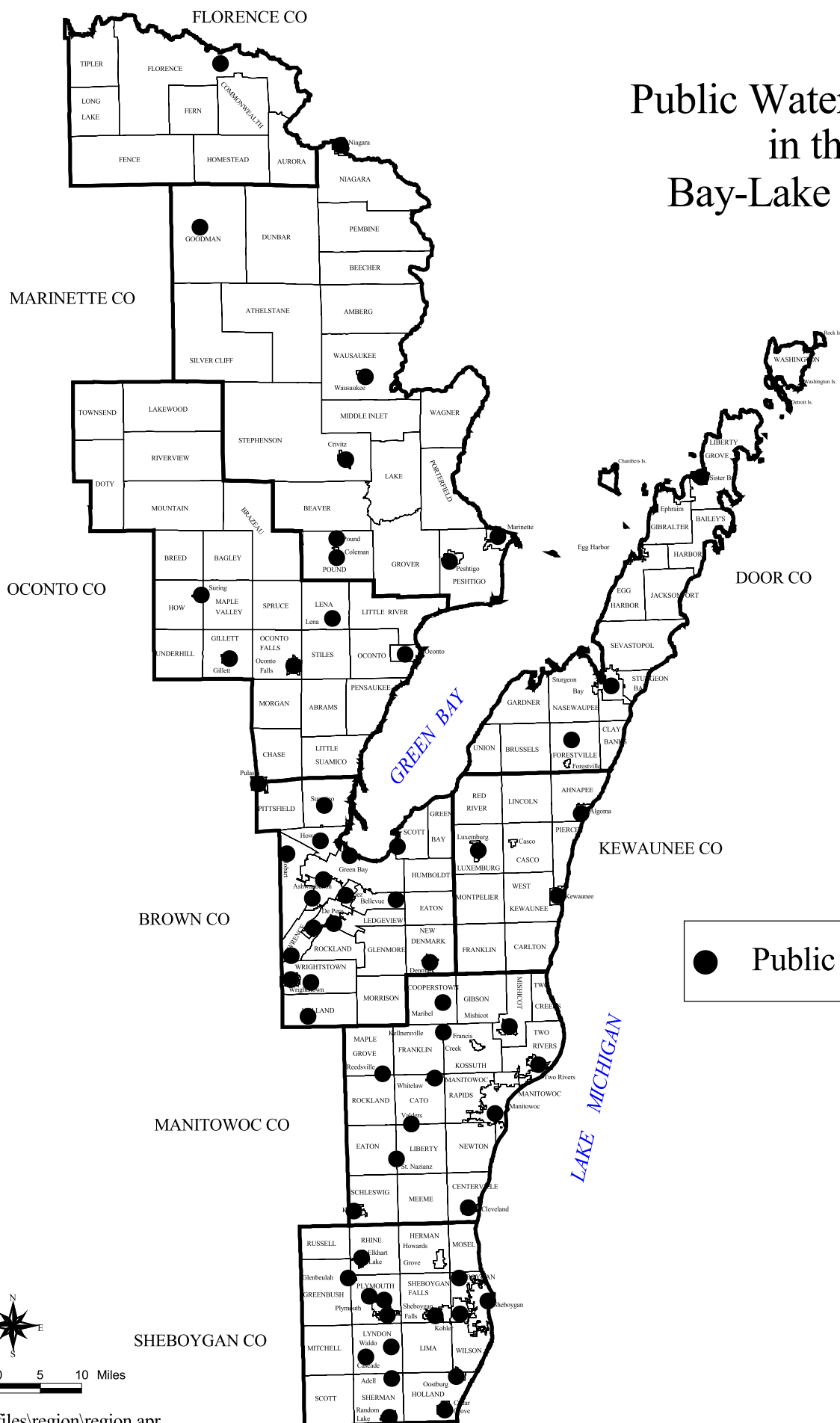
With extensive forestlands, vast water features, rustic trails, sporting venues, performing arts centers, etc., the recreational options in the Bay-Lake Region seem endless. With regular maintenance and appropriate usage, along with cooperation efforts between counties, local communities and various agencies, the recreational facilities in the region can continue to thrive. However, it is also up to the users of the parks and many other outdoor facilities to keep these areas functional for future generations.











Source: WI DNR; Bay-Lake Regional Planning Commission, 2005.









**School Districts in the Bay-Lake Region**

Map 9.4

**Legend:** [White Rectangle] School District

**Counties:** FLORENCE CO, MARINETTE CO, OCONTO CO, BROWN CO, MANITOWOC CO, SHEBOYGAN CO, KEWAUNEE CO, DOOR CO, WASHINGTON CO.

**Water Bodies:** GREEN BAY, LAKE MICHIGAN.

**Scale:** 0 5 10 Miles

**Source:** Q:\myfiles\region\region.apr  
Source: WI DOA, 2001; Bay-Lake Regional Planning Commission, 2005.

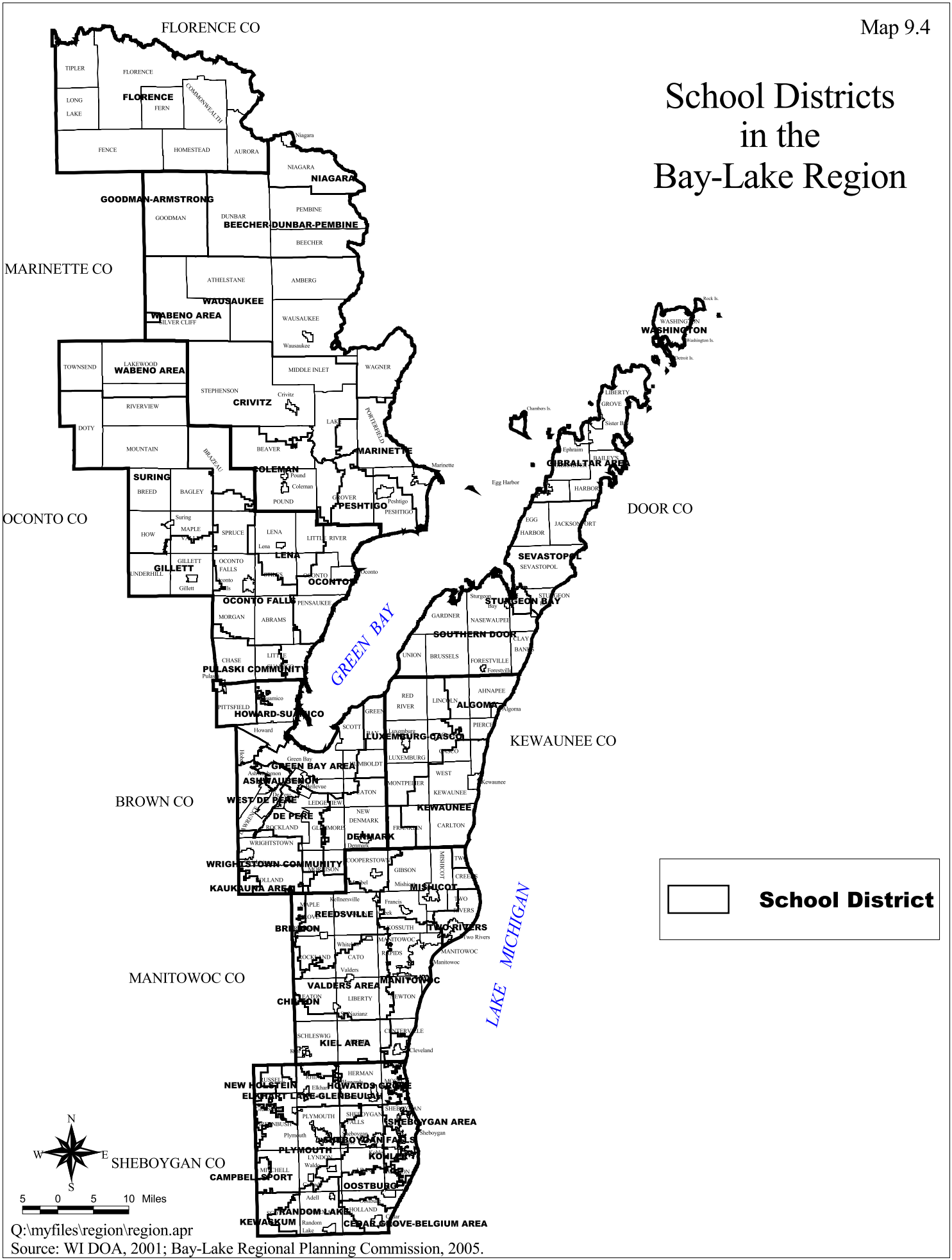
**School Districts in the Bay-Lake Region**

Map 9.4

Legend:  School District

Scale: 0 5 10 Miles

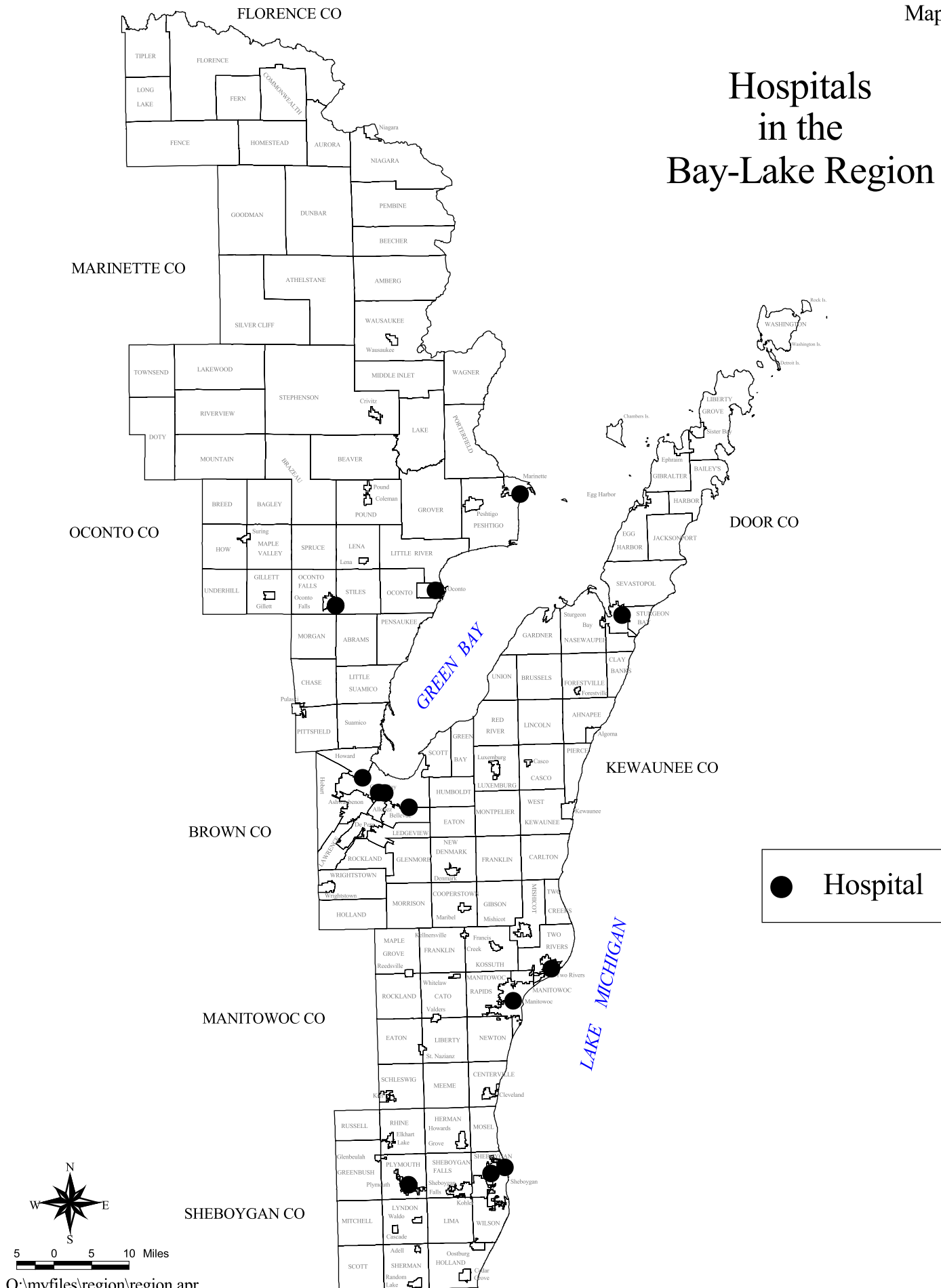
Source: WI DOA, 2001; Bay-Lake Regional Planning Commission, 2005.















## **CHAPTER 10 - INTERGOVERNMENTAL COOPERATION**

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### **INTRODUCTION**

The Intergovernmental Cooperation Element of the Regional Comprehensive Plan is intended to be a guide for joint planning and decision making with other jurisdictions, including school districts and local governmental units, for siting and building public facilities and sharing public services. The element describes processes that can be used to resolve intergovernmental conflicts that may exist or arise within the Region.

### **SUMMARY AND IMPLICATIONS**

The intergovernmental cooperation issues identified within this element are fairly consistent and relate well to issues identified early in the planning process. As the municipalities within the Region gain more understanding and sophistication in planning, their ability and comfort in using various development tools will be key in making their plans more effective. Learning how to make effective use of planning tools may serve as a goal of the Commission. Additional information and education on these tools can be provided through cooperative efforts with the counties, UW-Extension, as well as other state agencies such as the WDNR, WisDOT and WDOA.

### **Area Served**

The Commission serves a region consisting of the eight counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto and Sheboygan. The Bay-Lake Region is comprised of eight counties, 17 cities, 39 villages, 120 towns, and the Oneida Nation of Wisconsin, for a total of 185 local units of government. The total area of the region is 5,433 square miles, or 9.7 percent of the area of the State of Wisconsin. The region has over 400 miles of coastal shoreline along Lake Michigan and Green Bay, and contains 12 major watershed areas that drain into the waters of Green Bay and Lake Michigan. The 2004 population of the Region was 574,623 persons, or 10.4 percent of the population of the State of Wisconsin.

### **Organization**

The membership composition of the Commission is as follows: (1) One member appointed by the county board of each county, part or all of which is initially within the region or later added; (2) Two members from each participating county appointed by the governor, with at least one of the appointees being selected from a list of persons nominated by the county board; and (3) The secretary of the department of commerce or a designee who serves as a nonvoting member. As of February 2005, two of the Commissioners were locally elected officials, 13 were publicly appointed officials or employees, and six were private citizens who were actively involved in community affairs.

### **Operating Principles**

The Commission operates under the following five principles under which all of the Commission's work programs are developed. These principles are:

- To assist and advise local government.

- To influence state, regional, and federal plans and programs that reflect the best interest of the Bay-Lake Region.
- To prepare and adopt a comp plan under Wisconsin Statutes s. 66.0295, for the development of the region.
- To provide technical information about the region for use by public and private agencies.
- To encourage citizen participation in the planning process.

### **Basic Functions**

Throughout its history, BLRPC has taken a balanced approach to its annual work program, by providing both area-wide planning as well as local assistance services. In recognition of its statutory responsibilities, the Commission has undertaken regional studies that have focused on the region's transportation network, population and economic structure, housing characteristics, natural resources, land and water related issues and on those issues that transcend local governmental boundaries. Regional planning provides a cost effective way to collect, compile, and analyze information that can be used by counties and other local government units on their planning activities, such as comprehensive planning, environmental corridor preservation and economic development.

In all of its activities, the Bay-Lake Regional Planning Commission provides an advisory planning role to local governments and local government officials. Local planning activities include but are not limited to, comprehensive plans, zoning ordinances, grant writing and administration, GIS mapping and outdoor recreation plans.

### **INTERGOVERNMENTAL COOPERATION GOALS**

**Goal 1:** To encourage joint planning between jurisdictions including Tribes and special districts.

**Goal 2:** To improve communication and cooperation between and among units of government and the citizens they serve.

**Goal 3:** To develop collaborative stormwater & sewer management plans.

**Goal 4:** To encourage a more diverse population to participate in planning and government.

**Goal 5:** To encourage local governments to enter into cooperative service arrangements to better utilize existing resources.

**Goal 6:** To assist local units of government in identifying funding and technical resources to acquire and improve the services available to their residents.

### **Programs**

Promote cooperation and coordination between counties regarding any county plans.

Work with the Wisconsin Department of Natural Resources, the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency to insure compliance with water quality regulations.

Work with county and local planning agencies on regional, county and local planning activities.

### **Creation and Authority**

The Bay-Lake Regional Planning Commission (BLRPC) was created in 1972 by Governor Lucey at the request of seven county boards in the region under Wisconsin Statutes s. 66.945 as the official area-wide planning agency for northeastern Wisconsin. In December 1973, Florence County joined the Commission, bringing the total number of member counties to eight.

## **REGIONAL PLANNING PROGRAMS**

### **Regional Transportation Planning**

Since the mid-1970s, the Bay-Lake RPC has provided regional transportation planning in northeastern Wisconsin including:

- Bicycle facility plans
- Elderly and disabled transportation plans
- Highway corridor plans
- Pavement management plans
- Transit plans
- Transportation plans
- Harbor impact studies
- Transportation grant writing
- Transportation data
- Technical assistance to local communities

### **Sheboygan MPO**

Bay-Lake RPC was designated the Metropolitan Planning Organization (MPO) for Sheboygan by the governor in 1982.

- Area includes cities of Sheboygan and Sheboygan Falls, the village of Kohler, the town of Sheboygan and portions of the towns of Lima, Mosel, Sheboygan Falls and Wilson
- Law dictates that transportation planning is required for all MPOs to receive federal transportation funding
- Projects include traffic forecasts, bus system plans, and long and short range transportation plans

### **Water Quality Planning**

The Commission provides technical assistance to communities to help protect water quality. Projects include:

- Sewer service area planning

- Sewer service administration for city of Marinette urban area, the city of Sheboygan urban area and the village of Luxemburg
- Lake management plans

### **Economic Development Program**

U.S. Department of Commerce designated BLRPC an economic development district in 1973 to work on various economic duties including:

- An annual Comprehensive Economic Development Strategy (CEDS) that reports current economic statistics, development strategy and a list of proposed projects for EDA funding
- Demographic and socio-economic data
- Grant writing and administration for public works and economic development projects
- Tax incremental financing project plans
- Technical assistance to local communities
- Industrial park website
- Census information clearinghouse
- Wisconsin state data center

### **Natural Resource & Land Use Inventory**

Under this program the Commission is developing the elements of a Regional Master Plan that can be used by counties and other local governments as a framework for comprehensive plans required under Wisconsin's "Smart Growth" legislation (s 66.1001) such as:

- Regional land use inventory
- Regional base mapping
- Regional aerial photography
- Environmental corridor mapping
- Historic and archaeological studies
- Niagara escarpment study
- Natural resource data clearinghouse

### **Coastal Management Program**

The Commission has participated in the Wisconsin Coastal Management Program since 1979 providing:

- Erosion control study along Lake Michigan
- GIS mapping of coastal resources
- Technical assistance to local communities

- Public information on wetlands, impacts of development, public access, land use planning and natural hazards

### **Local Assistance Program**

Section 66.945(12) of the Wisconsin Statutes empowers regional planning commissions to enter into a contract with any local unit of government in the region under s.66.30 (Intergovernmental Cooperation) to make studies and offer: 1) advice on land use, thoroughfares, community facilities and public improvements; and 2) encouragement of economic and other developments through:

- City, village, town, and county comprehensive plans
- Outdoor recreation and site plans for park facilities
- Zoning and subdivision ordinances
- Housing consolidated plans
- Citizen surveys and community visioning
- Assisting communities to comply with Wisconsin Smart Growth law
- Environmental review records
- Writing and administering housing and public works grants for community development

### **Coordination of Local & Regional Planning**

An important part of the Commission's work program is to provide a way to discuss problems that transcend local government boundaries and can offer joint solutions for intergovernmental cooperation.

- Review and comment on Federally assisted projects under Executive Order 12372 review process
- GIS Users Group
- Regional Harbor Council
- Land Use and Transportation Technical Advisory Committees
- Economic Development Advisory Committee



## CHAPTER 11 - LAND USE

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### **INTRODUCTION**

This chapter presents information on the current (2004) land use and land use controls within the Bay-Lake Region. In addition, discussions on land-use issues and land-use controls are included.

### **LAND USE GOALS**

**Goal 1:** To promote the distribution of land uses that will preserve and enhance the character of the Bay-Lake Region by establishing land development guides designed to promote environmental protection, meet social and economic needs, provide for adequate services and facilities, conserve natural resources, and ensure compatibility of land uses.

**Goal 2:** To conserve and protect desirable existing residential, commercial, industrial, and agricultural development in order to maintain desirable social and economic values; renewal of obsolete and deteriorating residential, commercial, and industrial areas in the rural as well as in the urban areas of the Region; and prevention of slums and blight.

**Goal 3:** To develop communities having distinctive individual character based on physical conditions, historical factors, and local desires.

### **INVENTORY OF EXISTING LAND USE CONTROLS**

This section inventories and discusses the land use controls which currently exist within the Bay-Lake Region, which may affect, or restrict, the use of land for specific purposes. These controls should be reviewed periodically to make sure that they assist in implementing the general plan design for future development within the Region (Map 11.1).

### **Planning Documents**

#### **Existing Comprehensive Plans**

This will be the first comprehensive plan for the Bay-Lake Region. Brown, Door, and Florence Counties have completed county-wide comprehensive or land use plans while Kewaunee County is currently developing a county-wide comprehensive plan (Map 11.2). These plans have been referenced to gather ideas as to how regional communities are progressing with “smart growth”, and to avoid any conflicts in future land use decisions. All remaining counties (Manitowoc, Marinette, Oconto, and Sheboygan) are strongly encouraged to develop a county-wide comprehensive plan.

#### **County Development Plans**

##### ***Wis. Stats. S. 59.69***

Counties are authorized to prepare plans or parts thereof for the physical development of their unincorporated territory and incorporated areas whose governing bodies agree by resolution to be included in the county’s development plan. The statute requires that counties that have a zoning agency include in the plan the location of any part of an airport or area affected by an airport. The statute enables counties to establish landmark commissions and to designate and

regulate historic landmarks and establish historic districts. County development plans must include city and village master plans.

### ***Brown County***

The most recent Brown County Comprehensive Plan was adopted in 2004. The document is comprised of ten chapters reflecting the various elements in the Comprehensive Planning Law: Issues and Opportunities; Housing; Transportation; Utilities and Community Facilities; Agriculture; Natural and Cultural Resources; Economic Development; Intergovernmental Cooperation; Land Use; and Implementation. Although all of these chapters have their own goals, objectives, and recommendations, the elements are all interrelated, and therefore, the goals, objectives, and recommendations are also. This plan was developed with the interrelationships of the elements in mind. Since all local communities in Brown County administer their own local ordinances (zoning, building permits, etc.) and have a strong tradition of local control, it is not appropriate for Brown County to develop a countywide future land use map without including the local communities' individual future land use maps. Rather, the future land use map for Brown County is actually a "quilt" composed of each local community's future land use map that meets the Wisconsin Comprehensive Planning Law requirements. Since all of the local comprehensive plans are not yet completed, it is not possible to create a complete composite map showing the future land uses of all of the Brown County communities. However, the Land Use chapter provides a map that generalizes those local future land use maps in Brown County that meet the requirements of the comprehensive planning law. As additional communities adopt their local comprehensive plans, the future land use maps should be added as new pieces of the overall future land use map of Brown County.

The objectives are broken down into those that Brown County has direct responsibility over, those where responsibility is divided between the local units of government and Brown County, and those where the local units of government have direct responsibility. This was done in order to recognize the limits of Brown County government and to encourage the local units of government to incorporate the relevant objectives into their local plans in order to present a coordinated and consistent vision for the future of Brown County.

### ***Door County***

The *Door County Development Plan* was adopted in March of 1994. *The Door County Development Plan* provides guidelines for future land use and development within the county. Three of the underlying principals of the county's development plan are particularly germane to the transportation/land use issues explored within this study. Those three principal policies are as follows:

- Discourage commercial sprawl beyond established or planned businesses areas.
- Maintain the function of the county's principal arterial roads.
- Promoting development within well defined communities and growth areas where such development can more easily be serviced by public facilities.

The Door County Plan separates the county into twelve general land use categories, each with different land use and development objectives. These categories include development core areas, crossroads communities, business development areas, resort/residential areas, shoreline



residential areas, rural residential areas, suburban residential areas, open agricultural areas, open/rural areas, natural areas, airport areas, and highway corridors.

### ***Florence County***

The *Florence County Land Use and Lake Protection Plan* was prepared by the Bay-Lake Regional Planning Commission in 1998 under the planning and zoning authority granted by section 59.69 of the Wisconsin Statutes.

The purpose of the *Florence County Land Use and Lake Protection Plan* is to develop a comprehensive set of informational resources and a policy framework to assist the county and local units of government in managing development. The plan also inventories the county's surface water resources and makes recommendations for future protection of lakes and other water bodies.

### **Town Cooperation in County Planning**

#### ***Wis. Stats. S. 60.23(5)***

A town board may cooperate with the county in rural planning under ss. 27.015, 59.07 and 59.69, Wis. Stats. The Wisconsin enabling legislation requires that zoning ordinances be made in accordance with a comprehensive plan. This has been interpreted by planning professionals to mean that the zoning ordinance must be based on a master plan or land use plan and that the ordinance must seek to implement that plan. The individual comprehensive plans use common future land use categories developed by the regional planning commission that allow for local flexibility and re-coding of more detailed local land use categories into a county and regional framework, while also allowing for re-coding to County or Town Zoning Districts.

### **Sewer Service Plans**

Several areas within the Bay-Lake Region have developed sewer service area plans governing the extension of sanitary sewer for residential development (Map 11.3).

### ***Brown County***

The Brown County Sewer Service Area Plan (SSA plan) was updated by Brown County and the Wisconsin Department of Natural Resources in 2004 to comply with Administrative Code NR121 which defines and regulates "Sewer Service Areas" and "Environmental Corridors" based on water quality protection. Brown County's "environmentally sensitive areas" include both environmental corridors and "isolated natural areas". The *1995 Brown County Sewage Plan* currently defines environmentally sensitive areas (ESA's) as follows:

"The area within the designated floodway district of all perennial and intermittent streams as shown on USGS quadrangle maps and any wetland greater or equal to two (2) acres in size, as designated by either the WDNR Wetland Inventory Maps or Army Corps of Engineers (ACOE) field assessments. The ESA shall include a 100-foot buffer of land measured landward from the floodway district boundary if within the 100-foot distance. The ESA shall also include a 50-foot buffer of land adjacent to the designated wetland boundary. In the absence of a designated floodway district boundary, a distance of 50 feet along both sides of the stream shall be used to define the boundary until such time as a hydraulic engineering study is undertaken to define such boundary."

\*This definition is currently under the process of revision, and may change in the near future.

Development cannot occur within environmentally-sensitive areas; however, sewer lines may cross through with appropriate care. When a sewer crosses an environmentally sensitive area, restoration of the ESA must follow the guidelines of a Brown County Planning Commission approved restoration plan. The Plan Commission should recommend an amendment to the Brown County Sewer Service Area Plan to reflect the land use growth projections depicted on the General Plan Design map.

*Manitowoc/Two Rivers Sewer Service Area Plan.*

The *Manitowoc/Two Rivers Sewer Service Area Plan* (SSA plan) was updated by the Bay-Lake Regional Planning Commission and the Wisconsin Department of Natural Resources in 2002 to comply with Administrative Code NR121. The Plan's "environmentally sensitive areas" (ESAs) are defined as follows:

- All lakes, ponds, flowages, rivers and streams identified on the 7.5 minute U.S.G.S quadrangle maps and their adjacent 75' shoreland buffer, as measured from the ordinary high water mark, shall be designated as ESAs.
- All lakes, ponds, flowages, rivers and streams identified on the U.S.G.S. quadrangle maps shall be considered navigable until such time as an official Wisconsin Department of Natural Resources determination indicates otherwise.
- Any Environmentally Sensitive Area associated with a non-navigable lake or pond shall extend 25 feet from the ordinary high water mark.
- Any Environmentally Sensitive Area associated with a non-navigable flowage, river or stream shall extend 25 feet from the both sides of the center of the channel of such feature.
- All floodplains (FEMA 100-year) shall be designated as ESAs.
- All Department of Natural Resources (DNR) mapped wetlands shall be included in an ESA. Any Environmentally Sensitive Area associated with such a wetland two acres in size shall extend 50 feet beyond the edge of the wetland.
- Areas of steep slope 12 percent or greater shall be designated as ESAs.
- Publicly owned scientific and natural areas and areas with identified archaeological sites shall be included in the ESA.
- Other significant natural resource features, including but not limited to, river and stream headwaters, woodlands, high-value wildlife habitat areas, geologic and natural area sites, steep slopes, and wet, poorly drained and organic soils, shall be considered for inclusion as an ESA on a case-by-case basis by the TAC.

Development cannot occur within environmentally-sensitive areas; however, sewer lines may cross through with appropriate care. The Bay-Lake Regional Planning Commission is the review *City of Marinette Areawide Sewer Service Plan*

The *Marinette Areawide Sewer Service Plan* was updated by the Bay-Lake Regional Planning Commission and the Wisconsin Department of Natural Resources in 2005 to comply with Administrative Code NR121. The Plan's "environmentally sensitive areas" (ESAs) are defined as follows:

- All lakes, ponds, flowages, rivers and streams identified on the 7.5 minute U.S.G.S quadrangle maps and their adjacent 75-foot shoreland buffer, as measured from the ordinary high water mark, shall be designated as ESAs.
- All lakes, ponds, flowages, rivers and streams identified on the U.S.G.S. quadrangle maps shall be considered navigable until such time as an official Wisconsin Department of Natural Resources determination indicates otherwise.
- Any Environmentally Sensitive Area associated with a non-navigable lake or pond shall extend 25 feet from the ordinary high water mark.
- Any Environmentally Sensitive Area associated with a non-navigable flowage, river or stream shall extend 25 feet from the both sides of the center of the channel of such feature.
- All floodplains (FEMA 100-year) shall be designated as ESAs.
- All Department of Natural Resources (DNR) mapped wetlands shall be included in an ESA. Any Environmentally Sensitive Area associated with such a wetland two acres in size shall extend 50 feet beyond the edge of the wetland.
- Areas of steep slope 12 percent or greater shall be designated as ESAs.
- Publicly owned scientific and natural areas and areas with identified archaeological sites shall be included in the ESA.
- Other significant natural resource features, including but not limited to, river and stream headwaters, high-value wildlife habitat areas, geologic and natural area sites, steep slopes, and wet, poorly drained and organic soils, shall be considered for inclusion as an ESA on a case-by-case basis by the TAC.

#### *Oconto West Shore Sewer Service Plan*

The *Oconto West Shore Sewer Service Plan* was prepared by the Bay-Lake Regional Planning Commission in 1996 to comply with Administrative Code NR121. Oconto County revised the plan in 2004 to reflect changes in land use and demographics. The Plan's "environmentally sensitive areas" (ESAs) are defined as follows:

"Environmental corridors shall include all state mapped wetlands, floodways, and shoreland areas consisting of all lakes and streams shown on USGS Quadrangle Maps and their adjacent 75' shoreland buffer. In addition, other environmentally sensitive areas such as areas of steep slope of greater than 12% when adjacent to wetlands or shorelands, publicly owned scientific and natural areas (e.g. fish and wildlife habitats), and areas with identified archeological sites shall be preserved and protected from sewered development."

#### *Sheboygan Area Sewer Service Plan*

The *Sheboygan Area Shore Sewer Service Plan* was last updated by the Bay-Lake Regional Planning Commission in 1997 to comply with Administrative Code NR121. The Plan's "environmentally sensitive areas" (ESAs) are defined as follows:

Environmental corridor delineations include: wetlands of two acres or greater from the Wisconsin Department of Natural Resources (WDNR) Wisconsin Wetland Inventory files; 100-year floodplains from Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps; stream and lake setbacks from local ordinances; and all lakes, ponds, rivers, streams and flowages as shown on USGS 1:24,000-scale quadrangle maps. Wooded areas of 20 acres or more adjacent to or contiguous with these features were also included.

## **Land Use Regulations**

### **Zoning Ordinances**

Several counties in the region have established county-wide zoning ordinances. These ordinances provide guidelines for development within each individual county (Map 11.4).

#### ***Door County***

The Door County Zoning Ordinance, which was adopted in 1995 and revised in 1998, is based on a county-wide development plan. The purpose of the ordinance is to promote and protect public health, safety, aesthetics, and other aspects of the general welfare of the County. In order to accomplish this purpose, the ordinance regulates and restricts the use of property. The ordinance divides the county into districts for the purpose of regulating: 1) the location and use of land, water, buildings, and structures, 2) the height and size of building structures, 3) the percentage of a lot that may be occupied, 4) the density of the population, and 5) the size of lots.

The county adopted a revised zoning ordinance in 1998 which is in effect in all but six of the Towns located within the county. Within Door County, the Towns of Forestville, Egg Harbor, Union, Gardner, and Nasewaupee do not currently have zoning in place other than in shoreland areas which are zoned under the county ordinance.

The unincorporated areas of Door County are divided into nineteen zoning districts. Each district was created with the purpose and intent of establishing uniquely classified areas. The districts are classified according to the following: Wetlands, Natural Areas, Exclusive Agricultural, Prime Agricultural, General Agricultural, Countryside, Heartland 3.5, Heartland 5, Heartland 10, Estate, Single Family Residential, Small Estate Residential, Rural Residential, High Density Residential, Commercial Center, Mixed Use Commercial, Recreational Commercial, and Light Industrial.

#### ***Florence County***

The Florence County Zoning Ordinance, originally adopted December 15, 1967, states as its purpose, "...to promote and protect public health, safety, comfort, convenience, prosperity, aesthetics and other aspects of the general welfare." In order to accomplish this purpose, the ordinance regulates and restricts the use of property for the mutual benefit of all.

The Ordinance was updated in 2004 by the BLRPC. The Florence County ordinance divides the county into four districts and thirteen zones. Within the Open Space Zoning District are three zones: Natural Resource Preservation Zone (O-N), Forestry Zone (O-F), Park and Recreation Zone (O-P). In the Agricultural Zoning District is the Agricultural Zone (A-G). The Residential Zoning District contains four zones, including: Residential Single-Family Zone (RS-20) which mandates 20,000 square feet minimum lot size with public sewerage not required, Residential Single-Family Zone (RS-15) which mandates 15,000 square feet minimum lot size and public sewerage is required when within the shoreland zone, Residential Single-Family Zone (RS-10) that requires 10,000 square feet minimum lot size and public sewerage is required when within the shoreland zone, Residential Multi-Family Zone (R-M) that requires 15,000-20,000 square feet minimum and 5,000-10,000 square feet per dwelling unit and public sewerage is required for the smaller lot area when within the shoreland zone. The Commercial Zoning District includes the General Commercial Zone (C-G), Community Commercial Zone (C-C) and Commercial Service Zone (C-S). The Manufacturing District includes the General Manufacturing Zone (M-

G) and the Intensive Manufacturing Zone (M-I). The Florence County Zoning Ordinance should be consulted for permitted and conditional uses in the various zoning districts.

Florence County is primarily zoned Open Space Zoning District, Forestry Zone (O-F) with 238,900 acres in this category, accounting for 75 percent of the entire county. The General Agriculture Zone (A-G) is the next largest category with 38,735 acres, accounting for 12 percent of the county. Open Space Zoning District, Natural Resource Preservation Zone (O-N) accounts for 31,977 acres of land (10 percent of the county). The O-N district is primarily located in large wetland areas throughout the county. Those areas zoned for development, General Commercial, Community Commercial, Commercial Service, General Manufacturing, Intensive Manufacturing, 10,000 square foot Single Family Residential, 20,000 square foot residential Single Family Residential, and Residential Multi-Family account for 1,295 acres of land. Park and Recreation Zone (O-P) account for 35 acres of land in Florence County.

### ***Manitowoc County***

The Manitowoc County Zoning Ordinance is contained within Chapter Eight of the Manitowoc County Land Development Ordinances. The ordinance regulates and restricts the location, construction and use of buildings and structures as well as the use of land in the county. The county zoning ordinance has been adopted by 16 of the county's 18 towns. The Ordinance creates 16 districts within six general land use categories including agricultural, business, conservancy, industrial, residential, and rural residential.

### ***Oconto County***

Oconto County Zoning Ordinance is set forth in Chapter 14 of the Oconto County Code of Ordinances. The purpose of the ordinance is to promote the health, safety, morals, prosperity, aesthetics, and general welfare of the County. In order to accomplish this purpose, the ordinance regulates and restricts the use of property. The ordinance divides the county, into districts for the purpose of regulating: 1) the location and use of land, water, buildings, and structures, 2) the height and size of building structures, 3) the percentage of a lot that may be occupied, 4) the density of the population, and 5) the size of lots. The Oconto County Zoning Ordinance classifies land according to the following districts: residential single family, residential multiple family, mobile home park, community service, park and recreation, forest, rural residential district, agricultural, large scale agricultural, restricted commercial, general commercial, light industrial, and industrial.

The Oconto County Zoning Ordinance also includes, but is not limited to the Oconto County Farmland Preservation Plan and Oconto County Outdoor Recreation Plan. In addition to the zoning districts discussed, the Oconto County Zoning Ordinance has several overlay districts. These districts include a Conservancy District (C), Floodplain District (FP), Airport Height Limitation District (AH), Adult Entertainment Overlay District (AEOD), Quarrying District, Metallic Mining Exploration District (MME), and a Mining District (M). The provisions of an overlay district shall be in addition to any underlying zoning district requirements.

### **Subdivision Ordinance**

All eight counties within the Bay-Lake Region have adopted subdivision ordinances. The ordinances provide guidelines for new residential development within each individual county.

### ***Brown County***

Chapter 21 of the Brown County Code contains the Brown County land subdivision ordinance. The ordinance regulates the subdivision of land where the act of division creates five or more parcels. The ordinance also regulates the creation of five or more parcels or building sites of five acres each or less in area through successive divisions within a period of five years.

The ordinance contains design standards for streets, planned unit developments, lots, easements, and storm water drainage that must be complied with in order for the subdivision to be approved by the Board of Directors of the Brown County Planning Commission. The ordinance also contains requirements for park and public land dedication. For a more detailed account of the Brown County Subdivision Ordinance, refer to the Brown County Code.

### ***Door County***

The *Door County Land Division Ordinance* was adopted in August of 1996, and regulates the division of land to promote public health, safety, aesthetics, and general welfare. The ordinance provides for minor land divisions, major land divisions, design standards and the dedication and improvement of a parcel of land to be developed.

The ordinance regulates the combining of two or more parcels of land into one parcel of 10 acres or less and the subdivision of land where the act of division creates five or more parcels or building sites which are less than 10 acres in size within a five year period. The ordinance also regulates minor land division (certified survey map or commonly referred to as CSMs) where it is proposed to divide land into at least one but not more than four parcels or building sites of less than 10 acres. The ordinance also contains design standards for streets, curb and gutter, sidewalks, drainage, erosion control, utilities, and easements that must be complied with in order for the subdivision to be approved by the County. The ordinance also contains requirements for park and public land dedication. The land division ordinance in conjunction with other tools, provides a means of implementing the county's zoning.

### ***Florence County***

The *Florence County Subdivision Ordinance*, adopted May 16, 1969, applies to the division of a lot, where the division creates five or more parcels or building sites of 1.5 acres each, or less in an area, or where the act of division creates five or more parcels or building sites of 1.5 acres each or less in an area by successive division. In addition to defining what a subdivision constitutes, the ordinance provides requirements for dedication and reservations of land, design standards for streets, blocks, lots, required improvements by the developer, as well as the process for subdivision submittal and review. The ordinance also provides a section on planned residential unit development/cluster subdivision, and lists the requirements for this type of development.

### ***Kewaunee County***

The *Kewaunee County Subdivision Ordinance* applies only to the shoreland areas of Kewaunee County, defined as being within 300 feet of a navigable waterway or 1,000 feet of a lake, pond or flowage. The general purpose of the ordinance is to provide for the safe and orderly design and development of subdivisions within the shoreland area.

The ordinance applies to any division of land which results in a subdivision. A subdivision is defined by the ordinance to be:

"The division of a lot, parcel or tract by the owner thereof, or his agent, for the purposes of transfer of ownership or building development where the act of division creates three (3) or more parcels or building sites of five (5) acres each or less in area or where the act of division creates three (3) or more parcels or building sites of five (5) acres each or less in area by successive division within a five year period."

### ***Manitowoc County***

Manitowoc County, under Wisconsin Statutes 236, established the procedure for the division and subdivision of lands in unincorporated areas of the county (Ordinance Number 104-1-69). Individual town within Manitowoc County, under statutes, can develop and implement their own subdivision controls, if they so choose. All divisions of land of fifteen (15) acres or less in size must be surveyed and a certified survey map or subdivision plat approved before being recorded in the Register of Deeds Office according to Subdivision Regulations.

### ***Marinette County***

The *Marinette County Subdivision Ordinance* applies only to the shoreland areas of Marinette County, defined as being within 300 feet of a navigable waterway or 1,000 feet of a lake, pond or flowage. The general purpose of the ordinance is to provide for the safe and orderly design and development of subdivisions within the shoreland area.

The ordinance applies to any division of land which results in a subdivision. A subdivision is defined by the ordinance to be:

"The division of a lot, parcel or tract by the owner thereof, or his agent, for the purposes of transfer of ownership or building development where the act of division creates three (3) or more parcels or building sites of five (5) acres each or less in area or where the act of division creates three (3) or more parcels or building sites of five (5) acres each or less in area by successive division within a five year period."

### ***Oconto County***

*Oconto County's Land Division Ordinance* is contained in Chapter 13 of the Oconto County Code of Ordinances. Portions of this ordinance have recently been re-written to address current land division concerns. The ordinance regulates the subdivision of land where the act of division creates five or more parcels or building sites of which four may be less than 1.5 acres (65,340 square feet). The ordinance also regulates minor land division (certified survey map or commonly referred to as CSMs) where it is proposed to divide land into two, three or four parcels or building sites of less than 10 acres each of which the original parcel has existed for a 5-year period. The ordinance also contains design standards for streets, curb and gutter, sidewalks, drainage, erosion control, utilities, and easements that must be complied with in order for the subdivision to be approved by the County. The ordinance also contains requirements for park and public land dedication. The land division ordinance in conjunction with other tools, provides a means of implementing the county's zoning.

### ***Sheboygan County***

Chapter 71 of the Sheboygan County Code contains the *Sheboygan County Land Subdivision Ordinance*. The ordinance regulates the unincorporated areas of Sheboygan County, or where incorporated communities have entered into agreement under sec. 66.30 Wisconsin Statutes, to

exercise cooperative authority to approve plats of subdivisions, where the act of division creates five or more parcels from the same “Mother Tract” of land.

The “Mother Tract” of land is defined in the ordinance as, “A parcel of land that is, or at any time in the previous twenty (20) years was, in the same ownership. Contiguous parcels in the same ownership are considered to be one (1) parcel for purposes of this definition, even though the separate parcels may have separate tax identification numbers or were acquired at different times or from different persons.”

The ordinance includes a requirement for dedication of public parks and open space. The amount of land to be provided is based upon an equivalent of one acre per thirty-six dwelling units, with a minimum of one-half acre for undeveloped lots. In the event that the proposed park or open space would be too small, unsuitable or unnecessary for reasons particular to the division or neighborhood in which it is located, the subdivider of a plat or certified survey map can pay a fee of two hundred dollars per dwelling unit in lieu of land dedication.

The ordinance also contains design standards for streets, planned unit developments, lots, easements, and storm water drainage that must be complied with in order for the subdivision to be approved by the Sheboygan County Planning Commission. For a more detailed account of the Sheboygan County Subdivision Ordinance, refer to the Sheboygan County Code.

### **Official Map**

Section 62.23(6)(b) of the *Wisconsin Statutes* provides that a Town may establish an official map for the precise designation of right-of-way lines and site boundaries of streets, roads, highways, parkways, parks, and playgrounds. The Town may also include on its official map the locations of railway rights-of-way, public transit facilities, and those waterways which have been included in comprehensive surface water drainage plan. Such a map has the force of law and is deemed to be conclusive with respect to the location and width of both existing and proposed streets, highways, waterways, and parkways and the location and extent of existing and proposed railway rights-of-way, public transit facilities, and parks and playgrounds shown on the map. It is important to note that in Wisconsin the official map enabling legislation is a subsection of the basic local planning enabling legislation, Section 62.23 is entitled "City planning," and as such is made applicable by references in other statutes to villages and towns as well as to cities.

An official map is intended to implement a town, village, or city master plan for streets, highways, parkways, parks and playgrounds, and drainage ways. Its basic purpose is to prohibit the construction of buildings or structures and their associated improvements on land that has been designated for current or future public use.

All the counties in the region maintain a county-wide parcel base map.

### **Erosion Control Plan**

Under s. 92.10, Wis. Stats., those counties that are designated as priority counties by the Department of Agriculture, Trade and Consumer Protection (DATCP) must prepare and adopt erosion control plans.

A Coastal Hazard Management Plan was developed for Kewaunee County in 1988 regarding erosion management along the Lake Michigan shoreline.



The Manitowoc County Land Conservation Committee prepares plans to conserve long-term soil productivity, protect the quality of related natural resources, enhance water quality and focus on severe soil erosion problems.

The Marinette County land conservation committee prepares plans to conserve long-term soil productivity, protect the quality of related natural resources, enhance water quality and focus on severe soil erosion problems.

The Oconto County Land Conservation Committee prepares plans to conserve long-term soil productivity, protect the quality of related natural resources, enhance water quality and focus on severe soil erosion problems. In 1985, The Oconto County Land Conservation Committee entered into an agreement with DATCP to prepare a County Erosion Control Plan. The Oconto County Erosion Control Plan was adopted in 1987.

Text relating to erosion control and storm water management can be found within the Sheboygan County Subdivision Ordinance, Section 71.21(h). The Sheboygan County Plan Commission requires subdivides to provide storm water management and control plans whenever it determines from the initial review of the preliminary plat or certified survey map that the soil, slope, vegetation, and/or drainage characteristics of the site are such as to require significant cutting, clearing, grading, shoreline stabilization, or land disturbing activities in the development of the subdivision or land division. The guidelines and specifications contained in Sheboygan County Erosion Control and Storm Water Management Guidelines and the accompanying technical reference provide the framework for design plans to be submitted under this section.

### **County Wetland, Shoreland, and Floodplain Ordinances**

Floodplains are areas that frequently are intermittently covered with standing water during periods above the normal high water mark. Shorelands are the upland areas adjacent to navigable waterways. Along with floodplains, shorelands are often viewed as valuable recreational and environmental resources in both urbanized and rural areas. As a result, the State of Wisconsin requires that counties adopt shoreland/floodplain zoning ordinances to address the problems associated with development in floodplain areas. Development in shoreland areas is generally permitted but specific design techniques must be considered. Development in these areas is strictly regulated and in some instances, is not permitted. The authority to enact and enforce these types of zoning provisions is set forth in Chapter 59.692 of the *Wisconsin Statutes* and Wisconsin Administrative Codes NR 115,116, and 117.

#### ***Brown County***

The County Board adopted the *Brown County Shoreland-Floodplain Ordinance* pursuant to the authorization contained in Sections 59.97, 59.971, 59.99, 61.35, 62.23, and 87.30 of the Wisconsin Statutes. The purpose of the shoreland-floodplain ordinance is to promote and protect the public health, safety, convenience, and general welfare; to minimize expenditures of the public monies for costly flood control projects as well as rescue and relief efforts; prevent and control flooding and water pollution; protect spawning grounds, fish and aquatic life; control building sites, placement of structures, and land uses; and preserve shore cover and natural beauty.

The shoreland-floodplain ordinance applies to all shoreland areas of navigable waterways in the unincorporated areas of Brown County which are defined as follows: 1,000 feet from the normal

high water elevation of lakes, ponds, or flowages; and 300 feet from the normal high water elevation, or to the landward side of a floodplain, of navigable reaches of rivers or streams. This ordinance regulates lot size, setbacks, shore cover removal, filling, lagooning and dredging. For a more detailed account, refer to *The Brown County Code*, Chapter 22. Map 2.7 depicts areas of the town which are covered by the ordinance.

### ***Door County***

Door County administers its shoreland/floodplain ordinance in the unincorporated areas of the county. Shoreland zones are those areas within 300 feet of a navigable river or stream, 1,000 feet of a navigable lake, pond or flowage or to the landward side of the 100-year floodplain, whichever distance is greater. Map 3 depicts the shoreland zone within the study area. Shorelands are often viewed as valuable recreational and environmental resources in both urbanized and rural areas. As a result, the State of Wisconsin requires that counties adopt shoreland/floodplain zoning ordinances to address the problems associated with development in floodplain areas. Development in these areas is strictly regulated but may be permitted with specific design techniques. The authority to enact and enforce these types of zoning provisions is set forth in Chapter 59.692 of the *Wisconsin Statutes* and Wisconsin Administrative Codes NR 115,116, and 117 and is established in the Door County Zoning Ordinance.

Floodplains within Door County are under the jurisdiction of the *Door County Floodplain Zoning Ordinance*. The areas regulated by this ordinance include all areas within the unincorporated portions of Door County which would be covered by the regional (100-year) flood. The areas within the regional flood are designated as such, on F.E.M.A. Flood Insurance Rate Maps, *100-Year Dam Failure Map* by Mead and Hunt Consulting Engineers, and the revisions in the Door County Floodplain Appendix. Uses within areas designated as the regional floodplain are regulated through a permitting process.

The Door County Setback Ordinance is included in Chapter 3 of the *Door County Zoning Ordinance*, and requires that the setback from all navigable water shall be 75 feet from the ordinary high water mark. Navigable waters which the setback ordinance regulates include lakes, rivers, ponds, sloughs, flowages, and other waters which have a level of flow sufficient to support navigation by a recreational craft on an annually recurring basis.

### ***Florence County***

The Florence County Shoreland/Wetland Zoning Ordinance, adopted by the Florence County Board of Supervisors on July 15, 1986, regulates the areas within one thousand feet of navigable lakes, ponds or flowages and areas within three hundred feet of the ordinary high water mark of navigable rivers or streams, or to the landward side of the floodplain, whichever distance is greater. For the purpose of promoting the public health, safety, convenience and welfare the ordinance was enacted to further the maintenance of safe and healthful conditions and prevent the pollution of water, protect spawning grounds, fish and aquatic life and preserve shore cover and the natural beauty of Florence County. In addition to those areas within a navigable waterway, the ordinance also regulates wetlands greater than five acres in size. Within the shoreland zone, buildings are required to abide by a 75-foot setback from the ordinary high water mark of the navigable water. However, where there is at least one main building, within 200 feet, on either side of the proposed development that is built to less than the required setback, the new

development can average the existing setback and the required setback. Furthermore, the ordinance also regulates the removal of shore cover to no more than thirty feet in any 100 feet, as measured along the ordinary high water mark, may be clear cut to the depth of the 35 foot area.

Within the shoreland/wetland ordinance is section 11 of the Florence County Zoning Ordinance that pertains to the Pine and Popple Wild Rivers in Florence County. The Wild Rivers Zone (O-W) provides for the orderly and progressive re-establishment and maintenance of free flowing, relatively unpolluted, primarily primitive, generally inaccessible and aesthetically attractive Wild Rivers in congruence with Wisconsin Statute 30.26. The Wild Rivers Zone includes all land within 400 feet of the water or to the visible horizon from the water, whichever distance is greater on either side of the river. Within the zone, forestry practices that retain, preserve and continue a minimum of ninety square feet basal area vegetation growing stock within 150 feet of the river and seasonal residences if rustic in design, unobtrusive in body and trim coloration, at least seventy-five percent screened by vegetation as seen from the water during summer months with no power poles are both permitted uses in the Wild Rivers Zone. In addition to the requirements mentioned, there are strict lot sizes and height and setback regulations pertaining to residential development.

### ***Kewaunee County***

The *Kewaunee County Floodplain Zoning Ordinance* states as its finding of fact, "Uncontrolled development and use of the floodplains, rivers or streams of this municipality would adversely affect the public health, safety, convenience, general welfare, and impair the tax base." The purpose of the ordinance is to regulate development in flood hazard areas to protect life, health and property. In order to accomplish this purpose, the ordinance divides the floodplain into districts.

- The Floodway District (FW) consists of the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional flood waters.
- The Floodfringe District (FF) consists of that portion of the floodplain between the regional flood limits and the floodway.
- The General Floodplain District (GFP) consists of all areas that may have been or may be hereafter covered by flood water during the regional flood. It includes both the floodway and floodfringe districts

The boundary of the floodplain districts (Map 5.10), including the floodway, floodfringe and other floodplain districts, are those areas designated as floodplains or A-Zones on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), dated September 3, 1980.

The *Kewaunee County Shoreland Ordinance* regulates the shorelands of all navigable waters in the unincorporated areas which are shown either in the WDNR *Surface Waters of Kewaunee County*, or on USGS quadrangle maps. The ordinance regulates lands which are within 1,000 feet of the ordinary high water mark of navigable lakes, ponds or flowages. In addition, the ordinance regulates areas which are within 300 feet of the ordinary high water mark of navigable rivers or streams as shown on USGS quadrangles, or to the landward side of a floodplain of the navigable reaches of rivers or streams, whichever distance is greater. The ordinance also states there is a 75-foot setback for all structures from the ordinary high water mark of navigable inland

waters and Green Bay. For lots that abut on Lake Michigan, the required minimum setback for all buildings and structures shall be at least 75 feet from the ordinary highwater mark where the shore bluff height is 10 feet or less, and 125 feet from the ordinary highwater mark where the shore bluff height is greater than 10 feet. The removal of shore cover, filling, grading, lagooning, dredging, ditching and excavating are also regulated under this ordinance. Map 1 illustrates the locations of these shoreland areas.

### ***Manitowoc County***

The *Manitowoc County Floodplain Zoning* ordinance was adopted in April 1992. The ordinance was adopted pursuant to Wis. Stats. 59.57, 59.971, 59.99, and 87.30. The general purpose of the ordinance is to regulate development in the flood hazard areas to protect life, health and property. The ordinance established three zoning districts: (1) the floodway district which consists of the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional flood ( the regional flood is defined to be representative of large floods known to have occurred in Wisconsin or which may be expected to occur on a particular lake, river or stream once in every 100 years), (2) the floodfringe district consists of that portion of the floodplain between the regional flood limits and the floodway, and (3) the general floodplain district which consists of all areas which have or may be hereafter covered by the floodway and floodfringe district.

Uses permitted in the floodway district consist of open space uses that are not prohibited by any other ordinance and that meet the standards established in the ordinance. Structures intended for human habitation are not permitted in the floodway. Uses permitted in the floodfringe district consist of structures, land uses or development that meet the standards of the ordinance and are not prohibited by the ordinance or any other ordinance or other local, state, or federal regulation. Uses in the general floodplain are determined on whether or not the proposed uses are located in the floodway or floodfringe area.

The *Manitowoc County Shoreland Ordinance* was adopted March 1992. The ordinance was adopted pursuant to Wis. Stats. 59.57, 59.971, 87.30, and 144.26. The ordinance recognizes that the uncontrolled use of shorelands and pollution of navigable waters of Manitowoc County would adversely affect the public health, safety, convenience and general welfare and would impair the tax base. The ordinance states that the legislature of Wisconsin has delegated the responsibilities to the counties to further the maintenance of safe and healthful conditions; to prevent and control water pollution; protect spawning grounds, fish and aquatic life; control building sites, placement of structures and land uses; and to preserve shore cover and natural beauty. The ordinance regulates all lands within unincorporated areas of the county that are:

- a) Within 1,000 feet of the ordinary high water mark of navigable lakes, ponds or flowages,
- b) Within 300 feet of the ordinary high water mark of navigable rivers or streams or to the landward side of the floodplain which ever is greater.

The ordinance recognizes town zoning ordinances in that if the town ordinance is more restrictive than the county ordinance, the town ordinance continues to the extent of the greater restriction, but not otherwise. However, all county permits must be secured even though the town zoning provisions may be more restrictive.

Under the ordinance, the county reviews all land divisions of existing tax parcels in the shoreland area, pursuant to s.236.45, Wis. Stats and Manitowoc County Subdivision Ordinance Number 104-1-69. Under the ordinance, the county may require the installation of streets and utility improvements, the dedication of land for public streets, public use, and public access to the navigable lakes or streams. The ordinance defines a subdivision as a division of a lot, parcel or tract of land by the owner thereof or the owner's agent for the purpose of sale or building development where: 1. The act of subdivision creates three or more parcels or building sites of five acres each or less; or 2. three or more parcels or building sites of five acres are created by successive division within a period of five years. The ordinance further regulates the dimension of building sites, setbacks from water and highways, the minimum square footage of living space, removal of shore cover, filling, grading, lagooning, dredging, ditching, and excavating.

The ordinance establishes a method to allow clustering on lots at least 10 acres in size to promote open space and to protect open space through preservation in perpetuity. This ordinance also defines three zoning districts - Shoreland-Wetland, Recreational-Residential, and General Purpose.

### ***Marinette County***

The Marinette County Floodplain Zoning ordinance is contained in Chapter 19 of the *Marinette County Code of Ordinances*. The ordinance was adopted pursuant to Wis. Stats. 59.57, 59.971, 59.99, and 87.30. The general purpose of the ordinance is to regulate development in the flood hazard areas to protect life, health and property. The ordinance established three zoning districts: (1) the floodway district which consists of the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional flood ( the regional flood is defined to be representative of large floods known to have occurred in Wisconsin or which may be expected to occur on a particular lake, river or stream once in every 100 years), (2) the floodfringe district consists of that portion of the floodplain between the regional flood limits and the floodway, and (3) the general floodplain district which consists of all areas which have or may be hereafter covered by the floodway and floodfringe district.

Uses permitted in the floodway district consist of open space uses that are not prohibited by any other ordinance and that meet the standards established in the ordinance. Structures intended for human habitation are not permitted in the floodway. Uses permitted in the floodfringe district consist of structures, land uses or development that meet the standards of the ordinance and are not prohibited by the ordinance or any other ordinance or other local, state, or federal regulation. Uses in the general floodplain are determined on whether or not the proposed uses are located in the floodway or floodfringe area.

The Marinette County Shoreland-Wetland Zoning ordinance is contained in Chapter 21 of the *Marinette County Code of Ordinances*. The ordinance was adopted pursuant to Wis. Stats. 59.57, 59.971, 59.99, 87.30, and 144.26. The ordinance recognizes that the uncontrolled use of shorelands and pollution of navigable waters of Marinette County would adversely affect the public health, safety, convenience and general welfare and would impair the tax base. The ordinance states that the legislature of Wisconsin has delegated the responsibilities to the counties to further the maintenance of safe and healthful conditions; to prevent and control water pollution; protect spawning grounds, fish and aquatic life; control building sites, placement of

structures and land uses; and to preserve shore cover and natural beauty. The ordinance regulates all lands within unincorporated areas of the county that are:

- a) Within 1,000 feet of the ordinary high water mark of navigable lakes, ponds or flowages,
- b) Within 300 feet of the ordinary high water mark of navigable rivers or streams or to the landward side of the floodplain which ever is greater.

The ordinance recognizes town zoning ordinances in that if the town ordinance is more restrictive than the county ordinance, the town ordinance continues to the extent of the greater restriction, but not otherwise. However, all county permits must be secured even though the town zoning provisions may be more restrictive.

Under the ordinance, the county reviews all land divisions of existing tax parcels in the shoreland area, pursuant to s.236.45, Wis. Stats. Under the ordinance, the county may require the installation of streets and utility improvements, the dedication of land for public streets, public use, and public access to the navigable lakes or streams. The ordinance defines a subdivision *as a division of a lot, parcel or tract of land by the owner thereof or the owner's agent for the purpose of sale or building development where: 1. The act of subdivision creates five or more parcels or building sites of 1-1/2 acres each or less; or 2. Five or more parcels or building sites of 1-1/2 acres are created by successive division within a period of five years.* The ordinance further regulates the dimension of building sites, setbacks from water and highways, the minimum square footage of living space, removal of shore cover, filling, grading, lagooning, dredging, ditching, and excavating.

The ordinance establishes four districts: (1) a Shoreland-Wetland District, (2) a General Purpose District, (3) a Conservancy District, and (4) a Residential District. The Shoreland-Wetland District includes all shorelands which are two acres or more and which are shown on the Wisconsin Wetland Inventory Maps. Uses in this district that are allowed are generally limited to open space uses such as agricultural uses, outdoor recreation activities, and parks; other uses are prohibited. The General Purpose District consists of shorelands that are not in any of the other districts. Uses permitted include agricultural, residential, and recreational uses, and industrial uses as conditional uses. The Conservancy District includes all shorelands that have been designated wetlands on the United States Geological Survey Maps or wetlands that are two acres or under in size as shown on the Wisconsin Wetland Inventory Maps. Permitted uses consist of open space uses. The Residential Recreational District includes all shorelands that are defined as mobile home parks, recreational vehicle parks or campgrounds.

### ***Oconto County***

The *Oconto County Shoreland and Floodplain Zoning Ordinances* were adopted by the Oconto County Board in 1983 and 1987, respectively. The purpose of the shoreland zoning ordinance is to further the maintenance of safe and healthful conditions; to prevent and control water pollution; to protect fish spawning grounds and other aquatic life; to control building sites, placement of structures and land uses; and to preserve shore cover and natural beauty.

The shoreland ordinance applies to all shorelands of navigable waterways in the unincorporated areas of Oconto County which are: 1,000 feet from the ordinary high water elevation of navigable lakes, ponds, or flowages; and 300 feet from the ordinary high water elevation, or to

the landward side of a floodplain, of the navigable reaches of rivers or streams, whichever distance is greater. This ordinance regulates parcel size, alteration of surface vegetation, land surface alterations, sewage disposal, filling, toxic dumping, lagooning/dredging, commercial advertising and mandates a basic building and structure setback of 75 feet from the ordinary high water mark.

The *Oconto County Floodplain Zoning Ordinance* was adopted to promote public health, safety, and general welfare, and to minimize flood losses in areas subject to flood hazards. The ordinance regulates residential development, storage of hazardous materials, uses which may be detrimental to permitted uses in adjoining districts, sewage disposal, wells for drinking water, and wastewater ponds or facilities, except those permitted under Wisconsin Administrative Code (NR 110.15) within the FEMA designated floodplain area. Refer to Map 5.10 for an illustration of these rural areas which are covered by the Floodplain Ordinance.

### ***Sheboygan County***

The *Sheboygan County Shoreland-Floodplain Ordinance*, adopted by the Sheboygan County Board provides for the safe and orderly use of shorelands and promotes the public health, safety and general welfare relative to surface waters, shorelands, flood prone areas and wetlands.

The shoreland ordinance controls building and regulates land use types within all lands that would be inundated by the regional flood and/or the 500-year flood for certain critical use facilities; and shorelands and wetlands of all navigable waters in the unincorporated areas of Sheboygan County which are: 1,000 feet from the ordinary high water elevation of navigable lakes, ponds, or flowages; and 300 feet from the ordinary high water elevation, or to the landward side of a floodplain, of the navigable reaches of rivers or streams, whichever distance is greater. For a more detailed description of the shoreland-floodplain ordinance, refer to The Sheboygan County, Wisconsin Shoreland-Floodplain Ordinance, Chapter 72.

### **Farmland Preservation Plan**

Counties including Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto and Sheboygan have developed Farmland Preservation Plans.

### ***Brown County***

The *Brown County Farmland Preservation Plan.*, updated in 1990, identifies areas of prime agricultural importance and must stay zoned as farmland preservation areas in order for the owners to partake in allowable tax credits offered by the state. These areas may be impacted upon by new development occurring within the County.

### ***Door County***

The *Door County Farmland Preservation Plan*, adopted November, 1983, identifies areas, which are of prime agricultural importance for which the landowners may partake in allowable tax credits under the Farmland Preservation Program.

## ***Florence County***

The *Florence County Farmland Preservation Plan*, adopted December 21, 1982, states as its overall goal, "...to preserve productive and potentially productive agricultural land, forest land, and environmentally significant natural areas, and at the same time provide for well planned urban growth that is compatible with the agricultural and natural resources of the county." The plan divides the county into five districts: Agricultural Areas, Forestry Areas, Transitional Areas, Environmental Areas, and Excluded Areas. A discussion of each follows.

1. Agricultural Areas (Eligible for Farmland Preservation Tax Credits)
  - All farmlands
  - Lands that have been historically farmed, even though presently fallow
  - All lands that are part of the farm unit, including woodland, pasture lands, and wetlands
  - Lands must form 100 contiguous acres; environmental areas, forestry areas, and transition areas may form part of the 100 contiguous acres
2. Forestry Areas (Ineligible for Farmland Preservation Tax Credits)
  - Areas that should be preserved for forestry purposes and are better protected and managed under the Forest Crop Law Program or Woodland Tax Program.
  - Areas that are publicly owned and are used for forest production. These areas include federal, state, county and school forests.
3. Transitional Areas (Eligible for Farmland Preservation Tax Credits)
  - Logical extensions of existing developed areas
  - Lands that are subdivided, but not developed
  - Undeveloped land necessary to accommodate future residential, industrial or commercial growth
  - Sewer service areas
4. Environmental Areas (Eligible for Farmland Preservation Tax Credits)
  - Forest areas that are not publicly owned or covered by the Forest Cropland Program or Woodland Tax Program
  - Publicly owned natural areas not used for forest production purposes, such as campgrounds, woodland, wildlife areas, wilderness areas, parks and public hunting grounds
  - Historic sites
  - Archeological sites
  - Natural areas identified by the Wisconsin Department of Natural Resources
  - 100-year floodplain
  - Lakes, rivers, streams
  - Wild River Areas Project Acquisition Areas
  - Grasslands
  - Islands
  - Fraternal organizations, clubs, private hunting grounds



## 5. Excluded Areas (Ineligible for Farmland Preservation Credits)

- Lands currently developed for residential, commercial, and industrial uses
- Mining sites
- Landfill sites
- Golf courses
- Lands otherwise rendered unsuitable for agriculture or forestry purposes

The Environmental Areas are the largest category in Florence County. They are located primarily in the eastern portion of the county and cover approximately 49 percent of the county. The next largest category in Florence County is the Forestry Area, meaning those areas are not eligible for Farmland Preservation tax credits, but are eligible for the Forest Cropland Program or Woodland Tax Program. The Forestry Areas cover 42 percent of Florence County and are located in the western half of the county. The remaining 9 percent of the county is covered by Agricultural Areas, Transitional Areas, and Excluded Areas. Agricultural Areas cover portions of eastern Florence County, whereas Transitional and Excluded areas are dispersed throughout the county.

### ***Kewaunee County***

The *Kewaunee County Farmland Preservation Plan* was initially adopted in December, 1981, and updated in 1988. The intent of the first plan was to preserve, conserve, and protect prime agricultural lands within the county and qualify county farmers for tax credits available under the Wisconsin Farmlands Preservation Act. The update reviewed and updated the plan's goals and objectives, including the general purpose of the Farmland Preservation Plan.

In order to implement the overall goal for the Kewaunee County Farmland Preservation Plan, the plan designates agricultural preservation areas, transitional areas, and environmental areas that excluded areas within the county

### ***Manitowoc County***

The *Manitowoc County Farmland Preservation Plan* identifies agricultural preservation areas that are of prime agricultural importance. Property owners of eligible farmland may enter into farmland preservation agreements or transition agreements whereby the owner agrees not to develop the land in exchange for farmland preservation tax credits. Lands covered by a farmland preservation agreement are exempt from special assessments for sanitary sewers, water, lights, or non farmland drainage and the land is also denied the use of the improvement created by the special assessment. This plan was last updated in 1988 and details areas considered for Agricultural Preservation (being 100 contiguous acres as a minimum), Environmental Areas being wetlands, woodland, cultural, historic, or archeological, the 100 year floodplain, public lands, lakes, rivers and streams) which are eligible for the Wisconsin Farmland Preservation tax credits as an incentive to protect these sites, Transitional Areas (of at least 35 acres) may be eligible for the above tax credits as well, and finally Excluded Areas which are not eligible for tax credits and are deemed developed and not for farming.

### ***Marinette County***

The *Marinette County Farmland Preservation Plan* identifies agricultural preservation areas that are of prime agricultural importance. Property owners of eligible farmland may enter into farmland preservation agreements or transition agreements whereby the owner agrees not to develop the land in exchange for farmland preservation tax credits. Lands covered by a farmland preservation agreement are exempt from special assessments for sanitary sewers, water, lights, or non farmland drainage and the land is also denied the use of the improvement created by the special assessment.

The Marinette County Farmland Preservation Plan includes two districts: a Farm Economic Unit Preservation District, and a Forestry Economic Unit District - Special Environmental Area.

The Farm Economic Unit Preservation District includes “all farm parcels, under single ownership, which contain at least 35 acres of tilled agricultural land. ... Individual or groups of parcels defined in this way must total 100 acres or more to qualify as a preservation district.”

The Forestry District includes “all parcels under single ownership which contain at least 120 acres of forest use.”

### ***Oconto County***

The *Oconto County Farmland Preservation Plan*, published in May, 1985 by the Bay-Lake Regional Planning Commission, identifies areas which are of prime agricultural importance for which the owners may partake in allowable tax credits under the Farmland Preservation Program. The overall goal of the Oconto County Farmland Preservation Plan is stated as, “...to preserve productive and potentially productive agricultural land, forest land, and environmentally significant areas, while providing for well planned urban growth that is compatible with the agricultural, recreational and natural resources of the county.”

### ***Sheboygan County***

The *Sheboygan County Farmland Preservation Plan* states as its primary goal, “... to identify the County’s agricultural resources and needs, and to balance them with development demands and community growth.” The plans policies seek to discourage random and scattered growth, low-density development, and discontinuity of developing areas which inflate costs of services, etc. Furthermore, the plan also seeks to discourage the mixing of incompatible uses of the land.

### ***Agricultural Preservation Areas***

Areas that are currently cultivated (in agricultural use) that are part or wholly consist of 100 contiguous acres at a minimum are considered Agricultural Preservation Areas. This definition is intended to include all types of farmland and agricultural uses in order to provide the option of participating in the preservation program to the greatest number of farmers as possible. Farmers in agricultural preservation areas are eligible to sign contracts for ten to twenty years.

### ***Transitional Areas***

Transitional areas are those areas that are currently in agricultural use, but in the short-term are expected to convert to non-farm uses, such as residential, commercial or industrial uses. Transitional areas include incorporated areas in agricultural use and areas around developed unincorporated areas that are serviced by existing roads and public services. Transitional areas

must be a minimum of 35 acres in size. Farmers whose lands are in a transitional area may sign a contract agreeing not to develop their lands for a period of five to twenty years.

### ***Environmental Areas***

The following areas are considered to be environmental areas: wetlands, woodlands, cultural, historic, or archaeological sites, the 100 year floodplain, public lands, lakes, rivers, and streams. Environmental areas are eligible for Wisconsin Farmland Preservation tax credits if the cultivated area of the farm unit, of which they must be a part of, are eligible for a tax credit. Several counties have completed an Environmental Corridor study which has designated the environmental corridors within the county.

### ***Excluded Areas***

Excluded areas are considered ineligible for the Wisconsin Farmland Preservation Program. They include airports, landfills, quarries, developed incorporated and unincorporated areas, platted subdivisions, quasi-public lands (gun clubs, golf courses, etc.) cemeteries, transitional areas under 35 acres, all ten acre or larger non-agricultural related uses, and all land zoned for non-agricultural use.

### ***Other Land Use Plans***

Adopted in 1999, *the Manitowoc County Wireless Communication Facilities Ordinance*, addresses placement and co-location of communication towers and paraphernalia.

Manitowoc County has an adopted Park and Recreation Plan which meets the eligibility requirements for participation in Federal Land and Water Conservation Fund (LAWCON) grant program. LAWCON provides grants to assist in the provision of outdoor recreation facilities.

## **CURRENT LAND USE INVENTORY**

In June 1974 a process was begun to develop a state Standard Land Use Classification for Wisconsin, one that would be agreed to and usable by the various groups in Wisconsin that do land use inventories or benefit from them. A seminar, with members broadly representative of levels of government and of interests in land use, developed a set of first level categories. Working groups met during the summer to refine and give definition to the categories. They benefited from a suggested set of second and third level categories developed by the Regional Planning Commission representatives at a series of meetings. The working group chairmen convened as an executive committee and integrated the recommendations into a proposed classification, which was widely distributed for comment. The classification includes first and second level categories and definitions for each.

In March 1975 this final classification was sent to county planning agencies, regional planning commissions and state groups that handle land resource data asking that they endorse and begin to use the classification. The three coastal zone RPCs; Southeastern Wisconsin RPC, Bay-Lake RPC and Northwestern Wisconsin RPC adopted the classification in June 1975 for land use inventories conducted in conjunction with the Coastal Zone Management Development Program.

### **General Definitions**

This is a classification of primary land uses; if two land uses coexist, the dominant land use (the most intense activity) at the site takes precedence. Secondary land uses are recorded separately.

The definition of land use employed for the purposes of this classification:

*"A classification of land use includes categories of human activities on the land and of active and passive management of the land, plus the identification of all water areas to account for the entire surface defined by the state's boundaries."*

### **Classification and Definitions**

**Residential** - Use of land for non-transient-occupant dwelling units, both transportable and permanent structures.

*Single Family* - The use of land primarily for permanent structures housing one dwelling unit.

*Two Family* - The use of land primarily for permanent structures housing two separate dwelling units.

**Multi-Family** - The use of land primarily for permanent structures (with attached units and/or multiple stories) housing three or more dwelling units

*Mobile Home* - The use of land primarily for one or more transportable dwelling units.

*Group Quarters* - The use of land primarily for permanent structures, which are dormitory in nature and may provide meals but not medical or other special services. Rooming houses would be included but not nursing homes (these are Health Institutional/Governmental Facilities)

**Commercial** - Use of land for retail sales or trade of goods and/or services, including enclosed participatory sports, lodging, and commercial head offices. \*

*Retail Sales* - Use of land primarily for all forms of selling consumable goods to their ultimate consumer or for the maintenance of these goods. Auto sales and service businesses, eating and drinking places would be included but not contractors such as electrical or plumbing (these are Retail Services).

*Retail Services* - Use of land primarily for all forms of selling specialized services to their ultimate consumer. Financial and real estate businesses, transient lodgings, enclosed participatory sport operations, amusement, and health and legal services would all be included but not electronic repair or other such maintenance businesses (these are Retail Sales).

**Industrial** -Use of land for extraction or transformation of materials, for fabrication of products, for wholesaling of products, and/or for long-term storage of products. \*

*Extractive* -Use of land primarily for surface or subsurface extraction of materials, for on-site, nontransformational processing, and for spoil dumping.

*Manufacturing* -Use of land primarily for the transformation of raw materials and/or fabrication of goods of all types.

*Wholesaling* -Use of land primarily for the sale of goods in quantity, usually for resale.

*Storage* -Use of land primarily for the long-term storage of goods in quantity. A tank farm would be included but not a transshipment point such as a truck terminal. The type of storage used can be indicated, such as manufacturing or agriculture, by use of a secondary classification. \*\*

**Transportation** -Use of land corridors for the movement of people or materials, including related terminals and parking facilities.

*Air-related Transportation* -Use of land primarily for aircraft loading, launching and repair.

*Motor Vehicle-related Transportation* -Use of land primarily for motor vehicle operation, including bus and truck terminals, repair areas, parking areas, and off-road vehicle trails.

*Marine-related Transportation* -Use of land primarily for marine vehicle loading, launching and repair, including locks, artificial channels, water access sites, and structures over water but not open water areas.

*Rail-related Transportation* -Use of land primarily for rail vehicle operation, including terminals and marshaling and repair areas.

*Non-motorized-related Transportation* -The use of land primarily for pedestrian, bicycle and other movement by non-motorized forms of transportation, including established trails for such movement.

*Communication/Utilities* -Use of land for generation, processing, and/or transmission of electronic communication or of water, electricity, petroleum or other transmittable products, and for the disposal, waste processing and/or recycling of byproducts.

*Generation/Processing of Communication/Utilities* -The use of land primarily for generating and/or processing electronic communication or water, electricity, petroleum or other transmittable products.

*Transmission of Communication/Utilities* -The use of land primarily for towers, pipes, wires or other methods of diffusing or collecting electronic communication or water, electricity, petroleum or other transmittable products.

*Waste Processing/Disposal/Recycling* -The use of land primarily for processing, recycling, and/or disposal of solid or liquid byproducts, including sewage treatment and solid waste management.

*Institutional/Governmental Facilities* -Use of land for public and private facilities for education, health, or assembly; for cemeteries and related facilities; and for all government facilities used for administration or safety except public utilities and areas of outdoor recreation.

*Educational Institutional/Governmental Facilities* -The use of land for structures primarily containing all forms of continuing education services, including schools, colleges, museums and art galleries.

*Health Institutional/Governmental Facilities* -The use of land for structures primarily containing all forms of health services, including hospitals, clinics and long-term health care homes.

*Administrative Institutional/Governmental Facilities* -The use of land for structures primarily containing all forms of governmental or public administrative activities, including post offices and courthouses.

*Safety Institutional/Governmental Facilities* -The use of land for structures primarily containing all forms of safety services, including police and fire stations.

*Assembly Institutional/Governmental Facilities* -The use of land for structures primarily containing all forms of institutionally or governmentally operated assembly, including churches, sports stadia, halls and membership organizations.

*Cemetery and Related Institutional/Governmental Facilities* -The use of land primarily for burial grounds and related facilities.

*Outdoor Recreation* -Use of land for out-of-doors sport and general recreation facilities, for camping or picnicking facilities, for nature exhibits, and for the preservation or protection of historical and other cultural amenities.

*Cultural/Natural Outdoor Recreation Activities* -The use of land primarily for nature exhibits and for the preservation and protection of historical, or other cultural amenities, including zoos, arboreta, nature walks historical sites and archeological sites. These activities can be either land or water related. \*\*

*Camp/Picnic Outdoor Recreation Activities* -The use of land primarily for camping and picnicking facilities. These activities can be either land or water related. \*\*

*Other Land-related Outdoor Recreation Activities* -The use of land primarily for land-based recreation activities, including playgrounds and playlots, golf courses, playing fields and courts, skiing and skating areas and amusement parks.

*Other Water-related Outdoor Recreation Activities* -The use of land primarily for water-based recreation activities, including swimming beaches and pools but not water access sites or harbors. (These are Marine-related Transportation).

*Agriculture/Silviculture* -Use of land for growth or husbandry of plants and animals and their products and for associated facilities.

*Cropland/Pasture* -The use of land primarily for the cultivation of plants, including grasses for grazing.

*Animal Husbandry* -The use of land primarily for the intensive raising and housing of animals, including fish and fowl and including feedlots and special buildings.

*Farm Buildings/Accessories* -The use of land primarily for sheds, silos and other farm structures, not including animal husbandry buildings.

*Long-term Specialty Crops* -The use of land primarily for the long-term production of products such as mint, sod, berries, flowers, fruits, nuts, ornamental plants and Christmas trees.

*Commercial Forest* -The use of land primarily for the cultivation of trees for timber and other forest products.

*Natural Areas* -Water areas; land used primarily in a natural state for their natural functions including wetlands, grasslands and prairies, and woodlands; land undergoing change from natural areas to another land use; and conservancy areas.

*Conservancy* -Use of the land primarily for the protection and propagation of plants and wildlife; including wildlife refuges, scientific areas, wilderness areas, and wild rivers and lakes.

*Vital Natural Functions* -The use of land primarily for its natural functions including, but not restricted to, flood water storage and drainage, water nutrient filtration, and groundwater recharge.

*Other Natural areas* -Wetlands, grassland/prairies, and woodlands not elsewhere categorized.

*Water* -Open water areas, including natural and impounded lakes and streams. With this category the classification accounts for the entire surface of the state.

*Under Development* -Lands that are in transition from natural areas but cannot be identified as imminently becoming any particular category of use.

\* Administrative offices are to be included under "Commercial" or "Industrial" as is appropriate; e.g., a steel company's general headquarters would be included under "Manufacturing," while an insurance company's headquarters would be included under "Retail Services."

\*\* "Storage," as well as "Camp/Picnic Outdoor Recreation" and "Cultural/ Natural Outdoor Recreation" are included as separate categories at the second level to give special recognition to the intensity of activity that these land uses represent.

#### General Notes

1. If two uses may be determined for an area, code the most intensive use. For example, a power line or gas line corridor should be coded Communication/Utilities and not agricultural in rural areas. However, in urban areas, the residential use is assumed to be more intensive.
2. Small, insignificant areas should be coded that of the adjacent, most logical land use. For example, the open area surrounding an industrial building should be coded industrial.

The Commission has been collecting detailed land use data for areas in the region beginning in 1975 when a complete land use inventory of the region was conducted using printed aerial photography. The 1975 land use classification scheme described above was used to as categorize and compile the land use inventory. Over the course of the last ten years, detailed field inventories of land uses in many of the towns, villages, and cities within the Region have been completed on a case-by-case basis and digitized into the Commission's geographic information system. Complete land use inventories have been conducted for Brown, Florence, Marinette and Sheboygan counties, while portions of Door, Kewaunee, Manitowoc and Oconto have been completed in conjunction with Commission projects. Other land use and land cover information has been incorporated into the land use inventory for the Region as information has become available. For this report, the Commission utilized a land cover dataset provided by the National Oceanic and Atmospheric Administration to complement the land use data currently available. The land cover data was compiled by NOAA as part of a 2000 era or late-date classification of the Great Lakes. This data set consists of about 23 partial Landsat 7 Thematic Mapper scenes which were analyzed according to the Coastal Change Analysis Program (C-CAP) protocol to determine land cover. The data were field validated and subsequently mosaicked to produce a land cover inventory for a portion of the US Great Lakes Coastal Zone.

#### **Planning Area**

The Region encompasses approximately 3,471,000 acres or 5,424 square miles of land. Of this, 5.1 percent of the land uses in the Region are developed, 20.4 percent are in agricultural uses and 74.5 percent are undeveloped land. Of these undeveloped lands, nearly 30 percent are open lands and 35 percent are forested areas.

## **Type of Use**

### **High Intensity Developed**

Contains little or no vegetation. This subclass includes heavily built-up urban centers as well as large constructed surfaces in suburban and rural areas. Large buildings (such as multiple family housing, hangars, and large barns), interstate highways, and runways typically fall into this subclass. This category covers 42,348 acres or 1.2 percent of the Region.

### **Low Intensity Developed**

Contains substantial amounts of constructed surface mixed with substantial amounts of vegetated surface. Small buildings (such as single family housing, farm outbuildings, and sheds), streets, roads, and cemeteries with associated grasses and trees typically fall into this subclass. This category covers 134,898 acres 3.9 percent of the Region.

### **Cultivated Land**

Includes herbaceous (cropland) and woody (e.g., orchards, nurseries, and vineyards) cultivated lands. This category is the second largest land cover class and includes 707,446 acres or 20.4 percent of the Region.

### **Grassland**

Dominated by naturally occurring grasses and non-grasses (forbs) that are not fertilized, cut, tilled, or planted regularly. This category is the largest classification in the Region and covers 752,763 acres or 21.7 percent of the Region.

### **Deciduous Forest**

Includes areas dominated by single stemmed, woody vegetation unbranched 2 to 3 feet above the ground and having a height greater than 20 feet. This category covers 698,703 acres of Deciduous Forest or 20.1 percent of the Region representing the third largest category of land use in the Region.

### **Evergreen Forest**

Includes areas in which more than 67 percent of the trees remain green throughout the year. Both coniferous and broad-leaved evergreens are included in this category. This category covers 39,087 acres or 1.1 percent of the Region.

### **Mixed Forest**

Contains all forested areas in which both evergreen and deciduous trees are growing and neither predominate. This category covers 179,428 acres or 5.2 percent of the Region.

### **Scrub/Shrub**

Areas dominated by woody vegetation less than 20 feet in height. This class includes true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. This category covers 107,832 acres or 3.1 percent of the Region.

### **Palustrine Forested Wetland**

Includes all wetlands dominated by woody vegetation greater than or equal to 20 feet in height. This category covers 346,178 acres or 10.0 percent of the Region.

### **Palustrine Scrub/Shrub Wetland**

Includes all wetlands dominated by woody vegetation less than or equal to 20 feet in height. This category covers 336,217 acres or 9.7 percent of the Region.



**Palustrine Emergent Wetland**

Includes all wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens. This category covers 66,831 acres or 1.9 percent of the Region.

**Unconsolidated Shore**

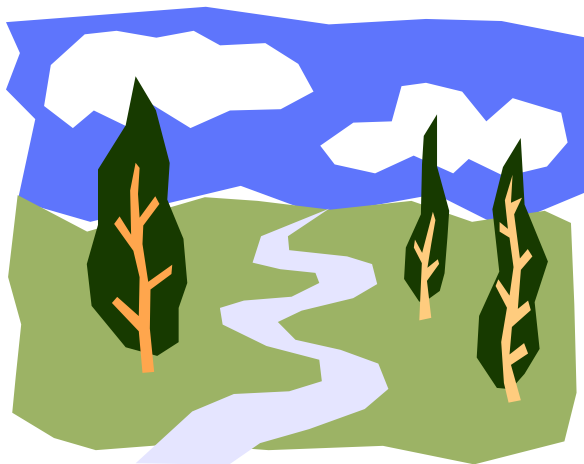
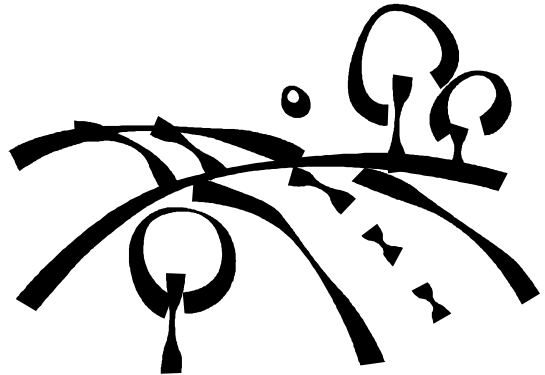
Characterized by substrates lacking vegetation except for pioneering plants that become established during brief periods when growing conditions are favorable. Erosion and deposition by waves and currents produce a number of landforms, such as beaches, bars, and flats, all of which are included in this class. This category covers 2,504 acres or 0.1 percent of the Region.

**Bare Land**

Composed of bare soil, rock, sand, silt, gravel, or other earthen material with little or no vegetation. This category covers 2,420 acres or 0.1 percent of the Region.

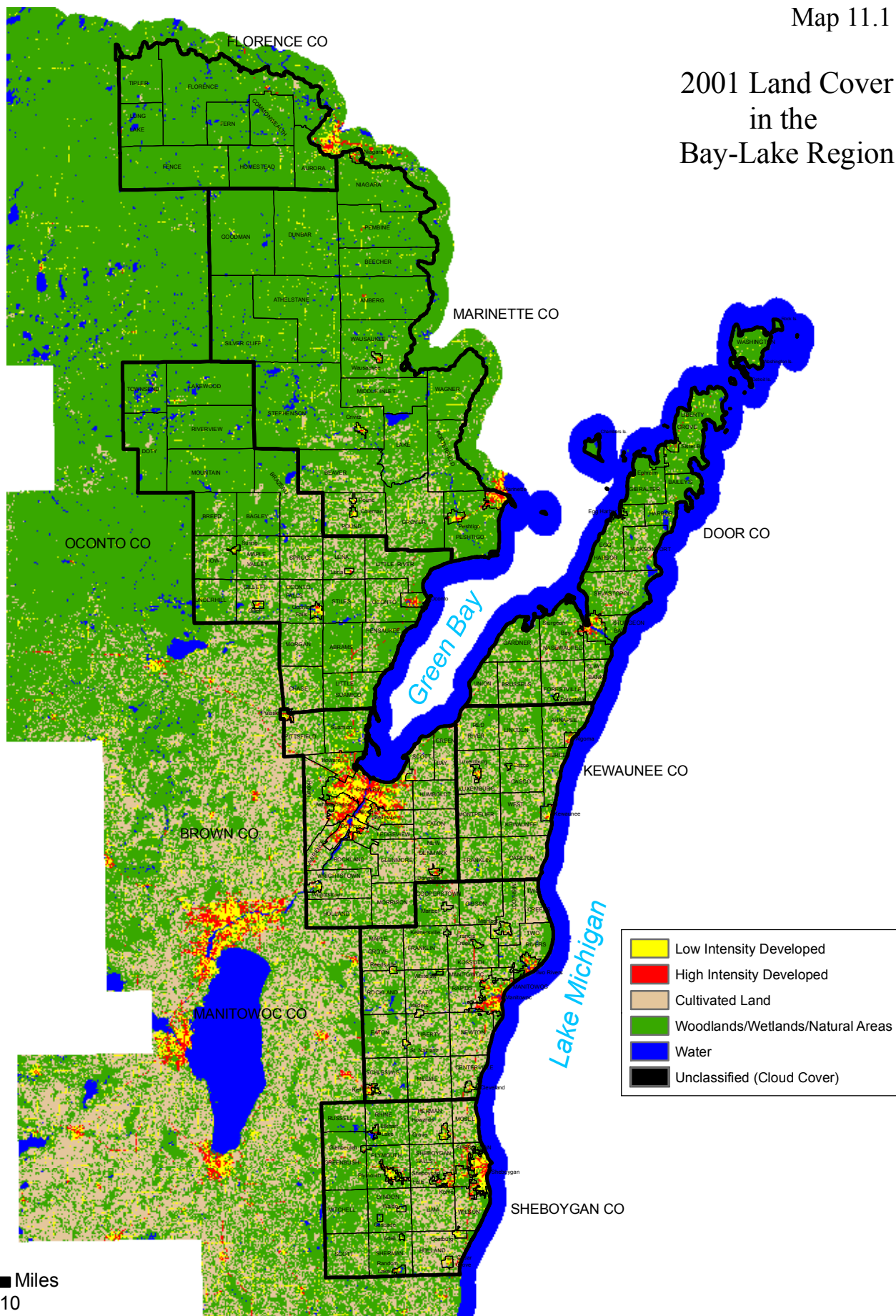
**Water**

Includes all areas of open water with less than 30 percent cover of trees, shrubs, persistent emergent plants, emergent mosses, or lichens. This category covers 54,591 acres or 1.6 percent of the Region.





# 2001 Land Cover in the Bay-Lake Region



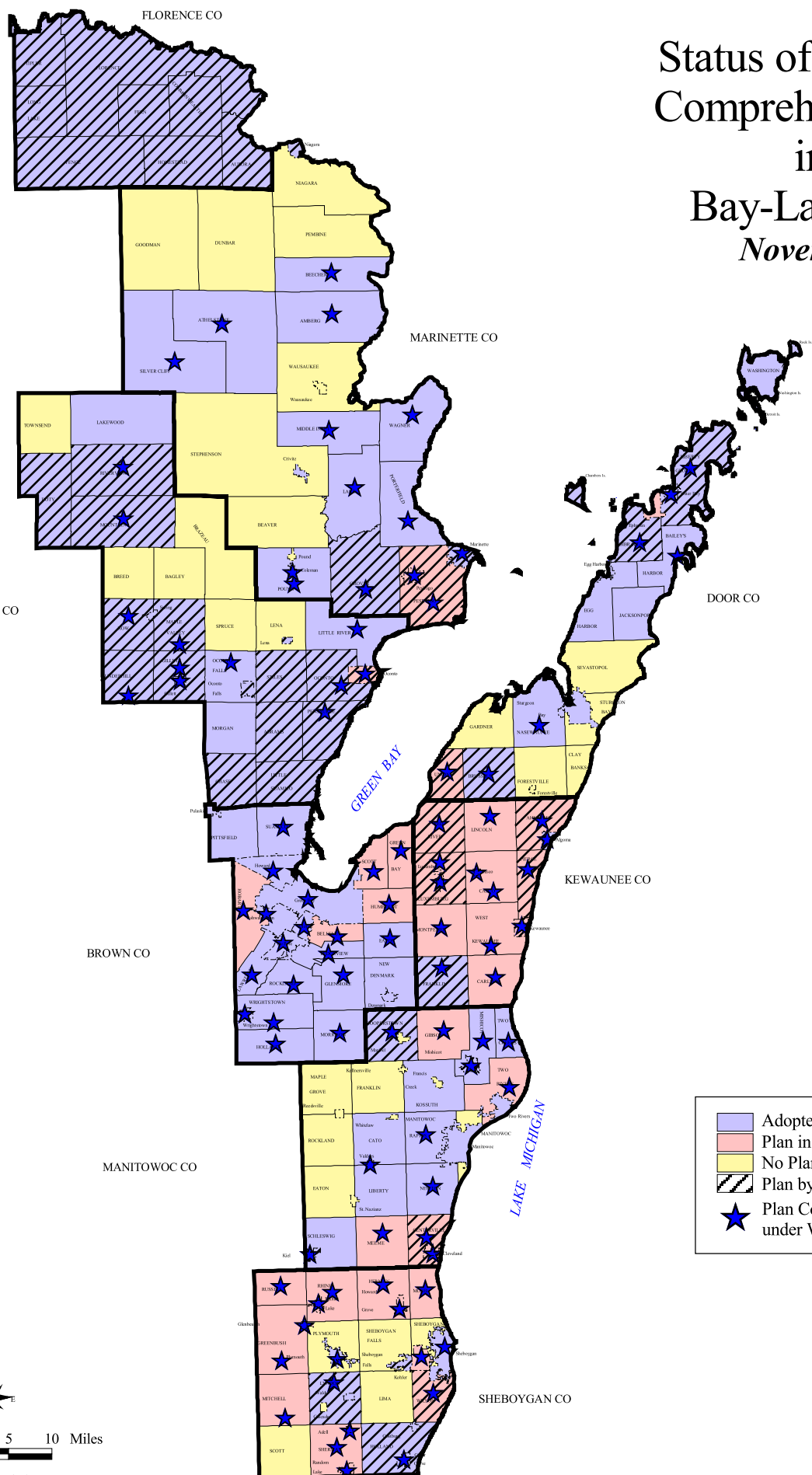
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Source: NOAA, 2001; Bay-Lake Regional Planning Commission, 2005



# Status of Community Comprehensive Plans in the Bay-Lake Region November 2005

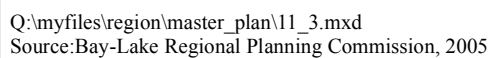
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Source: Bay-Lake Regional Planning Commission, 2005.

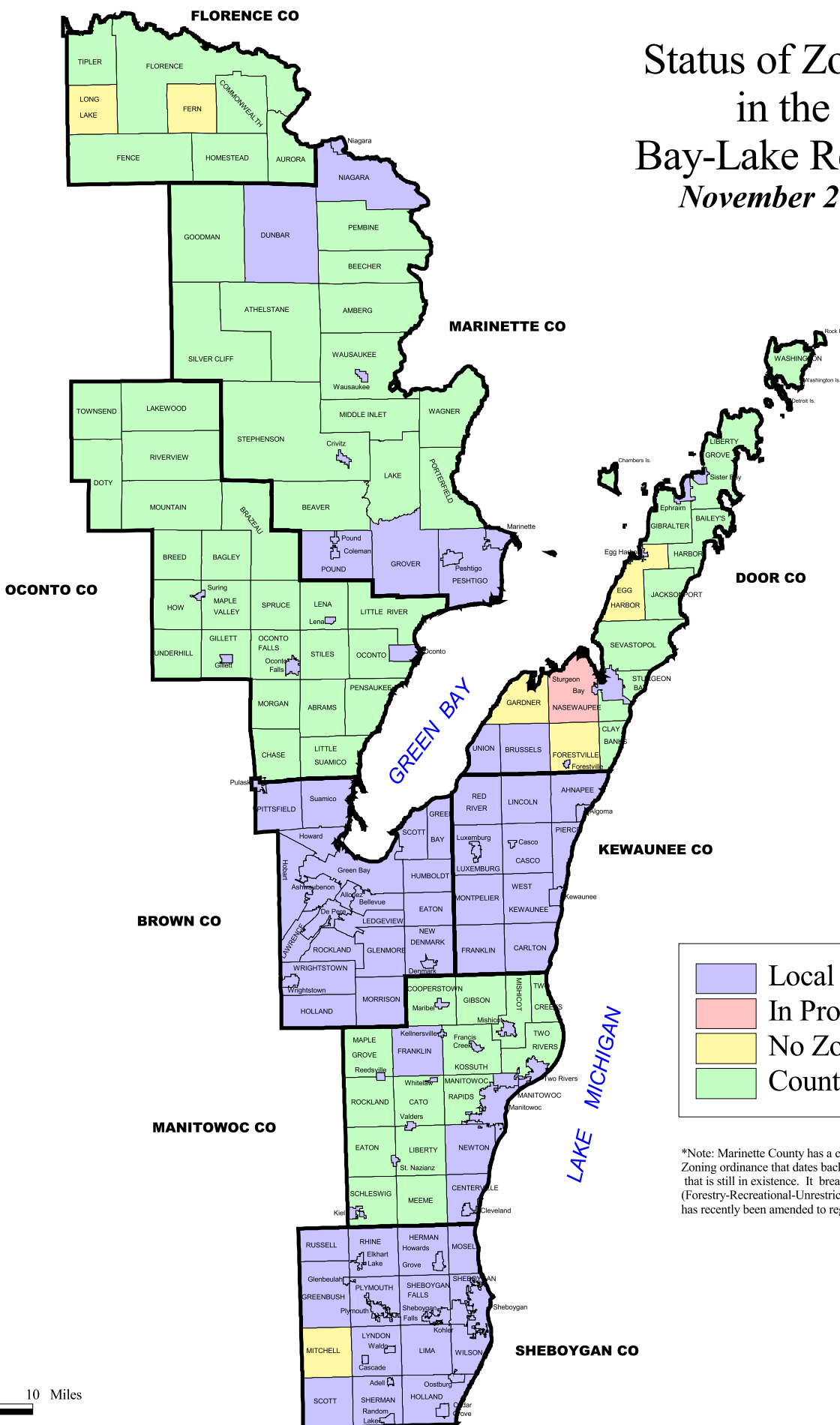








# Status of Zoning in the Bay-Lake Region *November 2005*



BAY-LAKE REGIONAL PLANNING COMMISSION

2030 REGIONAL COMPREHENSIVE PLAN

VOLUME III: APPENDICES

NOVEMBER 2005



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## **APPENDIX A**

### **COMMUNITY SURVEY RESULTS**

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April 15, 2005

Dear Local Official:

The Bay-Lake Regional Planning Commission is preparing a regional comprehensive plan for its eight-county district consisting of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan counties. The regional comprehensive plan is an advisory document that is intended to serve as a framework from which county and local plans can be carried out in greater detail. This regional plan is designed to help achieve consistency among locally developed plans. Information collected by the Commission while drafting the regional plan is being referenced and utilized in the development of local and county development plans. Topics addressed within the plan include: agricultural, natural, and cultural resources; housing and population; economic development; transportation; utility and community facilities; intergovernmental cooperation; and land use.

Nominal group sessions were held throughout the Bay-Lake district to identify local issues that need to be addressed in the regional comprehensive plan as well as in local and county comprehensive plans. All the responses were tabulated and prioritized. The issues receiving the most responses are included on the enclosed survey. We would like you to take a few minutes to complete the survey. Your prioritization of the issues will help further define the goals and objectives and set priorities for the regional plan.

Please complete the enclosed short survey form, fold the survey with the Business Reply label on the outside and mail it back to the Commission by May 13, 2005.

Thank you very much for your assistance. We look forward to your participation.

Sincerely,

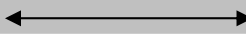
James Gilligan, Chair  
Bay-Lake Regional Planning Commission






# What are the most important issues facing northeast Wisconsin, the Bay-Lake Region, and your area?

Please rank the following issues using the scale of 1 (Not Important) to 5 (Important)

ISSUE	Not Important				Important
	1	2	3	4	5
Percent					
<b>Agricultural, Natural &amp; Cultural Resources</b>					
1. Improve air quality	7.4	21.1	26.3	21.1	24.2
2. Support a variety of cultural activities	10.8	26.9	44.1	15.1	3.2
3. Preserve historic resources	3.3	16.3	33.7	30.4	16.3
4. Encourage green space in new and existing developments	1.1	6.4	28.7	35.1	28.7
5. Preserve the quality of public lands	2.1	2.1	22.3	50.0	23.4
6. Protect groundwater resources	0.0	2.1	9.6	31.9	56.4
7. Improve surface water quality	0.0	2.2	16.3	34.8	46.7
8. Preserve parks and recreational areas	0.0	6.5	21.5	44.1	28.0
9. Improve public access to lakes and rivers	2.2	18.3	28.0	33.3	18.3
10. Preserve wetlands	7.5	12.9	24.7	32.3	22.6
11. Preserve environmental corridors	4.4	16.5	34.1	27.5	17.6
12. Encourage sustainable forestry	3.4	10.0	31.5	37.1	18.0
13. Address the impacts of large farming operations	4.3	4.3	23.4	34.0	34.0
14. Improve beach quality	11.8	9.7	23.7	33.3	21.5
15. Preserve prime agricultural lands	2.1	9.6	29.8	29.8	28.7
16. Preserve the Niagara Escarpment	15.9	8.0	34.1	28.4	13.6
<b>Housing and Population</b>					
1. Monitor the impacts of an aging population on transportation, housing, economics, and recreation	2.1	12.6	30.5	35.8	18.9
2. Promote a variety of housing for all income levels	5.3	13.7	32.6	31.6	16.8
3. Promote affordable housing for all age groups and persons with special needs	4.2	8.4	34.7	31.6	21.1
4. Encourage the rehabilitation of existing homes	4.2	7.4	30.5	44.2	13.7
<b>Economic Development</b>					
1. Increase the number of quality jobs to keep young people in the region	1.1	3.2	9.5	27.4	58.9
2. Monitor the impacts of timbering on public lands	3.2	18.1	40.4	29.8	8.5
3. Develop and attract clean, non-polluting industries in the region	1.1	6.3	14.7	37.9	40.0
4. Strengthen manufacturing sector	2.1	2.1	22.3	40.4	33.0
5. Promote programs such as the Technology Zone to grow the technology industry sector	3.3	5.5	26.4	35.2	29.7

Issue	Not Important	<div><div></div><div></div><div></div></div>			Important
	1	2	3	4	5
	Percent				
6. Revitalize, rehabilitate, and redevelop older and blighted areas	2.1	10.6	31.9	38.3	17.0
7. Diversify the local economy through local and regional economic development efforts	3.2	4.3	32.3	35.5	24.7
8. Promote tourism	6.5	15.1	28.0	31.2	19.4
9. Promote maritime industry	12.2	15.6	34.4	26.7	11.1
10. Recognize the economic value of the agriculture industry	1.1	8.4	28.4	35.8	26.3
Transportation					
1. Improve existing public transportation	15.1	12.9	31.2	32.3	8.6
2. Expand the availability of public transportation	16.1	16.1	33.3	28.0	6.5
3. Maintain rural roads and highways	1.1	3.2	15.8	40.0	40.0
4. Improve transportation corridors	2.2	10.8	29.0	41.9	16.1
5. Promote safe road and highway initiatives	3.2	3.2	23.4	38.3	31.9
6. Promote safe harbors and marinas	11.0	18.7	28.6	26.4	15.4
7. Expand the availability of public transportation	14.1	16.3	32.6	28.3	8.7
8. Expand transportation options such as sidewalks, trails, bicycle facilities, transit, and passenger rail	6.5	17.2	32.3	31.2	12.9
Utilities and Community Facilities					
1. Improve services for the elderly population	3.2	5.3	23.2	49.5	18.9
2. Expand alternative energy options	1.1	8.4	16.8	35.8	37.9
3. Expand telecommunications	2.2	10.8	41.9	37.6	7.5
4. Provide cost effective government services	2.1	1.1	25.5	34.0	37.2
5. Increase citizen participation in government	0.0	4.3	30.9	35.1	29.8
6. Consolidate services with other communities	0.0	5.3	29.5	38.9	26.3
7. Develop redundant power systems	2.2	22.2	37.8	24.4	13.3
8. Ensure an adequate supply of drinking water	0.0	4.3	13.8	22.3	59.6
9. Encourage multiple uses of public facilities such as parks, schools, and libraries	0.0	5.4	20.4	41.9	32.3
10. Improve park facilities	2.2	12.9	33.3	38.7	12.9
Intergovernmental Cooperation					
1. Encourage joint planning with other jurisdictions	0.0	5.3	22.1	44.2	28.4
2. Improve communication and cooperation between and among units of governments and the citizens they serve	0.0	3.2	15.8	43.2	37.9
3. Develop collaborative stormwater & sewer management plans	4.3	11.8	30.1	30.1	23.7
4. Encourage more diverse population in planning and government	5.4	14.1	46.7	20.7	13.0

ISSUE	Not Important				Important
	1	2	3	4	5
Percent					
<b>Land Use</b>					
1. Plan for future development and redevelopment of communities	1.1	4.2	15.8	42.1	36.8
2. Promote efforts to prevent sprawl	2.1	9.6	18.1	39.4	30.9
3. Balance growth with quality of life	0.0	6.5	16.3	39.1	38.0
4. Encourage consistent enforcement of ordinances	1.1	2.1	18.9	35.8	42.1
5. Establish development standards	0.0	5.4	25.8	41.9	26.9

#### Your County

	Valid Percent
Brown	10.5
Door	17.9
Florence	3.2
Kewaunee	13.7
Manitowoc	10.5
Marinette	10.5
Oconto	12.6
Sheboygan	12.6
Missing	8.4
Total	100.0

#### Additional Comments:

Clerk copied your survey, distributed to 3 town board members. This response form indicates the average of their 3 opinions.

Comprehensive planning is a very good idea whether it be for a local governmental entity or regional area. Let's not get carried away on all kinds of new ordinances and permit requirement issues-the people in this state are getting "permitted" to death...

Do it quickly, we need help and guidance. We can't wait till 2010.

ED #2. Place more resources to harvest timber that is falling & rotting on public lands. Should be harvested on allow citizens access for fire wood to help cut energy use-this should be done on a statewide scale soon.

Not enough attention given to land owners rights. Too much attention given to non-land owners dictating what land owners can do or not do with their land.

The responses herein are my personal opinion and do not reflect the opinion or position of the City of Kewaunee.

We need to look at a new tax code. Schools have to part of the plan.



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## **APPENDIX B**

### **PUBLIC PARTICIPATION**

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**RESOLUTION NO. 7-2002.**

Resolution of the Bay-Lake Regional Planning Commission adopting written procedures to foster public participation as part of the master plan for the region as the work of making the whole master plan progresses for the physical development of the region comprised of the counties of Brown, Door, Florence, Kewaunee, Manitowoc, Marinette, Oconto, and Sheboygan, in the State of Wisconsin

**WHEREAS**, Section 66.0309 (8) of the Wisconsin Statutes specifies that the Bay-Lake Regional Planning Commission may make plans for the physical and social development of the region consistent with the elements specified in s. 66.1001, and ;

**WHEREAS**, Section 66.0309 (9) of the Wisconsin Statutes specifies that the Bay-Lake Regional Planning Commission shall have the function and duty of making and adopting a master plan for the physical development of the region, and;

**WHEREAS**, Section 66.0309 (10) of the Wisconsin Statutes authorized and empowers the Regional Planning Commission, as the work of making the whole master plan progresses, to adopt parts or parts thereof, and;

**WHEREAS**, the Bay-Lake Regional Planning Commission is preparing a Comprehensive Plan under Wis. Stats. 66.1001, and;

**WHEREAS**, Section 66.1001(4) of the Wisconsin State Statutes requires the Bay-Lake Regional Planning Commission adopt written procedures designed to foster public participation in the adoption or amendment of a comprehensive plan and;

**WHEREAS**, the Commission has prepared and publicly reviewed such written procedures entitled Procedures for Public Participation for Adoption or Amendment of the Bay-Lake Regional Planning Commission Comprehensive Plan

NOW, THEREFORE, BE IT HEREBY RESOLVED:

**FIRST:** The Bay-Lake Regional Planning Commission officially adopts Procedures for Public Participation for Adoption or Amendment of the Bay-Lake Regional Planning Commission Comprehensive Plan

**SECOND:** That a true, correct, and exact copy of this resolution, together with a complete and exact copy of Procedures for Public Participation for Adoption or Amendment of the Bay-Lake Regional Planning Commission Comprehensive Plan, shall be forthwith distributed to each of the local legislative bodies of the local governmental units within the Region entitled thereto and to such other bodies, agencies, or individuals as the law may require or as the Commission, its Executive Committee, or its Executive Director, at their discretion, shall determine and direct.

The foregoing resolution, upon motion duly made and seconded, was regularly adopted at the meeting of the Bay-Lake Regional Planning Commission held on the 12th day of April 2002, the vote being:

Ayes \_\_\_\_; Nays \_\_\_\_

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James E. Gilligan, Chairperson

ATTEST:

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Lois L. Trever, Secretary-Treasurer





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# **Procedures for Public Participation for Adoption or Amendment of the Bay-Lake Regional Planning Commission Comprehensive Plan**



## **BAY-LAKE Regional Planning Commission**

*The regional planning commission for Northeastern Wisconsin serving communities within the counties of:*

**FLORENCE • MARINETTE • OCONTO • BROWN • DOOR • KEWAUNEE • MANITOWOC • SHEBOYGAN**



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**Bay-Lake Regional Planning Commission  
Regional Master Plan  
WRITTEN PROCEDURES TO FOSTER PUBLIC PARTICIPATION**

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## **INTRODUCTION**

In accordance with Wis. Stat. §66.1001(4), which defines “Procedures for Adopting Comprehensive Plans”, the following written procedures will be followed by the Bay-Lake Regional Planning Commission (BLRPC) to adopt or amend the regional master plan and to involve the public in the comprehensive planning process. Per Wis. Stat. §66.1001(4) a “Comprehensive Plan” means a master plan adopted by a regional planning commission under Wis. Stat. §66.0309(8), (9), or (10).

## **COMMITTEE RESPONSIBILITIES**

### **BLRPC Executive Committee**

The Executive Committee of the Commission is authorized to prepare or amend the comprehensive plan and recommend the adoption of the adoption or amendment to the Commission. The Commission by-laws require that any element of the Commission master plan must be approved by a two-thirds vote of the entire Commission.

### **Regional Technical Advisory Committee (TAC)**

The Bay-Lake Regional Planning Commission designates its Regional Technical Advisory Committee (TAC) as the primary technical review body for the development of the Regional Master Plan. The TAC is comprised of county and community planners and administrators, state and federal agency staff (U.S. Army Corps of Engineers, WDNR, WisDOT, U.S. Fish and Wildlife Service, etc.), and county UW Extension staff.

The TAC meets quarterly to exchange information about ongoing planning activities, to discuss issues related to community development and to review the Commission’s ongoing projects and programs. The TAC will continue to meet on a quarterly basis but will also be called upon to meet as often as needed to review specific elements of the Regional Master Plan.

### **Ad-Hoc Committees**

Special ad-hoc committees comprised of professionals and citizens with expertise in specific elements of the plan will be created by the BLRPC and utilized to review the elements of the plan that have a specific and narrow focus such as transit, harbor development, housing, etc. These special ad-hoc committees will be short-term, meeting on one or two occasions to review the specific plan element.

## **PUBLIC PARTICIPATION AND CITIZEN INPUT**

### **Focus Groups and Issues Forums**

A nominal group meeting shall be held with the Executive Committee, and one issue forum shall be held in each county in the region with the assistance of the University of Wisconsin Extension. The purpose of these meetings will be to identify regional issues that need to be considered in the comprehensive plan.

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### **Newsletter**

The Commission will use its quarterly newsletter to inform citizens on the progress of the regional plan as it is developed.

### **BLRPC WEB Page**

The Commission will post information on meetings, the status of the plan, and draft elements of the plan on its WEB site: [www.baylakerpc.org](http://www.baylakerpc.org).

### **Regional Surveys**

Based upon issues identified from the results of the nominal group meetings, the Commission will develop and mail a survey to local government officials. The survey shall serve as further notice to the citizens of the region that the Commission is developing a comprehensive plan and their input is being sought to establish community needs and desires.

### **Open Houses**

The Commission will hold open houses in order to present information regarding the comprehensive plan. One set of open houses will be held at the “midway” point to present background data and the other set of open houses will be held at the end of the process prior to the public hearing. The open houses shall be noticed in the regional newspapers and will be held in central locations in the region. The open houses will provide the public with an opportunity to review and comment on work that has been accomplished by the Bay-Lake Regional Planning Commission and the Executive Committee.

### **Additional Steps of Public Participation**

The Commission will take additional steps to foster public participation as funds permit. These optional steps may include informational meetings, mailings, focus groups, informational posters and pamphlets.

## **AMENDMENT OR ADOPTION OF THE COMPREHENSIVE PLAN**

### **Executive Committee Recommendation Resolution**

The Executive Committee will adopt a resolution by a majority vote, recommending the adoption or amendment of the Comprehensive Plan by the Commission. The resolution and majority vote will take place at a regularly scheduled and publicly noticed meeting of the Executive Committee. The vote shall be recorded in the official minutes of the Executive Committee. The resolution shall refer to maps and other descriptive materials that relate to one or more elements of the comprehensive plan and to other matters as required by Wis. Stat. §66.0309(8), (9), and (10).

### **Distribution of the Recommended Amendment or Comprehensive Plan**

In accordance with Wis. Stat. §66.1001(4), Procedures for Adopting Comprehensive Plans, one copy of the plan recommended for adoption by the Executive Committee will be sent to the following in either digital or printed form:

1. Every governmental body that is located in whole or in part within the boundaries of the local governmental unit.

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2. The clerk of every local governmental unit that is adjacent to the local governmental unit which is the subject of the plan.
  3. The Wisconsin Land Council.
  4. The Wisconsin Department of Administration.
  5. At least one local library in each county in the region.

Citizens will have a minimum two week opportunity to review and provide written comments on the recommended amendment or comprehensive plan. After the Commission has received all written comments, the Commission shall respond in writing collectively or individually to the comments received and maintain a disposition log of such comments.

## **BLRPC Adoption of Amendment or Comprehensive Plan**

### **Public Hearing**

The Commission will hold one public hearing at a central location within the region at which the proposed ordinance will be discussed. The hearing will be preceded by a class 1 notice under ch. 985 that is published at least 30 days before the hearing is held. The class 1 notice shall contain at least the following information:

1. The date, time, and place of the hearing.
2. A summary, which may include a map, of the proposed comprehensive plan.
3. The name of an individual employed by the Commission who may provide additional information regarding the proposed ordinance adopting the amendment or comprehensive plan.
4. Information relating to where and when the proposed comprehensive plan may be inspected before the hearing, and how a copy of the plan may be obtained.

After the Commission has received all written comment, the Commission shall respond in writing collectively or individually to the comments received and maintain a disposition log of such comments.

### **Adoption by Ordinance**

After adoption of the resolution by the Executive Committee recommending amendment or adoption of the comprehensive plan, after the required public hearing, and after receipt and response to public comment, the Commission will adopt the amendment or comprehensive plan by ordinance. A two-thirds majority vote of the entire Commission is necessary for adoption of any element of the comprehensive plan.

## **Local Adoption of Plans**

Upon adoption of the plan or amendment by the Commission, the Commission will request that each county pass a resolution in support of the regional comprehensive plan. Any local governmental unit within the region may adopt all or any portion of the amendment or comprehensive plan per Wis. Stat. §66.0309(12)(a).

## **Distribution of the Adopted Amendment or Comprehensive Plan**

In accordance with Wis. Stat. §66.1001(4), Procedures for Adopting Comprehensive Plans, upon adoption by the Commission, one copy of the plan in either digital or printed form will be sent to the following:

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1. Every governmental body that is located in whole or in part within the boundaries of the local governmental unit.
  2. The clerk of every local governmental unit that is adjacent to the local governmental unit which is the subject of the plan.
  3. The Wisconsin Land Council.
  4. The Wisconsin Department of Administration
  5. At least one local library in each county in the region.

**Public Notices**

All meetings will be posted in advance and open to the public in accordance with state law.

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## **APPENDIX C**

### **NOMINAL GROUP RESULTS**

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## **BAY-LAKE REGIONAL PLANNING COMMISSION NOMINAL GROUP SURVEY RESULTS**

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### **Background**

The Bay-Lake Regional Planning Commission held a series of nominal group meetings with its Commission and members of the county boards throughout the region in order to produce a list of issues and concerns regarding future development in the Bay-Lake Region. Commission staff held the first nominal group meeting as part of the December 12, 2002 Commission meeting in Green Bay with 22 Commissioners participating.

A nominal group meeting was held on Tuesday, April 15, 2003 at the Marinette County Courthouse with 22 members of the Marinette County Board.

A nominal group meeting was held on Thursday, April 24, 2003 at the Kewaunee County Courthouse with 10 members of the Kewaunee County Board.

A nominal group meeting was held on Wednesday, April 30, 2003 at the Sheboygan County Extension building with 54 members of the Sheboygan County Board, local officials and citizens.

A nominal group meeting was held on Wednesday, May 7, 2003 at the Sturgeon Bay High School with 7 members of the Sturgeon Bay City Council and local officials from member units of government in Door County.

A nominal group meeting was held on Thursday, May 15, 2003 at the Wausaukee Town Hall with 23 members of the Marinette County Towns Association.

A nominal group meeting was held on Thursday, June 19, 2003 at the Oconto County Courthouse with 30 members of the Oconto County Board.

In addition, the results of the Brown County VisionFest held on September 19, 2002 at the Resch Center in Green Bay are included as are the results of a Nominal Group held with the Florence County Board in September 2001.

The combined lists from each of these meetings have been categorized by type of issue.

The list is important to the planning process as it will be used in formulating goals and objectives for the Bay-Lake Regional Comprehensive Plan. In addition, the issues identified will be used as a checklist to ensure that they are addressed within the plan, and discussed by the Planning Committee during the planning and research phase.

The following lists identify every issue or concern that was brought at the individual groups and voted on in rank order. Each group's top issues were then combined and voted on by the entire group to identify the major issues or concerns facing the Bay-Lake Region.

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## Summary of Nominal Group Issues

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- Preserve agricultural lands
- Preserve rural character with balanced growth to maintain small town atmosphere/rural quality of life
- Preserve and improve air quality
- Encourage the preservation of environmental corridors and other sensitive areas, such as waterfronts, streams, and wetlands.
- Enhance services and infrastructure needs for elderly population
- Preserve and promote manufacture sector of business in Region
- Enhance technological growth through promotion and use of Technology Zones to encourage growth in this industry
- Diversify local economy through local and regional economic development efforts
- Improve communication and cooperation between and among units of governments, school districts, and among citizens and governmental units.
- Stormwater/sewer management plan that affects towns and villages together
- Effects of aging population on transportation, housing, economics, and recreation
- Need for more housing for all segments of population
- Strengthen and maintain efforts to prevent sprawl and focus development specific areas
- Establish development standards
- Encourage green space and open space in planned developments.
- Preserve natural resources and public lands with good management for multiple uses
- Preserve and protect the water quality of surface and groundwater
- Provide efficient public facilities throughout the region
- Continue to maintain, improve and expand park and trail systems
- Highway improvement and maintenance. Continue to improve highway infrastructure. Maintain rural roads and highways and improve traffic coordination
- Protect water access, and promote safe harbors and marinas
- Promote more transportation options, such as sidewalks, trails, bicycle facilities, and transit.

<b>Commission Nominal Group Results</b>	
<b>December 12, 2002</b>	
<b>Issue/Concern Regarding Future Development in the Bay-Lake Region</b>	<b>Issue Type</b>
Preservation of agricultural lands	Agriculture
Support/incubate small industries in the region	Agriculture
Large farm expansions and the conflicts they cause	Agriculture
More participation in forestry and farming (preservation of)	Agriculture
Concern about loss of family farms/decline in the agricultural economy	Agriculture
How to cope with the emergence of mega-farms in the region	Agriculture
Preservation of air quality	Air Quality
Economic development to create more jobs for the region	Economic Development
Develop clean, non-polluting industries (non tourism) in the region	Economic Development
Promote manufacture sector of business in Region	Economic Development
Promotion and use of Technology Zone to encourage growth in this industry	Economic Development
Keep industries from polluting/clean up previous pollution from industry	Economic Development
Preserve manufacturing base of region	Economic Development
Enhance technological growth	Economic Development
Natural resource decisions are being made without meaningful impact from those directly impacted (WDNR, utilities, etc.)	Economic Development
Inner-city retail development (fill vacant buildings)	Economic Development
Diversify local economy through local and regional economic development efforts	Economic Development
Need to improve our industrial base	Economic Development
Develop a process to consolidate services between communities	Government
Maintain sewer service area boundaries	Government
Maintain local units of government	Government
Glut of certain types of housing in certain areas	Housing
Need for more housing for all segments of population	Housing
Strengthen and maintain efforts to prevent sprawl and focus development specific areas	Land Use
Preserve the “Rural” character of the area	Land Use
Maintain “small community and town” atmosphere	Land Use
BLRPC become a part of designating areas for large farming operations	Land Use
Control commercial/residential development along major highways, including billboards	Land Use

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Establish development standards	Land Use
Control urban sprawl	Land Use
Preserve region's uniqueness and historical site	Land Use
Balance growth with small town atmosphere/rural quality of life	Land Use
Preservation of historical structures	Land Use
Provide for efficient land use patterns	Land Use

<b>Commission Nominal Group Results</b>	
<b>Issue/Concern Regarding Future Development in the Bay-Lake Region</b>	<b>Issue Type</b>
Protect water and forest resources	Natural Resources
Maintain fresh water	Natural Resources
Preservation of water quality	Natural Resources
Consider environmental effects of development and maintain integrity of system	Natural Resources
Support sustainable forestry for economic development	Natural Resources
Maintain beaches and find out why they are getting polluted	Natural Resources
Preservation of parks and open space. Encourage access and preservation of access to lakes and rivers	Natural Resources
Protect air and water quality	Natural Resources
Preserve natural resources and public lands with good management for multiple uses	Natural Resources
Regional participation in watershed and stormwater programs	Natural Resources
High cost of wetland mitigation	Natural Resources
Maintain and enhance coastal wetlands	Natural Resources
Preservation of the Niagara Escarpment	Natural Resources
Provide efficient public facilities throughout the region	Public Facilities
Preservation of recreational opportunities in the region	Recreation
Maintain high quality of parks	Recreation
Prescription drugs and health insurance for elderly (everyone)	Social Services
More closely monitor the needs of the elderly (health, housing, etc.)	Social Services
Provide transportation for the poor and elderly without high fees (and working poor).	Social Services
Accommodate the needs of immigrants/minorities	Social Services
Tourism promotion	Tourism
Support rural, residential and tourism at the regional level	Tourism
Improve transportation corridors and facilities (especially in North)	Transportation

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Traffic control	Transportation
Improve USH 141 to 4-lanes to state line (Niagara)	Transportation
Provide efficient transportation facilities coordinated with dev. patterns, site design, etc.	Transportation
Road maintenance	Transportation

<b>Marinette County Nominal Group Results</b>	
<b>April 15, 2003</b>	
<b>Issue/Concern Regarding Future Development in Marinette County and the Bay-Lake Region</b>	<b>Issue Type</b>
Highway improvement and maintenance. Continue to improve highway infrastructure. Maintain rural roads and highways and improve traffic coordination	Transportation
Plan for 141/41 development at interchanges.	Transportation
Preserve natural environment and features in their present state including maintaining wild areas	Natural Resources
Preserve our agriculture	Natural Resources
Forest product development	Natural Resources
Continue to promote sustainable forestry	Natural Resources
Maintain/improve clean water and air	Natural Resources
Use regional planning for natural resources	Natural Resources
Limit small area housing in all areas	Housing
Promotion of historical base	Historic
Get fair share of federal and state tax distributions	Government
Less government	Government
More community involvement, diverse participation in planning, other government	Government
Locate industrial development in areas that have existing infrastructure including expansion of industry in and around the cities	Economic Development
More industry-increase employment	Economic Development
Create more diversified employment to eliminate “brain drain”	Economic Development
Further promotion of tourism	Economic Development
Let industry know that we will do what we can to help/accommodate it	Economic Development
Have youth stay in the area-create opportunities for them, and retirement is leading to bedroom communities	Economic Development
Master plan for industrial parks-countywide	Economic Development
Lack of infrastructure in northern/western areas makes it difficult to attract industry	Economic Development





<b>Sheboygan County Nominal Group Results</b> <b>April 30, 2003</b>	
<b>Issue/Concern Regarding Future Development in Sheboygan County and the Bay-Lake Region</b>	<b>Issue Type</b>
Preserve prime agricultural lands/limit residential development in agricultural lands	Agriculture
Preserve rural character	Agriculture
Downsize the 35 acre minimum lot size in ag. land	Agriculture
How much prime farmland to preserve?	Agriculture
Preserve farm industry	Agriculture
Impacts of farm consolidations (res./ag. Conflicts, roads, etc.)	Agriculture
Planned development - residential, commercial, industrial	Economic Development
Keep industries in compact industrial parks	Economic Development
Designate areas for industrial and commercial development	Economic Development
High tech job development	Economic Development
Bring in more industry	Economic Development
Encourage tourism and recreational areas	Economic Development
Local land use control	Government
Stormwater/sewer management plan that affects towns and villages together	Government
Towns should have more input/clout in annexation decisions	Government
Have government units work together	Intergovernmental Cooperation
Combine community services (police, fire, garbage, etc.)	Intergovernmental Cooperation
Effects of consolidation of local govt. (city and town)	Intergovernmental Cooperation
Prevent urban sprawl-encourage cluster development	Land Use
Preserve the quality of life issues	Land Use
Residential development in rural areas	Land Use
Rural development should be around existing villages	Land Use
Issues after implementation of plan-ability to alter it	Land Use
Minimize land use conflicts	Land Use
Protect clean water and air and limit light and noise pollution	Natural Resources
Protect resources (air, water, soil)	Natural Resources
Conserve wildlife and environment corridors	Natural Resources

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Preservation of lakes and wetlands	Natural Resources
Lake Michigan and other unique features need public access	Natural Resources
Continue to maintain open space we have	Natural Resources
Protect water of Lake Michigan	Natural Resources
Better development and upgrading of highways	Transportation

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<b>Kewaunee County Nominal Group Results</b>	
<b>April 24, 2003</b>	
<b>Issue/Concern Regarding Future Development in Kewaunee County and the Bay-Lake Region</b>	<b>Issue Type</b>
Ambulance service needs to be upgraded and improved	Community Facilities
Look at ways to attract business and industry	Economic Development
Consolidate services with other communities	Intergovernmental Cooperation
Protect groundwater resources	Natural Resources
Wastewater and drinking water systems-protection	Natural Resources
Control harmful runoff into streams	Natural Resources
Air quality and noise pollution	Natural Resources
Improve park system	Recreation



<b>Door County Nominal Group Results</b>	
<b>May 7, 2003</b>	
<b>Issue/Concern Regarding Future Development in Door County and the Bay-Lake Region</b>	<b>Issue Type</b>
Opportunity for agriculture	Agriculture
Protect open farmland	Agriculture
Land use planning will encourage value-added products from agriculture	Agriculture
Consider and address the implications of the aging baby boomer population	Community Facilities
Quality public safety services	Community Facilities
Enhanced telecommunications	Community Facilities
Equal education opportunities for all ages	Community Services
Adequate health care	Community Services
Enhance services and infrastructure needs for elderly population	Community Services
Support cultural activities	Cultural
Employment	Economic Development
Commercial development	Economic Development
Balancing tourism development with community identity	Economic Development
Reuse of existing structures	Economic Development
Retention of maritime jobs and heritage	Economic Development
Maritime economic development	Economic Development
Promotion of retirement development	Economic Development
Socio-economic mix	Economic Development
Control escalating taxes	Government
Improve funding structure of education	Government
Effects of aging population on transportation, housing, economics, and recreation	Government
Consistent shoreline ordinances	Government
Respect land owner rights	Government
Affordable housing for young families	Housing
Preserve community identity and character	Land Use
Consistent planning and zoning throughout the county	Land Use
Rural character (preserve)	Land Use
Protect water quality	Natural Resources
Improve air quality	Natural Resources
Protect environmentally sensitive areas (i.e. wetlands)	Natural Resources
Transportation and power supply that encourages industry and commerce	Public Facilities
Redundant power system	Public Facilities
Redundancy in transportation links to the island (northern Door)	Transportation
Hwy 42/57 corridor land use regulations	Transportation
Promote safe roads and highways	Transportation

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Protect water access, and promote safe harbors and marinas	Transportation
Group (vs. mass) transportation	Transportation
Establish bike system (i.e. trails)	Transportation

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<b>Marinette Towns Nominal Group Results</b>	
<b>May 15, 2003</b>	
<b>Issue/Concern Regarding Future Development in Marinette County and the Bay-Lake Region</b>	<b>Issue Type</b>
More support from federal/state/county for roads	Transportation
Preserve the environment and open space	Natural Resources
Water quality-surface waters and groundwater	Natural Resources
No unfunded state/federal/county mandates now and in future	Government
Maintain current level of shared revenue	Government
Assist towns in enforcing ordinances	Government
High cost of schools on property tax	Government
Towns should have more control of their borders	Government
Support education system	Government
Need to pay more attention to tax structure	Government
Better pick-up of dead animals along highways	Government
Promote employment, increase employment/jobs in area	Economic Development
Don't want to see agriculture disappear	Economic Development
Promote industry and tourism for better and high paying jobs	Economic Development



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<b>Oconto County Nominal Group Results</b>	
<b>June 19, 2003</b>	
<b>Issue/Concern Regarding Future Development in Oconto County and the Bay-Lake Region</b>	<b>Issue Type</b>
Maintain and improve transportation	Transportation
Preserve the natural resources in Oconto Co.	Natural Resources
Plan new subdivisions properly so that they include adequate recreational facilities/establish minimum residential lot sizes in rural areas	Land Use
More even distribution of housing throughout the county	Housing
Eliminate mandated programs by state that have no state funding	Government
Eliminate smart-growth legislation	Government
Cluster development for residential and commercial	Government
Question why town plan needs to be done before county plan	Government
Fill vacancies and create jobs in industrial and commercial areas in Oconto County	Economic Development
Need better promotion of tourism	Economic Development
Reduce large billboards and reduce number of billboards	Economic Development
Attract higher paying jobs	Economic Development
Preserve agricultural lands from development	Agriculture

<b>Brown County VisionFest Top Issues</b>	
<b>September 19, 2002</b>	
<b>Issue</b>	<b>Issue Type</b>
Protect agricultural land from adverse impacts caused by incompatible land uses.	Agriculture
Protect the right to farm.	Agriculture
Preserve prime agricultural land through a purchase of agricultural rights program.	Agriculture
Improve air quality.	Air Quality
Provide more art and cultural/entertainment activities (concerts, community theater, art exhibits, etc.).	Cultural Resources
Control commercial sprawl and reduce blight by filling and rehabilitating existing structures and vacant lots.	Economic Development
Retain and attract business and industry.	Economic Development
Revitalize, rehabilitate, and redevelop older and blighted areas.	Economic Development
Encourage and assist with the enhancement and redevelopment of the waterfront, such as the Bay of Green Bay and Fox River.	Economic Development
The Brown County Comprehensive Plan should identify methods of helping communities preserve and/or rehabilitate their downtown areas.	Economic Development
Revenue sharing, such as the sharing of tax revenue, should be used to encourage economic development cooperation between Brown County communities.	Economic Development
The number of well-paying jobs in Brown County should be increased.	Economic Development
Assist the City of Green Bay with its downtown redevelopment effort by applying for grants and investigating and pursuing other opportunities.	Economic Development
Provide greater incentives for local businesses to remain in the downtown urban centers.	Economic Development
Balance community good with individual profit in the development of property.	Economic Development
Balance flexible growth boundaries with the need for realistic growth patterns that take into account economic realities.	Economic Development
Identify, propose, and consolidate government services to the greatest extent possible in an effort to maintain or improve quality, streamline services, and reduce costs.	Government
Promote safe neighborhoods for all residents.	Government
Reduce the number of governmental jurisdictions	Government
Improve communication and cooperation between and among units of governments, school districts, and among citizens and governmental units.	Government
Provide a balance of adequate municipal/government services and a low tax rate.	Government
Promote stronger enforcement in communities to clean up poorly maintained	Government

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properties.	
Encourage cooperation between counties in the delivery of services and facilities (i.e., airports, landfills, etc.).	Government
Ensure that there is county administered zoning.	Government
Encourage the development of boundary agreements between municipalities to avoid conflicts and encourage cooperation.	Government
Recognize cultural diversity in government policies.	Government
Promote regulations that protect private property rights.	Government
Buildings should be constructed at higher densities by building upward instead of outward to preserve land, and incentives should be provided to encourage this type of construction.	Government
Government should take a more active role to provide public education about planning to help the general public understand its importance.	Government
Utilize design standards for commercial/office/multifamily buildings to promote a quality building design.	Government

<b>Brown County VisionFest Top Issues</b>	
<b>Issue</b>	<b>Issue Type</b>
Provide for the availability and development of housing of various types and prices throughout the county.	Housing
Provide housing for the homeless.	Housing
Ensure that municipal ordinances do not deter or prevent the development of affordable housing.	Housing
The development of owner-occupied multifamily housing developments should be promoted, and incentives should be provided to encourage this type of development.	Housing
Encourage efficient, compact, and well-balanced land development to control sprawl (inefficient development)	Land Use
Encourage green space and open space in planned developments.	Land Use
Promote consistent planning, land use and design standards across municipal boundaries.	Land Use
The Brown County Comprehensive Plan should be flexible enough to allow it to be fully implemented.	Land Use
Promote and increase the use of conservation design subdivisions.	Land Use
Promote the concept of neighborhood within communities by fostering neighborhood identities and encouraging and promoting neighborhood activities.	Land Use
Inventory the county's existing land uses to identify and encourage their most appropriate uses.	Land Use
Encourage unique development in an effort to keep or establish community identities.	Land Use
Encourage the preservation of environmental corridors and other sensitive areas, such as waterfronts, streams, and wetlands.	Natural Resources
Preserve, restore, and improve surface water quality (wetlands, lakes, rivers, and streams) through education, erosion control, buffer strips, easements, land use controls, flood controls, and nutrient/sediment reductions	Natural Resources
Provide additional restoration and protection to existing natural wildlife habitats, such as wetlands, woodlands, and prairies.	Natural Resources
Preserve and restore Brown County's shoreland areas beyond the state's minimum standards.	Natural Resources
Provide better access to and visibility of the Fox River and the Bay of Green Bay.	Natural Resources
Ensure that there is and will always be an adequate supply of high quality public drinking water, such as through the construction of a new pipeline to Lake Michigan.	Public Facilities
Encourage multiple uses of parks, schools, libraries, and other public facilities.	Public Facilities
Ensure safe drinking water for private wells in outlying areas where there is a lot of housing development and no public sewer/water.	Public Facilities
Provide services, housing, and work opportunities for persons with	Public

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disabilities.	Facilities
Preserve public ownership of the Neville Public Museum.	Public Facilities
Discourage the provision of urban public services in rural areas that impose a cost on existing rural residents.	Public Facilities
Locate new branch offices of public and private institutions close to existing development and infrastructure.	Public Facilities
Expand, link, and maintain the existing and future trail, bike, and pedestrian systems to connect communities.	Recreation
Recognize the Fox River as a recreational asset and encourage the development of appropriate recreational uses and facilities.	Recreation
Create a network of local, regional, and state park and recreation facilities focused on natural features throughout the metropolitan area.	Recreation
Provide additional parks and active green spaces that include playground equipment and other uses in Brown County.	Recreation
Provide more cost-free outdoor cultural activities that are family-friendly and appeal to people of all ages (farmers' market, music in the park, municipal band concerts, etc.).	Recreation
Promote the creation and integration of civic spaces and entertainment areas, such as band shells and village parks, so that people will have places to walk and gather.	Recreation

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<b>Brown County VisionFest Top Issues</b>	
<b>Issue</b>	<b>Issue Type</b>
Promote more transportation options, such as sidewalks, trails, bicycle facilities, and transit.	Transportation
The county should encourage careful planning prior to construction of major highways and bridges to prevent premature development and negative secondary land use impacts.	Transportation
Expedite the construction of a Fox River bridge south of De Pere.	Transportation
Emphasize the maintenance of existing roads over the construction of new roads.	Transportation
Provide more pedestrian-friendly waterfront amenities and facilities, such as walkways and benches.	Transportation
Provide increased funding for highway maintenance programs.	Transportation
Decrease the size of commercial parking areas to avoid large asphalt areas.	Transportation
Identify and preserve corridors for future highway expansion projects.	Transportation
Improve public transportation by increasing bus service hours, expanding coverage, and providing more park-and-ride lots.	Transportation
Utilize grid-like street patterns to facilitate better street connectivity between subdivisions and a more efficient overall street pattern.	Transportation
Improve the design of the existing highway system.	Transportation
Require municipalities to provide city bus service after achieving a pre-determined population density.	Transportation

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<b>Florence County Nominal Group Results</b> <b>April 19, 2001</b>	
<b>Issue/Concern Regarding Future Development in Florence County</b>	<b>Issue Type</b>
Jobs to keep young people	Economic Development
Impacts of Reduced Timbering on Public Lands	Economic Development
Alternative Energy Sources - Dams, Pine River Dam	Economic Development
Encourage Tourism & Maintain Rural Nature	Economic Development
Limits on County Tax Base	Government
Zoning of Ag. And Forest Land	Government
Rezoning along Wild Rivers	Government
Impact of Managed Forest Land on Low Taxes	Government
Affordable living for elderly	Housing
County/Town Land Use Regulations need to be Coordinated/Choreographed	Intergovernmental Cooperation
National Forest 30 Year Vision	Land Use
How does current comp plan fit into Smart growth	Land Use
Protect Natural Resources	Natural Resources
Water Quality - Use Issues	Natural Resources
Highway Rights of way	Transportation

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## **APPENDIX D**

### **ENDANGERED SPECIES**

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## BAY-LAKE RPC ENDANGERED OR THREATENED SPECIES

Count	Group	Scientific	Common	State Listing	Federal Listing
1	BIRD	CHARADRIUS MELODUS	PIPING PLOVER	ENDANGERED	ENDANGERED
2	INVERTEBRATE	LYCAEIDES MELISSA SAMUELIS	KARNER BLUE BUTTERFLY	ENDANGERED	SPECIAL CONCERN
3	INVERTEBRATE	SOMATOCHLORA HINEANA	HINE'S EMERALD DRAGONFLY	ENDANGERED	ENDANGERED
4	PLANT	CIRSIIUM PITCHERI	DUNE THISTLE	THREATENED	THREATENED
5	BIRD	HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	THREATENED	SPECIAL CONCERN
6	PLANT	IRIS LACUSTRIS	DWARF LAKE IRIS	THREATENED	THREATENED
7	BIRD	AMMODRAMUS HENSLOWII	HENSLOW'S SPARROW		THREATENED
8	BIRD	ARDEA ALBA	GREAT EGRET		THREATENED
9	BIRD	BUTEO LINEATUS	RED-SHOULDERED HAWK		THREATENED
10	BIRD	COTURNICOPS NOVEBORACENSIS	YELLOW RAIL		THREATENED
11	BIRD	DENDROICA CERULEA	CERULEAN WARBLER		THREATENED
12	BIRD	EMPIDONAX VIRESCENS	ACADIAN FLYCATCHER		THREATENED
13	BIRD	LANIUS LUDOVICIANUS	LOGGERHEAD SHRIKE		ENDANGERED
14	BIRD	PANDION HALIAETUS	OSPREY		THREATENED
15	BIRD	PODICEPS GRISEGENA	RED-NECKED GREBE		ENDANGERED
16	BIRD	STERNA CASPIA	CASPIAN TERN		ENDANGERED
17	BIRD	STERNA FORSTERI	FORSTER'S TERN		ENDANGERED
18	BIRD	STERNA HIRUNDO	COMMON TERN		ENDANGERED
19	BIRD	TYTO ALBA	BARN OWL		ENDANGERED
20	BIRD	WILSONIA CITRINA	HOODED WARBLER		THREATENED
21	FISH	LEPOMIS MEGALOTIS	LONGEAR SUNFISH		THREATENED
22	FISH	LUXILUS CHRYSOCEPHALUS	STRIPED SHINER		ENDANGERED
23	FISH	LYTHRURUS UMBRATILIS	REDFIN SHINER		THREATENED
24	FISH	MOXOSTOMA VALENCIENNESI	GREATER REDHORSE		THREATENED
25	FISH	NOTROPIS ANOGENUS	PUGNOSE SHINER		THREATENED
26	HERPTILE	ACRIS CREPITANS BLANCHARDI	BLANCHARD'S CRICKET FROG		ENDANGERED
27	HERPTILE	CLEMMYS INSCULPTA	WOOD TURTLE		THREATENED
28	HERPTILE	EMYDOIDEA BLANDINGII	BLANDING'S TURTLE		THREATENED
29	HERPTILE	REGINA SEPTENTRIONATA	QUEEN SNAKE		ENDANGERED
30	HERPTILE	THAMNOPHIS BUTLERI	BUTLER'S GARTER SNAKE		THREATENED
31	HERPTILE	THAMNOPHIS PROXIMUS	WESTERN RIBBON SNAKE		ENDANGERED
32	HERPTILE	THAMNOPHIS SAURITUS	NORTHERN RIBBON SNAKE		ENDANGERED
33	INVERTEBRATE	ALASMDONTA VIRIDIS	SLIPPERSHELL MUSSEL		THREATENED
34	INVERTEBRATE	CALEPHELIS MUTICUM	SWAMP METALMARK		ENDANGERED
35	INVERTEBRATE	HENDERSONIA OCCULTA	CHERRYSTONE DROP		THREATENED
36	INVERTEBRATE	LYCAEIDES IDAS NABOKOVI	NORTHERN BLUE BUTTERFLY		ENDANGERED
37	INVERTEBRATE	OPHIOMPHUS HOWEI	PYGMY SNAKETAIL		THREATENED
38	INVERTEBRATE	QUADRULA METANEVRA	MONKEYFACE		THREATENED
39	INVERTEBRATE	TRIMEROTROPIS HURONIANA	LAKE HURON LOCUST		ENDANGERED
40	INVERTEBRATE	VENUSTACONCHA ELLIPSIFORMIS	ELLIPSE		THREATENED
41	INVERTEBRATE	VERTIGO HUBRICHTI	MIDWEST PLEISTOCENE VERTIGO		ENDANGERED
42	PLANT	AMERORCHIS ROTUNDIFOLIA	ROUND-LEAVED ORCHIS		THREATENED
43	PLANT	ANEMONE MULTIFIDA VAR. HUDSONIANA	EARLY ANEMONE		ENDANGERED
44	PLANT	ARMORACIA LACUSTRIS	LAKE-CRESS		ENDANGERED
45	PLANT	ASCLEPIAS OVALIFOLIA	DWARF MILKWEED		THREATENED
46	PLANT	ASPLENIUM VIRIDE	GREEN SPLEENWORT		ENDANGERED
47	PLANT	ASTER FURCATUS	FORKED ASTER		THREATENED
48	PLANT	ASTRAGALUS NEGLECTUS	COOPER'S MILKVETCH		ENDANGERED
49	PLANT	BOTRYCHIUM CAMPESTRE	PRAIRIE DUNE WORT		ENDANGERED
50	PLANT	BOTRYCHIUM LUNARIA	MOONWORT GRAPE-FERN		ENDANGERED
51	PLANT	BOTRYCHIUM MORMO	LITTLE GOBLIN MOONWORT		ENDANGERED
52	PLANT	CALAMOVILFA LONGIFOLIA VAR. MAGNA	SAND REED-GRASS		THREATENED
53	PLANT	CALYPSO BULBOSA	FAIRY SLIPPER		THREATENED
54	PLANT	CAREX CONCINNA	BEAUTIFUL SEDGE		THREATENED
55	PLANT	CAREX EXILIS	COAST SEDGE		THREATENED
56	PLANT	CAREX FORMOSA	HANDSOME SEDGE		THREATENED
57	PLANT	CAREX GARBERI	ELK SEDGE		THREATENED
58	PLANT	CAREX LENTICULARIS	SHORE SEDGE		THREATENED
59	PLANT	CAREX PRASINA	DROOPING SEDGE		THREATENED
60	PLANT	CYPRIPEDIUM ARIETINUM	RAM'S-HEAD LADY'S-SLIPPER		THREATENED
61	PLANT	DRABA LANCEOLATA	LANCEOLATE WHITLOW-CRESS		ENDANGERED
62	PLANT	DROSER A LINEARIS	SLENDERLEAF SUNDEW		THREATENED
63	PLANT	ELEOCHARIS ROSTELLATA	BEAKED SPIKERUSH		THREATENED
64	PLANT	ELYMUS LANCEOLATUS SSP. PSAMMOPHILUS	THICKSPIKE		THREATENED
65	PLANT	ERIGENIA BULBOSA	HARBINGER-OF-SPRING		ENDANGERED
66	PLANT	FESTUCA OCCIDENTALIS	WESTERN FESCUE		THREATENED
67	PLANT	GENTIANA ALBA	YELLOW GENTIAN		THREATENED
68	PLANT	GEOCAULON LIVIDUM	NORTHERN COMANDRA		ENDANGERED
69	PLANT	JUNCUS STYGIUS	MOOR RUSH		ENDANGERED
70	PLANT	OROBANCHE FASCICULATA	CLUSTERED BROOMRAPE		THREATENED
71	PLANT	PARNASSIA PALUSTRIS	MARSH GRASS-OF-PARNASSUS		THREATENED
72	PLANT	PARNASSIA PARVIFLORA	SMALL-FLOWER GRASS-OF-PARNASSUS		ENDANGERED
73	PLANT	PETASITES SAGITTATUS	ARROW-LEAVED SWEET-COLTSFOOT		THREATENED

Continued on Next Page

## BAY-LAKE RPC ENDANGERED OR THREATENED SPECIES (CONTINUED)

Count	Group	Scientific	Common	State Listing	Federal Listing
74	PLANT	PLATANThERA FLAVA VAR. HERBIOLA	PALE GREEN ORCHID		THREATENED
75	PLANT	POLEMONIUM OCCIDENTALE SSP. LACUSTRE	WESTERN JACOB'S LADDER		ENDANGERED
76	PLANT	POLYSTICHUM BRAUNII	BRAUN'S HOLLY-FERN		THREATENED
77	PLANT	PTEROSPORA ANDROMEDEA	GIANT PINEDROPS		ENDANGERED
78	PLANT	RANUNCULUS CYMBALARIA	SEASIDE CROWFOOT		THREATENED
79	PLANT	RANUNCULUS GMELINII	SMALL YELLOW WATER CROWFOOT		ENDANGERED
80	PLANT	RIBES OXYACANTHOIDES	CANADA GOOSEBERRY		THREATENED
81	PLANT	SALIX CORDATA	SAND DUNE WILLOW		ENDANGERED
82	PLANT	SCIRPUS CESPITOSUS	TUFTED CLUB-RUSH		THREATENED
83	PLANT	SCUTELLARIA PARVULA VAR. PARVULA	SMALL SKULLCAP		ENDANGERED
84	PLANT	SELAGINELLA SELAGINOIDES	LOW SPIKE-MOSS		ENDANGERED
85	PLANT	SOLIDAGO SIMPLEX VAR. GILLMANII	STICKY GOLDENROD		THREATENED
86	PLANT	TANACETUM HURONENSE	LAKE HURON TANSY		ENDANGERED
87	PLANT	TIARELLA CORDIFOLIA	HEART-LEAVED FOAM-FLOWER		ENDANGERED
88	PLANT	TOFIELDIA GLUTINOSA	STICKY FALSE-ASPHEDEL		THREATENED
89	PLANT	TRILLIUM NIVALE	SNOW TRILLIUM		THREATENED
90	PLANT	TRisetUM MELICOIDES	PURPLE FALSE OATS		ENDANGERED
91	PLANT	VACCINIUM CESPITOSUM	DWARF HUCKLEBERRY		ENDANGERED
92	PLANT	VALERIANA SITCHENSIS SSP. ULIGINOSA	MARSH VALERIAN		THREATENED

*Source: Wisconsin Department of Natural Resources, Bureau of Endangered Species, Natural Heritage Inventory; Bay-Lake Regional Planning Commission. June 2005.*

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## **APPENDIX E**

### **DETAILED LAND USE INVENTORY**

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Existing Land Cover				
Category	Acres	Percent		Acres
High Intensity Developed	42,348	1.2%	Developed	177,247
Low Intensity Developed	134,898	3.9%		
Cultivated Land	707,446	20.4%	Agriculture	707,446
Grassland	752,763	21.7%	Undeveloped	2,586,554
Deciduous Forest	698,703	20.1%		
Evergreen Forest	39,087	1.1%		
Mixed Forest	179,428	5.2%		
Scrub/Shrub	107,832	3.1%		
Palustrine Forested Wetland	346,178	10.0%		
Palustrine Scrub/Shrub Wetland	336,217	9.7%		
Palustrine Emergent Wetland	66,831	1.9%		
Unconsolidated Shore	2,504	0.1%		
Bare Land	2,420	0.1%		
Water	54,591	1.6%		
Total	3,471,247	100.0%		
Square Miles	5,424			

Acreage Needed for Compact/In-Fill Development Scenario				
Category	Acres	Percent		Acres
Cultivated Land	46,191	20.5%	Developed	119,044
High Intensity Developed	30,720	13.6%	Undeveloped	106,132
Low Intensity Developed	42,133	18.7%		
Water	4,825	2.1%		
Woodlands/Wetlands/Natural Area	101,307	45.0%		
Total	225,176	100.0%		

Acreage Needed for Existing Development Trends Scenario				
Type	Acres	Percent		Acres
Cultivated Land	149,346	25.8%	Developed	245,281
High Intensity Developed	35,616	6.1%	Undeveloped	334,599
Low Intensity Developed	60,319	10.4%		
Water	7,891	1.4%		
Woodlands/Wetlands/Natural Area	326,708	56.3%		
Grand Total	579,880	100.0%		

Acreage Needed for Corridor Development Scenario				
Type	Acres	Percent		Acres
Cultivated Land	165,216	30.1%	Developed	261,788
High Intensity Developed	37,873	6.9%	Undeveloped	287,556
Low Intensity Developed	58,698	10.7%		
Water	6,960	1.3%		
Woodlands/Wetlands/Natural Area	280,596	51.1%		
Grand Total	549,343	100.0%		



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## **APPENDIX F**

### **DEFINITIONS AND GLOSSARY OF TERMS**

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## Planning and Zoning Definitions

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**Alley:** a permanently reserved public or private secondary means of access to an abutting property.

**Accessory Structure:** a detached subordinate structure located on the same lot as and incidental to the principal structure.

**Accessory Use:** a use incidental to and on the same lot as a principal use. *See also* “accessory structure” and “principal building”.

**Acre:** a unit of area used in land measurement and equal to 43,560 square feet. This is approximately equivalent to 4,840 square yards, 160 square rods, 0.405 hectares, and 4,047 square meters.

**Administrative Appeal (Appeal):** a quasi- judicial\* process before the local zoning board to review a contested ordinance interpretation or an order of an administrative zoning official.

**Adverse Impact:** a negative consequence to the physical, social, or economic environment.

**Affordable Housing:** housing that has its mortgage, amortization, taxes, insurance, and condominium and association fees constituting no more than 30% of the gross household income per housing unit. If the unit is rental, then the rent and utilities constitute no more than 30% of the gross household income per rental unit. *See s. COMM 202.01, Wis. Admin. Code.*

**Agriculture:** the use of land for farming, dairying, pasturage, apiculture (bees), aquaculture (fish, mussels), horticulture, floriculture, viticulture (grapes), or animal and poultry husbandry; this includes the necessary accessory uses for packing, treating, or storing the produce from these activities. *See also* ss. 30.40( 1) and 91.01( 1), *Wis. Stats* .

**Amendment:** a local legislative act changing a zoning ordinance to make alterations, to correct errors, or to clarify the zoning ordinance. A class 2 notice must be published and a public hearing must be held before a county board may adopt a proposed amendment. *See s. 59.69, Wis. Stats* .

**Amenities:** features that add to the attractive appearance of a development, such as underground utilities, buffer zones, or landscaping.

**Americans with Disabilities Act (ADA):** a congressional law passed in 1990, which provides a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities as well as clear, strong, consistent, enforceable standards addressing discrimination against individuals with disabilities.

**Amortization:** a method of eliminating nonconforming uses (usually minor structures) by requiring the termination of the nonconforming use after a specified period of time, which is generally based on the rate of economic depreciation of the use or structure.

**Annexation:** the process of incorporating an area of land in a township into a municipality. *See* ch. 66, subch. II, *Wis. Stats*.

**Appellate Body:** a body authorized to review the judgments made by administrative officers. For example, a board of adjustment hears appeals of the decisions of a county zoning administrator.

**Aquatic and Terrestrial Resources Inventory (ATRI):** a public and private partnership to gather, link, and make available data used for decisions affecting Wisconsin’s landscape; a systematic and comprehensive information management system developed by the Wisconsin DNR to improve environmental and resource management decisions.

**Aquifer:** a geologic formation, usually comprised of saturated sands, gravel, and cavernous and vesicular rock, that carries water in sufficient quantity for drinking and other uses.

**Aquifer Recharge Area:** the surface area through which precipitation passes to replenish subsurface water bearing strata of permeable rock, gravel, or sand.

**Architectural Control/ Review:** regulations and procedures requiring the exterior design of structures to be suitable, harmonious, and in keeping with the historic character or general style of surrounding areas.

**Area Variance (Variance):** the relaxation of a dimensional standard in a zoning ordinance decided by a local zoning board. *See* ss.59.69, 60.61, 60.62 and 62.23, *Wis. Stats* .

**Arterial:** a major street, which is normally controlled by traffic signs and signals, carrying a large volume of through traffic.

**Benchmark:** a performance- monitoring standard that allows a local government to periodically measure the progress of a local comprehensive plan’s goals and policies; also, a fixed and recorded elevation point from which another, relative elevation can be surveyed.

**Berm:** A low earthen ridge constructed as a landscaping feature or to direct runoff or deflect noise.

**Best Management Practices (BMPs):** the conservation measures and management practices intended to lessen or avoid a development’s impact on surrounding land and water.

**Billboard:** a sign that identifies or communicates a message related to an activity conducted, a service rendered, or a commodity sold at a location other than where the sign is located.

**Block:** a unit of land or contiguous lots or parcels bounded by a roadway or other barrier.

**Board of Appeals/ Board of Adjustment (BOA):** a board of appointed individuals that hears appeals on variances and exceptions. Board of Appeals applies to cities, villages, and towns, whereas Board of Adjustment applies to counties.

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**Brownfields:** lands contaminated by spills or leaks and that are perceived to be unsuitable for future development due to its hazardous nature or owner liability concerns.

**Buffer Area:** an area separating two incompatible types of development or a development and sensitive natural resources.

**Build Out:** the maximum, theoretical development of land as permitted under zoning regulations.

**Build Out Analysis:** a projection, based on the maximum, theoretical development of all lands, of the impact of a community's cumulative growth.

**Building Line:** the line parallel to the street line that passes through the point of the principal building nearest the front lot line.

**Building Scale:** the relationship between the volume of a building and its surroundings, including the width of street, amount of open space, and volume of surrounding buildings. Volume is determined by the three- dimensional bulk (height, width, and depth) of a structure.

**Bulk Regulations:** standards that establish the maximum size of structures on a lot and the location where a building can be, including coverage, setbacks, height, impervious surface ratio, floor area ratio, and yard requirements.

**Business Improvement Districts (BID):** an area within a municipality consisting of contiguous parcels subject to general real-estate taxes other than railroad rights- of-way and that may include railroad rights- of- way, rivers, or highways continuously bounded by the parcels on at least one side. *See s. 66.1109( 1)( b), Wis. Stats.*

**Business Incubator:** retail or industrial space, which may offer shared or subsidized management support such as information and advice on regulations, advertising, promotion, marketing, inventory, labor relations, and finances and facility support such as clerical staff, security, electronic equipment, and building maintenance that is affordable to new, low profit- margin businesses.

**By Right:** a use that complies with all zoning regulations and other applicable ordinances and that is permitted without the consent of a review board.

**Capital Improvement:** a physical asset that is large in scale or high in cost.

**Capital Improvements Plan/ Capital Improvements Program (CIP):** a city's or county's proposal of all future development projects and their respective cost estimates listed according to priority.

**Census Tract:** a relatively permanent county subdivision delineated to present census data.

**Central Business District (CBD):** the primary, downtown commercial center of a city.

**Certificate of Appropriateness:** a permit issued by a historic preservation review board\* approving the demolition, relocation, or new construction in a historic district.

**Certificate of Compliance:** an official document declaring that a structure or use complies with permit specifications, building codes, or zoning ordinances.

**Clear Zone:** an area within a roadway right- of- way that is free of any obstructions, thus providing emergency vehicle access.

**Closed (Executive) Session:** a governmental meeting or portion closed to everyone but its members and members of its parent body for purposes specified in state law. Governmental meetings are subject to Wisconsin's 'Open Meetings Law.' *See s.19.81- 19.98, Wis. Stats .*

**Cluster Development Zoning (Clustering):** concentrating the total allowable dwelling units on a tract of land into higher densities on a smaller portion of the tract, leaving the remaining land as open space. For example, in a five- acre minimum lot zoned area, 10 units would be constructed on 50 acres; however, 10 units could also be 'clustered' on 20 acres (allowing minimum two- acre lots), leaving the remaining 30 acres as common open space.

**Collector:** a street designed to carry a moderate volume of traffic from local streets to arterial\* streets or from arterial streets to arterial streets.

**Combination Zones:** a zone that is placed over another, now underlying zone and that adds or replaces existing requirements of the underlying zone.

**Common Open Space:** squares, greens, parks, or green belts intended for the common use of residents.

**Community Development Block Grant (CDBG):** a grant program administered by the U.S. Department of Housing and Urban Development (HUD), the state departments of Administration and Commerce, and the Wisconsin Housing and Economic Development Authority (WHEDA) that provides money for community rehabilitation and development. *See s.16.358 and 560.045, Wis. Stats.*

**Community Development Zone:** Zones meeting certain requirements and designated by the state Department of Commerce for the purpose of administering tax benefits designed to encourage private investment and to improve both the quality and quantity of employment opportunities. The Community Development Zone Program has more than \$38 million in tax benefits available to assist businesses that meet certain requirements and are located or willing to locate in one of Wisconsin's 21 community development zones. *See s.560.70, Wis. Stats. See also "enterprise development zone".*

**Comprehensive Plan:** a county development plan or city, village, town, or regional planning commission master plan prepared under and meeting the content requirements outlined in s.66.1001, *Wis. Stats.* Comprehensive plans provide a vision and general idea of how land should be used to assure public health, safety, and welfare.

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**Concurrency Management System:** the process used to determine that needed public services are concurrent with a development's impacts.

**Concurrency Test:** an analysis of public facilities' ability to accommodate a development; in other words, adequate capacity of facilities must precede or be concurrent with a development's demand.

**Conditional Use:** a land use, construction activity, or structural development, which must be tailored to the site conditions and adjacent property uses through a public and technical review process, that is listed as a conditional use in a zoning district.

**Conditional Use Permit:** a permit issued by a zoning administrator, if the applicant meets certain additional requirements, allowing a use other than a principally permitted use.

**Conditional Zoning:** special conditions an owner must meet in order to qualify for a change in a zoning district designation.

**Condominium:** real estate and improvements where portions are designated for separate ownership and the remainder for common ownership. *See s.703.02, Wis. Stat.*

**Conservation Areas:** environmentally sensitive and valuable lands protected from any activity that would significantly alter their ecological integrity, balance, or character except in cases of overriding public interest.

**Conservation Development Zoning:** a type of cluster development zoning that emphasizes a planned unit development for preserving open space, wetlands, natural landscaping, floodplains, or other prioritized resources as well as for preventing stormwater runoff.

**Conservation Easement:** a recorded legal agreement between a landowner and a qualified conservation agency that transfers development rights from the owner to the agency to protect natural or historic features. *See s. 700.40, Wis. Stats.*

**Contested Case:** a hearing similar to a court proceeding where parties have a right to review and object to evidence and cross-examine witnesses who testify.

**Contiguous Properties:** properties sharing a property line.

**Cooperative Agreement:** an agreement between two or more organizations to share in the financing or managing of a property, providing of services, or some other joint venture. *Also see ss. 66.0307, 150.84, and 299.80, Wis. Stats. for specific examples of authorized agreements.*

**Dedication:** the transfer of property from private to public ownership.

**Deed Restriction:** a limitation, which is recorded with the county register of deeds and to which subsequent owners are bound, on development, maintenance, or use of a property.

**Design Guideline:** an activity standard that preserves the historic or architectural character of a site or building.

**Design Review/ Control:** an aesthetic evaluation, considering landscape design, architecture, materials, colors, lighting, and signs, of a development's impact on a community

**Design Standards:** criteria requiring specific dimensional standards or construction techniques. *See also "performance standards".*

**Detachment:** the transposition of land from a municipality back into a township. *See s. 66.0227, Wis. Stats.*

**Developer:** a person or company that coordinates the ownership, financing, designing, and other activities necessary for the construction of infrastructure or improvements.

**Development:** an artificial change to real estate, including construction, placement of structures, excavation, grading, and paving.

**Development Values:** the economic worth of land based upon the fair market price after residential, commercial, or industrial structures have been added.

**District:** a part, zone, or geographic area within the municipality where certain zoning or development regulations apply.

**Down Zoning:** a change in zoning classification that permits development that is less dense, intense, or restrictive. *See also "up zoning".*

**Dwelling Unit:** the space in a building that comprises the living facilities for one family. *See also "multifamily," "single-family attached," and "single-family detached dwelling".*

**Easement:** written and recorded authorization by a property owner for the use of a designated part of the property by others for a specified purpose. *See also "conservation easement".*

**Ecological Impact:** a change in the natural environment that could disrupt wildlife habitat or vegetation, or that could cause air, water, noise, or soil pollution.

**Economic Unit:** units of land that, although they may be separated from one another physically, are considered one economically.

**Eminent Domain:** the right of a government unit to take private property for public use with appropriate compensation to the owner. *See ch. 32, Wis. Stats.*

**Enabling Act:** legislation authorizing a government agency to do something that was previously forbidden. *See also "takings".*

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**Enterprise Development Zone:** zones meeting certain statutorily defined criteria and designated by the state Department of Commerce for providing tax incentives to new or expanding businesses whose projects will affect distressed areas. An enterprise development zone is “site specific,” applying to only one business, and is eligible for a maximum of \$3.0 million in tax credits. The department can designate up to 79 zones, which can each exist for up to seven years. The department is allowed to vary zone benefits to encourage projects in areas of high distress. *See s.560.70, Wis. Stats. See also “community development zone”.*

**Environmental Corridors:** linear areas of natural resources that are critical to maintaining water quality and quantity and to providing habitat linkages that maintain biological diversity. Environmental corridors are often associated with rivers and streams.

**Environmental Impact Ordinance:** a local legislative act requiring an assessment of the potential harmful environmental effects of a pending development so that steps to prevent damage can be taken.

**Environmental Impact Report (EIR):** a report that assesses an area’s environmental characteristics and then determines the impact that a proposed development will have.

**Environmental Impact Statement (EIS):** a statement prepared under the National Environmental Policy Act (NEPA) or Wisconsin Environmental Policy Act (WEPA) predicting the impacts a proposed government action is likely to have on the environment and describing the affected environment and the alternative actions considered. *See s.1.11, Wis. Stats., P.L.91-190, 42 USC 4331, NR 150, Wis. Admin. Code.*

**Environmental Nodes:** discrete, inherently non- linear areas of natural resources that are sometimes isolated from areas with similar resource features. Planning objectives often include linking environmental nodes.

**Environmentally Sensitive Areas:** areas such as wetlands, steep slopes, waterways, underground water recharge areas, shores, and natural plant and animal habitats that are easily disturbed by development.

**Esplanade:** waterfront area intended for public use.

**Estate Management Strategies:** strategies enacted during a landowner’s lifetime or upon her death to help preserve family lands and farms.

**Ex parte Contact:** communication, which is normally prohibited, with a decision maker in a quasi- judicial proceeding, which is not part of a public hearing or the official record in a matter.

**Exactions:** compensation, which may take the form of facilities, land, or an actual dollar amount, that a community requires from a developer as condition of the approval of a proposed development project. Exactions may be incorporated into the community’s zoning code or negotiated on a project- by- project basis; but, they must reflect the type and extent of the expected adverse impacts of the development.

**Executive Session:** *See “closed session”.*

**Extraterritorial Zoning:** a local government’s authority to zone areas outside its boundaries. Under Wisconsin law, the extraterritorial zone for 1 st , 2 nd , and 3 rd class cities extends 3 miles beyond the corporate limits. The limit extends 1-½ miles beyond the municipal boundary for 4 th class cities and villages. *See s.62.23( 7a), Wis. Stats .*

**Exurban Area:** the area beyond a city’s suburbs.

**Fee Simple Acquisition:** the purchase of property via cash payment.

**Fee Simple Interest in Property:** absolute ownership of and with unrestricted rights of disposition to land. This describes the possession of all rights to property except those reserved to the state. *See “rights”.*

**Fiscal Impact Analysis:** the projection of the costs and benefits of additional or new facilities, rentals, or remodeling of existing facilities, including data relative to increased instructional, administrative, maintenance, and energy costs and costs for new or replacement equipment.

**Fiscal Impact Report:** a report projecting the costs and revenues that will result from a proposed development.

**Floating Zone:** an unmapped zoning district that is described in ordinance and on the zoning map only when an application for development is approved.

**Floodplains:** land that has been or may be covered by flood water during a ‘regional flood’ as is defined in NR 116, Wis. Adm. Code. The floodplain includes the floodway and floodfringe, and is commonly referred to as the 100- year floodplain.

- *Floodfringe:* that portion outside of the floodway covered by water during a regional flood.

This term is generally associated with standing water, but may under local floodplain zoning ordinances, be developed for specified purposes if development is protected from flooding.

- *Floodway:* the channel of a river or stream and those portions of the floodplain adjoining the channel required to discharge a regional flood.

This term is generally associated with flowing water and is required by local floodplain zoning ordinances to remain undeveloped and free of obstructions.

**Front Lot Line:** the lot line separating an interior lot from the street, or the shortest lot line of a corner lot to a street.

**Gentrification:** the resettlement of low and moderate- income urban neighborhoods by middle and high- income professionals.

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**Geographic Information System (GIS):** computer technology, tools, databases, and applications that provide spatial (geographic) data management, analysis, and mapping capabilities to support policy evaluation, decision- making, and program operations.

**Geologic Review:** an analysis of geologic features on a site, including hazards such as seismic hazards, surface ruptures, liquefaction, landslides, mud slides, erosion, and sedimentation.

**Gift Credit:** a dollar or in- kind matching amount (labor, supplies, land donation, etc.) required to secure funds for a development.

**Global Positioning System (GPS):** a computerized tool for determining longitudinal and latitudinal coordinates through the use of multiple orbiting satellites.

**Green Spaces:** *See “open spaces”.*

**Growth Management:** the pacing of the rate or controlling of the location of development via law enactment to manage a community’s growth.

**Hamlet:** a predominantly rural, residential settlement that compactly accommodates development.

**Hamlet Lot:** a small residential lot in a contiguous group with adjacent and fronting lots oriented toward each other in some ordered geometric way and forming a boundary with the surrounding countryside.

**Hazardous Substance:** any substance or combination of substances, including solid, semisolid, liquid or gaseous wastes, which may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or which may pose a substantial present or potential hazard to human health or the environment because of its quantity, concentration, or physical, chemical, or infectious characteristics. This term includes irritants, strong sensitizers, explosives, and substances that are toxic, corrosive, or flammable. *See s.292.01( 5), Wis. Stats.*

**Heavy Industry:** the basic processing and manufacturing of products from raw materials; or, a use engaged in the storage or manufacturing processes using flammable or explosive materials or those that potentially involve offensive conditions. *See also “light industry”.*

**Highly Erodible Soils:** soils highly susceptible to erosion as determined by an equation that considers soil type, slope, and amount of rainfall but does not consider current land management or vegetative cover. These soils are often identified in county soil survey books.

**Historic Area:** an area designated by an authority, having buildings or places that are important because of their historical architecture or relationship to a related park or square or because those areas were developed according to a fixed plan based on cultural, historical, or architectural purposes.

**Historic Preservation:** the research, protection, restoration, and rehabilitation of historic properties.

**Historic Property:** a building, structure, object, district, area, or site, whether on or beneath the surface of land or water, that is significant in the history, prehistory, architecture, archaeology, or culture of Wisconsin, its rural and urban communities, or the nation. *See s.44.31( 3), Wis. Stats. See s.13.48( 1m)( a), Wis. Stats .*

**Homeowner’s Association:** a nonprofit organization made up of property owners or residents who are then responsible for costs and upkeep of semiprivate community facilities.

**Home Rule:** constitutional provisions in some states that give local units of government substantial autonomy. Wisconsin is a “strong” home rule state.

**Incorporation:** orderly and uniform development of territory from town to incorporated status. *See ch. 66, subch. II, Wis. Stats.*

**Impact Fees:** cash contributions, contributions of land or interests in land, or any other items of value that are imposed on a developer by a political subdivision to offset the community’s costs resulting from a development. *See s. 66.0617, Wis. Stats.*

**Impervious Surface:** a ground cover such as cement, asphalt, or packed clay or rock through which water cannot penetrate; this leads to increases in the amount and velocity of runoff and corresponds to increases in soil erosion and nutrient transport.

**Improvements:** the actions taken to prepare land, including clearing, building infrastructure such as roads and waterlines, constructing homes or buildings, and adding amenities.

**Incentive Zoning:** the granting of additional development possibilities to a developer because of the developer’s provision of a public benefit.

**Industrial District:** a district designated as manufacturing, research and development, or industrial park.

**Infill:** the development of the last remaining lots in an existing developed area, the new development within an area already served by existing infrastructure and services, or the reuse of already developed, but vacant properties. *See also “redevelopment”.*

**Infrastructure:** public utilities, facilities, and delivery systems such as sewers, streets, curbing, sidewalks, and other public services.

**Installment Sale:** a real estate transaction in which the landowner and the recipient negotiate terms for the property to be transferred over an extended period of time rather than all at once.

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**Intermodal Surface Transportation Efficiency Act, 1991 (ISTEA):** a federal transportation act that authorized the first 23 “high priority corridors” of the total 42 authorized by the ISTEA, the National Highway System Designation Act (1995), and the Transportation Equity Act for the 21st Century.

**Intelligent Transportation System (ITS):** a system of technologies, including traveler information systems to inform motorists of weather and road conditions, incident management systems to help emergency crews respond more efficiently to road incidents, and commercial vehicle operations to increase freight transportation efficiency, intended to relieve state highway congestion.

**Interim Zone of Influence:** a procedure for the exchange of information or resolution of conflicts on certain proposed land- uses between a city or town and the county.

**Interim Zone/ Development Controls:** *See “moratorium”.*

**Judicial Appeal:** the review of a local zoning decision by the state judicial system.

**Land:** soil, the ground surface itself, a subdivision, a tract or parcel, a lot, an open space, or the physical elements below ground.

**Land Banking:** the obtaining, holding, and subsequent release of lands by a local government for controlled development or conservation.

**Land Exchange:** a transaction where a public agency or nonprofit organization exchanges a land parcel for another land parcel with high conservation value.

**Land- use Intensity System (LUI):** a comprehensive system created in the mid- 1960s by the U.S. Federal Housing Administration for determining or controlling the intensity of land development.

**Land- use Inventory:** a study, cataloging the types, extent, distribution, and intensity of current and future uses of land in a given area.

**Land- use Plan:** the element of a comprehensive plan that designates and justifies the future use or reuse of land. *See s.66.1001, Wis. Stats.*

**Landfill:** a disposal facility for solid wastes. *See ch.289, Wis. Stats .*

**Land Trust:** a private, nonprofit organization that protects natural and cultural resources through conservation easements, land acquisition, and education.

**Large- Lot Zoning:** a requirement that each new house be constructed on a minimum number of acres (generally, five or more acres). Developments that feature large- lot zoning may include the dispersal of some impacts, less efficient infrastructure, and greater areas of land use.

**Leapfrog Development:** new development separated from existing development by substantial vacant land.

**Leaseback:** *See “purchase/ leaseback”.*

**Level of Service (LOS):** a measurement of the quantity and quality of public facilities.

**Light Industry:** the manufacture and distribution of finished products, including processing, fabrication, assembly, treatment, packaging, incidental storage, and sales. *See also “heavy industry”.*

**Limited Development:** the development of one portion of a property to finance the protection of another portion.

**Lot:** a parcel of land that is occupied or intended for occupancy, including one main building and any accessory buildings, open spaces, or parking spaces. *See also “through lot”.*

**Lot Area:** the area of a horizontal plane bounded by the vertical planes through front, side, and rear lot lines.

**Lot Averaging:** the design of individual adjoining lots within a residential subdivision where the average lot is the minimum prescribed area for the zoning district.

**Lot-by- Lot Development:** a conventional development approach where each lot is treated as a separate development unit conforming to all land- use, density, and bulk requirements.

**Lot Coverage:** the total when an area of a lot covered by the total projected surface of all buildings, impervious surfaces, or vegetative coverage is divided by the gross area of that lot.

**Lot Depth:** the average horizontal distance between the front and rear lot lines.

**Lot Line:** the property lines at the perimeter of a lot.

**Lot Width:** the distance between side lot lines. This is generally measured at the front setback, but the specific protocol varies between jurisdictions.

**LULU:** a locally unwanted land use. *See also “NIMBY,” “NIABY,” and “NIMTOO”.*

**Main Street Program:** a comprehensive revitalization program established in 1987 to promote and support the historic and economic redevelopment of traditional business districts in Wisconsin. The Main Street Program is administered by the state Department of Commerce.

**Manufactured Housing:** a structure, containing within it plumbing, heating, air- conditioning, and electrical systems, that is transportable in one or more sections of certain sizes and is built on a permanent chassis, and when connected to the required utilities, is designed to be used as a dwelling with or without a permanent foundation. Such housing must comply with the

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standards established under the National Manufactured Housing Construction and Safety Standards Act. *See* 42 USC 5401 to 5425 and ch.409, *Wis. Stats.*

**Map:** a drawing or other representation that portrays the spatial distribution of the geographic, topographic, or other physical features of an area.

**Mini- Lot Development:** a development containing lots that do not meet the minimum size or other requirements.

**Mitigation:** the process of compensating for the damages or adverse impacts of a development.

**Mitigation Plan:** imposed development conditions intended to compensate for the adverse impacts of the development.

**Mixed-Use Development:** a development that allows multiple compatible uses to be in close proximity to one another in order to minimize transportation infrastructure impacts and to create a compact, efficient neighborhood; for example, single family, multifamily, commercial, and industrial uses are located within a reasonable proximity to each other.

**Modernization:** the upgrading of existing facilities to increase the input or output, update technology, or lower the unit cost of the operation.

**Moratorium:** a temporary development freeze or restriction pending the adoption or revision of related public policies or provisions of public infrastructures or services.

**Multifamily Dwelling:** a building or portion occupied by three or more families living independently of each other.

**Multimodal Transportation:** an integrated network of various transportation modes, including pedestrian, bicycle, automobile, mass transit, railroads, harbors, and airports.

**Multiple Occupancy Development (MOD):** A development on a single lot wherein a building is provided with 3 or more occupancy units, or wherein 2 or more detached buildings are provided with 2 or more occupancy units, regardless of the characteristics of the user(s) of the occupancy units and regardless of the ownership of the building(s) or of the occupancy units.

**Municipality:** a city, village, town, or other unit of local government. The application of this term varies and it often has specific legal meanings.

**National Environmental Policy Act (NEPA):** a congressional act passed in 1969, establishing a national environmental policy. NEPA requires federal agencies to consider the environmental effects of decisions early in their decision- making processes and to inform the public of likely impacts. Environmental impact statements (EISs) are prepared consistent with this law. The act also established the Council on Environmental Quality. *See* P.L. 91- 190, 42 U.S.C. 4321- 4347. *See also* “environmental impact statement” and “Wisconsin Environmental Policy Act (WEPA)”.

**National Register of Historic Places in Wisconsin:** places in Wisconsin that are listed on the national register of historic places maintained by the U.S. Department of the Interior, National Park Service.

**Neighborhood Plan:** a plan that provides specific design or property- use regulations in a particular neighborhood or district.

**Neighborhood Unit:** the model for American suburban development after World War II based around the elementary school with other community facilities located at its center and arterial streets at its perimeter.

**Neotraditional Development:** a land- use approach that promotes neighborhoods with a variety of housing and architectural types, a central gathering point, and interconnecting streets, alleys, and boulevards edged with greenbelts.\* *See also* “New Urbanism” and “smart growth”.

**Net Acre:** an acre of land excluding street rights- of- way\* and other publicly dedicated improvements such as parks, open space, and stormwater detention and retention facilities.

**New Urbanism:** an approach to development that includes the reintegration of components such as housing, employment, retail, and public facilities into compact, pedestrian- friendly neighborhoods linked by mass transit. *See also* “Neotraditional development” and “smart growth”.

**NIABY:** Not in anyone’s backyard. *See also* “LULU,” “NIMBY,” and “NIMTOO”.

**NIMBY:** Not in my backyard. *See also* “LULU,” “NIABY,” and “NIMTOO”.

**NIMTOO:** Not in my term of office. *See also* “LULU,” “NIMBY,” and “NIABY”.

**Nonconforming Activity:** an activity that is not permitted under the zoning regulations or does not conform to off- street parking, loading requirements, or performance standards.

**Nonconforming Building:** any building that does not meet the limitations on building size or location on a lot for its use and district.

**Nonconforming by Dimension:** a building, structure, or parcel of land that is not compliant with the dimensional regulations of the zoning code.

**Nonconforming Lot:** a use or activity which lawfully existed prior to the adoption, revision, or amendment of an ordinance but that fails to conform to the current ordinance.

**Nonconforming Use:** a use (or structure) that lawfully existed prior to the adoption or amendment of an ordinance but that fails to conform to the standards of the current zoning ordinance.



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**Noncontributing Building:** a building or structure that does not add to the historic architecture or association or cultural values of the area.

**Office Park:** a large tract that has been planned and developed as an integrated facility for a number of separate office buildings and that considers circulation, parking, utilities, and compatibility.

**Open Session:** a meeting that is in accordance with Wisconsin's 'Open Meetings Law.' *See* s.19.85- 19.98, *Wis. Stats.*

**Open (Green) Spaces:** a substantially undeveloped area, usually including environmental features such as water areas or recreational facilities. *See also* "common open spaces".

**Ordinance:** a local law; a legislative enactment of a local governing body.

**Orthophoto Quad:** an aerial photograph that has been adjusted, via the correcting of distortions and inaccuracies due to plane tilt, elevation differences, or the curvature of the earth's surface, to reflect as accurately as possible the actual topography of the earth's surface.

**Outright Donation:** the donation of land to a unit of government or a qualified charitable land conservation management organization.

**Outright purchase:** the acquisition of land for the benefit of the public.

**Overlay Zone:** an additional land use or zoning requirement that modifies the basic requirements of the underlying designation.

**Parcel:** *See* "lot".

**Pedestrian Friendly:** a development that is primarily accessible to pedestrians rather than automobiles and with an emphasis on street sidewalks rather than parking.

**Performance Standards:** general criteria established to limit the impact of land uses or development. *See also* "design standards".

**Pervious Surface:** a ground cover through which water can penetrate at a rate comparable to that of water through undisturbed soils.

**Planned Unit Development:** land under unified control to be developed in a single development or a programmed series of phases. A planned development includes the provisions, operations, maintenance, facilities, and improvements that will be for the common use of the development districts, but which will not be maintained at general public expense.

**Plan Commission:** an appointed local government commission authorized to make and adopt a master plan, consistent with s.66.1001, *Wis. Stats.*, for the physical development of the city. *See* s.62.23, *Wis. Stats.*

**Plat:** a map of a lot, parcel, subdivision, or development area where the lines of each land division are shown by accurate distances and bearings.

**Point System:** numerical values assigned to a development's impacts on a community's resources.

**Political Subdivision:** a city, village, town, county, sanitary district, school district, inland lake protection and rehabilitation district, or other special purpose unit of government.

**Pre- acquisition:** a technique where one organization (usually a private land trust) purchases a property and holds it until another organization (usually a government agency) can allocate the funds to purchase it.

**Preservation:** leaving a resource undisturbed and free from harm or damage. While 'preservation' is often used interchangeably with 'conservation,' the latter entails a connotation of prudent resource use.

**Primary Metropolitan Statistical Area (PMSA):** a statistical area defined by the U.S. Census; an area within a consolidated metropolitan statistical area consisting of a large urbanized county or cluster of counties that demonstrates very strong internal economic and social links, in addition to close ties to other portions of the larger area. *See also* "metropolitan statistical area" and "consolidated metropolitan statistical area".

**Prime Agricultural Land:** land determined by local governments to be important for sustaining agricultural operations and that are often protected from conversion to other uses. *See* ch.91, *Wis. Stats.*

**Prime Farmland:** farmland classified by the Natural Resources Conservation Service as best for the crop production of row, forage, or fiber because of level topography, drainage, moisture supply, soil texture and depth, and susceptibility to erosion and runoff. Ideally, prime farmland allows least cost to both the farmer and the natural resources. *See* ch.91, *Wis. Stats.*

**Principal Building:** the building, including all parts connected, where the primary use of the lot is conducted.

**Private Road:** a way open to traffic, excluding driveways, established as a separate tract for the benefit of adjacent properties.

**Privately Owned Waste- Treatment Systems (POWTS):** sewage treatment and disposal systems, which are also called on- site sanitary systems, that are not connected to sewer lines or wastewater treatment plants.

**Public Dedication:** reserving land in a subdivision for public use such as a school or park.

**Public Road:** public property dedicated and reserved for street traffic.

**Purchase of Development Rights (PDR):** a public or private government initiative that acquires the development rights of property to limit development and protect natural features or open space. *See also* "rights" and "transfer of development rights".

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**Purchase/ Leaseback:** an arrangement where a community purchases a natural area and then either leases it back with special lease restrictions or sells it back with deed restrictions designed to protect the natural features of the property.

**Quarter, Quarter Zoning:** a development standard that limits nonfarm development to one house per 40 acres (¼ of ¼ of the original 640- acre section).

**Quasi- Judicial Decisions:** “resembling a court;” quasi- judicial decision making must follow rules of due process and is midway between legislative and administrative functions. Examples of quasi- judicial decisions include variances, appeals, and conditional- use permits.

**Quasi- Public Use/ Facility:** a use conducted or a facility owned or operated by a nonprofit or religious institution that provides public services.

**Rear- lot Line:** a lot line, opposite the front lot line, that generally does not abut a public roadway.

**Redevelopment:** any proposed replacement of existing development. *See also “infill”.*

**Redevelopment Authority:** an authority, known as the “redevelopment authority of the city of [city name],” created in every city with a blighted area. This authority, together with all the necessary or incidental powers, is created to carry out blight elimination, slum clearance, and urban renewal programs and projects as set forth in Wisconsin Statutes. *See s.66.1333 ( 3)(a) 1, Wis. Stats .*

**Reforestation:** the planting or replanting of forest plants.

**Regional Plan:** a plan that covers multiple jurisdictions, often within the administrative area of a regional planning commission, and that can be prepared jointly by cooperating municipalities, regional planning commissions, state agencies, or other entities.

**Requests for Proposals (RFP):** a document describing a project or services and soliciting bids for a consultant’s or contractor’s performance.

**Requests for Qualifications (RFQ):** a document describing the general projects, services, and related qualifications of bidding consultants or contractors.

**Reservation of Site:** *See “public dedication”.*

**Reserved Life Estate:** an arrangement where a landowner sells or donates property to another party (for example, a conservation organization) while retaining the right to lifetime use.

**Revolving Fund:** a conservation fund, replenished through donations or selling of the land to another conservation organization or a government agency, used to purchase land or easements.

**Rezoning:** an amendment to a zoning map or zoning ordinance that changes the zoning- district designation and use or development standards.

**Right of First Refusal:** an agreement between a landowner and another party (for example, a land trust) that gives the other party a chance to match any third- party offer to purchase lands.

**Right of Way (ROW):** a strip of land occupied by or intended to be occupied by a street, crosswalk, walkway, utility line, or other access.

**Riparian Areas:** the shore area adjacent to a body of water.

**Roadway Setback:** the required or existing minimum distance between a public roadway (measured from the centerline or edge of right- of- way) and the nearest point on a structure.

**Scenic Corridor:** a linear landscape feature that is visually attractive (for example, stream corridors or blufflines).

**Scenic Easement:** an easement\* intended to limit development in order to preserve a view or scenic\* area.

**Seasonal Dwelling:** a dwelling not used for permanent residence or not occupied for more than a certain number of days per year. The standard varies between jurisdictions.

**Secondary Dwelling Unit:** an additional dwelling unit in a freestanding building or above a residential garage and located within or on the same lot as the principal dwelling unit.

**Sense of Place:** the constructed and natural landmarks and social and economic surroundings that cause someone to identify with a particular place or community.

**Set Back:** the minimum distance a building, structure, or activity can be separated from a designated feature such as a waterway or bluffline.

**Shoreland:** a state mandated water resource protection district that Wisconsin counties must adopt. Shorelands include lands adjacent to navigable waters within 1,000 feet of the ordinary high- water mark of a lake, pond, or flowage and within 300 feet of the ordinary high- water mark or floodplain of a river or stream.

**Shoreland- Wetland:** shorelands that are designated as wetlands on Wisconsin Wetlands Inventory maps. *See Wis. Stats.*

**Shoreline Stabilization:** the placement of structural revetments or landscaping practices to prevent or control shoreline erosion.

**Side Lot Line:** a lot line that is neither a front lot line nor a rear lot line.

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**Single- family Attached Dwelling:** one of two or more residential buildings having a common wall separating dwelling units.

**Single- family Detached Dwelling:** a residential building containing not more than one dwelling unit surrounded by open space.

**Sign:** any device that is sufficiently visible to persons not located on the lot that communicates information to them.

**Site Plan:** a scaled plan, which accurately and completely shows the site boundaries, dimensions and locations of all buildings and structures, uses, and principal site development features, proposed for a specific lot.

**Sliding Scale Zoning:** a ratio of dwelling units to land acreage that concentrates development on smaller lots by increasing the minimum lot size for houses built on larger parcels.

**Smart Growth:** an approach to land- use planning and growth management that recognizes connections between development and quality of life. The features that distinguish smart growth approaches vary. In general, smart growth invests time, attention, and resources in restoring community and vitality to center cities and older suburbs. In developing areas, the approach is more town- centered, is transit and pedestrian oriented, and has a greater mix of housing, commercial, and retail uses. Smart- growth approaches preserve open space and other environmental amenities. The term is also used to refer to Wisconsin's comprehensive planning law. *See s.66.1001, Wis. Stats. See also "New Urbanism" and "Neotraditional development".*

**Special Designation:** the protection of scenic river corridors and other valuable resources through state or federal means such as recognition, acquisition, or technical assistance.

**Special District/ Special Purpose Unit of Government:** a government entity that is responsible for performing specific tasks and oversight essential to a community's or region's well being. Special districts include sanitary districts, metropolitan sewerage districts, drainage districts, inland lake protection and rehabilitation districts, business improvement districts, tax incremental financing districts, architectural conservancy districts, and port authorities.

**Special Exception:** *See "conditional use".*

**Spot Zoning:** a change in the zoning code or area maps that is applicable to no more than a few parcels and generally regarded as undesirable or illegal because it violates equal treatment and sound planning principles.

**Stand:** a number of plants growing in a continuous area. Examples include 'a stand of hardwood' or 'a stand of timber.'

**Stewardship Program:** a state bonding program established by the Wisconsin Legislature in 1989 and re- authorized in 1999 that provides funds to protect environmentally sensitive areas and to maintain and to increase recreational opportunities across the state.

**Stormwater Detention/ Stormwater Retention:** the storage of stormwater runoff.

**Stormwater Management:** the reduction of the quantity of runoff, which affects flooding, or of pollutants generated at a development site and carried in stormwater.

**Story:** a space in a building between the surface of any floor and the surface of the next above floor or roof.

**Subdivision:** the description (usually by survey) and recording of separate land parcels or lots.

**Summary Abatement:** a legal action taken to suppress the continuation of an offensive land use. *See also "tax abatement".*

**Sustainability:** long- term management of ecosystems intended to meet the needs of present human populations without compromising resource availability for future generations.

**Sustainable Development:** development that meets the needs of the present generation without compromising the needs of future generations.

**Takings:** government actions that violate the Fifth Amendment to the U.S. Constitution, which reads in part, "nor shall private property be taken for public use, without just compensation." Such actions include regulations that have the effect of "taking" property. The Supreme Court has established four clear rules that identify situations that amount to a taking and one clear rule that defines situations that do not.

The court has found "takings" in the following circumstances:

- *where a landowner has been denied "all economically viable use" of the land;*
- *where a regulation forced a landowner to allow someone else to enter onto the property;*
- *where the regulation imposes burdens or costs on a landowner that do not bear a "reasonable relationship" to the impacts of the project on the community; and*
- *where government can equally accomplish a valid public purpose through regulation or through a requirement of dedicating property, government should use the less intrusive regulation, for example, prohibiting development in a floodplain property.*

The Supreme Court has also said that where a regulation is intended merely to prevent a nuisance, it should *not* be considered a taking.

**Tax Abatement:** a release of a certain tax liability for a specific period of time and under certain circumstances. *See also "summary abatement".*

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**Tax Increment:** additional tax revenue resulting from a property- value increase; the amount obtained by multiplying the total of all property taxes levied on all taxable property within a tax- incremental district in a year by a fraction having as a numerator the value increment for that year in the district and as a denominator that year's equalized value of all taxable property in the district. In any year, a tax increment is "positive" if the value increment is positive and "negative" if the value increment is negative. *See s.66.1105, Wis. Stats.*

**Tax Increment Financing (TIF):** a local governmental financing of private- sector redevelopment, anticipating the additional revenues of the tax increment.\* *See s.66.1105, Wis. Stats.*

**Town:** the political unit of government; a body corporate and politic, with those powers granted by law. *See ch. 60, Wis. Stats.*

**Township:** all land areas in a county not incorporated into municipalities (cities and villages).

**Tract:** an indefinite stretch or bounded piece of land; in subdivisions, a tract is often divided into individual lots.

**Traditional Neighborhood:** a compact, mixed- use neighborhood where residential, commercial, and civic buildings are within a close proximity. *See also "Neotraditional development" and "New Urbanism".*

**Traffic Calming:** the process of increasing pedestrian safety via decreasing automobile speed and volume.

**Traffic Impact Analysis:** an analysis of the impacts of traffic generated by a development.

**Traffic Impact Mitigation Measure:** an improvement by a developer intended to reduce the traffic impact created by a development.

**Transfer of Development Rights:** a technique, involving the designation of development (receiving) zones and protected (sending) zones, for guiding growth away from sensitive resources and toward controlled development centers by transferring development rights from one area to another via local law authorization such as a deed or easement. *See also "rights" and "purchase of development rights".*

**Transit- Oriented Development (TOD):** moderate or high- density housing concentrated in mixed- use developments\* that encourages the use of public transportation.

**Transitional Use:** a permitted use or structure that inherently acts as a transition or buffer between two or more incompatible uses.

**TRANSLINKS 21:** a statewide transportation system plan prepared by the Wisconsin Department of Transportation in response to federal and state laws.

**Transportation Demand Management (TDM):** a strategy that alleviates roadway stress by reducing vehicle density via the increasing of passengers per vehicle.

**Transportation enhancements (ISTEA & TEA- 21):** funds contributed by the federal highway transportation program to enhance cultural, aesthetic, and environmental aspects of local transportation and transit systems.

**Underlying Zoning District:** a term referring to a zoning district when it is affected by an overly district.

**Undevelopable:** an area that cannot be developed due to topographic or geologic soil conditions.

**Unified Development Code:** the combining of development regulations into a single zoning code.

**Universal Transverse Mercator Grid (UTM):** a civilian grid system, which uses only numbers and can be handled by digital mapping software and Geographic Information Systems.

**Unnecessary Hardship:** a unique and extreme inability to conform to zoning ordinance provisions due to physical factors; and, one of three tests a property must meet in order to qualify for a zoning variance.

**Up Zoning:** changing the zoning designation of an area to allow higher densities or less restrictive use. *See also "down zoning".*

**Urban Area:** the area within a municipal boundary that is serviced by infrastructure; an intensively developed area with a relatively large or dense population.

**Urban Forest:** all trees and associated vegetation in and around a city, village, or concentrated development.

**Urban Growth Area:** an area designated for urban development and usually designed to protect open space or resources beyond its boundaries.

**Urban Growth Boundary:** the perimeter of an urban growth area.

**Urban Sprawl:** low- density, automobile- dependent, and land- consumptive outward growth of a city; the spread of urban congestion and development into suburban and rural areas adjoining urban areas.

**Utility Facilities:** any above ground structures or facilities used for production, generation, transmission, delivery, collection, or storage of water, sewage, electricity, gas, oil, or electronic signals.

**Variance:** a relaxation of dimensional standards by a local zoning board in compliance with statutory criteria. *See s.59.99( 7 ), Wis. Stats.*

**Vehicle Miles Traveled (VMT):** a measure of automobile and roadway use.

**Village:** an incorporated area with a population under 5,000. *See ch. 61, Wis. Stats.*

**Watershed:** the area where precipitation drains to a single body of water such as a river, wetland, or lake.

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**Wellhead Protection:** a plan to determine the water collecting area for a public well, identify the pollution sources within that area, and detect, prevent, and remedy potential contamination to the collecting area.

**Wetlands Inventory Map:** a map of wetlands classified according to their vegetation, hydrology, and types of human influence, developed by the Wisconsin Department of Natural Resources, used to identify wetlands for protection.

**Wetlands Reserve Program:** a federal program with state partnering to restore the functions and values of wetlands and to preserve riparian areas through conservation easements and wetland reconstruction.

**Wildlife Habitat Incentives Program:** a program that awards landowners federal cost- sharing funds after the installation of improvements to wildlife or fishery habitat.

**Wisconsin Administrative Code (Wis. Admin. Code):** a component of state law that is a compilation of the rules made by state agencies having rule- making authority. These rules provide the detailed provisions necessary to implement the general policies of specific state statutes

**Wisconsin Environmental Policy Act (WEPA):** a state law establishing a state environmental policy. WEPA requires state agencies to consider the environmental effects of decisions early in their decision-making processes and to inform the public of likely impacts and alternatives that were considered. Environmental impact statements (EISs) are prepared consistent with this law. *See also "environmental impact statement" and "National Environmental Policy Act (NEPA)". See NR 150, Wis. Admin. Code, and s.1.11, Wis. Stats.*

**Wisconsin Register of Historic Places:** a listing of districts, sites, buildings, structures, and objects that are significant in national, state, or local history, architecture, archaeology, engineering and culture. The Wisconsin register of Historic Places is maintained by the Wisconsin State Historical Society. *See s. 44.36, Wis. Stats.*

**Zero Lot Line:** the location of a building in such a manner that one or more of its sides rests directly on its lot line.

**Zone:** an area designated by an ordinance where specified uses are permitted and development standards are required.

**Zoning Inspector:** an appointed position to administer and enforce zoning regulations and related ordinances.

**Zoning Permit:** a permit issued by the land- use or zoning administrator authorizing the recipient to use property in accordance with zoning- code requirements.

Source: *Land-Use Lingo: A Glossary of Land-Use Terms*, WDNR, 2001.

Note: All references are to 1999-2000 Wisconsin Statutes.

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**NOTES:**

<sup>a</sup>Net land use area is defined as the actual site area devoted to a given use, and consists of the ground floor site area occupied by any buildings plus the required yards and open spaces.

<sup>b</sup>Gross residential land use area is defined as the net area devoted to this use plus the area devoted to all supporting land uses, including streets, neighborhood parks and playgrounds, elementary schools, and neighborhood institutional and commercial uses, but not including freeways and expressways and other community and areawide uses.

<sup>c</sup>Areas which are served, proposed to be served, or required to be served by public sanitary sewerage and water supply facilities and which require neighborhood facilities.

<sup>d</sup>Areas which are not served, not proposed to be served, nor required to be served by public sanitary sewerage and water supply facilities and which do not require neighborhood facilities.

<sup>e</sup>This category includes areas developed for active recreational use.

<sup>f</sup>Gross public park and recreational area is defined as the net area devoted to active or intensive recreational use plus the adjacent lands devoted to supporting land uses such as roads and parking areas. This area does not include surface water, woodlands, wetlands, or other natural resources.

<sup>g</sup>Gross commercial and industrial area is defined as the net area devoted to these uses plus the area devoted to supporting land uses, such as off-street parking.

<sup>h</sup>Gross governmental and institutional area is defined as the net area devoted to governmental and institutional use plus the area devoted to supporting land uses, such as off-street parking.

<sup>i</sup>Direct access implies adjacency or immediate proximity.

<sup>j</sup>Floodlands are herein defined as those lands inundated by a flood having a recurrence interval of 100 years where hydrologic and hydraulic engineering data are available, and as those lands inundated by the maximum flood of record where such data are not available.

<sup>k</sup>Urban development, as used herein, refers to all land uses except agriculture, water, woodlands, wetlands, open lands, and quarries.

<sup>l</sup>A stream channel is herein defined as that area of the floodplain lying either within legally established bulkhead lines or within sharp and pronounced banks marked by an identifiable change in flora and normally occupied by the stream under average annual high-flow conditions.

<sup>m</sup>Floodway lands are herein defined as those designated portions of the floodlands that will safely convey the 100-year recurrence interval flood discharge with small, acceptable upstream and downstream stage increases.

<sup>n</sup>Wetlands are defined as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

<sup>o</sup>Woodlands are defined as those upland areas having 17 or more deciduous trees per acre each measuring at least four inches in diameter at breast height and having at least a 50 percent canopy cover. In addition, coniferous tree plantations and reforestation projects are defined as woodlands. It is also important to note that all lowland wooded areas, such as tamarack swamps, are defined as wetlands because the water table in such areas is located at, near, or above the land surface and because such areas are generally characterized by hydric soils which support hydrophytic trees and shrubs.

<sup>p</sup>A watershed is defined as an area 25 square miles or larger in size occupied by a surface drainage system discharging all surface-water runoff to a common outlet.

<sup>r</sup>Natural areas are defined as tracts of land or water so little modified by human activity, or which have sufficiently recovered from the effects of such activity, that they contain intact native plant and animal communities believed to be representative of the pre-European-settlement landscape.

<sup>s</sup>Critical species habitats are defined as those tracts of land or water which support federally listed or State-listed endangered, threatened, or rare plant or animal species.

<sup>t</sup>Onsite sewage disposal systems should not accommodate new suburban residential development, but should be provided to serve only those lands already committed to such development, namely platted but currently undeveloped lots of record or lots created by certified survey maps.

<sup>u</sup>Major industrial development is defined as an industrial area having a minimum of 3,500 industrial employees.

<sup>v</sup>Major retail development is defined as a retail area having a minimum of 2,000 retail employees.

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<sup>w</sup>Major office development is defined as an office area having a minimum of 3,500 office and service-related employees.

<sup>x</sup>Open space is defined as land or water areas which are generally undeveloped for urban residential commercial, or industrial uses and which are or can be considered relatively permanent in character. It includes areas devoted to park and recreational uses and to large land-consuming institutional uses, as well as areas devoted to agricultural use and to resource conservation, whether publicly or privately owned

<sup>y</sup>It was deemed impractical to establish spatial distribution standards for open space per se. Open spaces which are not included in the spatial distribution standards are forest preserves and arboretums, major river valleys, lakes, zoological and botanical gardens; stadia; woodland, wetland, and wildlife areas, scientific areas, and agricultural lands whose location must be related to, and determined by, the natural resource base.

Source: SEWRPC, 1998.

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## **APPENDIX G**

### **PUBLIC COMMENTS**

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## PUBLIC COMMENTS

The Bay-Lake Regional Planning Commission has prepared the following in response to comments received regarding the *Bay-Lake Regional Planning Commission 2030 Regional Comprehensive Plan* prior to its adoption by the full Commission on November 11, 2005. All comments were reviewed on a case-by-case basis and separated into two categories: those comments addressing information of a factual nature; and those comments expressing an opinion about aspects of the plan. All factual comments were reviewed, compared to the plan and information was changed accordingly where needed. All comments expressing opinions or ideas were reviewed and were considered for incorporation into the plan on a case-by-case basis.

The Commission's Technical Advisory Committee on Regional Land Use and Transportation Planning reviewed the Land Use, Transportation, and Resources elements of the plan and helped in the development of the Future Land Use element; the Housing Advisory Committee reviewed and commented on the Housing element; and the Economic Development Advisory Committee reviewed and commented on the Economic Development element of the regional comprehensive plan.

On April 15, 2005, the Commission distributed a survey to all local officials in the Bay-Lake Region requesting input on identifying local issues that need to be addressed in the regional comprehensive plan.

The Commission held two sets of open houses to obtain public input on the regional comprehensive plan. The first set of open houses was held to review background information and provide input on the development of the regional comprehensive plan. These open houses were held on near the mid-point of the planning process in January 21, 2004, at the Town of Scott (Brown County) Town Hall; January 22, 2004, at Wausaukee Schools; and January 26, 2004, at Lakeshore Technical College. Approximately 25 people attended these three open houses.

A second set of open houses was held prior to adoption of the plan by the Commission in the fall of 2005. These open houses were held on October 3, 2005, at the Village of Crivitz Village Hall; October 4, 2005, at the Lakeshore Technical College and October 5, 2005, at the Northeast Wisconsin Technical College-Luxemburg site, and gave individuals the opportunity to review and provide input on the draft regional comprehensive plan. Approximately 28 people attended these open houses.

A final comment opportunity was provided to the public at a Public Hearing on November 11, 2005 in Green Bay.

The Commission received written comments from the Brown County Planning Commission, Wisconsin Department of Natural Resources and the Wisconsin Department of Transportation

The plan was also available on-line for review and comment.



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## **APPENDIX H**

### **HOUSING PROGRAMS AND RESOURCES**

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### Specific Local Actions to Promote a Range of Housing Choices

Local governments affect the type and cost of housing available in their community through their regulations and policies. While most government regulations are implemented in order to serve specific community health, safety, and welfare needs they may have unintended adverse impacts on affordability. A review of local regulations may reveal areas where changes can be made to decrease the impact on affordability without compromising the protection of public health, safety, and welfare.

#### Zoning and subdivision regulations for smaller lot size

One technique for insuring a range of housing is to provide a range of densities and lot sizes. Traditional zoning ordinances may only allow a limited variety of lot sizes throughout a community for single-family residential development. Refer to Chapter 8: Land Use for more information.

Land costs can be 25 percent or more of the total cost for a home. One way to reduce land costs is to reduce lot size. First, lot prices are less expensive for smaller parcels. Second, land development costs are less because they may be spread over a larger number of units. Third, less infrastructure is needed because development on smaller lots requires fewer miles of roads, sidewalks, gutters, and shorter utility runs. In a competitive market, reduced land development costs are passed on to consumers.

Smaller lot sizes which seek to increase overall density within the community can also be linked to other community planning objectives. For example, higher density development can (1) preserve farmland, open space, and environmentally sensitive areas by reducing the overall amount of land needed for housing; (2) improve the viability of mass transit, provide opportunities for residents to live near their jobs, and thereby help reduce vehicle miles traveled; (3) use existing infrastructure more efficiently than less compact development thus reducing service costs and saving tax dollars.

Increasing density may meet with opposition from existing area residents. To address these concerns attention must be given to site design characteristics. For example, design elements such as the layout of streets, lots, mixing of lot and house sizes, variation in building setbacks and elevations, variation in exterior designs, and quality landscaping to provide privacy. The development must be attractive if it is to be accepted by the larger community.

*A word of caution: Concentrating the very lowest income households together in high densities has proven to have a negative effect upon the community, the residents, and the condition of the housing. A broader mix and range of housing choices throughout a community is, therefore, important.*

#### Standards in zoning and subdivision ordinances

Many communities have zoning and/or subdivision ordinances that contain building requirements that may unnecessarily increase the cost of housing thereby limiting the range of housing choices available in the community. These include requirements setting forth minimum floor area size. By removing minimum floor area sizes, communities can increase the range of housing opportunities. Refer to Chapter 8: Land Use for more information.

Many local subdivision regulations also include standards for how subdivisions are designed (e.g., road widths, sidewalks, tree plantings, setback, materials, land dedication, sidewalks or

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paths, location of the structure on the site, garages). Communities should review their subdivision ordinances to identify provisions that constrain housing. Old ordinances in particular may be in need of revision to meet current needs. Current neighborhood design emphasizes social, economic, and environmental aspects and endeavors to create neighborhoods that are more energy efficient and that have a greater range of housing options.

The following are some suggestions for reviewing subdivision regulations:

**Setbacks** - Large setbacks increase housing costs. They originated as a means of fire protection. Subdivision regulations should establish maximum front yard setbacks, either in addition to or instead of minimum setbacks. Side yard setbacks may also need to be decreased.

**Streets** - Narrower streets can reduce development costs.

**Lot layout** - Traditional platting design has been to site large, one-sized lots without regard to local climate, topography, or hydrology. Current practice emphasizes variety in lot size, shape, and use to increase housing options within the development.

**Lot design and vegetation** - Using breezes and topography and trying to capture winter sun and block summer sun can save residents money on fuel costs.

#### References/Additional Resources

*Removing Regulatory Barriers to Affordable Housing in Wisconsin: A Report by the Governor's Task Force on Regulatory Barriers to Affordable Housing* (1994).

*Affordable Housing Techniques: A Primer for Local Government Officials* by the Municipal Research and Services Center of Washington (1992).

*Changing Development Standards for Affordable Housing* by Welford Sanders and David Mosena (American Planning Association, PAS Report # 371, 1982).

*Planning for Affordable Housing* by the Vermont Department of Housing and Community Affairs (1990).

*A Citizen's Guide to Conserving Land and Creating Affordable Housing* by the Burlington Community Land Trust and the Vermont Land Trust (1990).

*Smart Growth: Creating Communities for People* by Allison Semandel and Mike Kinde (Citizens for a Better Environment, 1999).

*Model Code Provisions - Urban Streets & Subdivisions* Washington State Department of Community, Trade and Economic Development (1998).

#### *Innovative zoning and subdivision techniques*

Innovative development techniques, such as ***mixed-use development***, ***zero lot lines***, and ***cluster development***, can also encourage a broader range of housing choices.

***Mixed-use development*** allows different land uses, such as commercial and residential, and allows several different housing densities within a single development. Mixed-use developments can range in size from single buildings with apartments located over retail uses, to large-scale projects that include office and commercial space along with housing.

With mixed uses, commercial uses may make housing development economically feasible when it otherwise would not be. Higher density housing in commercial zones may be more politically

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acceptable than increasing densities in established single-family areas. Sensitive design and site planning is critical with mixed-use developments.

Mixed-use developments can be regulated in various ways. Some communities allow residential uses by-right in certain identified commercial zones. Other communities consider housing in commercial areas as conditional uses. Other communities allow mixed uses within a planned development district (also commonly referred to as planned unit development or PUD) or in special mixed-use districts.

**Zero-lot-line.** Conventional zoning requires that the home be set back from every lot line. However, for small lots the "yards" created on each side of the house are very small, and usually useless. Zero-lot-line ordinances place the house on one of the side-lot lines and/or on the rear or front-lot line. By placing a house on the lot lines, the amount of useable space on the other sides is doubled.

Some communities permit houses to be sited on a common lot line so that they resemble duplexes. Other communities require that they be sited on alternate lot lines, to give the appearance of housing in a conventional development. The advantage of zero lot line is that it offers the lower costs associated with high-density development while still maintaining the privacy and appearance of traditional single-family detached housing.

**Cluster development** allows housing units to be grouped within a residential development on lots smaller than those normally allowed. Clustering can help reduce housing costs because of decreased lot sizes and because of decreased development costs. But, cluster development may increase site planning, design, and engineering costs. It can create common open space and protect environmentally sensitive land. It is a technique has been used in developing urban areas and in rural areas. Cluster developments are regulated in a number of ways. Zoning ordinances can specify zones in which cluster developments are permitted and/or allowed by special permit. Subdivision regulations can outline development standards for clustering. Cluster development may also occur as part of a planned development district.

#### References/Additional Resources

Southeastern Wisconsin Regional Planning Commission, *Rural Cluster Development Guide* (Planning Guide No. 7, 1996).

East Central Wisconsin Regional Planning Commission, *Rural Development Guide for East Central Wisconsin Governments and Landowners* (1999).

Randall Arendt, *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks* (Island Press, 1996).

#### *Density bonuses*

A *density bonus* allows a developer to build more units in a project than would otherwise be permitted. Bonuses may be offered in exchange for preservation of open space or other things valued by the community. Density bonuses increase the value of the overall project and may therefore make certain projects economically feasible when they otherwise would not be. Density bonuses offer a positive alternative to mandatory programs that may be resisted by developers. Developers may decide for themselves whether participation will be cost effective.



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The community will need to decide the amount of increased density given in exchange for the desired development features. Because the market ultimately determines the success of density bonus programs, program designers will need a thorough understanding of the local and regional real estate market. For example, if current zoning already allows enough density to satisfy market demand, developers will have no interest in a density bonus. Density bonus programs may be implemented through zoning or subdivision ordinances, or both.

#### *Inclusionary zoning*

*Inclusionary zoning* requires that a certain number of units in a new development be set aside as affordable. Inclusionary programs may apply to both rental and owner-occupied units and may be mandatory or voluntary. Some communities have found that mandatory programs impose costs on developers that are too heavy and actually retard new construction of both affordable and market-rate units by making them economically unfeasible. If requirements are imposed, they should be modest enough to ensure developers an adequate return on their investment. Voluntary programs are preferable to mandatory programs if developers will use the incentives.

Voluntary programs provide incentives to allow developers to determine for themselves whether participation will be cost effective. Incentives may be density bonuses, waiving development fees, and financial assistance through federal, state, and local programs.

#### References/Additional Resources

*Affordable Housing Techniques: A Primer for Local Government Officials* by the Municipal Research and Services Center of Washington (1992).

*Planning for Affordable Housing* by the Vermont Department of Housing and Community Affairs (1990).

*Affordable Housing: Proactive and Reactive Planning Strategies* by S. Mark White (American Planning Association, PAS Report #441, 1992).

#### *Accessory or "granny" apartments*

An *accessory or "granny" apartment* is a living unit separate from the primary residential unit. It includes separate kitchen, sleeping, and bathroom facilities. Accessory apartments may be attached to the primary dwelling or detached. Attached accessory units typically involve some space in the existing home, such as an attic, garage, or basement family room. Detached units are sometimes also referred to as "accessory cottages." They may be guest or servant quarters, converted sheds, or garages.

Accessory apartments benefit elderly persons with limited resources living in large single-family homes with under-used space; households with an older relative who is still able to live substantially independently but requires some degree of assistance; and young adults who want to live independently while still being near to their parents.

Accessory units may already exist in the community without ordinances. Communities may want to adopt regulations to address the size of units, their concentration, their exterior appearance, and parking requirements. In some communities accessory units can only be used for a frail elderly person or caretaker and the kitchen must be removed when this permitted use ends.

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## References/Additional Resources

*Accessory Apartments: Using Surplus Space in Single-family Houses* by Patrick H. Hare, Susan Conner, Dwight Merriam (American Planning Association, PAS Report #365, 1981).

### *Streamlined permitting processes*

The land-use permitting process affects the cost of housing. Delays in the review of proposed housing developments can add to development costs. A more efficient land-use review process can also result in a more cost-effective way to administer land-use regulations.

The following are ideas for streamlining the land use permitting process. Because each of these reform measures is designed to accomplish different objectives, they are best used in combinations:

**Self-assessment** - Begin by taking stock of the permitting process. For example, how long does a typical development review take from start to finish? Are there places where the system bogs down? Are there ways to eliminate or consolidate some of the steps in the approval process?

**Centralized one-stop permit desk** - This saves applicants from needlessly backtracking to different offices and departments. Include interdepartmental review to help coordinate the numerous departments that may be involved in the development process.

**Checklists and flow charts** - Consider publishing guidebooks that outline the local permit process.

**Zoning and subdivision ordinances should describe the application process from start to finish** - Ordinance language should be simple and direct and the sections and standards that relate to one another should be cross-referenced. Doing so benefits applicants and those who administer and enforce the ordinance.

**Pre-application conferences** - Formal or informal meetings with community staff to present concept or sketch plans, address requirements, and save money by clarifying expectations before the expensive technical and engineering work begins.

**Concurrent review** - Concurrent review allows different steps in an application to proceed at the same time, (like a petition for a zoning change and review of a subdivision plat) thus reducing the overall time needed.

**Staff discretion on administrative matters** - Minor subdivision approvals and issues involving mostly technical and minor changes to submittals can be handled by planning staff. Plan commission time should not be wasted on such matters.

**Fast-tracking** - Development projects, that are desirable because of type or location, can be encouraged by exempting them from certain permit requirements.

**Encourage innovation** - Innovative techniques may be encouraged by an expedited permit process and by allowing them as conditional uses or as overlays to existing zoning districts.

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## References/Additional Resources

*Streamlining the Development Approval Process* by Debra Bassert (Land Development, Winter 1999, pp. 14-19).

*Streamlining Land Use Regulations: A Guidebook for Local Governments* by John Vranicar, Welford Sanders, and David Mosen (American Planning Association, 1982).

*Affordable Housing: Proactive and Reactive Planning Strategies* by S. Mark White (American Planning Association, PAS Report #441, 1992).

### *Impact fees*

*Impact fees* are fees imposed on development to mitigate the capital costs of new public facilities necessitated by the development. Public facilities include infrastructure for transportation, water, stormwater, parks, solid waste, and fire and police. However, impact fees cannot be used for school facilities. Under section 66.0617(7) of the Wisconsin Statutes, impact fee ordinances must provide for an exception from, or a reduction in the amount of, impact fees on developments that provide low-cost housing.

1. Specific local actions that can be taken promoting the availability of land for the development or redevelopment of low- and moderate-income housing

### *Community land trust*

Community land trusts protect housing by keeping land from the speculative market. They typically work by owning the land, and selling or leasing the buildings. Buyers or lessors agree to a limited appreciation should they decide to later sell or lease to another. The model works to preserve both existing residential units and new units built on the land. Also, it can be used to preserve affordable space for such things as community centers, health care facilities, small businesses, or day care centers. Community land trusts are similar to conservation land trusts which protect natural resources and open space.

Community land trusts provide the following benefits:

**Lower land costs** - Because land trusts remove land costs from the purchase price of a property, housing units can be sold or rented for less;

**Permanent affordability** - Removing land costs and limiting the amount of appreciation means that land trust housing will always be more affordable than market-rate housing for as long as the trust exists (which may be indefinitely);

**Retention of investment** - Grants, loans and other investments in a land trust are effectively recycled year after year through rents or sale prices, instead of requiring continuous financial support;

**Community stability** - Community land trust are non-profit organizations controlled by local personalities. They are committed to stabilizing local housing costs for the long term and preserving a community's social fabric;

**Speed** - Land trusts can more quickly purchase properties that become available than can government.

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The Madison Area Community Land Trust has been active since 1990 working with the City of Madison. For more information about the Madison Area Community Land Trust call (608) 255-6442.

#### References/Additional Resources

Institute for Community Economics, 57 School Street, Springfield, MA 01105-1331. 413-746-8660.

*A Citizen's Guide to Conserving Land and Creating Affordable Housing* by the Burlington Community Land Trust and the Vermont Land Trust (1990).

#### *Use of public or donated land for housing*

Development of housing on publicly owned land, or land donated for affordable housing, can substantially increase the financial feasibility of many housing projects. Communities can also seek to encourage the donation of land for affordable housing.

Lands acquired by the community through tax forfeiture may be appropriate for affordable housing. Local governments and nonprofits may also engage in a program to acquire land and hold it until the community is ready to develop housing. Funding to acquire land may be available from federal and state programs.

#### *Infrastructure improvements reserved for affordable housing*

Giving priority for sewer and water extension to projects that include housing units affordable to middle- and lower-income households can increase the likelihood that such housing will be built. The priority may be formalized in an ordinance or informally as a plan policy.

#### *Infill development*

*Infill* refers to development on vacant or under-used land within built-up urban areas. Infill can range from construction of single-family housing on one or two adjacent lots, to development of entire city blocks containing both residential and commercial uses.

Infill development has several advantages. Infill areas are already served by public facilities, including roads, sewer and water, police, fire, utilities, schools, and transit. Infill opportunities may sometimes be located on higher-cost urban land. If this is the case, then multi-family housing and/or mixed-use projects which have lower per-unit development costs may be most appropriate. Density bonuses or faster permitting may also add to an infill project's economic feasibility.

Communities may encourage infill development by preparing an inventory of potential infill sites and distributing it to developers; adopting flexible regulations which allow development of irregular or substandard infill lots; allowing mixed uses for infill developments, which may enhance the economic feasibility of projects; assisting in the consolidation of infill lots into larger, more easily developed sites; and acquiring abandoned property and demolishing structures beyond rehabilitation.

To minimize neighbor concerns infill units should be designed to fit in with the massing and density of the existing neighborhood as much as possible. For example if the neighborhood is all two story houses with steep pitched roofs the infill units would probably be more acceptable if they had two stories with steeply pitched roofs. The Wisconsin Housing and Economic

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Development Authority has had a special financing program to support the development of infill housing. They used this program in several cities where they successfully added new structures to existing neighborhoods using modular homes.

### *Adaptive reuse*

*Adaptive reuse* involves the conversion of surplus and/or outmoded buildings to economically viable new uses such as housing. Examples of outmoded buildings include old schools, hospitals, warehouses, and factories. It is one method for introducing housing into non-residential areas. Projects that involve historically or architecturally significant buildings may qualify for preservation tax credits.

Communities can facilitate adaptive reuse by developing flexible ordinances to facilitate adaptive reuse, by arranging for possible property transfers of publicly-owned buildings, and by providing assistance in obtaining sources of funding such as loans, grants, and rent subsidies.

### *Manufactured Housing*

Manufactured housing can be an important source of low and moderate cost housing in a community. Communities may want to encourage manufactured housing as a means of expanding the range of housing opportunities. Manufactured housing is less expensive to build than site-built housing because of lower production costs. The term *manufactured housing* describes housing that is constructed in a factory and delivered to the site as a finished product. While these homes are often referred to as "mobile homes", fewer than 5 percent of manufactured homes are moved once placed on a site.

Local communities often try to prohibit the siting of manufactured housing due to concerns about the effect on the tax base since manufactured housing is often taxed as personal property. However, a study by the University of Wisconsin-Extension suggests that manufactured home communities may actually have a positive impact on local taxes. There also may be concerns about the effect on adjacent property values and the visual quality of manufactured homes. A University of Michigan study, however, concluded that manufactured home parks have little or no impact on adjacent residential property values.

Communities may want to review their zoning ordinances to be sure that their regulations do not unduly restrict the use of manufactured homes. For additional information regarding manufactured housing and integrating them into single-family neighborhoods, contact the Wisconsin Manufactured Housing Association at (800) 236-4663.

The Foundation for rural housing located in Madison has developed a program with the Wisconsin Manufactured Housing Association and the Department of Corrections to obtain donated manufactured homes, rehabilitate them with prison labor and make them available for low income housing. For information contact the Foundation at (608) 238-3448.

### References/Additional Resources

*Manufactured Housing: Regulation, Design Innovations, and Development Options* by Welford Sanders (American Planning Association, PAS Report #478, 1998).

*Manufactured Housing Impacts on Adjacent Property Values* by Kate Warner and Jeff Scheuer (University of Michigan, 1993).

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*Municipal Revenue Impact of Tax Exempt Mobile Homes: A Methodology for Extension Agents* by Richard Stauber (University of Wisconsin-Extension, 1995).

*Product Report: 'Manufactured Housing'* available from the American Association of Retired Persons website at [www.aarp.org/manhov1.html](http://www.aarp.org/manhov1.html).

*Manufactured Housing and Standards: Fact Sheet for Purchasers of Manufactured Homes* (1999) available from the U.S. Department of Housing and Urban Development website at [hud.gov/fha/sfh/mhs/mhssht3.html](http://hud.gov/fha/sfh/mhs/mhssht3.html).

*Regulating Manufactured Housing* by Welford Sanders (American Planning Association, PAS Report # 398, 1986).

## 2. Specific local actions that can be taken to maintain or rehabilitate existing housing stock

### *Building code*

The State of Wisconsin has a uniform dwelling code which must be followed for the construction and inspection of all one- and two-family dwellings in the state. Local communities in the state have certain responsibilities for enforcement of the code. The uniform dwelling code is administered by the Wisconsin Department of Commerce and is found in the Administrative Rules for the Department of Commerce (COM 20 - COM 25).

### *Historic building code*

The standard state building codes may make rehabilitation of certain older homes prohibitively expensive or impractical. Communities in Wisconsin that have adopted historic preservation ordinances certified by the State Historical Society of Wisconsin can use the Wisconsin Historic Building Code for locally designated historic buildings. The Historic Building Code, administered by the Wisconsin Department of Commerce, permits a flexible and cost-effective approach to rehabilitating historic buildings. The code is found in the Administrative Rules for the Department of Commerce (COM 70). Information is also available from the Division of Historic Preservation at the State Historical Society of Wisconsin at (608) 264-6500.

### *Housing code*

All communities in Wisconsin can enact housing codes under their general authority to protect public health, safety, and welfare. Housing codes provide standards for how a dwelling unit is to be used and maintained over time.

It is important for communities to review housing code enforcement efforts to determine if they need to be increased or modified to make them more effective. Communities can intensify housing code enforcement programs to help maintain housing and upgrade deteriorating housing stock. In some communities, code enforcement capacity is so limited that routine inspections are scheduled only once in ten years. Communities could consider focusing enforcement efforts on select neighborhoods, publicizing code provisions, and complaint procedures.

### *Community paint/fix up events*

Local governments should target home maintenance/rehabilitation programs at the neighborhood level because the visibility can help create peer pressure to motivate others to fix up their homes. One strategy is to organize painting/fix-up events in partnership with local professional and civic groups to encourage volunteers to help with exterior maintenance of target residences.

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### *Rehabilitation loans and grants*

Code enforcement can be supplemented with financial and technical assistance to homeowners and tenants. Communities may establish loan or grant programs to assist owner occupants with repairs. Such programs are commonly funded by federal Community Development Block Grant dollars. The programs often focus on specific census tracts or neighborhoods where the concentration of deferred maintenance is highest. In addition to keeping housing units functioning, maintenance and rehabilitation are also worthwhile because they build pride among residents, stimulate others to repair their homes, encourage long-term investment and maintenance, and reduce potential neighborhood problems.

### *Occupant education and cooperation*

Many repairs are simple enough that most homeowners can help if given some guidance. Educational programs to train homeowners and renters can help ensure that the homes are rehabilitated and maintained in good condition. These educational programs help property owners better understand the responsibilities of home ownership.

MULTIFAMILY RESOURCES				
<b>WHEDA – Wisconsin Housing and Economic Development Authority</b>	<b>HOME – Federal HOME Investment Partnership Department of Commerce Division of Community Development Bureau of Housing</b>	<b>FHLBC – Federal Home Loan Bank of Chicago</b>	<b>Rural Housing – United States Department of Agriculture</b>	<b>HUD – Housing and Urban Development</b>

MULTIFAMILY RESOURCES								
WHEDA								
PROGRAM NAME	Tax Exempt Financing	Tax Credits Section 42 9%	Tax Credits Section 42 4%	Saving Our Stock (SOS)	Wisconsin Affordable Housing Alliance, LLC (WAHA LLC)	Accessibility Loan		WHEDA Foundation Grants
<b>Contact Information</b>	Multifamily Development Officer (MDO) 800-334-6873 www.wheda.com	800-334-6873 www.wheda.com	800-334-6873 www.wheda.com	MDO 800-334-6873 www.wheda.com	MDO 800-334-6873 www.wheda.com	MDO 800-334-6873 www.wheda.com	MDO 800-334-6873 www.wheda.com	Wanda Beard 800-334-6873 www.wheda.com
<b>Purpose</b>	Permanent/ Construction Financing Affordable housing set-a-side	Create affordable housing Affordable housing set-a-side	Create affordable housing Affordable housing set-a-side	Transfers to preserve housing. Address capital needs Restructure/ refinance current mortgages Repairs and/or improvements	Financing associated with 9% tax credit	Improve accessibility to meet ADA/504 requirements	Short term loans for multifamily construction	Competitive Grant Program for the creation or improvement of low income emergency, transitional or permanent housing units for special needs populations.



## MULTIFAMILY RESOURCES

### WHEDA

PROGRAM NAME	Tax Exempt Financing	Tax Credits Section 42 9%	Tax Credits Section 42 4%	Saving Our Stock (SOS)	Wisconsin Affordable Housing Alliance, LLC (WAHA LLC)	Accessibility Loan		WHEDA Foundation Grants
<b>Eligible Borrowers</b>	For profits Non profits Housing Authorities	For profits, non profits and PHA's	For profits, non profits and PHA's	For profits Non profits Housing Authorities	Developments with 9% credit	For Profits Non Profits Housing Authorities	For Profits Non Profits PHA's	Eligible applicants include non profit housing organizations or cooperatives; community development, redevelopment and housing authorities; or local units of government, including Native American Tribal Authorities.
<b>Eligible Developments</b>	Apartments Residential Care Apartment Complexes (RCAC) Community Based Residential Facilities (CBRF)	Rental housing RCAC's	Rental housing RACA's	Targeted to Section 8 but also applies to Section 515, 42, 236 and 202	Developments with 9% tax credits	Multifamily rental housing with accessibility deficiencies	Rental Housing Renovation Adaptive Reuse	Emergency shelter facilities, halfway houses, CBRF's, group homes, congregate living facilities, SRO's, independent apartments, sheltered or shared apartments.

## MULTIFAMILY RESOURCES

### WHEDA

PROGRAM NAME	Tax Exempt Financing	Tax Credits Section 42 9%	Tax Credits Section 42 4%	Saving Our Stock (SOS)	Wisconsin Affordable Housing Alliance, LLC (WAHA LLC)	Accessibility Loan		WHEDA Foundation Grants
<b>Loan Amount Min/Max</b>	No Limit	N/A	N/A	No limit	\$5,000,000 maximum	\$250,000 maximum	No Limit????	\$35,000 maximum award. No minimum award established, smaller funding requests are allowed.
<b>Rate</b>	Check <a href="http://www.wheda.com">www.wheda.com</a> Changes weekly	Rate published monthly by IRS	Rate published monthly by IRS	3% – 6.5%	Check <a href="http://www.wheda.com">www.wheda.com</a>	3% - 5%	185 Basis points adjusted monthly	N/A
<b>Amortization</b>	30 years maximum	N/A	N/A	25 - 30 years	30 years maximum	Up to 10 years or term of 1 <sup>st</sup> mortgage, whichever is less	36 month term	N/A
<b>Loan Position</b>	First mortgage	N/A	N/A	First, Second	First	First, Second	Primary	N/A
<b>Debt Coverage Ratio (DCR)</b>	1.10 minimum 1.15 typical	N/A	N/A	1.10 minimum on all debt	1.15	1.0 on all debt	N/A	N/A
<b>Loan Guarantee</b>	15% Letter of Credit Construction phase	Equity guarantees provided to investor	Equity guarantees provided to investor	Non recourse to principals	Non recourse to principals	Non recourse to principals	Personal and/or Corporate Guarantee or 100% performance bond	N/A
<b>Prepayment Provision</b>	Allowed after first bond call – penalties through year 15	N/A	N/A	Allowed with WHEDA approval	Allowed subject to yield maintenance charge and fee	Allowed	Allowed at any time	N/A

## MULTIFAMILY RESOURCES

### WHEDA

PROGRAM NAME	Tax Exempt Financing	Tax Credits Section 42 9%	Tax Credits Section 42 4%	Saving Our Stock (SOS)	Wisconsin Affordable Housing Alliance, LLC (WAHA LLC)	Accessibility Loan		WHEDA Foundation Grants
<b>Set-Aside Units</b>	20% @ 50% CMI 40% @ 60% CMI	20% @ 50% CMI 40% @ 60% CMI	20% @ 50% CMI 40% @ 60% CMI	Must meet funding source requirements	20 @ 50% CMI 40% @ 60% CMI	20% @ 50% CMI 40% @ 60% CMI	Minimum 15% @ 80% CMI or less	Emergency shelter or transitional housing projects serve households who will reside in the facility up to 24 months.  Permanent housing projects serve households who will reside in the facility for a period greater than 24 months.
<b>Income and Rent Requirements</b>	Rent & utilities cannot exceed 30% of CMI	County limits or MSA limits published <a href="http://www.wheda.com">www.wheda.com</a>	County limits or MSA limits published <a href="http://www.wheda.com">www.wheda.com</a>	Rent & utilities cannot exceed 30% of CMI	Rent & utilities cannot exceed 30% of CMI	Rent & utilities cannot exceed 30% of CMI	N/A	Income cannot exceed 80% CMI
<b>Environmental Reviews</b>	Phase I required	Typically required by lender, Investor	Typically required by lender, Investor	Environmental checklist	Phase I required	Environmental checklist	Phase I required	N/A
<b>Other Requirements</b>	Escrows for taxes and replacement reserves	LURA required 30 years	LURA required 30 years	Principal & interest collected monthly via ACH	Evidence of equity funding	Must certify that ADA and 504 requirements are met or have plan in place to meet.	Loan commitment for take out permanent financing must be provided.	Evidence of committed funding resources, if applicable.

## MULTIFAMILY RESOURCES

### WHEDA

PROGRAM NAME	Tax Exempt Financing	Tax Credits Section 42 9%	Tax Credits Section 42 4%	Saving Our Stock (SOS)	Wisconsin Affordable Housing Alliance, LLC (WAHA LLC)	Accessibility Loan		WHEDA Foundation Grants
<b>Conditions to Loan Funding</b>	50% of origination fee due at loan commitment	Equity funded in stages	Equity funded in stages	Appraisal required	Evidence of substantial completion	ADA Plan approved	Executed equity agreement required prior to closing	N/A
<b>Compliance</b>	WHEDA oversight	15 years mandatory	15 years mandatory	WHEDA oversight	WHEDA assignment	WHEDA oversight	Draw processing by WHEDA	N/A
<b>Origination Fee</b>	1.5% of mortgage permanent loans 2.5% construction / permanent	N/A	N/A	1.0% can be waived	1.5% permanent only 2.5% construction / permanent	N/A	1% of mortgage loan commitment	N/A
<b>Approval Process</b>	Available throughout the year; non-competitive process	Competitive process	Non-Competitive process	Funding throughout the year	Forward commitments for 30 days	Funding throughout the year	Funding throughout the year	Competitive process
<b>Application Fee</b>	\$250 24 units or less \$500 all others	\$1,000 24 units or less \$2,000 greater than 24 units	\$1,000 24 units or less \$2,000 greater than 24 units	\$250 24 units or less \$500 all others	\$250 24 units or less \$500 all others	\$500 or 1% of loan amount	\$500	N/A
<b>Lender Participation Requirements</b>	No	N/A	N/A	None but encouraged	No	None, but would be expected	Other than take out letter for permanent financing	N/A
<b>Case Studies</b>		<b>Example #3, Example #1</b>		<b>Example #1</b>		<b>Example #2</b>		
<b>Miscellaneous</b>	New construction, acquisition/rehab, adaptive reuse, refinance only for 501c(3) non profits	Borrower or ownership structure is a Limited Partnership (LP) or Limited Liability Company (LLC) to take full advantage of tax benefits.	Borrower or ownership structure is a Limited Partnership (LP) or Limited Liability Company (LLC) to take full advantage of tax benefits.	Loan term 25-30 years or co-terminus with existing primary debt whichever is less	Operating reserve required	Typically applies to developments placed in service prior to 1990		The annual Housing Grants competition is usually announced in mid-January. Application submissions deadline is usually in March. Grant awards are usually announced in May.

<b>MULTIFAMILY RESOURCES</b>			
<b>Federal HOME Investment Partnerships (HOME)</b>			
<b>Department Of Commerce</b>			
<b>Division of Community Development</b>			
<b>Bureau of Housing (BOH)</b>			
<b>PROGRAM NAME</b>	<b>Community Development Block Grant (CDBG)</b>	<b>HOME Program</b>	
		<b>Community Housing Development Organization (CHDO) Rental Housing Development</b>	<b>HOME Rental Rehabilitation Program (HRRP)</b>
<b>Contact Information</b>	Marty Evanson 608-267-3682 www.commerce.wi.gov/housing	Meryl Lesch 608-267-6912 www.commerce.wi.gov/housing	Sandi Capps 608-267-6908 www.commerce.wi.gov/housing
<b>Purpose</b>	Community redevelopment	Create affordable housing	Repair/Improvements to rental units
<b>Eligible Borrowers</b>	Communities (18 funded in 1 year) Less than 50,000 population	Community Housing Development Organizations (CHDO's) only. For profit and non profit may participate as co-owners	Local sponsors (see link) (Grantees)
<b>Eligible Developments</b>	Housing rehab, acquisition, relocation, and demolition	Rental housing	Owners of rental properties
<b>Loan Amount</b>	N/A – Grants only	Based on square foot formula	\$1,000 - \$40,000 per unit
<b>Rate</b>	N/A	3%	Flexible – determined by grantee
<b>Amortization</b>	N/A	27 years (30 year term)	Flexible – determined by grantee
<b>Loan Position</b>	N/A	Primary or subordinate	Determined by grantee
<b>Debt Coverage Ratio (DCR)</b>	N/A	1.0	N/A
<b>Loan Guarantee</b>	N/A	Nonrecourse	N/A
<b>Prepayment Provision</b>	N/A	None – funds are treated as grant to CHDO who can re-lend to project	N/A
<b>Set-Aside Units</b>	N/A	20% @ 50% CMI 40% @ 60% CMI	At least 90% of HOME assisted units must be occupied by households at or below 60% of area median income.
<b>Income and Rent Requirements</b>	N/A	Encouraged to target 30% CMI or less, Must use fair market rents (FMR)	Rents cannot exceed fair market rents (FMR)
<b>Environmental Reviews</b>	N/A	Yes, checklist	N/A
<b>Other Requirements</b>	Approximately \$7 million available annually	N/A	Owners apply at local level (see list) for grants/low interest loans. Each grantee sets own terms.
<b>Conditions to Loan Funding</b>	N/A	Program guide available through BOH	

<b>MULTIFAMILY RESOURCES</b>			
<b>Federal HOME Investment Partnerships (HOME)</b>			
<b>Department Of Commerce</b>			
<b>Division of Community Development</b>			
<b>Bureau of Housing (BOH)</b>			
<b>PROGRAM NAME</b>	<b>Community Development Block Grant (CDBG)</b>	<b>HOME Program</b>	
		<b>Community Housing Development Organization (CHDO) Rental Housing Development</b>	<b>HOME Rental Rehabilitation Program (HRRP)</b>
<b>Compliance</b>	Bureau of Housing oversight	Maximum 11 units can use HOME Funds	BOH Oversight – Waiver required > \$24,999
<b>Origination Fee</b>	N/A	N/A	N/A
<b>Approval Process</b>	Competitive process – one application cycle per year	Bureau of Housing approval	Bureau of Housing approval
<b>Application Fee</b>	N/A	N/A	N/A
<b>Lender Participation Requirements</b>	N/A	N/A	N/A
<b>Case Studies</b>	<b>Example #4</b>	<b>Example #3</b>	
<b>Miscellaneous</b>		HOME program rules require 15% of HOME funds be issued to CHODA's before other funds can be disbursed to other organizations in other programs.	Owners may receive funds up to 75% of cost of repairs to help defray the rehab expenses. Up to \$14,999 per unit requires a 5 year affordability period. \$15,000 - \$40,000 per unit requires a 10 year affordability period.

## MULTIFAMILY RESOURCES

### Federal Home Loan Bank of Chicago (FHLB)

PROGRAM NAME	Affordable Housing Program (AHP)	Community Investment Program (CIP)
<b>Contact Information</b>	312-565-5725 www.fhlbc.com	312-565-5725 www.fhlbc.com
<b>Purpose</b>	Develop affordable housing	Discounted advances, standby Letters of Credit to fund affordable housing
<b>Eligible Borrowers</b>	For profits, not for profits through member sponsor	Open to all members of FHLB
<b>Eligible Developments</b>	Purchase, construction, rehab of rental housing, land acquisition, hard costs, soft costs	Purchase construction , refinance, rehabilitation of rental housing
<b>Loan Amount</b>	Grant - \$750,000 maximum	No limit
<b>Rate</b>	N/A	FHLB cost of funds plus bank spread
<b>Amortization</b>	N/A	Bank negotiates – 10 years typical
<b>Loan Position</b>	N/A	Typically first
<b>Debt Coverage Ratio (DCR)</b>	N/A	1.15
<b>Loan Guarantee</b>	N/A	Recourse
<b>Prepayment Provision</b>	No prepayment unless fail to meet retention agreement	No Restrictions
<b>Set-Aside Units</b>	Minimum 20% of units @ 50% area median income	Minimum 51% of units must be occupied with incomes at or below 115% of area median income
<b>Income and Rent Requirements</b>	Minimum 20% of units @ 50% area median income	Minimum 51% of units must be occupied with incomes at or below 115% of area median income
<b>Environmental Reviews</b>	No	Follow member bank requirements.
<b>Other Requirements</b>	Outreach plan required (fair housing, affirmative marketing)	N/A
<b>Conditions to Loan Funding</b>	Retention agreement	Approval within 2 business days by FHLB to member bank
<b>Compliance</b>	15 year retention agreement required and recorded	FHLB monitors member bank
<b>Origination Fee</b>	N/A	Set by member bank
<b>Approval Process</b>	Competitive scoring process. Applications accepted April and October each year.	Member bank applies to FHLB for CIP advance
<b>Application Fee</b>	None	Set by member bank
<b>Lender Participation Requirements</b>	Member bank must work with sponsor (applicant) Member bank is part of Federal Home Loan Bank.	Permitted, not required
<b>Case Studies</b>	Example #1, Example #4	
<b>Miscellaneous</b>	Used to fill funding gaps, rental projects eligible every 90 months for funding. Must use funds in 12 months.	Member banks have 30 days to access funds on current loan or 90 days on proposed loans – if no advance – application expires

## MULTIFAMILY RESOURCES

### Rural Housing USDA

<b>PROGRAM NAME</b>	<b>Rural Rental Housing Direct Loans</b>	<b>Rural Rental Housing Guaranteed Loans</b>	<b>Section 514/516 Farm Labor Housing Loans/Grants</b>	<b>Section 533 Housing Preservation Grants</b>
<b>Contact Information</b>	Mr. Kelly Oehler 715-345-7677 www.rurdev.usda.gov/wi	Mr. Kelly Oehler 715-345-7677 www.rurdev.usda.gov/wi	Mr. Kelly Oehler 715-345-7677 www.rurdev.usda.gov/wi	Mr. Kelly Oehler 715-345-7677 www.rurdev.usda.gov/wi
<b>Purpose</b>	Rental Housing, New Construction	New Construction, Rehab, Rental	Rental Housing	Repair/Rehab homes, rental units
<b>Eligible Borrowers</b>	Non-Profits, For Profits, LLC's, L.P and Co-Ops	Non-Profits, For Profits, LLC's, L.P and Co-ops	Non-Profits, Co-ops, Public Bodies	Non-Profits, Public Agencies
<b>Eligible Developments</b>	New Construction, Existing Rehab	New, existing rentals	House Domestic Farm workers	SFH, MFH
<b>Loan Amount</b>	\$1 million per project maximum	No limit	\$3 million maximum	N/A Grant
<b>Rate</b>	1%	Negotiated	1%	N/A
<b>Amortization</b>	50 years, 30 year term	40 years	33 years	N/A
<b>Loan Position</b>	First or Second	First	First	N/A
<b>Debt Coverage Ratio (DCR)</b>	N/A – Budget Based	Lender	N/A	N/A
<b>Loan Guarantee</b>	N/A	90%	N/A	N/A
<b>Prepayment Provision</b>	20 year restriction	None	20 years plus USDA concourse	N/A
<b>Set-Aside Units</b>	100% low income	115% of median income	100% low-income Farm Workers only	100% Low Income
<b>Income and Rent Requirements</b>	50% CMI or less	30% of 115% Area Medium Income	50% CMI or less	Low & very low income
<b>Environmental Reviews</b>	Yes	Yes	Yes	N/A
<b>Other Requirements</b>	Must be rural area minimum	Rural areas up to 20,000	Urban or rural areas acceptable	No refinancing allowed. No new construction.
<b>Conditions to Loan Funding</b>	Minimum 2 units	Loan to value 90% maximum	N/A	N/A
<b>Compliance</b>	Inspections every 3 years	N/A	Inspections every 3 years	N/A
<b>Origination Fee</b>	N/A	Set by Lender	N/A	N/A
<b>Approval Process</b>	NOFA thru Federal Register yearly	NOFA thru Federal Register yearly	NOFA thru Federal Register yearly	NOFA – Notice of Funding Availability



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**MULTIFAMILY RESOURCES****Rural Housing USDA**

<b>PROGRAM NAME</b>	<b>Rural Rental Housing Direct Loans</b>	<b>Rural Rental Housing Guaranteed Loans</b>	<b>Section 514/516 Farm Labor Housing Loans/Grants</b>	<b>Section 533 Housing Preservation Grants</b>
<b>Application Fee</b>	None	None	None	N/A
<b>Lender Participation Requirements</b>	N/A	HUD, Fannie Mae, Freddie Mac, Approved Lenders	N/A	N/A
<b>Case Studies</b>				
<b>Miscellaneous</b>	Limited funding Yearly appropriation	Adequate funding Yearly appropriation	Loan/Grant used in combination  Usually combined with rental assistance	Grant Funds

## MULTIFAMILY RESOURCES

### Housing and Urban Development

PROGRAM NAME	Section 202 Supportive Housing for Elderly	Supportive Housing for Persons With Disabilities	Risk Share	Risk Share
<b>Contact Information</b>	David Lierman 414-297-3214	David Lierman 414-297-3214	David Lierman 414-297-3214	David Lierman 414-297-3214
<b>Purpose</b>	Elderly rental housing and supportive services	Rental housing for persons with disabilities	New Construction, Rehab	New Construction, Rehab
<b>Eligible Borrowers</b>	Private nonprofits	Private nonprofits	Insured program for HUD approved lenders	Insured program for HUD approved lenders
<b>Eligible Developments</b>	Senior housing – new construction	Housing disabled with support plan	Nonprofit sponsors and cooperatives 5 units or more	For profit sponsors 5 units or more
<b>Loan Amount</b>	Notice of Funding Availability (NOFA) yearly	Notice of Funding Availability (NOFA) yearly	100% of replacement costs	90% of replacement costs
<b>Rate</b>	Interest free	Interest free	Lender Sets Rate	Lender Sets Rate
<b>Amortization</b>	40 years if serving low income	40 year if serving low income-disabled	40 years	40 years
<b>Loan Position</b>	N/A	N/A	First Mortgage	First Mortgage
<b>Debt Coverage Ratio (DCR)</b>	N/A	N/A	Lender	Lender
<b>Loan Guarantee</b>	N/A	N/A	100%	90%
<b>Prepayment Provision</b>	None if serving low income for 40 year minimum	None if serving low income disabled for 40 year minimum	N/A	N/A
<b>Set-Aside Units</b>	100% very low income 50% CMI	100% disabled	None	None
<b>Income and Rent Requirements</b>	Very low income 50% CMI or less	Very low income 50% CMI or less	None	None
<b>Environmental Reviews</b>	Yes	Yes	Yes	Yes
<b>Other Requirements</b>	62 years old minimum	18 years old, have disability	David-Bacon	Davis-Bacon
<b>Conditions to Loan Funding</b>	Capital investment .5% of HUD Advance	Capital investment .5% of HUD Advance	HUD underwrites for insurance	HUD underwrites for insurance

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## MULTIFAMILY RESOURCES

### Housing and Urban Development

PROGRAM NAME	Section 202 Supportive Housing for Elderly	Supportive Housing for Persons With Disabilities	Risk Share	Risk Share
<b>Compliance</b>	Up to maximum of \$25,000 for national sponsors or \$10,000 for local sponsors	Up to a maximum of \$10,000	Per unit cost limitations	Per unit cost limitations
<b>Origination Fee</b>	None	None	Lender	Lender
<b>Approval Process</b>	Notice of Funding Availability (NOFA) yearly	Notice of Funding Availability (NOFA) yearly	Pre application Application	Pre application Application
<b>Application Fee</b>	N/A	N/A		
<b>Lender Participation Requirements</b>	N/A	N/A	Must be HUD approved lender	Must be HUD approved lender
<b>Case Studies</b>				
<b>Miscellaneous</b>	Rental assistance available 5 year contracts	Must have supportive services plan – Rental assistance available 5 year contracts	Davis – Bacon Act applies	Davis – Bacon Act applies

## SINGLE-FAMILY RESOURCES

### WISCONSIN HOME IMPROVEMENT RESOURCES

	FEDERAL HOME LOAN BANK CHICAGO	DEPARTMENT OF COMMERCE		REGIONAL PROGRAMS				WHEDA
PROGRAM NAME	Affordable Housing Program (AHP)	Bureau of Housing		USDA Rural Development	Wisconsin Community Action Agencies (WISCAP)	Neighborhood Housing Services Agencies (NHS) (NeighborWorks)	WI Veterans Affairs Office	HOME PLUS Or HOME Improvement Loan
	Competitive Agency Awards	Homeowner Accessibility and Rehab Program (HOME)	Community Development Grant (CDBG)					
<b>Contact Information</b>	See Press release at fhfbc.com for program listing <a href="http://commerce.wi.gov/housing/cd-boh-home.html">http://commerce.wi.gov/housing/cd-boh-home.html</a>	Betty Kalschauer 608-266-9185 bkalschauer@commerce.state.wi.us	Marie Kielley 608-267-2726 mkielley@commerce.state.wi.us	RD State office 715-345-7615 <a href="http://www.rurdev.usda.gov/wi">www.rurdev.usda.gov/wi</a>	20 WISCAP agencies throughout the state <a href="http://www.wiscap.org">www.wiscap.org</a>	5 agencies throughout the state  <a href="http://www.nw.org/network/utilities/NWOLookup.asp">www.nw.org/network/utilities/NWOLookup.asp</a>	WDVA office 800-947-8387 <a href="http://www.dva.state.wi.us">www.dva.state.wi.us</a>	800-334-6873 <a href="http://www.wheda.com">www.wheda.com</a>
<b>Funding Cycle</b>	Jan – July July - Dec	Jan- Dec	Jan - Dec	Varies by program	Varies by program	Varies by program	Ongoing as funds are available	Ongoing as funds are available
<b>Minimum Maximum \$ Available</b>	Depends on grantee application and use of funds	Depends on grantee application and use of funds	Depends on grantee application and use of funds.	Grant max is \$7,500  Loan max is \$20,000	Determined by agency	Determined by agency	Up to \$25,000	HOMEPLUS- Initial draw up to 5% of purchase price for down payment and/or closing costs only- balance of funds available for 2 yrs for rehab needs up to \$10,000.  HOME Improvement loans – up to \$17,500

## SINGLE-FAMILY RESOURCES

### WISCONSIN HOME IMPROVEMENT RESOURCES

	FEDERAL HOME LOAN BANK CHICAGO	DEPARTMENT OF COMMERCE		REGIONAL PROGRAMS				WHEDA
PROGRAM NAME	Affordable Housing Program (AHP)	Bureau of Housing		USDA Rural Development	Wisconsin Community Action Agencies (WISCAP)	Neighborhood Housing Services Agencies (NHS) (NeighborWorks)	WI Veterans Affairs Office	HOME PLUS Or HOME Improvement Loan
	Competitive Agency Awards	Homeowner Accessibility and Rehab Program (HOME)	Competitive Agency Awards					
<b>Eligible Uses</b>	Eligible rehab projects determined by grantee	Eligible rehab projects determined by grantee	Eligible rehab and accessibility needs	Repairs, installing essential features or to remove health and safety hazards	Agency determines rehab and or weatherization project eligibility	Determined by the agency and funding source	Additions, construction or repairs to the veteran's principal residence (including garage). May not be used for furniture or appliances	Additions, remodeling, repairs, or energy-related items which are permanent in nature. <b>Ineligible Improvements</b> Deck or patio Fences Fireplaces Landscaping Storage sheds, Pole buildings, Barns or other outbuildings Appliances
<b>Terms</b>	5 yr forgivable loan	Varies with Agency	Varies with Agency	Loan is 20 yrs @ 1%  Grant is 3 yrs	Varies with Agency	Varies by agency	5-15 yrs	HOMEPLUS - Monthly payments: 8% for 13 years  HOME Improvement Loan – up to 15 years

## SINGLE-FAMILY RESOURCES

### WISCONSIN HOME IMPROVEMENT RESOURCES

	FEDERAL HOME LOAN BANK CHICAGO	DEPARTMENT OF COMMERCE		REGIONAL PROGRAMS				WHEDA
PROGRAM NAME	Affordable Housing Program (AHP)	Bureau of Housing		USDA Rural Development	Wisconsin Community Action Agencies (WISCAP)	Neighborhood Housing Services Agencies (NHS) (NeighborWorks)	WI Veterans Affairs Office	HOME PLUS Or HOME Improvement Loan
	Competitive Agency Awards	Homeowner Accessibility and Rehab Program (HOME)	Community Development Grant (CDBG)					
<b>Location</b>	Wisconsin	See funded agencies	Awarded communities	Ashland Spooner Barron Menomonie Medford Rhineland Shawano Stevens Point Black River Falls Portage Viroqua Fond du Lac Madison Stevens Point- State office	Advocap CAP Services Central WI CAC Community Action Inc Coalition of SCEI Coulee CAP Indianhead CAA Lakeshore CAP NEWCAP North Central CAP Northwest CAP Racine/Kenosha CAA Social Development Commission Southwest CAP West Central CAP Western Dairyland EOC Coalition of WI Aging Groups Foundation for Rural Housing United Migrant Opportunity Services	Beloit nhsofbeloit.com Green Bay – nhsgb.org Milwaukee – nhsmilwaukee.org SE WI – Kenosha/Racine Richland Center NeighborWorks (NHS) presentation (Yellow area of requests, red area served)	County Veterans Service Office	Wisconsin

## SINGLE-FAMILY RESOURCES

### WISCONSIN HOME IMPROVEMENT RESOURCES

	<b>FEDERAL HOME LOAN BANK CHICAGO</b>	<b>DEPARTMENT OF COMMERCE</b>		<b>REGIONAL PROGRAMS</b>				<b>WHEDA</b>
PROGRAM NAME	<b>Affordable Housing Program (AHP)</b>	<b>Bureau of Housing</b>		<b>USDA Rural Development</b>	<b>Wisconsin Community Action Agencies (WISCAP)</b>	<b>Neighborhood Housing Services Agencies (NHS) (NeighborWorks)</b>	<b>WI Veterans Affairs Office</b>	<b>HOME PLUS Or HOME Improvement Loan</b>
	<b>Competitive Agency Awards</b>	<b>Homeowner Accessibility and Rehab Program (HOME)</b>	<b>Community Development Grant (CDBG)</b>					
<b>Eligible Properties</b>	1-2 units owner occupied	1-2 units owner occupied	1-2 units owner occupied		Varies with Agency	Varies with agency	Veteran's owner occupied residence	1-4 units; property must be over 10 yrs old
<b>Income Limits</b>	80% CMI	80% CMI	80% CMI	53% CMI	80% CMI	80% CMI	No Maximum limits	WHEDA Limits
<b>Process Time</b>	Varies	Varies	Varies	Contact office	Contact Agency	Contact Agency	Varies	Contact Lender
<b>Docs Required</b>	Contact Agency	Contact Agency	Contact Grantee	Contact office	Contact Agency	Contact Grantee	Contact Service office	Contact Lender
<b>Predatory Practices Limitations</b>	Contact Agency	Contact Agency	Contact Grantee	Contact office	Contact Agency	Contact Grantee	Contact Service Office	N/A
<b>Special Provisions for Person with Disability</b>	Movin' Out has been awarded funds annually to be used for health and safety rehab or accessibility needs, if a person in the household has a permanent disability and the household income is under 80% CMI in a limited number of counties in WI <a href="http://www.movin-out.org">www.movin-out.org</a> Movin' Out Inc. ph: 608-251-4446 fax: 608-819-0623	Contact Agency	Contact Grantee		Contact Agency	Contact Grantee	Contact Service office	N/A

## SINGLE-FAMILY RESOURCES

### WISCONSIN DOWN PAYMENT AND CLOSING COST RESOURCES

	FEDERAL HOME LOAN BANK of CHICAGO		DEPARTMENT OF COMMERCE		WHEDA
PROGRAM NAME	Affordable Housing Program (AHP)		Bureau of Housing		HOME PLUS
	Set-Aside Down Payment Plus Program (DPP)	Competitive Agency Awards	Housing Cost Reduction Initiative (HCRI) / HOME FUNDS now known as Housing Organization Direct Assistance Program (HODAP)	Community Development Grant (CDBG)	
<b>Contact Information</b>	Lisa Kratz or Jan Roth at WPHD 888-318-4446 www.wphd.org	See Press release at fhlbc.com for program listing http://commerce.wi.gov/housing/cd-boh-home.html	Betty Kalscheur 608-267-6904 bkalscheur@commerce.state.wi.us	Marie Kielley 608-267-2726 mkielley@commerce.state.wi.us	800-334-6873 <a href="http://www.wheda.com">www.wheda.com</a>
<b>Funding Cycle</b>	Jan - Dec	Jan – July July - Dec	Jan - Dec	Jan - Dec	Ongoing as funds are available
<b>Minimum Maximum \$ Available</b>	\$5,000	Depends on grantee application and use of funds	Depends on grantee application and use of funds	Depends on grantee application and use of funds.	Initial draw up to 5% of purchase price for down payment and/or closing costs only
<b>Eligible Uses</b>	Down payment and closing costs	Down payment and closing costs	Down payment and closing costs, rental assistance	Down payment and closing costs	Down payment and closing costs
<b>Terms</b>	5 yr forgivable loan	5 yr forgivable loan	Varies with Agency	Varies with Agency	Monthly payments: 8% for 13 years
<b>Location</b>	Wisconsin	Wisconsin	Awarded communities	Awarded communities	Wisconsin
<b>Eligible Properties</b>	1-2 units owner occupied	1-2 units owner occupied	SF owner occupied, ½ duplex or condo	1-2 units owner occupied	1-4 units; property must be over 10 yrs old
<b>Maximum Purchase Price</b>	None	Income based	HUD Limits	None	Varies by County See www.wheda.com
<b>Income Limits</b>	80% CMI	80% CMI	80% CMI	80% CMI	WHEDA Limits See www.wheda.com
<b>Ratios</b>	N/A	Varies	Varies	Varies	N/A
<b>First Time Homebuyer</b>	No	Yes	Yes	Yes	Yes
<b>Asset Limits</b>	N/A	N/A	Varies	Varies	N/A
<b>Process Time</b>	5 business days	Varies	Varies	Varies	
<b>Docs Required</b>	Verification of income, housing counseling	Contact Agency	Contact Grantee	Contact Grantee	Contact loan officer for WHEDA first mortgage



## SINGLE-FAMILY RESOURCES

### WISCONSIN DOWN PAYMENT AND CLOSING COST RESOURCES

	FEDERAL HOME LOAN BANK of CHICAGO		DEPARTMENT OF COMMERCE		WHEDA
PROGRAM NAME	Affordable Housing Program (AHP)		Bureau of Housing		HOME PLUS
	Set-Aside Down Payment Plus Program (DPP)	Competitive Agency Awards	Housing Cost Reduction Initiative (HCRI) / HOME FUNDS now known as Housing Organization Direct Assistance Program (HODAP)	Community Development Grant (CDBG)	
<b>Predatory Practices Limitations</b>	N/A	ContactAgency	ContactGrantee	Contact Grantee	N/A
<b>Special Provisions for Person with Disability</b>	N/A	Movin' Out Inc.has been awarded \$495,000 to be used for down payment or closing costs, if a person in the household has a permanent disability and the household income is under 80% CMI in all counties in WI <a href="http://www.movin-out.org">www.movin-out.org</a> Movin' Out Inc. ph: 608-251-4446 fax: 608-819-0623	Movin' Out, Inc has been awarded HCRI funds to be used in counties where there are no existing HCRI funds for Down Payment Assistance. <a href="http://www.movin-out.org">www.movin-out.org</a> Movin' Out Inc. ph: 608-251-4446 fax: 608-819-0623	N/A	N/A
<b>Lender Participation Requirements</b>	Must be a member of Federal Home Loan Bank of Chicago and enrolled with WPHD in DPP program	N/A	N/A	N/A	Available only when lender originates HOME loan.

## SINGLE-FAMILY RESOURCES

### WISCONSIN DOWN PAYMENT AND CLOSING COST RESOURCES

Regional Programs				
PROGRAM NAME	Foundations	Wisconsin Community Action Agencies (WISCAP)	Neighborhood Housing Services Agencies (NHS) (NeighborWorks)	Catholic Charities Of Wisconsin
<b>Contact Information</b>	Kristine Wiese 608-240-2800 www.rascw.org; go to Housing Foundation page	20 WISCAP agencies throughout the state www.wiscap.org	5 Agencies throughout the state www.nw.org/network/utilites/NWOLookup.asp	5 Agencies in Wisconsin www.catholiccharitiesinfo.org/states/WI
<b>Funding Cycle</b>	Jan - Dec	Varies by program	Varies by program	Varies by program
<b>Min/Max \$ Available</b>	3% of purchase price	Determined by Agency	Determined by Agency	Determined by Agency
<b>Eligible Uses</b>	Down payment and closing costs	Down Payment and closing costs	Down Payment and closing costs	Down Payment and closing costs
<b>Terms</b>	Deferred loan payment at prime rate for 15 yrs, or until property is sold, refinance or vacated as permanent residence	Varies with Agency	Varies with Agency	Varies with Agency

## SINGLE-FAMILY RESOURCES

### WISCONSIN DOWN PAYMENT AND CLOSING COST RESOURCES

Regional Programs				
PROGRAM NAME	Foundations	Wisconsin Community Action Agencies (WISCAP)	Neighborhood Housing Services Agencies (NHS) (NeighborWorks)	Catholic Charities Of Wisconsin
<b>Location</b>	Counties of: Dane Sauk Columbia Dodge Jefferson Rock Green Iowa	Advocap CAP Services Central WI CAC Community Action Coalition of SCWI Coulee CAP Indianhead CAA Lakeshore CAP NEWCAP North Central CAP Northwest CAP Racine/Kenosha CAA Social Development Commission Southwest CAP West Central CAP Western Dairyland EOC Coalition of WI Aging Groups Foundation for Rural Housing United Migrant Opportunity Services	Beloit – nhsofbeloit.com Green Bay – nhsgb.org Milwaukee- nhsmilwaukee.org SE WI - Kenosha/Racine Richland Center  NeighborWorks (NHS) presentation (Yellow area of requests, red area served)	<a href="mailto:info@catholiccharitieslax.org">LaCrosse - info@catholiccharitieslax.org</a> Eau Claire Stevens Point – <a href="mailto:stpoint@catholiccharitieslax.org">stpoint@catholiccharitieslax.org</a> Wausua – <a href="mailto:Wausau@catholiccharitieslax.org">Wausau@catholiccharitieslax.org</a> Superior- Ccbsuperior.org Green Bay
<b>Eligible Properties</b>	1-4 units	Varies with Agency	Varies with Agency	Varies with Agency
<b>Max.Purchase Price</b>	Income based	Varies	Varies	Varies
<b>Income Limits</b>	80% CMI	80% CMI	80% CMI	80% CMI
<b>Ratios</b>	N/A	Varies	Varies	Varies
<b>First Time Homebuyer</b>	No	Varies	Varies	Varies
<b>Asset Limits</b>	N/A	Varies	Varies	Varies

<b>SINGLE-FAMILY RESOURCES</b>				
<b>WISCONSIN DOWN PAYMENT AND CLOSING COST RESOURCES</b>				
<b>Regional Programs</b>				
<b>PROGRAM NAME</b>	<b>Foundations</b>	<b>Wisconsin Community Action Agencies (WISCAP)</b>	<b>Neighborhood Housing Services Agencies (NHS) (NeighborWorks)</b>	<b>Catholic Charities Of Wisconsin</b>
<b>Process Time</b>	10 business days	Contact Agency		
<b>Docs Required</b>	Lender application, credit report, good faith estimate, cover letter of request with details outlined.	Contact Agency	Contact Grantee	Contact Grantee
<b>Predatory Practices Limitations</b>	None currently	Contact Agency	Contact Grantee	Contact Grantee
<b>Special Provisions for Person with Disability</b>		Contact Agency	Contact Grantee	Contact Grantee
<b>Lender Participation Requirements</b>	Any lender	Contact Agency	Contact Grantee	Contact Grantee



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## **APPENDIX I**

### **ECONOMIC DEVELOPMENT PROGRAMS AND RESOURCES**

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## Federal

### US Department of Commerce, Economic Development Administration (EDA)

EDA was established to work with states and regional planning commissions (economic development districts) to generate new jobs, retain existing jobs, and stimulate industrial and commercial growth in economically distressed areas and regions of the United States. The purpose of its program investments is to provide economically distressed communities with a source of funding for planning, infrastructure development, and business financing that will induce private investment in the types of business activities that contribute to long-term economic stability and growth. EDA's investments are strategically targeted to increase local competitiveness and strengthen the local and regional economic base. There are a number of investment programs offered by EDA.

**The Public Works Program** to empower distressed communities to revitalize, expand, and upgrade their physical infrastructure to attract new industry, encourage business expansion, diversify local economies, and generate or retain long-term, private sector jobs and investment. **Economic Adjustment Assistance Program** assists state and local interests to design and implement strategies to adjust or bring about change to an economy. The program focuses on areas that have experienced or are under threat of serious structural damage to the underlying economic base. **The Research and Technical Assistance Program** supports research of leading edge, world class economic development practices as well as funds information dissemination efforts. **The Technical Assistance Program** helps fill the knowledge and information gaps that may prevent leaders in the public and nonprofit sectors in distressed areas from making optimal decisions on local economic development issues. **EDA's Partnership Planning Programs** help support local organizations (Economic Development Districts, Indian Tribes, and other eligible areas) with their long-term planning efforts and their outreach to the economic development community on EDA's programs and policies. (Source:www.eda.gov)

### US Department of Housing and Urban Development

CDBG Entitlement Communities Grants **are** annual grants given on a formula basis to entitled cities, including the City of Green Bay, and counties to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons. Entitlement communities develop their own programs and funding priorities. Focus is on serving low-and moderate-income persons, and prevention and elimination of blight. Eligible activities include relocation and demolition; construction of public facilities; and assistance to profit-motivated businesses to carryout economic development and job creation/retention activities. To receive its annual CDBG entitlement grant, a grantee must develop and submit to HUD its Consolidated Plan.

Economic Development Initiative (**EDI**) provides grants to local governments to enhance both the security of loans guaranteed through Section 108 Loan Program and the feasibility of the economic development and revitalization projects they finance. EDI has been the catalyst in the expanded use of loans through the Section 108 Program by decreasing the level of risk to their CDBG funds or by paying for some of the project costs. There are congressionally earmarked and competitive BDI grants. Competitive EDI grants can be only be used in projects also assisted by the Section 108 Loan Program. Eligible activities include property acquisition, rehabilitation of public owned property, and economic development activities.



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Brownfields Economic Development Initiative (**BEDI**) is a key competitive grant program HUD administers to stimulate and promote economic and community development. BEDI is designed to assist cities with the redevelopment of abandoned, idled, and underused industrial and commercial facilities where expansion and redevelopment is burdened by real or potential environmental contamination. The purpose of the BEDI program is to spur the return of brownfields to productive economic use through financial assistance to public entities in the redevelopment of brownfields, and enhance the security or improve the viability of a project financed with Section 108- guaranteed loan authority. Therefore, BEDI grants must be used in conjunction with a new Section 108-guaranteed loan commitment.

Section 108 Loan Guarantee Program loan guarantee provision of the CDBG program. It provides communities with a source of financing for economic development, housing rehabilitation, public facilities, and large-scale physical development projects. Eligible applicants include entitlement communities. Activities eligible for Section 8 financing include economic development activities eligible under CDBG, acquisition of real property, rehabilitation of public property, installation of public facilities. As an entitlement community, Green Bay may apply for up to five times the latest approved CDBG entitlement amount minus any outstanding Section 108 commitments and/or principal balances of Section 108. The principal security for the loan guarantee is a pledge by the applicant public entity of its current and future CDBG funds. The maximum repayment period for a Section 8 loan is twenty years. (Source: [www.hud.gov](http://www.hud.gov))

#### USDA Rural Development

The office offers a variety of funding options for many types of business ventures to include agriculture, manufacturing, processing, services, commercial, and retail. Rural Development is also instrumental in providing much needed financial resources to communities for infrastructure improvements and expansions primarily for waste water and water treatment facilities. They have direct and guaranteed loans for businesses and communities in addition to a number of grants.

The **Rural Business Opportunity Grant Program** provides technical assistance, training, and planning activities that improve economic conditions in rural areas of 50,000 people or less. A maximum of \$1.5 million per grant is authorized. **Rural Utilities Service (RUS) Grant Program** is designed to promote economic development and/or job creation projects including, but not limited to: project feasibility studies, start-up costs, incubator projects, and other reasonable expenses. Grants can be provided to rural communities through RUS borrowers to be used for revolving loan funds for community facilities and infrastructure, and for assistance in conjunction with rural economic development loans.

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**Rural Business Enterprise Grants Program (RBEG)** to public bodies, private nonprofit corporations, and federally-recognized Indian Tribal groups to finance and facilitate development of small and emerging private business enterprises located in areas outside the boundary of a City, or unincorporated areas of 50,000 or more and its immediately adjacent urbanized or urbanizing area. The small or emerging business to be assisted must have less than 50 new employees, less than \$1 million in gross annual revenues, have or will utilize technological innovations and commercialization of new products and/or processes to be eligible for assistance. Funds can be used for a variety of things including, but not limited to: construction of buildings and plants, equipment, access streets and roads, parking areas, utility and service extensions, and a variety of other costs.

**The Intermediary Relending Program** money is lent to private non-profit organizations, any state or local government, an Indian Tribe, or a cooperative that is relented to by the intermediary to the ultimate recipients. The ultimate recipient must not be able to receive financing at reasonable rates or terms. (Source: [www.rurdev.usda.gov](http://www.rurdev.usda.gov))

#### US Department of Commerce National Oceanic and Atmospheric Administration (NOAA)

Coastal Zone Management Program (**CZMP**) assists local and state governments in managing and revitalizing coastal areas for mixed-use development. The competing goals of commercial and industrial development, tourism, environmental protection, transportation and recreation are discussed in coastal management plans. The CZMP seeks to maintain the economic welfare of coastal communities and ecosystems through intergovernmental cooperation. The CZMP supports states through financial contributions, technical advice, participation in state and local forums, and through mediation. Wisconsin CZMP programs currently protect wetland ecosystems, reduce non-point pollution sources, reduce erosion and assist in meeting state and regional coastal goals. (Source: [www.coastalmanagement.noaa.gov/czm](http://www.coastalmanagement.noaa.gov/czm))

#### US Environmental Protection Agency

Brownfields Assessment and Cleanup Cooperative Agreements objectives are to provide funding to inventory, characterize, assess, and conduct planning and community involvement related to brownfield sites; to capitalize a RLF fund; and to carry out cleanup activities at brownfield sites that are owned by the grant recipient. Eligibility for the assessment, RLF, and cleanup grants includes a general purpose unit of local government. This is a competitive grant program. There are separate guidelines for each of the three areas. Grant amounts are based on size and type of contamination, ranging from \$200,000 to \$350,000. (Source: [www.epa.gov](http://www.epa.gov))

#### US Department of the Interior - National Park Service

Land and Water Conservation Fund (**LWCF**) is a visionary and bipartisan program, established by Congress in 1964 to create parks and open spaces, protect wilderness, wetlands, and refuges, preserve wildlife habitat, and enhance recreational opportunities. States receive individual allocations of LWCF grant funds based on a national formula. Then states initiate a statewide competition for the amount available to award via matching grants. (Source: [www.nps.gov](http://www.nps.gov))

#### Small Business Administration (SBA)

The **SBA** provides financial, business counseling and training, and business advocacy to foster the development and success of small businesses. Financial assistance comes in the form of loans and grant programs including the 7(a) Loan Guarantee, Prequalification Loan, 7(m) Micro Loan,

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CDC/504 Loan, CAPLines Program, and 8(a) Business Development Program. (Source: [www.sba.gov](http://www.sba.gov))

## State

### Wisconsin Department of Commerce

The federally funded **Community Development Block Grant (CDBG)** program can be used for housing, economic development and public facility improvements. The program is designed to assist economically distressed smaller communities with improvements to such things as utilities and streets, fire stations, community centers, and housing rehabilitation, as well as many other improvements needed by a community. The **CDBG-Economic Development (ED)** program assists large businesses that will invest substantial private funds and create approximately 100 jobs as they expand or relocate in Wisconsin. Funds are awarded to a community, which then loans the funds to a business. The **Major Economic Development (MED) Program** is designed to assist businesses that will invest private funds and create jobs as they expand in or relocate to Wisconsin. The **Rural Economic Development (RED) Program** provides working capital or fixed asset financing for businesses with fewer than 50 employees.

Specifically, the **CDBG-Public Facilities for Economic Development (PFED)** program is designed to assist communities with expanding or upgrading their infrastructure to accommodate businesses that have made a firm commitment to create jobs and invest in the community. The **CDBG-Public Facilities (PF)** component helps eligible local governments upgrade community facilities, infrastructure, and utilities for the benefit of low- to moderate-income residents. The **Main Street Program** offers a variety of resources to include façade grants and technical and financial assistance to stimulate the revitalization of their respective areas. The **Brownfields Initiative** provides grants to persons, businesses, local development organizations, and municipalities for environmental remediation activities for brownfield sites where the owner is unknown, cannot be located or cannot meet the cleanup costs. The **Community-Based Economic Development Program (CBED)** is designed to promote local business development in economically-distressed areas. The program awards grants to community-based organizations for development and business assistance projects and to municipalities for economic development planning. The program helps community-based organizations plan, build, and create business and technology-based incubators, and can also capitalize an incubator tenant revolving-loan program. The **CDBG-Blight Elimination and Brownfield Redevelopment Program (BEBR)** can help small communities obtain money for environmental assessments and to remediate brownfields. The **CDBG-Emergency Grant Program** can help small communities repair or replace infrastructure that has suffered damages as a result of catastrophic events. Call 608-266-8934.

Community Development Zone (CDZ) designation is a tax credit program for businesses planning to expand, relocate or start in the designated Community Development Zones (CDZ). *CDZs in the BLRPC district include the Cities of Green Bay, Sturgeon Bay, Two Rivers, and Manitowish; and the Counties of Florence, Marinette, and Oconto.* These tax credits are to be applied against a company's Wisconsin income tax liability. These credits are based on the number of new jobs that a company creates, and the wage level and benefit package that are offered to the employees. The Enterprise Development Zone (EDZ) program provides tax incentives to new or expanding businesses whose projects will affect distressed areas. Based on the economic impact of a proposed business project, the Department of Commerce will be able

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to designate an enterprise development zone. A zone is “site specific” and applies to only one business.

To compliment the bricks and mortar component of Commerce, there is funding specifically earmarked for employee training. Eligible businesses looking to train a significant number of its current or incoming workforce can apply for and receive a direct grant from Commerce for **Customized Labor Training (CLT)**. Companies with a few employees seeking training are eligible for the **Business Employees Skills Training (BEST)** program. The focus of both programs is on the training or retraining of employees to incorporate new technologies or manufacturing processes.

Commerce provides financial resources to encourage the development of small businesses. Potential entrepreneurs can access an **Early Planning Grant (EPG)** of up to \$3,000 to obtain professional services necessary to evaluate the feasibility of a proposed start-up or expansion or develop a business plan. The **Entrepreneurial Training Grant Program (ETG)** is a comprehensive course designed to provide hands-on assistance in the writing of a business plan. The technical assistance can be provided by the *Small Business Development Center (SBDC) at UW-Green Bay* or the regional *Service Core of Retired Executives (SCORE)* office.

Other programs offered by Commerce include: the **Employee Ownership Assistance Loan (EOP) Program** can help a group of employees purchase a business by providing individual awards up to \$15,000 for feasibility studies or professional assistance. The business under consideration must have expressed its intent to downsize or close. **Industrial Revenue Bonds (IRB)** are municipal bonds whose proceeds are loaned to private persons or to businesses to finance capital investment projects. All Wisconsin municipalities, cities, villages, and town are authorized to issue IRBs. The **Technology Development Fund (TDF)** program helps Wisconsin businesses research and develop technological innovations that have the potential to provide significant economic benefit to the state. The **Technology Development Loan (TDL)** program helps Wisconsin businesses develop technological innovations that have the potential to provide significant economic benefit to the state. This program is designed to help businesses commercialize new technology.

The **Minority Business Development (MBD) Loan Program** provides low interest loans to assist minority-owned companies with land and equipment purchase, working capital, and construction. The **Wisconsin Trade Project Program** can help small export-ready firms participate in international trade shows. The **Milk Volume Production (MVP) Loan Program** enables farmers to increase milk production by offering loan interest loans to purchase additional dairy cattle. The **Dairy 20/20 Early Planning Grant Program** covers third party services to assist the applicant with start-up, modernization, or expansion of a dairy operation. (Source: [www.commerce.state.wi.us](http://www.commerce.state.wi.us))

#### Wisconsin Department of Transportation

The **Transportation Economic Assistance (TEA)** grants provide up 50% of costs to governing bodies, private businesses, and consortiums for road, rail, harbor, and airport projects that help attract employers to Wisconsin, or encourage business and industry to remain and expand in the state. Grants up to \$1 million are available for transportation improvements that are essential for an economic development project. The amount of DoT provided funding is dependent on the number of jobs being created or retained. The 50 percent local match portion can come from a combination of local, federal, state, or in-kind services.

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In 1979, the **Harbor Assistance Program (HAP)** was created to assist harbor communities along the Great Lakes and Mississippi River in maintaining and improving waterborne commerce. Port projects typically include dock reconstruction, mooring structure replacement, dredging, and construction of facilities to hold dredged materials. The **Freight Rail Infrastructure Improvement program (FRIP)** and **Freight Rail Preservation program (FRPP)** were created to maintain and improve rail services throughout Wisconsin.

**The State Infrastructure Bank (SIB) program**, similar to a private bank, offers a range of loans and credit options to help finance eligible surface transportation projects. The money can be used in conjunction with other programs. SIBs offer Wisconsin the ability to undertake transportation projects that would otherwise go unfunded or experience substantial delays. Communities can borrow the money to provide needed transportation infrastructure improvements to help preserve, promote, and encourage economic development and/or promote transportation efficiency, safety, or mobility. The Wisconsin SIB program is a revolving loan program providing capital for transportation projects from loan repayments and interest earned from money remaining in the bank. Eligible projects include constructing or widening a road linking an intermodal facility and providing better access to commercial and industrial sites. WisDOT charges 2 percent interest on the loan principal, with projects amortized up to 25 years. Eligible applicants are local units of government, Amtrak Railroad, private non-profit organizations, and Transit Commissions. (Source: [www.dot.wisconsin.gov](http://www.dot.wisconsin.gov))

#### Wisconsin Department of Tourism

Funding is available for local communities and regions to design their own marketing effort. The most popular and utilized program is the **Joint Marketing Grant (JEM)**. The grants are to assist in paying for the costs associated with developing a stronger advertising and public relations campaign to promote tourism. (Source: <http://agency.travelwisconsin.com>)

#### Wisconsin Department of Agriculture, Trade, and Consumer Protection

Financial resources are provided to help grow and diversify the state's agriculture industry. The **Agricultural Development and Diversification (ADD)** grant is awarded to projects that may create new opportunities within agriculture through new value-added products, new market research, new production or marketing techniques, or alternative crops or enterprises. Maximum grants are \$50,000. Eligible applicants are individuals, associations, agri-businesses, and industry groups. (Source: <http://datcp.state.wi.us>)

#### Wisconsin Department of Administration

Wisconsin Coastal Management Program was established in 1978 under the Federal Coastal Zone Management Act. Coastal management is defined as achieving a balance between natural resource preservation and economic development along our Great Lakes coasts. All counties adjacent to Lakes Superior and Michigan are eligible to receive funds. Coastal Management Grants are available for coastal land acquisition, wetland protection and habitat restoration, non-point source pollution control, coastal resources and community planning, Great Lakes education, and public access and historic preservation. (Source: [www.doa.state.wi.us](http://www.doa.state.wi.us))

#### Wisconsin Department of Natural Resources

Brownfields, Green Space and Public Facilities grants help local governments clean-up brownfield sites intended for long-term public benefit, including green spaces, development of recreational areas or other uses by local governments. A city, village, town, county, redevelopment authority, community development authority, or housing authority is eligible to

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apply for funds. Eligible costs include remedial action plans and/or costs to develop a Remedial Action Plan. No grant may exceed \$200,000. The match requirement (20-50 percent) is determined by the amount of the grant. Site access and completed Phase I and II Environmental Site Assessments are required to receive a grant. Application deadline has been each year in January. (Source: [www.dnr.state.wi.us](http://www.dnr.state.wi.us))

#### Wisconsin Housing and Economic Development Authority (WHEDA)

WHEDA is responsible for a number of housing and economic development functions. WHEDA works with local and state economic development professionals, businesses, and lending institutions to help an individual expand or modernize a farm or business. **Loan Guarantees, direct loans, New Market Tax Credits, and interest rate subsidies** are utilized within a financial package to help ensure the project has the best chance for long term success. (Source: [www.wheda.com](http://www.wheda.com))

Other state resources include: *Impact Seven, Inc.*, is one of more recognizable statewide organizations that provide micro-loans for small business start-ups and expansions. (source: [www.impactseven.org](http://www.impactseven.org)) The *Wisconsin Women's Business Initiative Corporation (WWBIC)* also provides micro-loans to predominately women, people of color, and those of lower incomes. (source: [www.wwbic.com](http://www.wwbic.com)) The *Wisconsin Business Development Finance Corporation* provides financial assistance and resources to business and lenders throughout the state. (Source: [www.wbd.org](http://www.wbd.org))

#### **Regional**

##### The Bay-Lake Regional Planning Commission (BLRPC)

The Bay-Lake Regional Planning Commission serves as an economic development district for the US Department of Commerce-Economic Development Administration. Potential EDA funded projects must be reviewed by the BLRPC for eligibility of federal funding. The BLRPC also provides technical assistance to local ED organizations and offers grant writing and administration services for various state and federal funding sources. (source: [www.blrpc.org](http://www.blrpc.org))

##### Northeast Wisconsin Regional Economic Partnership (NEWREP)

All eight counties of the BLRPC are part of Commerce's ***Eastern Wisconsin Technology Zone***. The program provides income tax incentives for high-tech development in the region. The zone is designed to enhance the region's attractiveness to high-tech businesses and workers, build on the success of the biotechnology and manufacturing companies in the region, attract auxiliary companies and help existing companies increase productivity. (Source: [www.northeastwisconsin.org](http://www.northeastwisconsin.org))

##### Small Business Development Centers (SBDC)

**SBDCs** are located within the eleven 4-year universities. The SBDCs counselors offer advice, training, and resources to promote entrepreneurship and small business growth. Programs focus on minority entrepreneurship, startup business solutions, and established business solutions. Specific programs include business plan reviews and one-to-one business counseling. (source: [www.wisconsinsbdc.org](http://www.wisconsinsbdc.org))



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## SCORE

**SCORE** is a more than 11,500 member volunteer association sponsored by the U.S. Small Business Administration. It matches volunteer business-management counselors with present and prospective small business owners in need of expert advice. **SCORE** has experts in virtually every area of business management. Local SCORE chapters offer workshops and no cost one-to-one counseling. (source: [www.sba.gov](http://www.sba.gov))

## Community Action Agencies

The purpose of Community Action Agencies, as stated in the Economic Opportunity Act (EOA of 1964), is to stimulate a better focusing of all available local, state, private and federal resources upon the goal of enabling low-income families, and low-income individuals of all ages in all geographic areas, to attain the skills, knowledge, and motivations, and secure the opportunities needed, for them to become fully self-sufficient. CAAs operate a variety of programs. CAAs are known statewide for their operation of Head Start, weatherization, housing, employment and training programs, family development, economic development, commodity distribution, senior and youth services, and many other valuable programs. In addition to providing direct services, CAAs often serve as program sponsors or grantees overseeing, although not necessarily directly operating programs. (source: [www.wiscap.org](http://www.wiscap.org))

## Utilities

Area utilities to include **Wisconsin Public Service Corporation, Alliant Energy, Rural Energy Cooperatives**, and **SBC** offer economic development assistance to communities and businesses in a number of ways to include the development of business plans, making available grants and loans, providing loan guarantees, and facilitating educational forums.

## **County and Local**

### University of Wisconsin Extension Office

Community Resource Development Agent/Educator offers small business management assistance workshops or one-on-one counseling, as well as information on county revolving loan funds and other sources of financing. (Source: [www.uwex.edu](http://www.uwex.edu))

### County Economic Development Officials/Contacts

Seven of the eight counties within the Bay-Lake Region have established programs to promote economic development within each of their respective county. The counties of Florence, Marinette, Oconto, Brown, Kewaunee, Manitowoc, and Door each have a specific economic development organization that focuses on job creation, job retention, and the overall economic well-being of the county. These organizations also promote existing businesses in the community, offer a marketing outlet for their respective municipality, and establish events that are unique to the community to benefit the area economically.

The remaining county, Sheboygan, has a County Planning Department and a Chamber of Commerce that oversee the community economic development needs of the county. The Planning and Economic Development Department within the City of Sheboygan handles the community economic development needs of the city. To support the efforts of county-wide ED activities, there are several community specific or local organizations that deal with economic development at the town, village, and city levels. In addition to these economic development

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organizations, there are several Chambers of Commerce located throughout the region that provide supporting economic development and marketing services.

**Table I.1: County Economic Development Contacts**

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Brown County

Paul Ehrfurth, Vice-President ED  
Green Bay Area Chamber of Commerce  
835 Potts Avenue  
Green Bay, Wisconsin 54304  
Phone (920) 496-2113  
Email: ehrfurth@titletown.org  
Website: www.titletown.org

Florence County

Wendy Gehlhoff, Director  
Florence Economic Development Commission  
P.O. Box 88 (Courthouse)  
Florence, Wisconsin 54121  
Phone: (715) 528-3294  
Email: wgehlhoff@co.florence.wi.us  
Website: www.florencewisconsin.com

Manitowoc County

Ken Stubbe, Executive Director  
Economic Development Corporation of  
Manitowoc County  
1515 Memorial Drive  
Manitowoc, Wisconsin 54221  
Phone: (920) 482-0540  
Email: kstubbe@lakefield.net  
Website: www.manitowocchamber.com

Oconto County

Bruce Mommaerts, Executive Director  
Oconto County Economic Development Corp.  
1133 Main Street  
Oconto, Wisconsin 54153  
Phone: (920) 834-6969  
Email: bruce@ocontocounty.org  
Website: www.ocontocounty.org

Door County

William Chaudoir, Executive Director  
Door County Economic Development Corp.  
185 E. Walnut Street  
Sturgeon Bay, Wisconsin 54235  
Phone: (920) 743-3113  
Email: bill@doorcountybusiness.com  
Website: doorcountybusiness.com

Kewaunee County

John Rogers, Executive Director  
Kewaunee County Economic Development Corp.  
P.O. Box 104  
Kewaunee, Wisconsin 54216  
Phone: (920) 255-1661  
Email: jmrogers@kcedc.org  
Website: www.kewauneeco.org

Marinette County

Don Clewley, Executive Director  
Marinette County Association for Business and  
Industry, Inc.  
601 Marinette Avenue  
Marinette, Wisconsin 54143  
Phone: (715) 732-0230  
Email: dac@cybrzn.com  
Website: www.marinettecounty.org

Sheboygan County

Dee Olsen, Executive Director  
Sheboygan County Chamber of Commerce  
712 Riverfront Drive, Suite 101  
Sheboygan, Wisconsin 53081  
Phone: (920) 457-9491  
Email: olsen@sheboygan.org  
Website: www.sheboygan.org

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Source: Bay-Lake Regional Planning Commission, 2005.



Many communities and counties throughout the Bay-Lake Region administer **small business revolving loan fund** programs within the district.

**Table I.2: Revolving Loan Fund Programs (EDA, CDBG, and local)**

<b>County/Community</b>
Brown- <ol style="list-style-type: none"> <li>1. City of De Pere</li> <li>2. City of Green Bay (CDBG Float Loan Program)</li> <li>3. Brown County</li> </ol>
Door- <ol style="list-style-type: none"> <li>1. Door County Economic Development Corporation</li> <li>2. Door County</li> <li>3. City of Sturgeon Bay</li> </ol>
Florence- <ol style="list-style-type: none"> <li>1. Florence County</li> <li>2. Tri-County</li> </ol>
Kewaunee- <ol style="list-style-type: none"> <li>1. Kewaunee County</li> <li>2. City of Kewaunee</li> </ol>
Manitowoc- <ol style="list-style-type: none"> <li>1. Manitowoc County</li> <li>2. City of Two Rivers</li> <li>3. City of Manitowoc (2) Industrial and Commercial RLFs</li> <li>4. Village of Maribel</li> </ol>
Marinette- <ol style="list-style-type: none"> <li>1. Marinette County (2) Controlled by the Marinette Co. Industrial Development Corporation and administered by the Marinette Co. Association for Business and Industry.</li> <li>2. City of Peshtigo</li> <li>3. City of Marinette</li> </ol>
Oconto- <ol style="list-style-type: none"> <li>1. Oconto County</li> <li>2. Tri-County (Florence, Marinette recently withdrew, and Oconto-administered by Oconto County)</li> <li>3. City of Oconto</li> <li>4. City of Oconto Falls</li> </ol>
Sheboygan- <ol style="list-style-type: none"> <li>1. Sheboygan County</li> <li>2. City of Sheboygan</li> <li>3. City of Sheboygan Falls</li> <li>4. City of Plymouth</li> <li>5. Village of Cascade</li> <li>6. Village of Oostburg</li> </ol>

Source: Bay-Lake Regional Planning Commission, 2005.

The most often used tool to develop these areas is **Tax Incremental Financing Districts (TIDs)**. The TIDs are able to use the increase in taxes or increment and apply it to the costs associated with site preparation; the building of roads, water, and sewer mains; and upgrading water and wastewater treatment plants without additional revenue needed from the community.

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At the time of this CEDS publication, there are 75 active TIDs located throughout the BLRPC district. (see Table 4.17)

**Table I.3: Active TIDs in the Bay-Lake District by County**

<b>County</b>	<b>Number of TIDs</b>
Brown	13
Door	2
Florence	0
Kewaunee	3
Manitowoc	26
Marinette	8
Oconto	6
Sheboygan	17
Total	75

Source: Wisconsin Department of Revenue, Report Used for Apportionment of County Levy – 2004, 2004 Equalized Value Reduced by TID Value, TID Value Increments, and Bay-Lake Regional Planning Commission, 2005.

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## **APPENDIX J**

### **TRANSPORTATION RESOURCES**

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**Table J.1: Elderly and Disabled Transportation Service Providers, Bay-Lake Region, 2003**

County	Service Provider	Services Provided	Recipient	When	Coordinating Committee
Brown	Aging Resource Center	Rural Driver Escort Program	Persons over 60 and disabled persons	By reservation	no
	American Red Cross	Door-to-Door Demand Service	Persons over 60 and disabled persons	By reservation	
	NEW Curative Rehab	Van Service	Persons over 60 and disabled persons	By reservation	
	Oneida Nation	Van & Mini-bus Service	Persons over 55 and disabled persons	By reservation	
	Salvation Army	Bus and Mini-Bus Service	Hmong Elders	By reservation	
	Lamers Bus Lines	Van and Mini-Bus Service	Persons over 60 and disabled persons	By reservation	
Door	Door County Senior Resource Center	Bus Service/Dial-a-ride (fixed routes, some door-to-door)	General public	Mon, Wed, Fri - Sturg. Bay; Tue - North Door Co.; Thur - South Door Co.	no
	Lakeland Chapter of the American Red Cross	Autos and vans (door-to-door)	Persons age 55 and over	Door Co. Mon - Fri, Green Bay 3 times per week 8 am - 4:30 pm	
Florence	Florence County Aging Unit and Resource Center	Transportation Service (door-to-door)	Persons over 60 (including spouses) and disabled persons	Mon - Fri 7:30 am to 4 pm by reservation only	no
Kewaunee	Human Services of Kewaunee County, Inc.	Bus Transportation	Persons over 55 and disabled persons	Mon - Fri 10-2pm City of Algoma by reservation only	yes
	Human Services of Kewaunee County, Inc.	Driver Escort (door-to-door)	Persons over 55 and disabled persons	By reservation	
	East Shore Industries	Door-to-door	ESI clients, persons over 55, and disabled persons	Mon - Fri 7:30-9 am and 3-4:15 pm; Aging services unit Mon - Fri 10 am-2 pm	
	Human Services of Kewaunee County, Inc.	Kewaunee Van Transportation (door-to-door)	Persons over 55 and disabled persons	3 days per week by reservation	
Manitowoc	Manitowoc Maritime Metro Transit (Assist-to-Transport, LLC)	Disabled Transportation (door-to-door)	Handicapped of rural areas of the county	By reservation	yes
	American Red Cross	Elderly Transportation (door-to-door)	Persons over 65	2 days a week – 8am to 4pm (exceptions for therapy or dialysis)	
	Manitowoc County Aging Resource Center	Volunteer Escort (door-to-door)	Persons over 65	By reservation	
	Aging Resource Center Valders Buses, Inc.	Valders Sheltered Employment (door-to-door)	Special arrangement with ARC	By reservation	
Marinette	Marinette County Health & Human Services Dept. (Wausaukee Enterprises)	Vans (fixed routes, door-to-door)	Adults with developmental disabilities	Mon - Thur 8 am - 4 pm	no
	Marinette County Elderly Services	Rural Transportation Program (fixed routes, door-to-door)	Persons over 60 (including spouses) , disabled persons, and the general public if space is available	By reservation	
Oconto	Oconto Commission on Aging, Inc.	Bus Service (door-to-door)	Persons over 55 and disabled persons (priority to those w/o transportation)	Mon, Wed, Fri - 10am-2pm; Tue, Thurs - 11am-12:30 pm by reservation	no
	Oconto Commission on Aging, Inc.	Bus Service (fixed route with some door-to-door)	Persons over 55 (including spouses) and disabled persons (priority to those w/o transportation)	Mon 9 am-2:15 pm; Tues 9 am-1:30 pm; Wed 9 am-3 pm; Thurs 9 am- 3:15 pm; Fri 9 am-2 pm by reservation	
	Oconto Commission on Aging, Inc.	Volunteer Escort (flexible route, door-to-door)	Persons over 55 (including spouses) and disabled persons (priority to those w/o transportation)	By reservation	
	Oconto Commission on Aging, Inc.	New View Industries (door-to-door)	Disabled clients of New View (schedule set up for employment)	By reservation	
Sheboygan	Sheboygan County Health & Human Services Department (G. and G. Enterprises)	Wheelchair accessible minibus service (door-to-door)	ADA certified persons, persons over 60, and disabled persons	By reservation	yes

Source: Bay-Lake Regional Planning Commission, 2003.

**Table J.2: Recreational Marinas in the Bay-Lake Region (2002)**

Marina Name	Community	Permanent Slips	Transient Slips	Max Boat Size (ft)	Water Depth (ft)
Harbor Centre Marina	Sheboygan	250	yes/varies	50	10
Sheboygan Yacht Club	Sheboygan	60	yes/varies	60	10
Manitowoc Marina	Manitowoc	250	30	100	5 to 10
Seagull Marina and Campgrounds	Two Rivers	30	20	38	10
Stop and Dock Marina	Two Rivers	40	5	30	3 to 10
Twin Cities Marine Inc.	Two Rivers	25	5	26	12
Stans Marina	Two Rivers	20	6	28	6
Inner Harbor Marina	Kewaunee	130	20	100	15+
Kewaunee Marina	Kewaunee	75	25	60	5 to 6
Algoma Marina	Algoma	45	yes/varies	45	6
Captain K's Landing	Algoma	26	12	35	9
Pier 42 Marina on the Lake	Algoma	36	12	42	6
Algoma Boat Club	Algoma	24	yes/varies	26	4
Quarter Deck Marina	Sturgeon Bay	250	yes/varies	60	4
Sturgeon Bay Yacht Harbor Inc.	Sturgeon Bay	275 to 300	yes/varies	100+	N/A
Leathem Smith Lodge and Marina	Sturgeon Bay	48	12	50	4
Snug Harbor Inn	Sturgeon Bay	12	12	32	4 to 5
The Harbor Club Marina	Sturgeon Bay	150	yes/varies	85	10
Port Door Marina	Sturgeon Bay	N/A	N/A	N/A	N/A
Bailys Harbor Yacht Club and Resort	Baileys Harbor	36	yes/varies	50	7
Silver Gull Marina	Baileys Harbor	N/A	N/A	N/A	N/A
Wagon Trail Resort and Marina	Rowleys Bay	7	5	24	4
Shipyards Island Marina	Washington Island	14	yes/varies	75	7.5
Kap's Marina	Washington Island	75	25	50	6
Town and Dock at Jackson Harbor	Washington Island	na	16	na	7
Yacht Works Inc.	Sister Bay	70	12	120	18
Sister Bay Public Dock	Sister Bay	65	35	90	7
Eagle Harbor	Ephraim	47	10	50	5
Ephraim Yacht Harbor	Ephraim	42	3	70	6
Alibi Dock Marina	Fish Creek	91	28	150	8
Fish Creek Municipal Dock	Fish Creek	32	3	45	9 to 13
Egg Harbor Municipal Dock	Egg Harbor	30	8	40	9
Wave Pointe	Little Sturgeon	124	64	55	N/A
All Seasons Marina	Dyckesville	N/A	N/A	N/A	N/A
Bayshore Co. Park Harbor of Refuge	Green Bay	N/A	N/A	N/A	7
Eagles Nest Marina	Green Bay	38	6	30	7
Green Bay Yachting Club	Green Bay	87	yes/varies	40	7
Skippers Choice City Centre Marina	Green Bay	70	4	40	12
Allouez Yacht Harbor	Allouez	N/A	N/A	N/A	N/A
Joe's Anchor Inn	Suamico	40	4	28	6
Shipyards Marine	Suamico	30	5	55	7
Wind Jammers Sailing Club	Little Suamico	51	1	35	6
South Bay Marina	Green Bay	na	Na	na	na
Harbor Cove	Oconto	34	2	35	5
Oconto Yacht Club	Oconto	N/A	N/A	N/A	N/A
Hi Seas Marina	Oconto	80	10	45	5
Nestegg Marina	Marinette	100	5	60	15

Source: Bay-Lake Regional Planning Commission, Survey of Marinas, 2002

N/A indicates no information available for the marina

**Table J.3: Airport Facilities Serving the Bay-Lake Region**

Airport Name	Owner	Fixed-Base Operator or Manager/Director	Overseers	Annual Operating Costs	Funded by
Austin-Straubel International	Brown County	Director: Tom Miller Phone: (920) 498-4800	Brown Co. Board of Supervisors	\$5,599,579 (2002)	User fees
Crivitz Municipal	Town of Stephenson	Manager: Rick Shyzewski Phone (715) 854-2573	Town of Stephenson Board		User fees
Door County Cherryland	Door County	Director: Kieth Kasbohm Phone: (920) 743-3636	Door County Board		
Ephraim-Gibraltar (920) 854-9711	Town of Gibraltar  Village of Ephraim	Town of Gibraltar	Ephraim-Gibraltar Airport Comm.  Myrvin Somerhalder (920) 854-2733 / 854-2510	\$54,669  (2001)	User fees Town/Village approp.  Fed./State grants
Ford  (906) 774-4830 William Marchetti (Manager)	Dickinson County	Superior Aviation  Steve VanBeek	Dickinson County Board County Airport Committee	\$289,101  (2002)	User fees County appropriations
General Mitchell International (414) 747-5300 Barry Bateman (Director)	Milwaukee County	Signature Flight Support Doug Drescher	Milwaukee County Board	\$35,000,000 (2001)	User fees
Manitowoc County (920) 683-4594 Chuck Behnke (Manager)	Manitowoc County	Magnus Aviation Bill Heckathorn  (920) 682-0043	Manitowoc County Highway Department	\$347,298 (2001)	County appropriations User fees

Source: Wisconsin Department of Transportation, Wisconsin State Airport System Plan 2020, 2002; and, Bay-Lake Regional Planning Commission, 2003.

**Tale J.3: Airport Facilities Serving the Bay-Lake Region, continued**

Airport Name	Owner	Fixed-Base Operator or Manager/Director	Overseers	Annual Operating Costs	Funded by
<b>New Holstein Municipal</b> (920) 898-5211 Steve Stanislaws (Manager)	City of New Holstein	Manager  Steve Stanislaws	Airport Committee  Mike Stutz (920) 898-5766 City Treasurer and Clerk	\$40,479  (2001)	User fees City appropriations
<b>Oconto Municipal</b> (920) 834-7727 Eileen Duffeck (Manager)	City of Oconto Oconto County	N/A	Airport Commission	\$43,000 (2001)	City & County appropriations User fees
<b>Outagamie County Regional</b> (920) 832-5268 Jeff Mulder (Manager)	Outagamie County	MaxAir	Property, Airport, Recreation, and Economic Development Committee	\$5,529,272 (2000)	User fees
<b>Shawano Municipal</b> (715) 526-2465 Clarence Schampers (Manager)	City of Shawano Shawano County	Clarence Schampers Manager	Airport Commission	\$34,507 (2001)	City & County appropriations User fees
<b>Sheboygan County Memorial</b> (920) 467-2978 Charles Mayor (Manager)	Sheboygan County	Magnus Aviation	Transportation Committee  Airport Department	\$550,000 (2001)	User fees County appropriations
<b>Menominee-Marquette Twin County</b> (906) 863-8408 Bill Kazen (Manager)	City of Marinette, WI City of Menominee, MI	Enstrom Helicopters,  Corp.	Twin County  Airport Commission	\$292,603 (2001)	User fees Twin and Marinette County appropriations
<b>Washington Island</b> (920) 847-2147 Walt Nehlson (Manager)	Town of Washington	N/A	Town Board  Rob Carr (920) 847-2522	\$12,735 (2001)	User fees Town appropriations

Source: Wisconsin Department of Transportation, Wisconsin State Airport System Plan 2020, 2002; and, Bay-Lake Regional Planning Commission, 2003.





# ***Bay-Lake Regional Planning Commission***

## **Commission Members**

### ***Brown County***

Paul Jadin  
Chris Swan  
Christopher Zabel

### ***Door County***

Jaime Forest

### ***Florence County***

Edwin Kelley  
Yvonne Van Pembrook  
John Zoeller

### ***Kewaunee County***

Mary Hanrahan  
Brian Paplham  
Charles R. Wagner

### ***Manitowoc County***

Kevin M. Crawford  
Donald C. Markwardt  
NyiaLong Yang

### ***Marinette County***

Florence I. Magnuson  
Cheryl R. Maxwell, Vice Chairperson  
Mary G. Meyer

### ***Oconto County***

Donald A. Glynn  
Thomas D. Kussow  
Lois L. Trever, Sect./Tres.

### ***Sheboygan County***

James E. Gilligan, Chairperson  
Flossie Meyer  
James R. Schramm

### ***Wisconsin Department of Commerce***

Sec., Mary Burke

## **Staff**

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Executive Director

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GIS Coordinator

### **Richard J. Malone**

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Assistant Director/Principal Planner

### **Kathrine L. Hess**

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### **Angela M. Pierce**

Natural Resources Planner II

### **Brenda L. Rehberg**

Administrative Assistant

### **Brandon G. Robinson**

Community Assistance Planner II

### **Joshua W. Schedler**

GIS Specialist

### **James J. Van Laanen**

Regional Transportation Planner III