

SHERMAN
FREDONIA

SHERBOYGAN CO.
OZAUKEE CO.

LUDOWISSI
LAKE

STATE OF
WISCONSIN
PROPERTY

HUIRAS
LAKE

KOHLER

A LAND USE PLAN FOR THE TOWN OF FREDONIA: 2010

MILWAUKEE

WAUBEKA

RIVER

FREDONIA

WAUBEDONIA
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**COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 33 (2nd Edition)**

**A LAND USE PLAN FOR THE TOWN OF FREDONIA: 2010
OZAUKEE COUNTY, WISCONSIN**

Prepared by the

Southeastern Wisconsin Regional Planning Commission
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Chapter I

INTRODUCTION

The State municipal planning enabling act, set forth in Section 62.23 of the Wisconsin Statutes, provides for the creation of municipal plan commissions and charges them with the responsibility of creating and adopting a "master," or comprehensive, plan for the physical development of the municipality, including any areas outside its boundaries which may affect development of the municipality. The scope and content of the comprehensive plan, as set forth in the Statutes, is very broad, extending to all aspects of the physical development of a community. The Statutes indicate that the plan shall be prepared for the general purpose of accomplishing a coordinated, adjusted, and harmonious development of the municipality which will, in accordance with existing and future needs, best promote the public health, safety, morals, order, prosperity, and general welfare, as well as fostering efficiency and economy in the process of development.

Acting in accordance with this statutory charge, the Town of Fredonia prepared and adopted a Town land use plan in 1979. The Southeastern Wisconsin Regional Planning Commission (SEWRPC) assisted the Town in the preparation of that plan. It is set forth in SEWRPC Community Assistance Planning Report No. 33, *A Land Use Plan for the Town of Fredonia: 2000*, September 1979. The periodic review and reevaluation of local land use plans over time is important to plan implementation. A reevaluation also permits the local municipality to extend the plan to a new design year on the basis of changes that have occurred. In June 1995, the Town of Fredonia requested that the Southeastern Wisconsin Regional Planning Commission assist the Town Plan Commission in the review and reevaluation of the design year 2000 land use plan. The plan, while intended primarily to meet local development objectives, is also intended to carry pertinent regional plan elements into greater depth and detail as necessary for sound community development. This report, a second edition, sets forth the desired land use plan for the Town of Fredonia to the year 2010.

The planning effort involved extensive inventories and analyses of the factors and conditions affecting land use development in the Town of Fredonia, including the preparation of projections of a possible range of future population and economic activity levels within the planning area, inventories of the natural resource base and

existing land uses, an inventory of existing local plan implementation devices, the formulation of a set of recommended land use development objectives and supporting standards for the Town, analyses of the inventory findings, and the preparation of a land use plan which best meets the Town objectives. The plan, when adopted by the Town Plan Commission and the Town Board, is intended to serve as a guide to Town officials in making development decisions in the Town of Fredonia. The planning effort also included a review of existing plan implementation measures and devices needed to help carry out the recommended plan over time, with particular emphasis on any needed revisions to the Town zoning and land subdivision control ordinances.

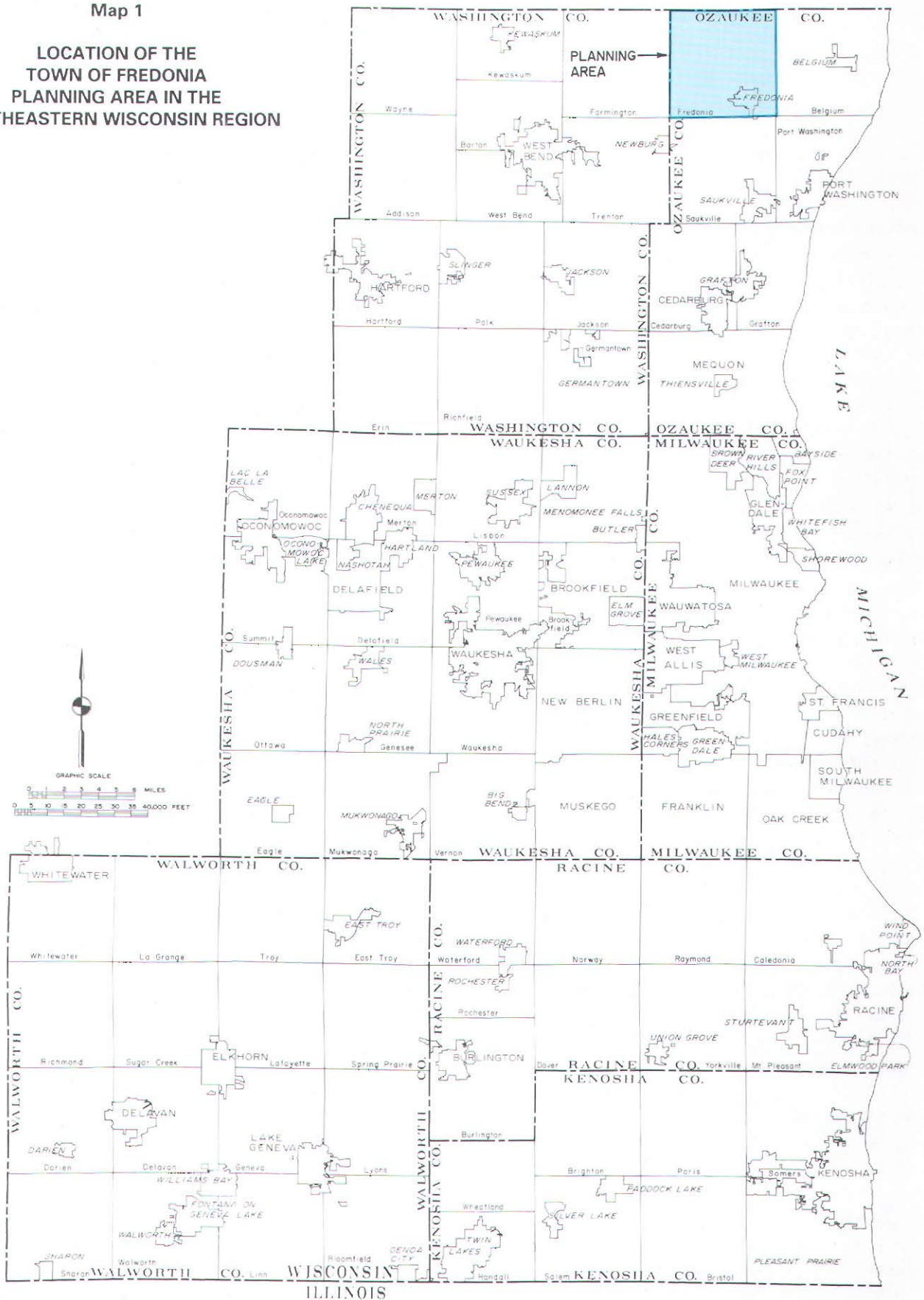
THE PLANNING AREA

The Town of Fredonia planning area is located in the northwest portion of Ozaukee County, as shown on Map 1, and consists of all of the Town and that portion of the Village of Fredonia lying in the Town of Fredonia, both of which lie generally within U. S. Public Land Survey Township 12 North, Range 21 East. This Township encompasses approximately 23,249 acres, or about 36.3 square miles. The corporate limits of the Village of Fredonia in 1995 encompassed an area of approximately 900 acres, or about 1.4 square miles. Thus, the civil town known as the Town of Fredonia encompassed about 34.9 square miles. For the purposes of preparing a recommended land use plan for the Town, however, only the area within the 1995 civil division of the Town is reflected on the plan, excluding the Village of Fredonia.

COMMUNITY HISTORY

The settlement of Southeastern Wisconsin by Europeans began in about 1836, shortly after completion of the U. S. Public Land Survey in the Region. The Town of Fredonia's modern history can be traced to 1844, when Hiram King established a home near an Indian village whose chief was named Waubeka, for whom the community of Waubeka was later named. In 1847, the Town of Fredonia was formally established from a part of what had originally been the Town of Port Washington. The majority of the early settlers were farmers; agriculture has remained the dominant land use in the Town to the present.

LOCATION OF THE
TOWN OF FREDONIA
PLANNING AREA IN THE
SOUTHEASTERN WISCONSIN REGION



Source: SEWRPC.

By the late 1800s, the unincorporated Village of Waubeka had become the principal urban community in the Town. In addition to houses, the Village included two pump factories, a cheese factory, and a tannery, plus a dam and mill built to tap the power of the Milwaukee River. In 1872, an event was to occur that would greatly influence the future development pattern in the Town, particularly in Waubeka. The Milwaukee & Northern Railway, later incorporated into the Chicago, Milwaukee, St. Paul & Pacific Railroad Company and now operated by the Wisconsin Central Ltd., planned to build a line connecting the Cities of Milwaukee and Green Bay. The Company considered running the new line through Waubeka; however, a donation of land and more favorable topography in an area known locally as Stony Creek led railway officials to choose the current railroad location through the Town. "Fredonia Station" was the first structure built in what was to become the Village of Fredonia.

After the coming of the railroad, urban development began to concentrate around "Fredonia Station" rather than in the previously established settlement of Waubeka. The Village of Fredonia was incorporated in May 1922, with an area of 675.7 acres and a resident population of 272 persons.

Another early settlement in the Town of Fredonia was the unincorporated village of Kohler, locally known as "Little Kohler," which was established in 1846 and lies in the west-central part of the Town. Little Kohler remains the smallest of the unincorporated urban areas of the Town. It features a few businesses and a number of single-family residences. Thus, the development pattern established in the mid-nineteenth century is reflected in the current land use pattern in the Town. The unincorporated areas of Waubeka and Little Kohler remain the only concentrated areas of urban development in the Town. Both are secondary to the Village of Fredonia, which, as an incorporated village, is no longer politically a part of the Town. The rest of the Town has remained primarily in agricultural and other open space uses. Map 2 shows the pattern of historic urban development in the Town of Fredonia planning area from 1880 to 1990.

PLANNING CONSIDERATIONS

Sound planning practice dictates that local plans be prepared within the framework of broader, areawide plans. The Southeastern Wisconsin Regional Planning Commission (SEWRPC) is the official areawide planning agency for the seven-county Southeastern Wisconsin Region, which includes Ozaukee County and the Town of Fre-

donia. The Commission has, since its creation in 1960, prepared advisory plans for the physical development of the Region through the systematic formulation of those elements of such plans most important to the units and agencies of government operating within the Region. While always advisory in nature to the government agencies concerned and to private-sector interests, this framework of regional plan elements is intended to serve as a basis for more detailed county and local government planning and is intended to influence both public- and private-sector decision-making with respect to development. An understanding of pertinent recommendations contained in regional, subregional, county, and local plans, as described below, is, therefore, important to the proper preparation of a land use plan for the Town of Fredonia.

Regional Land Use Plan

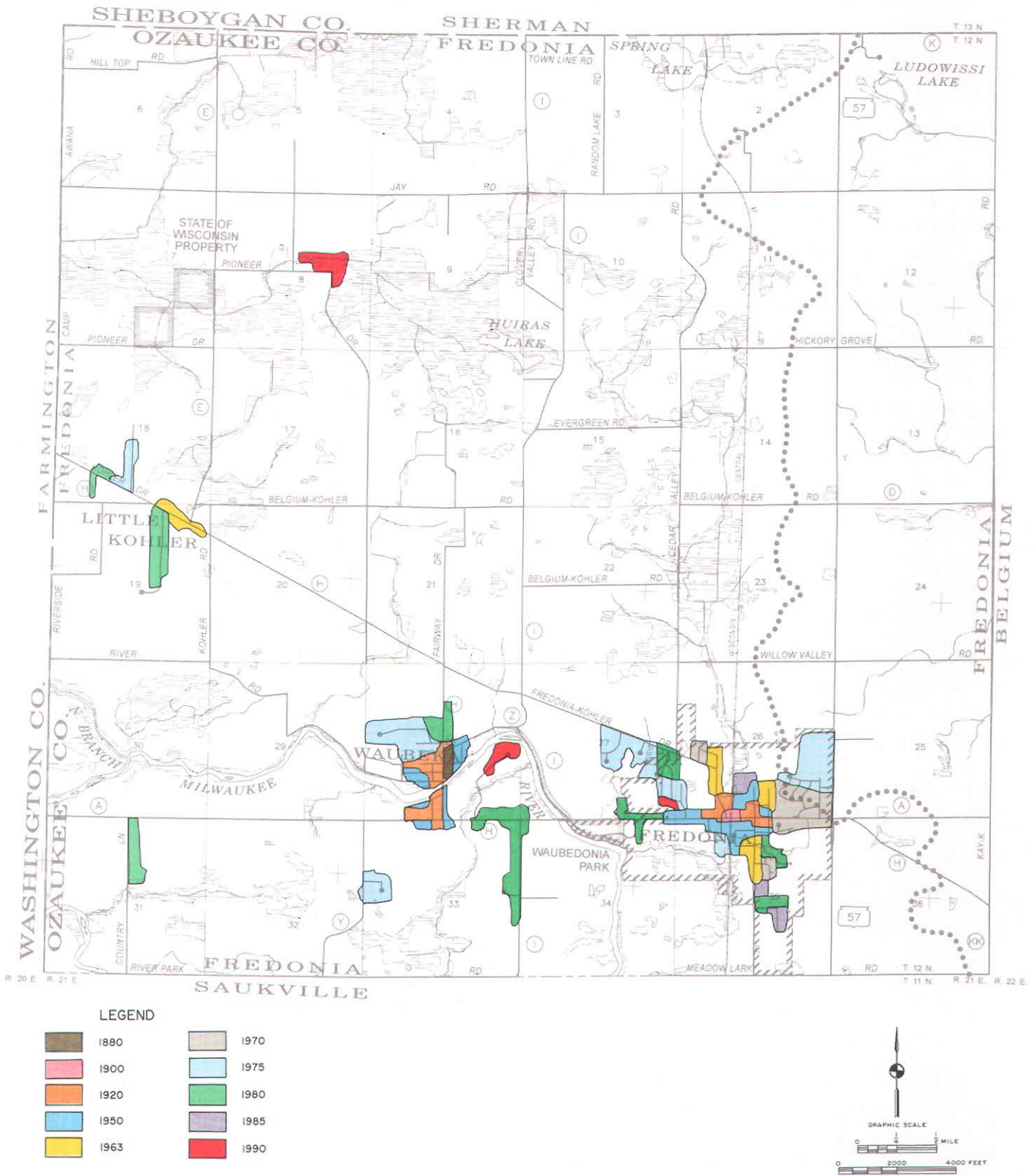
The adopted regional land use plan, documented in SEWRPC Planning Report No. 40, *A Regional Land Use Plan for Southeastern Wisconsin: 2010*, January 1992, provides recommendations regarding the amount, spatial distribution, and general arrangement of the various land uses required to serve the needs of the existing and anticipated future resident population and economic activity levels within the Region. Particularly pertinent to the preparation of a land use plan for the Town of Fredonia are the recommendations for the preservation of the primary environmental corridors and prime agricultural lands of the Region and the encouragement of a more compact pattern of urban development. The regional plan recommends that urban development be encouraged to occur contiguous to, and outward from, the existing urban centers of the Region in areas which are covered by soils suitable for such use, which are not subject to such hazards as flooding, and which can be readily and efficiently served by such essential urban facilities as public sanitary sewerage and water supply. These important recommendations of the regional land use plan provided the basic framework around which a Town land use plan could be developed. The adopted regional land use plan, as it pertains to the Town of Fredonia planning area, is shown on Map 3.

Transportation System Plans

The adopted regional transportation system plan, presented in SEWRPC Planning Report No. 41, *A Regional Transportation System Plan for Southeastern Wisconsin: 2010*, December 1994, provides recommendations as to how the regional land use plan can best be served by highway and arterial street and transit facilities. It recommends a functional and jurisdictional system of arterial streets and highways to serve the Region through the design year

Map 2

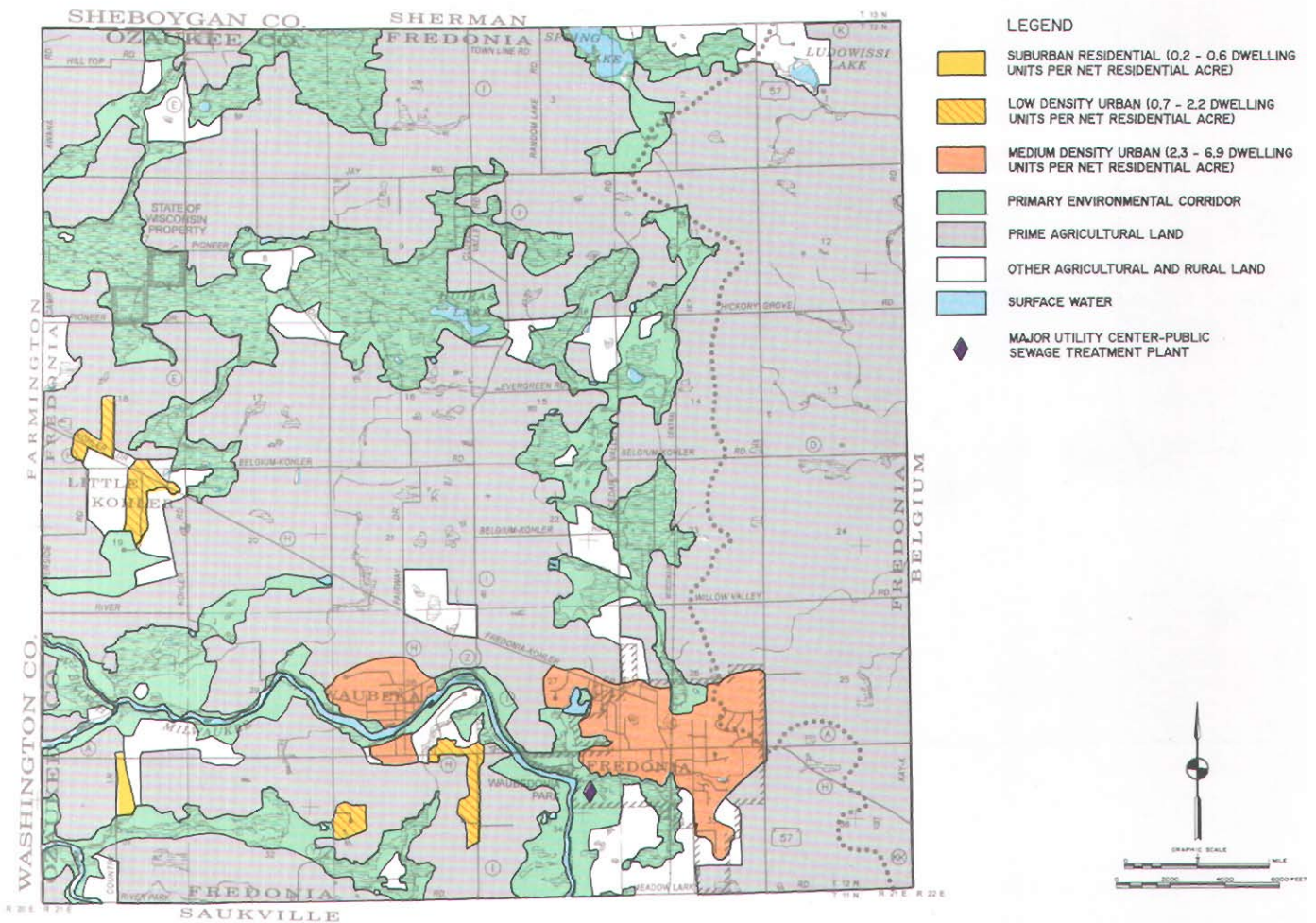
HISTORIC URBAN GROWTH IN THE TOWN OF FREDONIA PLANNING AREA: 1880-1990



Source: SEWRPC.

Map 3

ADOPTED REGIONAL LAND USE PLAN AS RELATED TO THE TOWN OF FREDONIA PLANNING AREA: 2010



Source: SEWRPC.

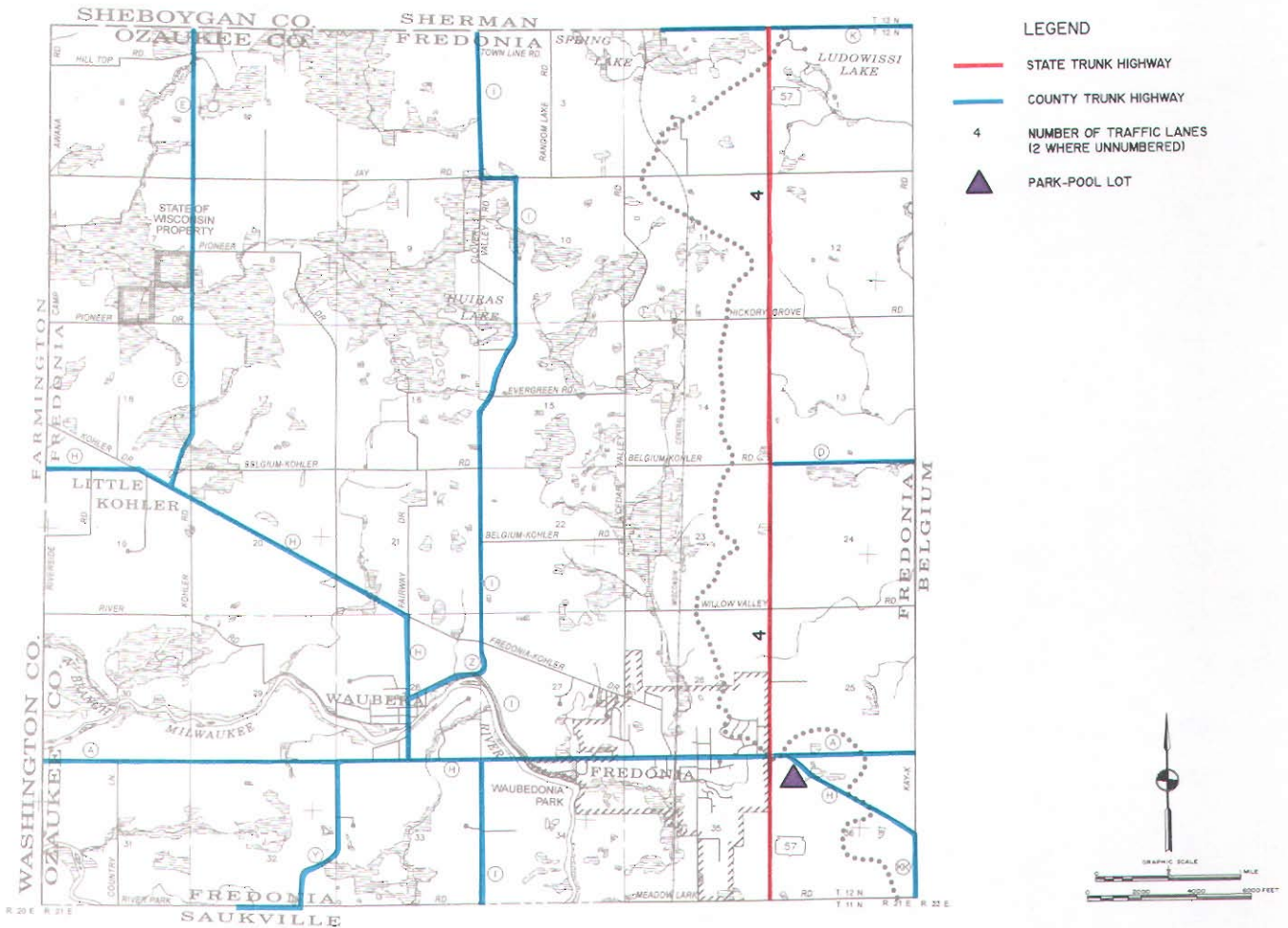
2010, together with a functional network of various types of transit lines. The regional transportation system plan was developed on the basis of quantitative analyses of existing and probable future traffic movements within the Region and of existing highway and transit system capacity and use. The adopted regional transportation system plan, as it pertains to the Town of Fredonia planning area, is shown on Map 4.

In November 1993, the Ozaukee County Board requested that the Regional Planning Commission prepare a plan for improving public transit service within the County. The request was prompted, not only by increasing demands being placed upon the existing specialized transportation services provided within the County to elderly and disabled individuals, but also by the needs of Ozaukee

County employers for transit services to help overcome labor shortages and to meet the requirements of the Federal Clean Air Act Amendments of 1990 related to reducing employee work trips made in single-occupancy automobiles. The findings and recommendations of the study are documented in SEWRPC Community Assistance Planning Report No. 218, *A Transit Service Plan for Ozaukee County: 1996-2000*, July 1995. The plan recommends the establishment on a two-year demonstration basis of bidirectional commuter-bus service over IH 43 between the central business district of Milwaukee and park-ride lots in Ozaukee County; the establishment of companion shuttle-bus services from park-ride lots to serve employment centers, including the Village of Fredonia; the conversion of the existing County specialized services for elderly and disabled persons into a general public,

Map 4

ADOPTED REGIONAL TRANSPORTATION SYSTEM PLAN
AS RELATED TO THE TOWN OF FREDONIA PLANNING AREA: 2010



Source: SEWRPC.

Countywide shared-ride taxicab service similar to the service now being provided by the City of Port Washington; and the continued provision of specialized transportation services to elderly and disabled County residents for trips made outside the County, primarily for medical purposes.

Park and Open Space Plans

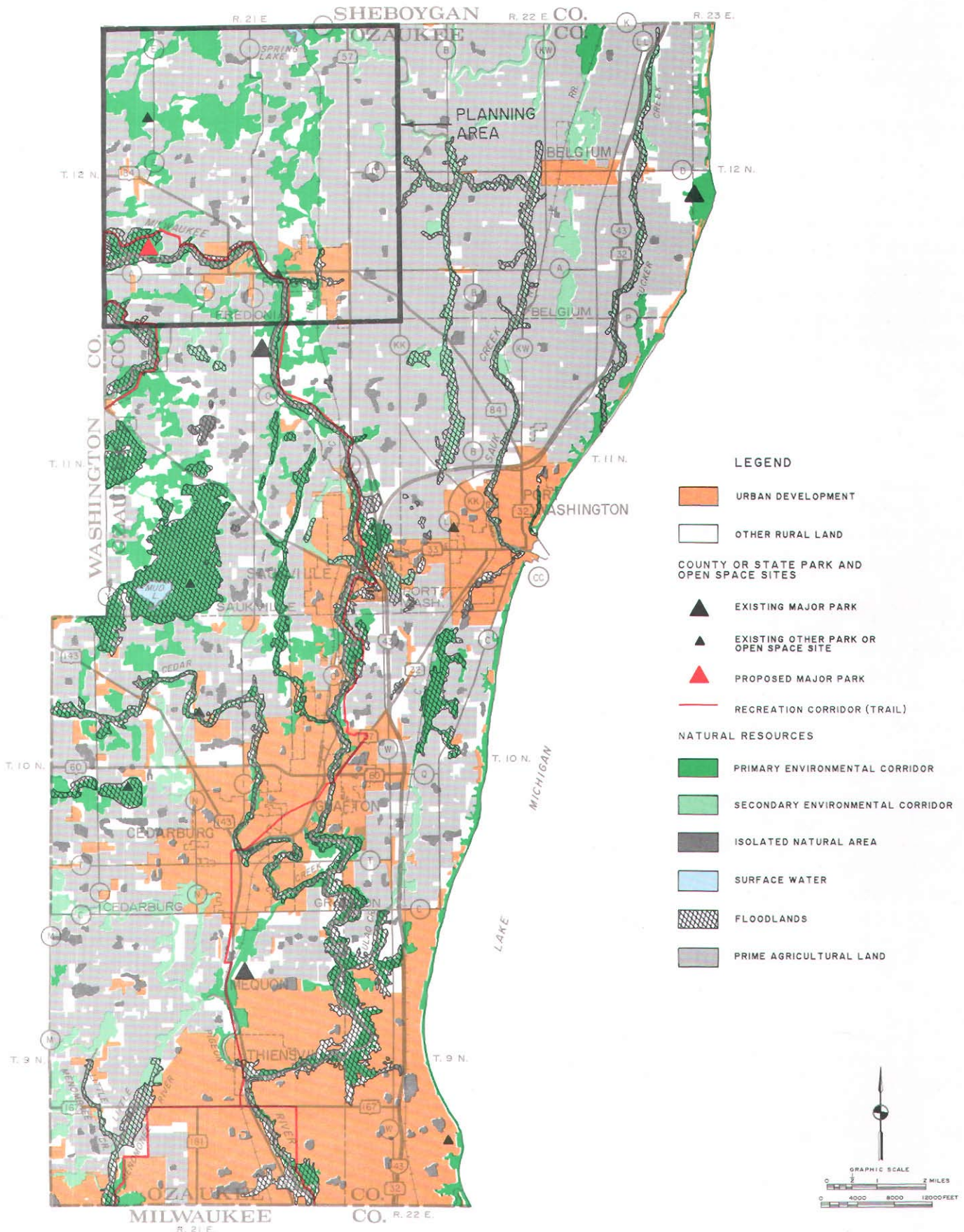
The adopted regional park, outdoor recreation, and related open space plan, described in SEWRPC Planning Report No. 27, *A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000*, November 1977, identifies existing and probable future park and open space needs within the Region and recommends a system of large regional resource-oriented parks, recreational corridors, and smaller urban parks, together with their attendant recreational facility requirements, to meet these needs.

That portion of the Regional Plan that applies to Ozaukee County, including the Town of Fredonia, was refined and detailed in 1987 by the Regional Planning Commission in response to a request from the Ozaukee County Board. The resulting park and open space plan for the County is documented in SEWRPC Community Assistance Planning Report No. 133, *A Park and Open Space Plan for Ozaukee County*, July 1987. The adopted Ozaukee County park and open space plan as related to the Town of Fredonia planning area is shown on Map 5.

The first regional bicycle and pedestrian facilities system plan, documented in SEWRPC Planning Report No. 43, *A Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2010*, December 1994, was adopted as an element of the regional transportation system plan. The bicycle and pedestrian facilities system plan is

Map 5

ADOPTED OZAUKEE COUNTY PARK AND OPEN SPACE PLAN
AS RELATED TO THE TOWN OF FREDONIA PLANNING AREA: 2000



intended to encourage increased bicycle and pedestrian travel in a safe and efficient manner as alternatives to travel by automobile within the Region. The plan includes a proposed regional bicycle-way system designed to provide connections between urbanized areas and incorporated areas with a population of 5,000 or more outside urbanized areas. Map 6 shows the adopted regional bicycle-way system plan as related to the Town of Fredonia planning area.

Water Quality and Related Plans

A regional water quality management plan is intended to provide recommendations to help meet a Congressional mandate that the waters of the United States be made, to the extent practical, "fishable and swimmable." The findings and recommendations of the water quality management planning program for Southeastern Wisconsin are described in SEWRPC Planning Report No. 30, *A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000*, Volume One, *Inventory Findings*, September 1978; Volume Two, *Alternative Plans*, February 1979; and Volume Three, *Recommended Plan*, June 1979. The plan consists of a land use and sanitary sewer service area element, a point water pollution abatement element, a nonpoint water pollution abatement element, a wastewater sludge management element, and a water quality monitoring element.

The adopted regional water quality management plan includes recommended sanitary sewer service areas attendant to each recommended sewage treatment facility in the Region. These initially recommended service areas were based on the urban land use configuration identified in the regional land use plan for the year 2000. As such, delineation of the areas was necessarily general and did not reflect more detailed local planning considerations. Accordingly, the plan recommends that each community served by public sanitary sewerage facilities refine and detail sanitary sewer service areas for their area. In response to this recommendation, the Village of Fredonia adopted a refined sanitary sewer service plan designating a detailed sanitary sewer service area tributary to the Village of Fredonia Sewage Treatment Plant. This plan is shown on Map 7 and documented in SEWRPC Community Assistance Planning Report No. 96, *Sanitary Sewer Service Area for the Village of Fredonia*, July 1984. This report is relevant to development in the Town of Fredonia because of the planned sanitary sewer service area in the Waubeka area.

In addition to the regional plan elements, there is a subregional plan element which is of importance to the Town of Fredonia. This subregional plan is described

in SEWRPC Planning Report No. 13, *A Comprehensive Plan for the Milwaukee River Watershed*, Volume One, *Inventory Findings and Forecasts*, December 1970, and Volume Two, *Alternative Plans and Recommended Plan*, October 1971. This plan contains recommendations for floodland management, water pollution abatement, and water supply which pertain to the Town of Fredonia planning area. Particularly important for the Town of Fredonia is the recommendation to preserve floodwater storage areas in the headwater areas of the watershed, in order to avoid major increases in the flood flows and stages of the Milwaukee River in urban areas.

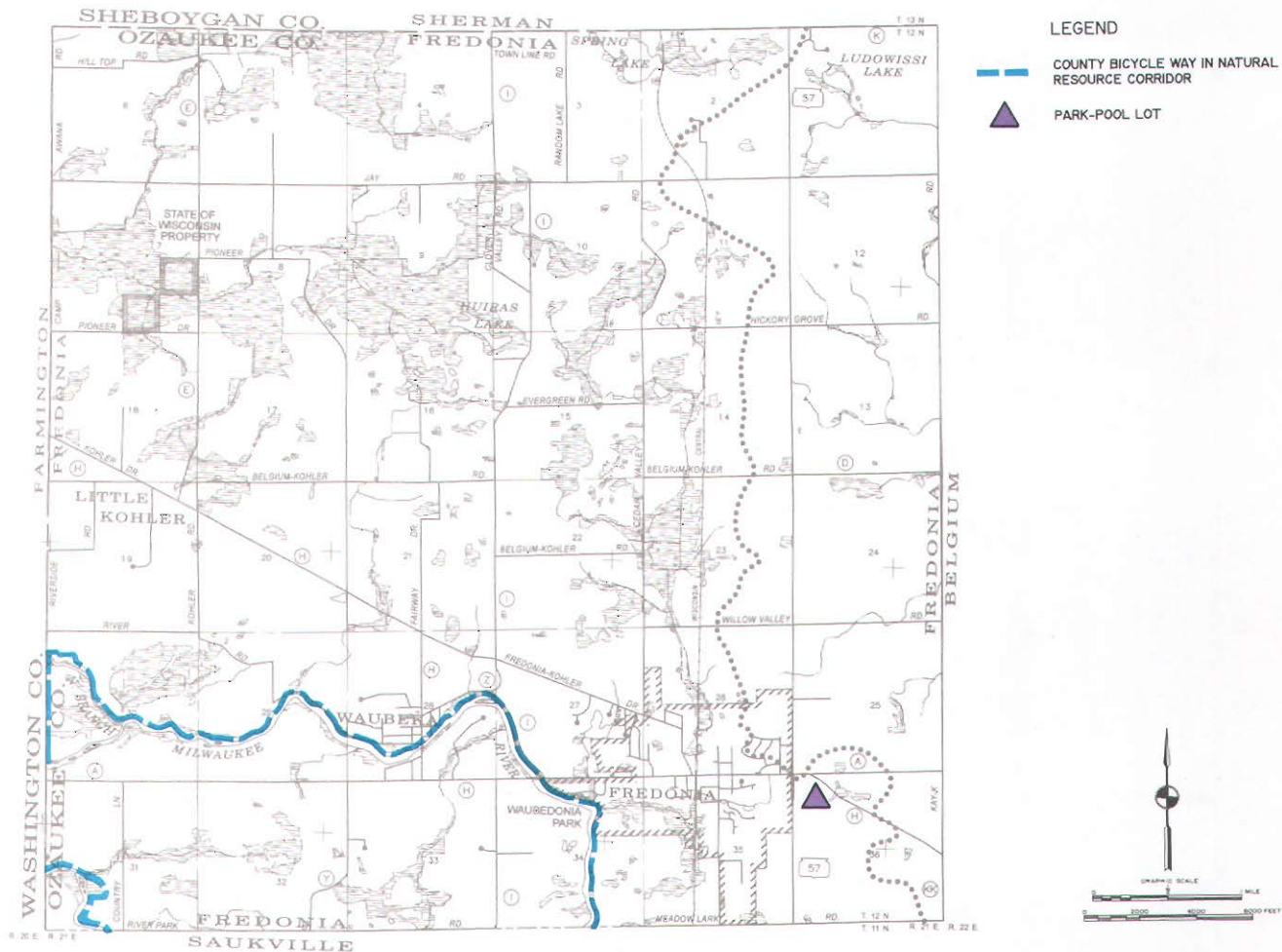
Agricultural Preservation Plans

In 1982, the Ozaukee County Zoning Committee, acting on behalf of the Ozaukee County Board, requested that the Regional Planning Commission assist the County in preparing a farmland preservation planning program. The findings and recommendations of this program are set forth in SEWRPC Community Assistance Planning Report No. 87, *A Farmland Preservation Plan for Ozaukee County, Wisconsin*, May 1983. The plan is intended to serve as a guide to the preservation of agricultural lands in Ozaukee County. This plan was prepared partly in response to the increasing public concern over the rapid conversion of farmland to urban use and to the requirements of the State "Farmland Preservation Act." The Wisconsin Legislature adopted this Act in 1977 to encourage the preparation of county farmland preservation plans and to provide State income-tax credits for the maintenance of farmlands in delineated preservation areas. Ultimately, only those farmers owning lands in delineated prime agricultural areas zoned for exclusive agricultural use, and, in Southeastern Wisconsin, in an area for which a farmland preservation plan has been prepared, as in this case, are eligible for the full State income-tax credits provided under the law. The County plan further recommends the protection of environmentally significant areas and makes recommendations regarding the location and intensity of urban development within the County through the year 2000. The plan also presents recommendations for implementation of the agricultural land preservation plan by local units and agencies of government. Such recommendations are designed to minimize the loss of valuable agricultural lands while providing for the efficient and economical provision of public facilities to areas of urban growth and development. The adopted Ozaukee County farmland preservation plan as it relates to the Town of Fredonia planning area is shown on Map 8.

Concerns about cropland soil erosion also led the Ozaukee County Board in 1985 to request the Regional Planning Commission's assistance in preparing a plan to control

Map 6

ADOPTED REGIONAL BICYCLE-WAY SYSTEM PLAN
AS RELATED TO THE TOWN OF FREDONIA PLANNING AREA: 2010



Source: SEWRPC.

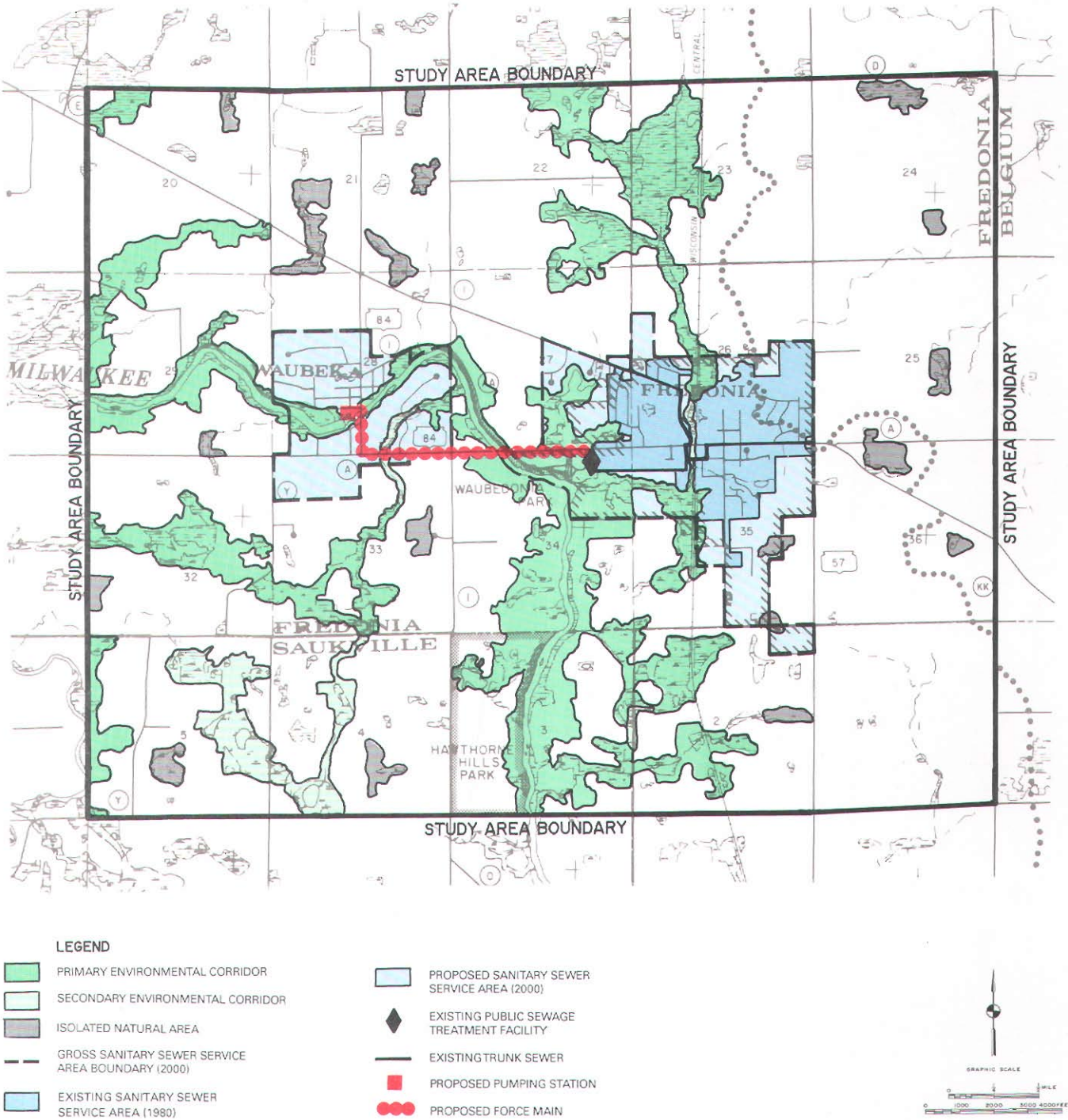
such erosion and to comply with the erosion control planning requirements of Section 92.10 of the Wisconsin Statutes. The resulting plan is documented in SEWRPC Community Assistance Planning Report No. 171, *Ozaukee County Agricultural Soil Erosion Control Plan*, February 1989. As part of the planning process, agricultural soil erosion control problems were identified and erosion control priority ratings were developed for each U. S. Public Land Survey section in the County, including the Town of Fredonia. The plan describes such available soil erosion control practices as conservation tillage, contouring, terraces, and permanent vegetative cover and identifies farm conservation planning activities needed to implement the recommended control practices.

Local Land Use Plan

A land use plan was prepared for the Town of Fredonia by the Southeastern Wisconsin Regional Planning Commission in 1979. It is set forth in SEWRPC Community Assistance Planning Report No. 33, *A Land Use Plan for the Town of Fredonia: 2000*, September 1979. The report presents a summary of pertinent data and a land use plan for the orderly growth and development of the Town to the plan design year 2000. The objectives of the plan were to protect those lands best suited for agricultural use in the Town, to discourage development in primary environmental corridors and other environmentally sensitive lands, to discourage the development of undeveloped floodland and shoreland areas, to avoid linear urban development

Map 7

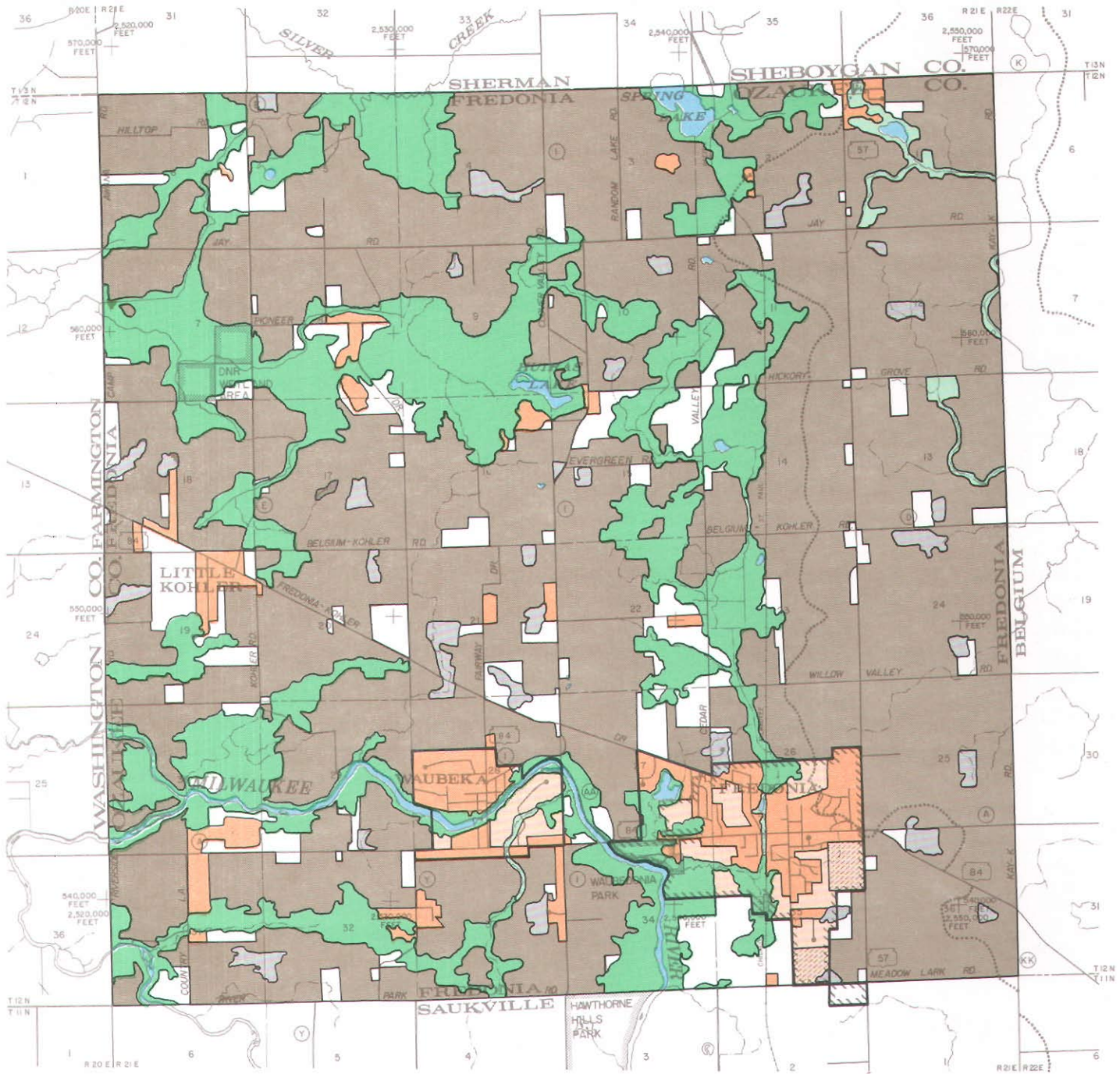
ADOPTED PLANNED SANITARY SEWER SERVICE AREA
FOR THE VILLAGE OF FREDONIA AND ENVIRONS: 2000



Source: SEWRPC.

Map 8

ADOPTED OZAUKEE COUNTY FARMLAND PRESERVATION PLAN
AS RELATED TO THE TOWN OF FREDONIA PLANNING AREA: 2000



LEGEND

FARMLAND PRESERVATION INFORMATION

- FARMLAND PRESERVATION AREA
- FARMLAND TRANSITIONAL AREA

NATURAL RESOURCE PRESERVATION INFORMATION

- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA

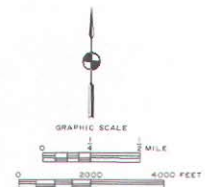
URBAN DEVELOPMENT INFORMATION

- EXISTING URBAN, EXTRACTIVE, AND INTENSIVE RECREATION LANDS - 1980
- PROPOSED URBAN LAND
- URBAN SERVICE AREA BOUNDARY

OTHER LAND

- RURAL RESIDENTIAL AND OTHER URBAN LAND
- SURFACE WATER

Source: SEWRPC.



along the arterial street and highway system in order to preserve the capacity and safety of the system, and to encourage urban-density development only in those areas of the Town in which it is proposed to make public sanitary sewers available. The plan was designed to meet the needs of a resident population of about 1,925 by the year 2000. The plan is summarized in graphic form on Map 9.

The necessary zoning regulations and attendant mapping were prepared, including the creation of an exclusive agricultural district, to further the implementation of the plan. In 1990, the resident population of the Town was 2,043, 178 persons more than the plan had forecast for the year 1990 and 119 persons more than were forecast for the year 2000. Because of a population level slightly larger than was planned, increasing pressures to rezone land and increased concern from Town residents, Town officials have determined that the Town land use plan needs to be reviewed and updated.

As noted earlier, the findings and recommendations of the aforereferenced plan elements all have important implications for any comprehensive planning effort for the Town of Fredonia. Pertinent recommendations from these earlier planning efforts are reflected in the land use plan presented in this document.

THE COMMUNITY COMPREHENSIVE PLANNING PROCESS

The recommended plan presented in this report was developed through a planning process consisting of the following seven steps: 1) a comprehensive inventory of the factors affecting land use development and redevelopment in the Town planning area, 2) an analysis of the inventory data, 3) the formulation of land use development objectives, principles, and standards, 4) the identification of land use and related facility needs in the planning area through the year 2010 based, in part, on the resident population and employment forecasts and the agreed upon development objectives and standards, 5) the development and evaluation of alternative land use plans, 6) the selection of a recommended plan, and 7) the development of recommended plan implementation measures. The comprehensive planning process is diagramed in Figure 1. The active participation of citizens and local officials during the planning process is imperative for the process to succeed. It is also important, as part of the planning process, to reevaluate adopted community plans in light of new information and changing public attitudes and opinions.

Inventory and Analysis

Reliable planning data are essential for the formulation of workable land use plans. Consequently, inventory becomes the first operational step in the planning process. The crucial nature of factual information in the process should be evident, since no reliable forecasts can be made or alternative courses of action evaluated without knowledge of the current state of the system being planned. Development of the land use plan for the Town of Fredonia was based on the existing development pattern, the potential demand for each of the various major land use categories, local land use development potentials and constraints, and the underlying natural resource and public utility base and its ability to support development. The necessary inventory and analyses provide, not only data describing the existing conditions, but also a basis for identifying existing and potential problems in the planning area and also opportunities for development. The inventory data are also crucial to the forecasting of community land use and facility needs, formulating alternative plans, and evaluating such plans.

Formulation of Development Objectives, Principles, and Standards

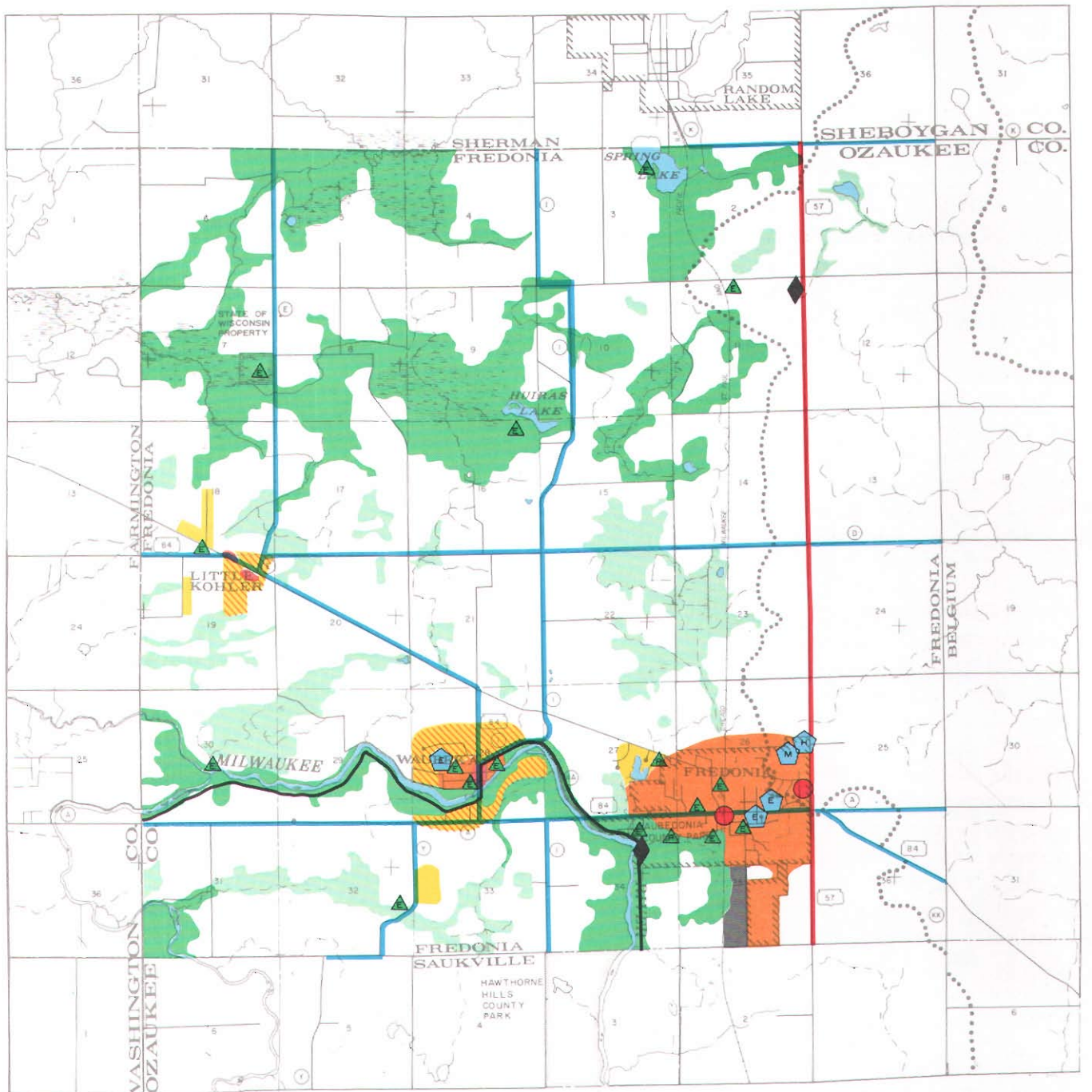
An objective is defined as a goal or end toward the attainment of which plans and policies are directed. Planning is a rational process for formulating and attaining objectives. The objectives serve as a guide to the preparation of alternative plans and provide an important basis for the evaluation of these alternatives and the selection of a recommended plan from among the alternatives considered. The community plans should be clearly related to the defined objectives through a set of standards. Objectives may change as new information is developed, as objectives are fulfilled through plan implementation or as objectives fail to be implemented due to changing public attitudes and values. The formulation of objectives should involve the active participation of local officials and knowledgeable and concerned citizens. The Town Plan Commission and Long Range Planning Committee, which includes both local officials and citizen members, provided active guidance to the technical staffs engaged in the planning process.

Identification of Community Land Use and Facility Requirements

Although the preparation of forecasts is not planning, a land use plan must, to the extent possible, anticipate future land and facility requirements as a basis for developing alternative plans. The future demand for land will depend primarily on the size of the future resident population and the nature of future economic activity in the Town. Control of changes in population and employment levels, however,

Map 9

ADOPTED TOWN OF FREDONIA LAND USE PLAN: 2000

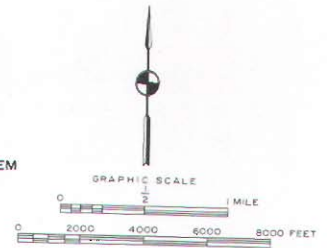


LEGEND

- SUBURBAN DEVELOPMENT
(0.3-0.6 DWELLING UNITS PER NET RESIDENTIAL ACRE)
- LOW-DENSITY URBAN DEVELOPMENT
(0.7-2.2 DWELLING UNITS PER NET RESIDENTIAL ACRE)
- MEDIUM-DENSITY URBAN DEVELOPMENT
(2.3-6.9 DWELLING UNITS PER NET RESIDENTIAL ACRE)
- COMMUNITY RETAIL AND SERVICE CENTER
- COMMERCIAL
- INDUSTRIAL

- PARKS
E EXISTING
P PROPOSED
- PRIMARY ENVIRONMENTAL CORRIDOR
- OTHER ENVIRONMENTALLY SIGNIFICANT LANDS
- AGRICULTURAL AND OTHER RURAL LAND
- SCHOOLS
E ELEMENTARY SCHOOL
H HIGH SCHOOL
M MIDDLE SCHOOL

- SEWAGE TREATMENT PLANT
- WATER
- ARTERIAL STREET AND HIGHWAY SYSTEM**
 - STATE TRUNK
 - COUNTY TRUNK
- PROPOSED LOCAL RECREATIONAL CORRIDOR (TRAIL)



lies largely, although not entirely, outside the scope of government activity at the local level. Therefore, future population and economic activity levels must be forecast. These forecast levels are then used to determine the probable future demand for various types of land uses and facilities. This is not to say that governmental policies at the local level cannot influence the course of urban growth and development, and, consequently, of population and economic activity growth rates.

Development and Evaluation of Alternative Plans and Selection and Adoption of a Recommended Plan

Once the probable future demand for a variety of land uses and facilities has been estimated, alternative plans which meet the probable demand can be developed. The alternative plans should be evaluated on the basis of their relative ability to attain the agreed-upon development objectives; the plan which is judged best able to meet those objectives should be selected for adoption. The evaluation and selection should be made by the Town Plan Commission on the basis of information obtained during all stages of the planning process.

Plan Implementation

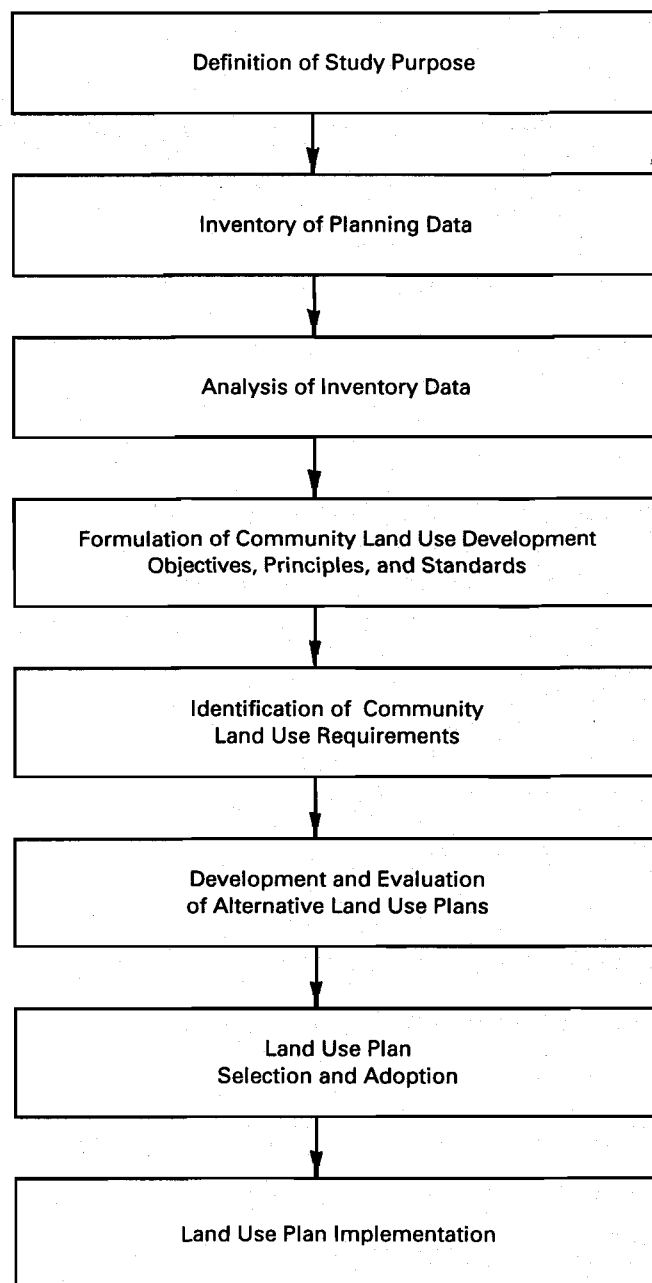
Implementation of the adopted land use plan requires the use of several planning tools of a legal nature. A zoning ordinance and accompanying zoning district map should be used to assure legally that private development and redevelopment will occur in conformance with the adopted plan. The zoning regulations should govern, not only the types of land uses permitted in various parts of the community, but also the height and arrangement of buildings on the land and the intensity of the use of land as well. Land division regulations should be applied to assure that any proposed land subdivision plats and certified survey maps conform to the adopted plan, both with respect to proposed land uses to be accommodated and to such details as street, block, and lot layout and required infrastructure improvements.

SUMMARY

This chapter has served as an introduction to the Town of Fredonia Land Use Plan and planning process. It has cited the Wisconsin Statutes which authorize the Town to engage in land use planning, described the geographic location and history of the Town of Fredonia

Figure 1

THE COMMUNITY LAND USE PLANNING PROCESS



Source: SEWRPC.

area, indicated that the Southeastern Wisconsin Regional Planning Commission has prepared regional and local comprehensive plan elements that will bear on planning efforts in the Town, and has summarized each of the seven steps of the Town land use planning process.

Chapter II

POPULATION AND EMPLOYMENT INVENTORIES, ANALYSES, AND FORECASTS

INTRODUCTION

Information on the size, characteristics, and distribution of the resident population and of employment in a planning area and on anticipated changes in these socio-economic factors over time is essential to the preparation of sound physical development plans. The size and characteristics of the existing and probable future resident population and workforce in the planning area have a direct influence on land use requirements and needs. The primary purpose of a land use plan is to meet those requirements and needs in an efficient, economical, and environmentally sound manner, thereby benefitting community residents and workers by maintaining and enhancing living and working conditions.

POPULATION AND EMPLOYMENT FORECASTS

The population, employment, and land use forecasts which were selected for use in the land use planning effort for the Town of Fredonia were based on consideration of a range of alternative population and employment levels developed for the seven-county Southeastern Wisconsin Region by the Regional Planning Commission. Three alternative future scenarios were developed by the Regional Planning Commission for use in preparing the 2010 regional land use plan. Two scenarios, the high-growth scenario and the low-growth scenario, were intended to identify reasonable extremes. An intermediate-growth scenario was also developed, providing a most probable future between the extremes. These three scenarios are described in the following sections.¹

¹For a detailed description of the methodology used to develop these projections, see SEWRPC Technical Report No. 25, Alternative Futures for Southeastern Wisconsin, December 1980; Technical Report No. 11, Second Edition, The Population of Southeastern Wisconsin, June 1984; and Technical Report No. 10, Second Edition, The Economy of Southeastern Wisconsin, May 1984.

The High-Growth Scenario

The high-growth scenario envisions that the Region as a whole will experience only a slight decline in household size with a return to more conventional life-styles and somewhat higher birth rates.² This scenario assumes that the Region will be economically competitive with other areas of the United States over the next two decades and that the pattern of out-migration of population, economic activity, and jobs experienced in the recent past will subside. The greater attractiveness of the Region would be due to such factors as the availability of an ample high-quality water supply; availability of labor and land; a high-quality infrastructure of railroads, highways, sea-ports, airports, and sewerage and water systems; a good university and vocational-technical educational system; a high-quality environment; ample recreation opportunities; and community attitudes receptive to the needs of business and industry.

The Intermediate-Growth Scenario

The intermediate-growth scenario assumes that even though some out-migration of population and jobs will continue, the relative attractiveness of the Region will result in a stabilization of population and employment. The assumptions underlying this future include replacement-level birth rates and a slight decline in household size. Regionwide, there would be some increase in younger age groups and the retirement-age population would be expected to increase significantly.

The Low-Growth Scenario

The low-growth scenario envisions continued out-migration of population and jobs from the Region. This would be due in part to a decline in the ability of the Region to compete with other regions of the United States for economic activity and in part to continued growth in nontraditional lifestyles, including increasing female par-

²Households include persons who live alone; unrelated persons who live together, such as college roommates; and families. Persons not living in households are classified as living in group quarters, such as hospitals for the chronically ill, homes for the aged, correctional institutions, and college dormitories.

ticipation in the labor force and birthrates at lower than replacement level.

Population Distribution

An additional variable was added to the analysis in the preparation of the intermediate population forecast. That variable deals with the degree of centrality of incremental urban land use development as measured by its relative nearness to the major population centers in the Region. Two alternative population distributions, referred to as the centralized and the decentralized distribution, were developed.

The centralized distribution concentrates population in the older urban centers of the Region and adjacent suburbs, with proportionately fewer people in outlying areas. The centralized distribution assumes that a significant proportion of the population will prefer to reside in an urban setting which provides a full range of urban facilities and services, such as public water supply, sanitary sewers, and mass transit.

The decentralized distribution accommodates proportionately fewer people in the older urban centers of the Region and adjacent suburbs but proportionately more in the outlying areas. The decentralized distribution assumes that a significant proportion of the population will prefer to reside in a suburban or rural setting with relatively large lots and a reduced level of urban services.

Significant decentralization of population within the Region began in the 1950s and has continued unabated to the present. The movement of persons from the older, urban central areas of the Region to outlying areas has markedly changed the development pattern of the Region, requiring outlying areas to provide many of the facilities and services once required only in the older, more highly developed urban areas of the Region.

Selected Forecast

The forecast population and employment levels envisioned under the low-growth, intermediate-growth centralized, intermediate-growth decentralized, and high-growth scenarios are summarized in Table 1 for the Southeastern Wisconsin Region, Ozaukee County, the Town of Fredonia, the Village of Fredonia sanitary sewer service area, and the unincorporated community of Waubeka sanitary sewer service area. After consideration of the four alternative future scenarios postulated and after consideration of recent development trends, the intermediate future, coupled with the decentralized distribution, was selected as the basis for the preparation of the land use

plan for the Town of Fredonia. Based on recent development trends, the Town of Fredonia Long Range Planning Committee, however, selected a population forecast of 2,670 persons. This population level is within the range of population forecasts. Under the selected forecast, the population in the Town of Fredonia may be expected to increase from about 2,040 persons in 1990 to about 2,670 persons in 2010, an increase of about 630 persons, or about 31 percent. The number of jobs would be expected to increase from about 530 in 1990 to about 550 in 2010, an increase of about 20 jobs, or about 4 percent.

In order to set the selected forecast into perspective, the historic population levels of the State, the Region, Ozaukee County, and the Town of Fredonia are presented in Table 2. This table indicates that the resident population of the Town of Fredonia remained relatively stable from 1860 through 1950, experienced significant growth between 1950 and 1980, and again remained relatively stable from 1980 to 1990. Figure 2 shows graphically the historic and projected future population levels for the Town of Fredonia in terms of the four alternative future scenarios, as well as the selected forecast.

AGE DISTRIBUTION

The age distribution of the population has important implications for planning and for public policy in the areas of education, recreation, health, housing, and transportation. The age composition of the Southeastern Wisconsin Region, Ozaukee County, and the Town of Fredonia is set forth in Table 3. In general, as the resident population of the Region and Ozaukee County increased during the last two decades, the number of adults increased significantly while the number of children decreased slightly. In the Town of Fredonia, where the population increased about 17 percent between 1970 and 1990, the number of children remained stable while the adult population increased about 42 percent.

Between 1970 and 1990, the number of children under the age of five decreased by about 10 percent in the Region, while increasing about 5 percent in Ozaukee County and decreasing about 25 percent in the Town of Fredonia. The number of school-age children, ages five through 17, decreased by about 28 percent in the Region, decreased by about 16 percent in the County, and decreased by about 13 percent in the Town of Fredonia. It is anticipated that the school-age population will continue to decline in the Town of Fredonia over the planning period.

Table 1

**ALTERNATIVE POPULATION AND EMPLOYMENT FORECASTS FOR SOUTHEASTERN
WISCONSIN, OZAUKEE COUNTY, THE TOWN OF FREDONIA, THE VILLAGE OF FREDONIA
SEWER SERVICE AREA, AND THE WAUBEKA SEWER SERVICE AREA: 1970, 1980, 1990 AND 2010**

Area	1970	1980	1990	Alternative Future Scenarios: 2010 ^a			
				Low-Growth	Intermediate-Growth Centralized ^b	Intermediate-Growth Decentralized	High-Growth
Region							
Population	1,756,083	1,764,796	1,810,364	1,517,100	1,911,000	1,872,200	2,316,100
Jobs	748,900	884,200	990,300	870,900	1,095,000	1,051,300	1,251,600
Ozaukee County							
Population	54,461	66,981	72,831	67,600	79,800	93,000	151,300
Jobs	19,337	25,600	32,200	35,800	38,700	44,300	56,800
Town of Fredonia ^c							
Population	1,746	2,144	2,043	1,762	1,982	2,278	4,167
Jobs	450	507	529	533	540	552	728
Village of Fredonia Sanitary Sewer Service Area							
Population	1,045	1,437	1,558	1,665	1,840	2,644	4,874
Jobs	392	461	782	738	851	1,104	1,504
Waubeka Sanitary Sewer Service Area ^d							
Population	437	442	263	405	453	644	1,589
Jobs	54	97	107	110	115	127	174

^aPopulation and employment forecasts to the year 2010 were prepared by using 1980 base data and may not reflect changes which occurred between 1980 and 1990.

^bThe intermediate-growth centralized scenario represents the adopted regional land use plan.

^cIncludes the planned Waubeka sanitary sewer service area.

^dThese forecasts are included in the Town of Fredonia population and employment forecasts.

Source: U. S. Bureau of the Census, U. S. Bureau of Economic Analysis, and SEWRPC.

The number of working-age adults, ages 18 through 64, increased in all three areas between 1970 and 1990, with a modest increase of about 15 percent in the Region and significant increases of about 60 percent and 44 percent in the County and Town, respectively. The number of persons 65 years old and older also increased in all three areas between 1970 and 1990. The growth of this age group was particularly dramatic in Ozaukee County, where the number of persons age 65 and older doubled. The number of persons 65 or older increased by 34 percent in the Region and by 36 percent in the Town of Fredonia. The increase in the size of the elderly population, which may be expected to continue throughout the planning period, may be expected to increase the demand for specialized housing units, transportation, and health-care services for the elderly.

HISTORIC AND PROBABLE FUTURE HOUSEHOLD SIZE

As indicated by the data provided in Table 4, there was a steady increase in the number of housing units as well as in the resident populations of the Southeastern Wisconsin Region, Ozaukee County, and the Town of Fredonia from 1970 to 1990. This table also demonstrates that the rate of increase in the number of housing units exceeded the rate of population increase in each of these three areas. With the number of households increasing at a faster rate than the population, household size throughout the Region has steadily decreased. The decline in the number of persons per household can be attributed to an increase in the number of one-person households and a decrease in the number of children per family.

Table 2

**COMPARISON OF HISTORIC POPULATION LEVELS FOR THE STATE OF WISCONSIN, THE
SOUTHEASTERN WISCONSIN REGION, OZAUKEE COUNTY, AND THE TOWN OF FREDONIA: 1850-1990**

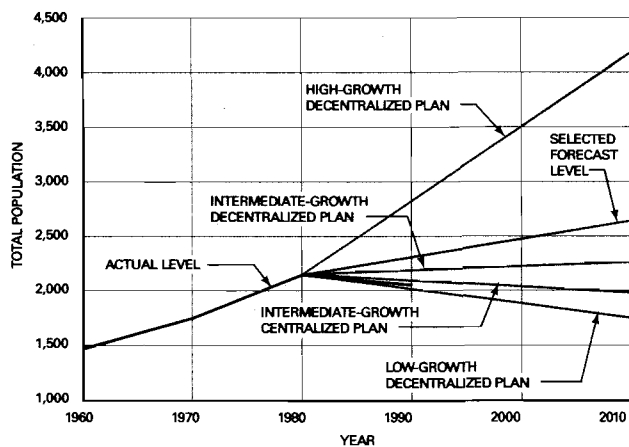
Year	Wisconsin		Southeastern Wisconsin Region		Ozaukee County		Town of Fredonia	
	Population	Change from Previous Period (percent)	Population	Change from Previous Period (percent)	Population	Change from Previous Period (percent)	Population	Change from Previous Period (percent)
1850	305,391	--	113,389	--	-- ^a	--	--	--
1860	775,881	154.1	190,409	67.9	15,682	--	1,785	--
1870	1,054,670	35.9	223,546	17.4	15,564	-0.8	1,688	-5.4
1880	1,315,497	24.7	277,119	24.0	15,461	-0.7	1,839	8.9
1890	1,693,330	28.7	386,774	39.6	14,943	-3.4	1,666	-9.4
1900	2,069,042	22.2	501,808	29.7	16,363	9.5	1,652	-0.8
1910	2,333,860	12.8	631,161	25.8	17,123	4.6	1,421	-14.0
1920	2,632,067	12.8	783,681	24.2	16,355	-4.6	1,444	1.6
1930	2,939,006	11.7	1,006,118	28.4	17,394	6.5	1,149	-20.4
1940	3,137,587	6.8	1,067,699	6.1	18,985	9.1	1,164	1.3
1950	3,434,575	9.5	1,240,618	16.2	23,361	23.0	1,191	2.3
1960	3,951,777	15.1	1,573,614	26.8	38,441	64.6	1,475	23.8
1970	4,417,821	11.8	1,756,083	11.6	54,461	41.7	1,746	18.4
1980	4,705,642	6.5	1,764,796	0.5	66,981	23.0	2,144	22.8
1990	4,891,769	4.0	1,810,364	2.6	72,831	8.7	2,043	-4.7

^aIn 1853, seven Towns (Belgium, Cedarburg, Fredonia, Grafton, Mequon, Port Washington, and Saukville) and the Village of Port Washington, then in Washington County, and which contained a resident population of 8,281 in 1850, were detached from the remainder of Washington County to form Ozaukee County.

Source: U. S. Bureau of the Census and SEWRPC.

Figure 2

**HISTORIC AND FORECAST POPULATION LEVELS
FOR THE TOWN OF FREDONIA: 1960-2010**



Source: SEWRPC.

The number and size of households are population characteristics of particular importance for land use and public facility planning, because the average household size is used to convert a population forecast into the number of housing units needed over the planning period.

Throughout the Region, the number of households has increased at a faster rate than the total household population. Table 5 compares historic and forecast year 2010 household sizes in the Southeastern Wisconsin Region, Ozaukee County, and the Town of Fredonia. Forecast variations in household size are generally due to a greater assumed proportion of "traditional" households, consisting of husband, wife, and children, under the high-growth scenario, and a greater proportion of single-parent families and single-person households under the low-growth scenario, with more children per family present in the "traditional" families.

The data in Table 5 indicate that in 1990 the average household size in the Town of Fredonia was 3.19, compared to 2.79 in Ozaukee County, and 2.62 in the Region. The average household size, under the selected intermediate-growth decentralized forecast, may be expected to decline for all of the areas considered, with household size in the Town of Fredonia decreasing from 3.19 in 1990 to 2.95 in 2010.

On the basis of a selected household size of 2.95 persons and a selected household population of approximately 2,670 persons for the Town of Fredonia, a total of

Table 3

**AGE COMPOSITION OF THE POPULATION OF THE SOUTHEASTERN
WISCONSIN REGION, OZAUKEE COUNTY, AND THE TOWN OF FREDONIA: 1970-1990**

Age Group	Southeastern Wisconsin Region							
	1970 ^a		1980 ^b		1990		1970-1990	
	Number	Percent	Number	Percent	Number	Percent	Change	Percent
Under 5	153,243	8.7	128,085	7.2	138,444	7.6	10,359	8.1
5 through 17	472,342	26.9	375,653	21.3	338,629	18.8	-37,024	-9.9
18 through 64	960,887	54.8	1,065,887	60.4	1,106,820	61.1	40,933	3.8
65 and Older	169,415	9.6	195,294	11.1	226,471	12.5	31,177	16.0
All Ages	1,755,887	100.0	1,764,919	100.0	1,810,364	100.0	45,445	2.6

Age Group	Ozaukee County							
	1970 ^c		1980		1990		1980-1990	
	Number	Percent	Number	Percent	Number	Percent	Change	Percent
Under 5	5,074	9.3	4,771	7.1	5,323	7.3	552	11.6
5 through 17	17,165	31.5	16,174	24.1	14,362	9.7	-1,812	-11.2
18 through 64	28,213	51.8	40,374	60.3	45,086	61.9	4,712	11.7
65 and Older	3,969	7.3	5,662	8.5	8,060	11.1	2,398	42.4
All Ages	54,421	100.0	66,981	100.0	72,831	100.0	5,850	8.7

Age Group	Town of Fredonia							
	1970		1980		1990		1980-1990	
	Number	Percent	Number	Percent	Number	Percent	Change	Percent
Under 5	183	10.5	192	9.0	139	6.8	-53	-27.6
5 through 17	583	33.4	619	28.9	505	24.7	-114	-18.4
18 through 64	853	48.9	1,179	55.0	1,226	60.0	47	4.0
65 and Older	127	7.3	154	7.2	173	8.5	19	12.3
All Ages	1,746	100.0	2,144	100.0	2,043	100.0	-101	-4.7

^aThe 1970 regional population of 1,755,887 excludes 196 persons who were added after the conduct of the 1970 census but were not allocated to the various age group categories.

^bThe 1980 regional population of 1,764,919 includes 123 persons who were subtracted from this number after the conduct of the 1980 census but were not allocated to the various age group categories.

^cThe 1970 county population of 54,421 excludes 40 persons who were added after the conduct of the 1970 census but were not allocated to the various age group categories.

Source: U. S. Bureau of the Census and SEWRPC.

about 905 occupied housing units may be expected to be needed in the Town by the year 2010. This represents an increase of about 265 occupied housing units over the 1990 total of about 640 occupied housing units, an average increase of about 13 occupied units per year.

HOUSING CHARACTERISTICS

Housing Construction Activity: 1980 through 1997

Table 6 provides a summary of residential building permits issued in the Town of Fredonia from 1980 through 1997, except for 1986 through 1989, when such data

were not recorded. During the 14-year period for which data are available, permits for 124 housing units were issued, all for single-family housing units. From 1980 through 1985, a total of 17 permits were issued, an annual average of about 3 permits; from 1990 through 1997, a total of 107 permits were issued, an annual average of about 13 permits.

Housing Occupancy and Vacancy Rates

Table 4 provides information on housing occupancy and vacancy rates in the Southeastern Wisconsin Region, Ozaukee County, and the Town of Fredonia in 1970,

Table 4

HISTORIC POPULATION AND HOUSING CHARACTERISTICS OF THE SOUTHEASTERN WISCONSIN REGION, OZAUKEE COUNTY, AND THE TOWN OF FREDONIA: 1970-1990

Characteristics	Southeastern Wisconsin Region							
	1970 ^a		1980 ^b		1990		1970-1990	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Change	Percent Change
Population								
Household	1,714,200	97.6	1,724,567	97.7	1,769,120	97.7	44,553	2.6
Group Quarters	41,687	2.4	40,352	2.3	41,244	2.3	892	2.2
Total	1,755,887	100.0	1,764,919	100.0	1,810,364	100.0	45,445	2.6
Housing Unit Type								
Owner Occupied	331,339	58.5	389,381	58.5	414,049	57.7	24,668	6.3
Renter Occupied	205,147	36.2	238,574	35.9	262,058	36.6	23,484	9.8
Vacant, For Sale	2,379	0.4	4,478	0.7	3,850	0.5	-648	-14.5
Vacant, For Rent	9,101	1.6	11,205	1.7	12,615	1.8	1,410	12.6
Other Vacant ^c	18,790	3.3	21,335	3.2	24,623	3.4	3,288	15.4
Total	566,756	100.0	664,973	100.0	717,175	100.0	52,202	7.9
Persons per Occupied Housing Unit	3.20	--	2.75	--	2.62	--	-0.13	-4.7

Characteristics	Ozaukee County							
	1970 ^d		1980		1990		1980-1990	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Change	Percent Change
Population								
Household	53,951	99.1	66,211	98.9	71,732	98.5	5,521	8.3
Group Quarters	470	0.9	770	1.1	1,099	1.5	329	42.7
Total	54,421	100.0	66,981	100.0	72,831	100.0	5,850	8.7
Housing Unit Type								
Owner Occupied	11,621	75.8	16,164	71.8	19,128	72.2	2,964	18.3
Renter Occupied	3,132	20.4	5,599	24.9	6,579	24.8	980	17.5
Vacant, For Sale	134	0.9	234	1.0	140	0.5	-94	-40.2
Vacant, For Rent	126	0.8	172	0.8	170	0.6	-2	-1.2
Other Vacant ^c	326	2.1	351	1.6	465	1.8	114	32.5
Total	15,339	100.0	22,520	100.0	26,482	100.0	3,962	17.6
Persons per Occupied Housing Unit	3.66	--	3.04	--	2.79	--	-0.2	-8.3

Characteristics	Town of Fredonia							
	1970 ^d		1980		1990		1980-1990	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Change	Percent Change
Population								
Household	1,732	99.2	2,052	95.7	2,043	100.0	-9	-0.4
Group Quarters	14	0.8	92	4.3	0	0.0	-92	-100.0
Total	1,746	100.0	2,144	100.0	2,043	100.0	-101	-4.7
Housing Unit Type								
Owner Occupied	335	74.0	494	81.7	545	82.8	51	10.3
Renter Occupied	105	23.2	88	14.5	96	14.6	8	9.1
Vacant, For Sale	2	0.4	3	0.5	0	0.0	-3	-100.0
Vacant, For Rent	1	0.2	3	0.5	3	0.5	0	0.0
Other Vacant ^c	10	2.2	17	2.8	14	2.1	-3	-17.6
Total	453	100.0	605	100.0	658	100.0	53	8.8
Persons per Occupied Housing Unit	3.94	--	3.53	--	3.19	--	-0.34	-9.6

^aThe 1970 regional population of 1,755,887 excludes 196 persons who were added after the conduct of the 1970 census but were not allocated to the total number of persons in households or group quarters.

^bThe 1980 regional population of 1,764,919 includes 123 persons who were subtracted from this number after the conduct of the 1970 census but were not allocated to the total number of persons in households or group quarters.

^cIncludes migratory and seasonal housing units.

^dThe 1970 county population of 54,421 excludes 40 persons who were added after the conduct of the 1970 census but were not allocated to the total number of persons in households or group quarters.

Source: U. S. Bureau of the Census and SEWRPC.

Table 5

**COMPARISON OF HISTORIC AND PROBABLE FUTURE POPULATION PER OCCUPIED HOUSING UNIT IN
THE SOUTHEASTERN WISCONSIN REGION, OZAUKEE COUNTY, AND THE TOWN OF FREDONIA: 1970-2010**

Year	Southeastern Wisconsin Region	Ozaukee County	Town of Fredonia
1970	3.20	3.66	3.94 ^a
1980	2.75	3.04	3.53 ^a
1990	2.62	2.79	3.19 ^a
2010 Forecast ^b			
Low-Growth Decentralized Forecast	2.19	2.34	2.67
Intermediate-Growth Centralized Forecast	2.40	2.59	3.00
Intermediate-Growth Decentralized Forecast	2.42	2.59	2.95
High-Growth Decentralized Forecast	2.67	2.85	3.27

^aData are based on the Town of Fredonia civil division limits.

^bForecast data were prepared by using 1980 base data and may not reflect changes in the household size which occurred between 1980 and 1990.

Source: U. S. Bureau of the Census and SEWRPC.

1980, and 1990. Between 1970 and 1990, the number of housing units in the Region increased by about 27 percent, while in Ozaukee County and in the Town of Fredonia housing units increased by about 73 percent and 45 percent, respectively. In 1990, about 85 percent of the year-round occupied units in the Town were owner occupied and about 15 percent were renter occupied.

Between 1970 and 1990, the Southeastern Wisconsin Region experienced an increase in owner-occupied year-round housing units of about 25 percent, while Ozaukee County and the Town of Fredonia experienced increases of about 65 percent and 62 percent, respectively, with each increase more than twice as high as that experienced for the Region as a whole. With respect to renter-occupied year-round housing units during this same period, the Region experienced an increase of about 28 percent, the County experienced a significantly higher increase of 110 percent, and the Town experienced a decline of about 9 percent. The increase in renter-occupied housing in the Region and County may be due to such changes in life-style as more single-person households and smaller families; the Town decrease may be a result of more traditional families residing in the Town.

Housing vacancy rates for both owner-occupied and rental housing in 1990 for Southeastern Wisconsin, Ozaukee County, and the Town of Fredonia are also shown in Table 4. The vacancy rate for owner-occupied

housing in the Region, that is, for formerly owner-occupied housing units that were vacant and up for sale, was about 0.9 percent in 1990. The vacancy rate for owner-occupied housing in Ozaukee County was about 0.9 percent and the vacancy rate for owner-occupied housing in the Town of Fredonia was zero in 1990.

The vacancy rate for renter-occupied housing in the Region, that is, for formerly renter-occupied housing units that were vacant and available for rent, was about 4.6 percent in 1990. The vacancy rate for renter-occupied housing in Ozaukee County was about 2.5 percent and the vacancy rate for such housing in the Town of Fredonia was about 3.3 percent in 1990.

Standards presented in SEWRPC Planning Report No. 20, *A Regional Housing Plan for Southeastern Wisconsin*, February 1975, suggest that local housing vacancy rates be maintained between a minimum of 4 percent and a maximum of 6 percent for rental housing units and at a minimum of 1 percent and a maximum of 2 percent for owner-occupied housing units over a full range of housing types, sizes, and costs. These vacancy rates are desirable to facilitate population mobility and to enable an exercise of choice in the selection of suitable housing. The 1990 vacancy rate within the Town of 0.0 percent for owner-occupied housing and 3.3 percent for rental housing falls below the recommended standards.

Table 6

**RESIDENTIAL BUILDING PERMITS ISSUED
IN THE TOWN OF FREDONIA: 1980-1997***

Year	Single-Family Housing Units	Two-Family Housing Units	Multi-Family Housing Units	Total Housing Units
1980	3	0	0	3
1981	4	0	0	4
1982	1	0	0	1
1983	3	0	0	3
1984	3	0	0	3
1985	3	0	0	3
1986	N/A	N/A	N/A	N/A
1987	N/A	N/A	N/A	N/A
1988	N/A	N/A	N/A	N/A
1989	N/A	N/A	N/A	N/A
1990	6	0	0	6
1991	8	0	0	8
1992	9	0	0	9
1993	19	0	0	19
1994	13	0	0	13
1995	19	0	0	19
1996	22	0	0	22
1997	11	0	0	11
Total	124	0	0	124

NOTE: "N/A" means "not available."

*Except 1986-1989.

Source: Allied Construction Employers' Association, Town of Fredonia, and SEWRPC.

Housing Costs

Table 7 provides the monthly owner costs, including debt costs, of owner-occupied, mortgaged, noncondominium housing units in the Southeastern Wisconsin Region, Ozaukee County, and the Town of Fredonia. Table 7 indicates that the median monthly mortgage housing cost for Southeastern Wisconsin was \$764; for Ozaukee County, \$913; and for the Town of Fredonia, \$666. These data indicate that the 1990 cost of mortgaged units in the County was comparatively higher than such costs within the Region as a whole; the 1990 cost of mortgaged units in the Town was comparatively lower than such costs within the Region. In 1990, the Town of Fredonia had 243 mortgaged owner-occupied noncondominium dwelling units, or 38 percent of the total housing stock in the Town.

Table 8 shows the 1990 monthly gross rent of renter-occupied housing in the Southeastern Wisconsin Region, Ozaukee County, and the Town of Fredonia. The data indicate that in 1990 the median monthly rent paid for renter-occupied housing was \$372 for the Southeastern

Table 7

**NUMBER OF HOUSING UNITS OF OWNER-OCCUPIED MORTGAGED HOUSING BY MONTHLY OWNER COSTS
IN THE SOUTHEASTERN WISCONSIN REGION, OZAUKEE COUNTY, AND THE TOWN OF FREDONIA: 1990**

Actual Monthly Owner Costs with Mortgage	Southeastern Wisconsin Region		Ozaukee County		Town of Fredonia	
	Number of Units	Percent of Total	Number of Units	Percent of Total	Number of Units	Percent of Total
Less than \$300	2,788	1.2	68	0.6	6	2.5
\$300 to \$399	9,220	4.1	234	2.0	4	1.6
\$400 to \$499	18,936	8.5	467	3.9	23	9.5
\$500 to \$599	27,594	12.3	778	6.6	54	22.2
\$600 to \$699	32,750	14.6	1,387	11.7	52	21.4
\$700 to \$799	32,393	14.5	1,466	12.4	46	18.9
\$800 to \$899	26,738	11.9	1,343	11.3	13	5.3
\$900 to \$999	21,348	9.5	1,340	11.3	26	10.7
\$1,000 to \$1,249	28,724	12.8	1,968	16.6	15	6.2
\$1,250 to \$1,499	11,211	5.0	1,085	9.2	2	0.8
\$1,500 to \$1,999	8,104	3.6	1,105	9.3	2	0.8
\$2,000 or more	4,159	1.9	602	5.1	0	0.0
Total	223,935	100.0	11,843	100.0	243	100.0
Median Costs	\$764	--	\$ 913	--	\$666	--
Average Costs	\$840	--	\$1,036	--	\$697	--

Source: U. S. Bureau of the Census and SEWRPC.

Table 8

**NUMBER OF HOUSING UNITS BY MONTHLY CONTRACT RENT FOR RENTER-OCCUPIED
MORTGAGED HOUSING BY MONTHLY OWNER COSTS IN THE SOUTHEASTERN
WISCONSIN REGION, OZAUKEE COUNTY, AND THE TOWN OF FREDONIA: 1990**

Actual Monthly Contract Rent	Southeastern Wisconsin Region		Ozaukee County		Town of Fredonia	
	Number of Units	Percent of Total	Number of Units	Percent of Total	Number of Units	Percent of Total
Less than \$100	4,690	1.8	81	1.3	1	1.3
\$100 to \$149	10,372	4.0	130	2.1	3	3.9
\$150 to \$199	10,782	4.2	156	2.5	6	7.8
\$200 to \$249	17,776	6.9	245	3.9	18	23.4
\$250 to \$299	30,695	11.9	362	5.7	16	20.8
\$300 to \$349	36,808	14.3	632	10.0	12	15.6
\$350 to \$399	39,954	15.5	822	13.0	2	2.6
\$400 to \$449	32,217	12.5	1,008	15.9	3	3.9
\$450 to \$499	24,161	9.4	616	9.7	0	0.0
\$500 to \$549	15,432	6.0	661	10.5	1	1.3
\$550 to \$599	10,676	4.1	683	10.8	0	0.0
\$600 to \$649	7,084	2.7	394	6.2	1	1.3
\$650 to \$699	4,152	1.6	106	1.7	1	1.3
\$700 to \$749	2,448	0.9	90	1.4	0	0.0
\$750 to \$999	4,117	1.6	101	1.6	0	0.0
\$1,000 or more	1,220	0.5	32	0.5	0	0.0
No Cash Rent	5,542	2.1	205	3.2	1	16.9
Total	258,12	100.0	6,324	100.0	77	100.0
Median Rent	\$372	--	\$431	--	\$263	--
Average Rent	\$381	--	\$439	--	\$274	--

Source: U. S. Bureau of the Census and SEWRPC.

Wisconsin Region; \$431 for Ozaukee County; and \$263 for the Town. As shown in Table 8, Ozaukee County had comparatively higher median rents in 1990 than the Region; the Town of Fredonia had comparatively lower rents than the Region.

ECONOMIC CHARACTERISTICS AND FORECASTS

Household Income

The data in Table 9 indicate the 1990 household income for Southeastern Wisconsin, Ozaukee County, and the Town of Fredonia by income ranges, together with the median and mean income levels for each of these geographic areas. In 1990, the median household income in the Southeastern Wisconsin Region was \$32,146; in Ozaukee County, \$42,695; and in the Town of Fredonia, \$37,664. The mean, or average, household income for the Region in 1990 was \$38,541; for Ozaukee County, \$54,348; and for the Town, \$42,547. Both the median

and mean family income in the Town of Fredonia in 1990 were slightly higher than those in the Region, but not higher than those in Ozaukee County.

Occupations and Employment Types

Table 10 provides information on the employed population 16 years of age and older by occupation for the Southeastern Wisconsin Region, Ozaukee County, and the Town of Fredonia. In 1990, 882,716 persons, or about 49 percent of the resident population of the Southeastern Wisconsin Region, were in the employed labor force. In Ozaukee County, 39,100 persons, or about 54 percent of the resident County population, were in the employed labor force. In the Town of Fredonia, 1,063 persons, or about 52 percent of the resident population of the Town, were in the employed labor force. White-collar workers, including executive, managerial and professional specialty and technical, sales, and administrative support workers, represented about 58 percent of the employed persons in the Region, about 62 percent of the employed

Table 9

**HOUSEHOLD INCOME IN THE SOUTHEASTERN WISCONSIN REGION,
OZAUKEE COUNTY, AND THE TOWN OF FREDONIA: 1990**

Income Range	Southeastern Wisconsin		Ozaukee County		Town of Fredonia	
	Number of Households	Percent of Total	Number of Households	Percent of Total	Number of Households	Percent of Total
Less than \$5,000	24,879	3.7	328	1.3	20	3.1
\$5,000 to \$9,999	63,191	9.3	1,053	4.1	15	2.3
\$10,000 to \$12,499	29,465	4.4	640	2.5	30	4.7
\$12,500 to \$14,999	26,147	3.9	666	2.6	27	4.2
\$15,000 to \$17,499	29,003	4.3	814	3.2	15	2.3
\$17,500 to \$19,999	27,707	4.1	760	3.0	17	2.7
\$20,000 to \$22,499	30,503	4.5	866	3.4	31	4.8
\$22,500 to \$24,999	26,473	3.9	731	2.8	20	3.1
\$25,000 to \$27,499	30,020	4.4	947	3.7	31	4.8
\$27,500 to \$29,999	24,880	3.7	901	3.5	31	4.8
\$30,000 to \$32,499	30,327	4.5	1,035	4.0	23	3.6
\$32,500 to \$34,999	24,118	3.6	847	3.3	24	3.7
\$35,000 to \$37,499	27,610	4.1	1,170	4.6	34	5.3
\$37,500 to \$39,999	23,380	3.5	889	3.5	38	5.9
\$40,000 to \$42,499	27,513	4.1	1,129	4.4	23	3.6
\$42,500 to \$44,999	21,174	3.1	942	3.7	32	5.0
\$45,000 to \$47,499	22,261	3.3	900	3.5	20	3.1
\$47,500 to \$49,999	18,646	2.8	743	2.9	36	5.6
\$50,000 to \$54,999	34,933	5.2	1,671	6.5	37	5.8
\$55,000 to \$59,999	26,800	4.0	1,219	4.7	13	2.0
\$60,000 to \$74,999	52,685	7.8	2,830	11.0	70	10.9
\$75,000 to \$99,999	31,826	4.7	2,179	8.5	28	4.4
\$100,000 to \$124,999	10,308	1.5	875	3.4	17	2.7
\$125,000 to \$149,999	4,901	0.6	418	1.6	4	0.6
\$150,000 or more	8,653	1.3	1,146	4.5	5	0.8
Total	676,593	100.0	25,699	100.0	641	100.0
Average Income	\$38,541	--	\$54,348	--	\$42,547	--
Median Income	\$32,146	--	\$42,695	--	\$37,664	--

Source: U. S. Bureau of the Census and SEWRPC.

persons in Ozaukee County, and about 35 percent of the employed population of the Town of Fredonia. Blue-collar workers, including service occupations; farming, forestry, and fishing; precision production, craft, and repair; and operators, fabricators, and laborers, represented about 42 percent of the employed persons of the Region, about 38 percent of the employed persons in the County, and about 65 percent of the employed population of the Town of Fredonia.

Table 11 provides information on the employed population 16 years of age and over by class of worker for the Region, Ozaukee County, and the Town of Fredonia in 1990. These data indicate that about 82 percent of the Town workers were employed in the private sector, compared to 84 percent for the Region and 85 percent for

Ozaukee County; that about 6 percent were employed in the public sector, compared to about 12 percent for the Region and 9 percent for Ozaukee County; and that about 10 percent were self-employed, compared to about 4 percent for the Region and about 6 percent for Ozaukee County. The data further indicate that about 1 percent of Town workers were engaged in unpaid family work, compared to 0.3 percent in the Region and 0.4 percent in the County.

Place of Work

Table 12 shows the place of work of workers 16 years and older living in Ozaukee County and in the Town of Fredonia in 1990. The data indicate that for the Town of Fredonia 654 persons, or about 64 percent of the labor force, worked in Ozaukee County; 379 workers, or

Table 10

**EMPLOYED PERSONS 16 YEARS OF AGE AND OLDER BY OCCUPATION IN THE
SOUTHEASTERN WISCONSIN REGION, OZAUKEE COUNTY, AND THE TOWN OF FREDONIA: 1990**

Occupation	Southeastern Wisconsin Region		Ozaukee County		Town of Fredonia	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Managerial and Professional Specialty Executive, Administrative, Managerial	103,680	11.7	6,211	15.9	67	6.3
Professional Specialty	122,673	13.9	6,046	15.5	78	7.3
Technical, Sales, and Administrative Support Technicians and Related Support	31,301	3.5	1,131	2.9	31	2.9
Sales	103,033	11.7	5,100	13.0	57	5.4
Administrative Support, including Clerical	150,205	17.0	5,682	14.5	140	13.2
Service Occupations Private Households	1,728	0.2	128	0.3	0	0.0
Protective Service	12,724	1.4	278	0.7	3	0.3
Service, except Protective and Household	98,458	11.2	3,696	9.4	122	11.5
Farming, Forestry, and Fishing	9,288	1.1	661	1.7	105	9.9
Precision Production, Craft and Repair	103,690	11.7	4,898	12.5	213	20.0
Operators, Fabricators, and Laborers Machine Operators, Assemblers, Inspectors	80,106	9.1	3,308	8.5	167	15.7
Transportation and Material Moving	32,522	3.7	767	2.0	43	4.0
Handlers, Equipment Cleaners, Helpers, Laborers	33,278	3.8	1,194	3.1	37	3.5
Total	882,716	100.0	39,100	100.0	1,063	100.0

Source: U. S. Bureau of the Census and SEWRPC.

Table 11

**EMPLOYED PERSONS 16 YEARS OF AGE AND OLDER BY CLASS OF WORKER IN THE
SOUTHEASTERN WISCONSIN REGION, OZAUKEE COUNTY, AND THE TOWN OF FREDONIA: 1990**

Class of Worker	Southeastern Wisconsin Region		Ozaukee County		Town of Fredonia	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Private Wage and Salary Worker	739,155	83.6	33,111	84.7	876	82.4
Federal Government Worker	15,469	1.8	447	1.1	10	0.9
State Government Worker	16,486	1.9	459	1.2	16	1.5
Local Government Worker	69,564	7.9	2,604	6.7	42	4.0
Self-Employed Worker	39,608	4.5	2,323	5.9	107	10.1
Unpaid Family Worker	2,424	0.3	156	0.4	12	1.1
Total	882,716	100.0	39,100	100.0	1,063	100.0

Source: U. S. Bureau of the Census and SEWRPC.

Table 12

**PLACE OF WORK OF WORKERS 16 YEARS OF AGE AND OLDER
LIVING IN OZAUKEE COUNTY AND THE TOWN OF FREDONIA: 1990**

Place of Work	Ozaukee County		Town of Fredonia	
	Number of Workers	Percent of Total	Number of Workers	Percent of Total
Ozaukee County	19,592	50.1	654	64.3
Milwaukee County				
City of Milwaukee	9,887	25.3	129	12.1
City of Glendale	1,346	3.4	12	1.1
City of Wauwatosa	599	1.5	10	0.9
City of West Allis	412	1.1	4	0.4
Remainder of Milwaukee County	2,498	6.4	17	1.6
Subtotal	14,742	37.7	172	16.2
Waukesha County				
City of Brookfield	491	1.3	8	0.8
City of Waukesha	404	1.0	6	0.6
Remainder of Waukesha County	1,230	3.1	7	0.7
Subtotal	2,125	5.4	21	2.0
Washington County				
City of West Bend	424	1.1	56	5.3
Remainder of Washington County	592	1.5	34	3.2
Subtotal	1,016	2.6	91	8.5
Worked Elsewhere	1,626	4.2	95	8.9
Total	39,100	100.0	1,063	100.0

Source: U. S. Bureau of the Census and SEWRPC.

about 36 percent, worked outside the County. The significant number of workers employed outside Ozaukee County leads to the conclusion that the Town of Fredonia functions largely as a "bedroom" community.

Employment Forecasts

Table 13 sets forth the future employment levels for the Town of Fredonia to the year 2010 under the range of future scenarios for the following six major employment categories: retail trade; service; industry; institution, government, and education; transportation, communication, and utilities; and agriculture. Each of these employ-

ment categories may be related to specific land use requirements, and is, therefore, useful in the allocation of land to various land use categories such as commercial, industrial, and governmental uses. Under the selected growth scenario, employment in the Town may be expected to increase from about 529 jobs in 1990 to about 552 jobs by the year 2010, distributed as follows: about 24 percent in retail trade; about 22 percent in service; about 10 percent in industry; about 14 percent in government and education; about 3 percent in the transportation, communications, utilities; and about 27 percent in agriculture.

Table 13

ACTUAL AND FORECAST EMPLOYMENT BY TYPE IN THE TOWN OF FREDONIA: 1970, 1980, 1990, AND 2010

Year	Employment Type						
	Retail Trade ^a	Service ^b	Industry ^c	Institution, Government, and Education	Transportation, Communication, and Utilities ^d	Agriculture ^e	Total
1970	57	113	55	73	14	138	450
1980	114	113	55	73	14	138	507
1990	127	116	56	75	14	141	529
2010 Forecast							
Low-Growth Forecast	128	117	56	76	14	142	533
Intermediate-Growth Centralized Forecast	130	118	57	77	14	144	540
Intermediate-Growth Decentralized Forecast	133	121	58	78	15	147	552
High-Growth Forecast	190	174	84	112	21	147	728

^aIncludes grocery, drug, variety, clothing, and other retail store workers.

^bIncludes self-employed persons; workers in finance, insurance, and real estate; hotel and motel workers; day care workers; barbers and hairdressers; and other service workers.

^cIncludes manufacturing, construction, and wholesale trade workers.

^dIncludes utility company workers; postal workers; and bus, trucking, and railroad workers.

^eIncludes farmers, miners, forestry workers, and landscaping and nursery workers.

Source: U. S. Bureau of Economic Analysis and SEWRPC.

SUMMARY AND CONCLUSIONS

This chapter has described the demographic and economic base of the Town of Fredonia and of Ozaukee County and of the seven-county Southeastern Wisconsin Region of which the Town is an integral part. Of particular significance to the preparation of the Town of Fredonia land use plan are the following findings and conclusions relative to that base:

1. Following two decades of rapid growth in the 1950s and 1960s, the resident population of the Southeastern Wisconsin Region remained relatively stable from 1970 to 1990, increasing from 1,756,083 to 1,810,364, or about 3 percent, during the 20-year period. By way of contrast, the resident population of Ozaukee County from 1970 to 1990 increased from 54,461 to 72,831, or by about 34 percent. This higher growth rate in Ozaukee County than in the Region is evidence that population of the seven-county Region is decentralizing.
2. From 1970 to 1990, the resident population of the Town of Fredonia increased from 1,746 to 2,043, or by about 17 percent. Accordingly, the rate of growth in the Town was significantly higher than that of

the Region, but significantly lower than that of the County. All of the population increase in the Town over this 20-year period occurred between 1970 and 1980; the population of the Town declined slightly from 1980 to 1990.

3. From 1970 to 1990, occupied housing units in the Southeastern Wisconsin Region increased from 536,486 to 676,107, or by about 26 percent. By way of contrast, occupied housing units in Ozaukee County during the same period increased from 14,753 to 25,707, or by about 74 percent. From 1970 to 1990, occupied housing units in the Town of Fredonia increased from 440 to 641, or by about 46 percent.
4. The average household size in the Southeastern Wisconsin Region was 2.62 persons in 1990, compared to 3.20 persons in 1970. In Ozaukee County, the average household size was 2.79 persons in 1990, compared to 3.66 persons in 1970. In the Town of Fredonia, the average household size was 3.19 persons in 1990, compared to 3.94 persons in 1970. Given even a stable population, a decline in household size will contribute to a need for additional housing units and for supporting public facilities and services.

5. Jobs in the Southeastern Wisconsin Region increased from 748,900 to 990,300, or by about 32 percent, from 1970 to 1990. Jobs in Ozaukee County increased from 19,337 to 32,200, or by about 67 percent, over that same period. Jobs in the Town of Fredonia from 1970 to 1990 increased from 450 to 529, or by about 18 percent. This indicates that employment, as well as population, is decentralizing in Southeastern Wisconsin.
6. The population of the Southeastern Wisconsin Region may be expected to increase to about 1.9

million by the year 2010. The population of Ozaukee County may be expected to increase to about 93,000 by the year 2010. The population of the Town of Fredonia may be expected to increase to about 2,670 by the plan design year 2010, an increase of about 31 percent over the 1990 level. The number of occupied housing units within the Town may be expected to increase to about 905 by the plan design year 2010, or by about 41 percent, over the 1990 level. The number of jobs within the Town may be expected to increase to about 550, or about 4 percent, over the 1990 level.

Chapter III

NATURAL RESOURCE BASE INVENTORY AND ANALYSIS

INTRODUCTION

The conservation and wise use of the natural resource base is vital to the physical, social, and economic development of any area and to the continued ability of the area to provide a pleasant and habitable environment for life. Uncontrolled or rapid urban development may be expected to subject the natural resource base of an area to substantial deterioration and even destruction in the absence of sound planning and plan implementation. Consequently, a sound development plan for the Town of Fredonia should identify areas which have concentrations of natural resources deserving of protection from intensive urban development. The plan should also identify areas with natural resource characteristics which could impose severe limitations on urban development.

For the purposes of this planning effort, the principal elements of the natural resource base were defined as 1) soils and topography, 2) water resources, including streams and lakes and associated floodlands, 3) wetlands, (4) woodlands, 5) prairies, and 6) wildlife habitat areas. Elements closely related to the natural resource base include 1) scenic overlooks, 2) park and open space sites, and 3) natural areas of scientific value.

Areas of the landscape which contain concentrations of the natural resource base elements described above have been identified and termed "environmental corridors" by the Regional Planning Commission. The environmental corridors encompass those areas in Southeastern Wisconsin in which concentrations of recreational, aesthetic, ecological, and cultural resources occur, and which, therefore, should be preserved and protected in essentially natural, open uses.

Without a proper understanding and recognition of the elements of the natural resource base, human use and alteration of the natural environment proceeds at the risk of excessive costs in terms of both monetary expenditures and environmental degradation. The natural resource base is highly vulnerable to misuse through improper land development. Such misuse may lead to severe environmental problems which are difficult and costly to correct and even to the deterioration and destruction of the natural

resource base itself. Intelligent selection of the most desirable urban development plan from among the alternatives available must, therefore, be based in part upon a careful assessment of the effects of each alternative upon the natural resource base.

The following discussion summarizes the inventory findings with respect to the natural resources of the planning area, which includes the Town of Fredonia and the Village of Fredonia.

SOILS AND TOPOGRAPHY

Soils

Soil properties exert a strong influence on the manner in which people use land. Soils are an irreplaceable resource; mounting pressures upon land are constantly making this resource more and more valuable. A need exists, therefore, in any planning effort, to examine, not only how land and soils are currently used, but also how they can best be used and managed for future use. This requires a detailed soil survey which maps the geographic locations of various types of soils; identifies their physical, chemical, and biological properties; and interprets those properties for planning for land use and public facilities. A soil survey of the Southeastern Wisconsin Region was completed in 1965 by the U. S. Department of Agriculture, Soil Conservation Service,¹ under contract to the Regional Planning Commission. The results of the survey are contained in SEWRPC Planning Report No. 8, *Soils of Southeastern Wisconsin*, June 1966, and in five reports published by the Soil Conservation Service. Soil survey information for the Town of Fredonia planning area is included in the *Soil Survey of Ozaukee County, Wisconsin*, published by the Soil Conservation Service in 1970.

The information on soils presented here is a particularly important consideration in the preparation of the land use plan for the Town of Fredonia because it is essential for the proper analysis of existing land use patterns,

¹Now called the U. S. Department of Agriculture, Natural Resources Conservation Service.

alternative plan design and evaluation, and plan selection. Soil limitations for residential development with and without public sanitary sewers are particularly important factors in the preparation of the land use plan. Among the most important land uses influenced by soil properties are residential development with public sanitary sewers and residential development with onsite sewage disposal systems. The most significant soil properties related to domestic sewage disposal are depth to bedrock, depth to water table, permeability, presence of coarse-textured sands and gravels or stones, flooding hazards, and slopes.

Soil Suitability for Development Using Onsite Sewage Disposal Systems

When the regional soil survey was conducted in 1965, disposal of domestic sewage was primarily based on use of conventional septic tanks. Since then, alternative onsite sewage disposal systems have been designed, field tested, and, in some cases, approved by regulatory agencies for use under more limiting soil conditions than those for which conventional systems would be acceptable. Chapter Comm 83 of the Wisconsin Administrative Code, which governs the siting and design of onsite sewage disposal systems, was also adopted after the detailed regional soil survey.

As part of the year 2010 regional land use planning effort, the Regional Planning Commission reviewed and, as necessary, revised the soil classifications developed as a result of the 1965 soil survey to reflect current technology and regulatory practice. Soil classifications were developed to reflect suitability for conventional onsite sewage disposal systems and the most common alternative onsite sewage disposal system, the mound system, in accordance with the soil and site specifications set forth in Comm 83. The revised classifications were based on soil characteristics indicated in the detailed soil surveys as well as on the actual field experience of county and State technicians responsible for overseeing the location and design of such systems.

Maps 10 and 11 show the suitability of soils in the planning area for onsite sewage disposal systems on the basis of State requirements. Specifically, Map 10 shows the suitability of soils in the planning area for conventional onsite systems and Map 11 shows the suitability of soils for mound systems. Areas shown as "suitable" on Maps 10 and 11 depict areas covered by soils which have a high probability of meeting State requirements for the applicable onsite system. Areas shown as "unsuitable" depict areas covered by soils which have a high probability of not meeting State requirements for the applicable

onsite system. Areas shown as "undetermined" include soils which span the range from unsuitable to suitable for characteristics which affect the operation of onsite systems, so that no classification can be assigned. For instance, such soils may exhibit a wide range of slopes or a wide range of percolation rates. Areas shown as "unclassified" are disturbed areas, such as quarries and gravel pits, for which no interpretive data is available.

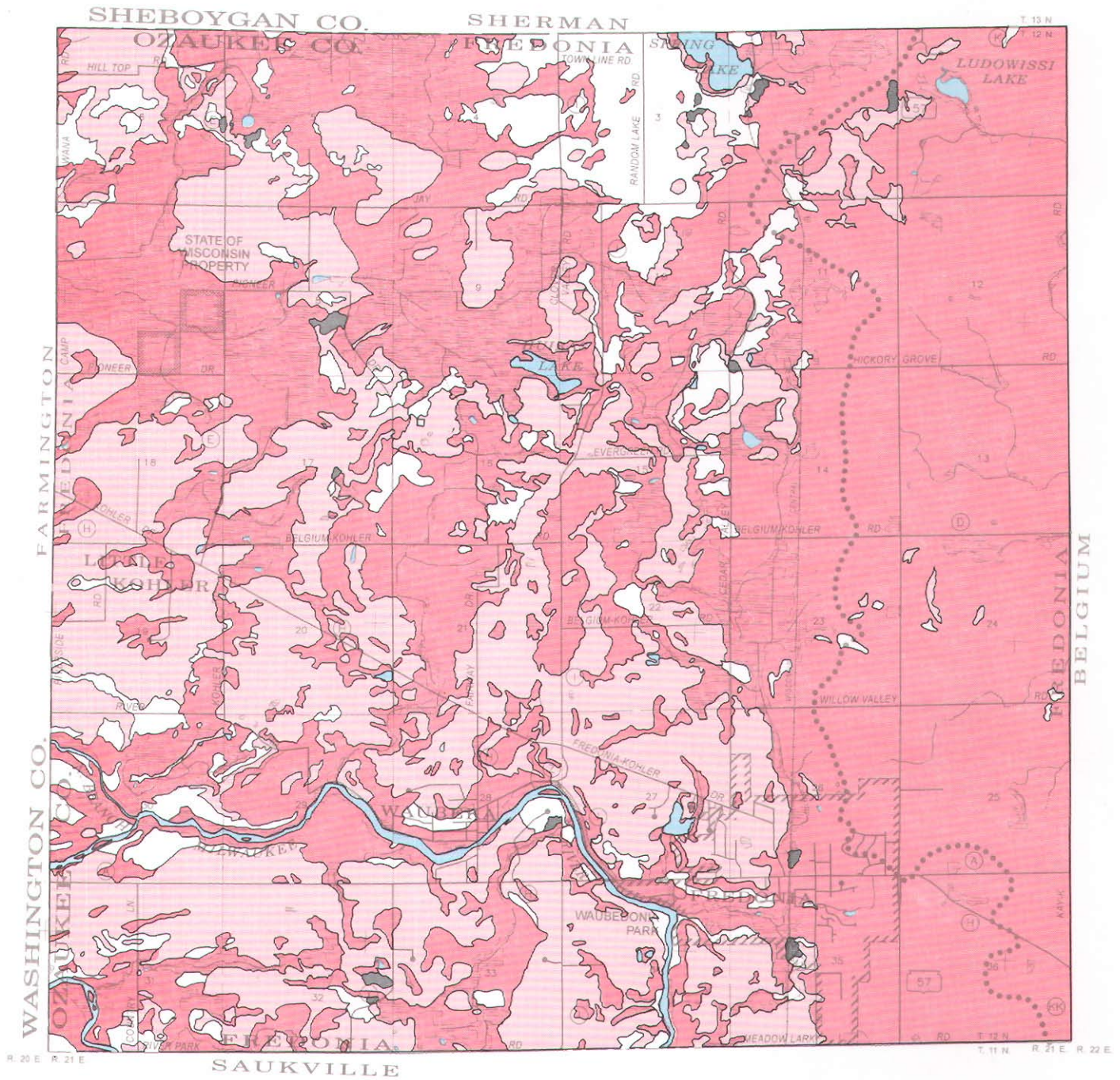
It should be recognized that Maps 10 and 11 are intended to illustrate the overall pattern of soil suitability for onsite systems. Detailed site investigations based on the requirements of Chapter Comm 83 are necessary to determine if the soils on a specific tract of land are suitable for development proposed to be served by onsite sewage disposal systems.

Map 10 indicates that about 21.6 square miles, or about 60 percent of the planning area, are covered by soils which are unsuitable for the use of conventional onsite sewage disposal systems. These soils are distributed relatively uniformly throughout the planning area, but primarily in association with streams, floodlands, wetlands, and other low-lying areas. Areas covered by soils suitable for conventional onsite systems, also shown on Map 10, encompass about 3.2 square miles, or about 9 percent of the planning area. Suitable areas are concentrated in the extreme northern portion of the Town of Fredonia, near Spring Lake. About 11.1 square miles, or about 30 percent of the planning area, are covered by soils whose suitability or unsuitability for conventional onsite systems cannot be determined without onsite investigation. About 0.5 square mile, or about 1 percent of the planning area, is covered by surface water or soils which have not been classified.

The general pattern of soil suitability for mound sewage disposal systems is shown on Map 11. Approximately 12.9 square miles, or about 36 percent of the planning area, are covered by soils which are unsuitable for mound systems, as compared to approximately 60 percent which are unsuitable for conventional systems. Soils shown on Map 11 as suitable for mound systems encompass approximately 14.1 square miles, or about 39 percent of the planning area, while only 9 percent of the planning area is classified as suitable for conventional systems. About 8.9 square miles, or about 24 percent of the planning area, are covered by soils whose suitability or unsuitability for mound systems cannot be determined without onsite investigation. About 0.5 square mile, or about 1 percent of the planning area, is covered by surface water or soils which have not been classified.

Map 10

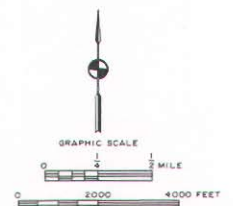
**SUITABILITY OF SOILS FOR CONVENTIONAL ONSITE
SEWAGE DISPOSAL SYSTEMS IN THE TOWN OF FREDONIA PLANNING AREA**



LEGEND

- UNSUITABLE:** AREAS COVERED BY SOILS WHICH HAVE A HIGH PROBABILITY OF NOT MEETING THE CRITERIA OF CHAPTER COMM 83 OF THE WISCONSIN ADMINISTRATIVE CODE GOVERNING CONVENTIONAL ONSITE SEWAGE DISPOSAL SYSTEMS
- UNDETERMINED:** AREAS COVERED BY SOILS HAVING A RANGE OF CHARACTERISTICS AND/OR SLOPES WHICH SPAN THE CRITERIA OF CHAPTER COMM 83 OF THE WISCONSIN ADMINISTRATIVE CODE GOVERNING ONSITE SEWAGE DISPOSAL SYSTEMS SO THAT NO CLASSIFICATION CAN BE ASSIGNED
- SUITABLE:** AREAS COVERED BY SOILS HAVING A HIGH PROBABILITY OF MEETING THE CRITERIA OF CHAPTER COMM 83 OF THE WISCONSIN ADMINISTRATIVE CODE GOVERNING CONVENTIONAL ONSITE SEWAGE DISPOSAL SYSTEMS
- OTHER:** AREAS CONSISTING FOR THE MOST PART OF DISTURBED LAND FOR WHICH NO INTERPRETIVE DATA ARE AVAILABLE
- SURFACE WATER**

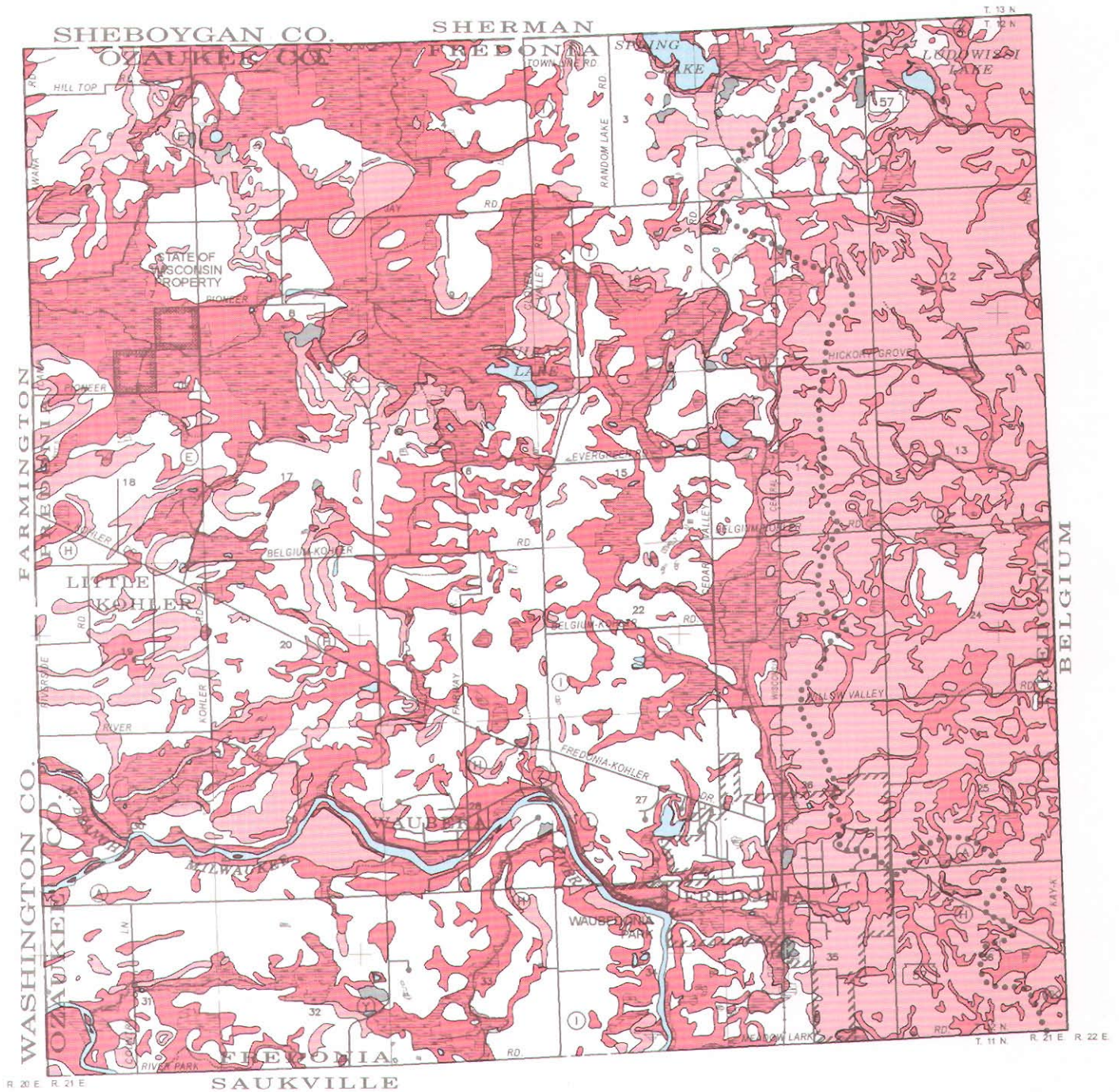
NOTE: ONSITE INVESTIGATIONS ARE ESSENTIAL TO THE DETERMINATION OF WHETHER ANY SPECIFIC TRACT OF LAND IS SUITABLE FOR DEVELOPMENT SERVED BY A CONVENTIONAL SEWAGE DISPOSAL SYSTEM



Source: Wisconsin Department of Industry, Labor and Human Relations; U. S. Natural Resources Conservation Service; and SEWRPC.

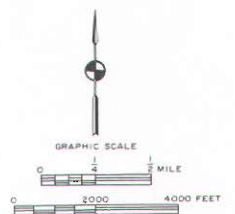
Map 11

SUITABILITY OF SOILS FOR MOUND ONSITE
SEWAGE DISPOSAL SYSTEMS IN THE TOWN OF FREDONIA PLANNING AREA



LEGEND

- UNSUITABLE: AREAS COVERED BY SOILS WHICH HAVE A HIGH PROBABILITY OF NOT MEETING THE CRITERIA OF CHAPTER COMM 83 OF THE WISCONSIN ADMINISTRATIVE CODE GOVERNING MOUND SEWAGE DISPOSAL SYSTEMS
- UNDETERMINED: AREAS COVERED BY SOILS HAVING A RANGE OF CHARACTERISTICS AND/OR SLOPES WHICH SPAN THE CRITERIA OF CHAPTER COMM 83 OF THE WISCONSIN ADMINISTRATIVE CODE GOVERNING MOUND SEWAGE DISPOSAL SYSTEMS SO THAT NO CLASSIFICATION CAN BE ASSIGNED
- SUITABLE: AREAS COVERED BY SOILS HAVING A HIGH PROBABILITY OF MEETING THE CRITERIA OF CHAPTER COMM 83 OF THE WISCONSIN ADMINISTRATIVE CODE GOVERNING MOUND SEWAGE DISPOSAL SYSTEMS
- OTHER: AREAS CONSISTING FOR THE MOST PART OF DISTURBED LAND FOR WHICH NO INTERPRETIVE DATA ARE AVAILABLE
- SURFACE WATER



Source: Wisconsin Department of Industry, Labor and Human Relations; U. S. Natural Resources Conservation Service; and SEWRPC.

In general, areas covered by soils which are unsuitable for both conventional and mound sewage disposal systems should not be considered for urban development unless public sanitary sewers are provided.

Soil Suitability for Development with Public Sanitary Sewers

Map 12 shows the areas covered by soils with severe limitations for residential development served by public sanitary sewer facilities. These limitations are due to such soil properties as high water tables, slow permeability rates, erosive slopes, low bearing capacity, high shrink-swell potential, and frost-heave potential. These soils are found throughout the planning area, but primarily in association with streams, floodlands, wetlands, and other low-lying areas. The development of these areas for residential use requires particularly careful planning and above-average design and management to overcome the limitations; such development may be expected to be more costly and difficult than in areas covered by more suitable soils.

Map 12 indicates that about 11.6 square miles, or about 32 percent of the planning area, are covered by soils which have severe limitations for residential development served by public sanitary sewers. About 0.5 square mile, or about 1 percent of the planning area, is covered by surface water or soils which have not been classified. The remaining soils, encompassing about 24.3 square miles, or about 67 percent of the planning area, have slight or moderate limitations for development served by public sanitary sewerage.

Soils Well Suited for Agricultural Use

Prime agricultural lands have been defined as those lands which are well suited for agricultural use and which meet specific criteria regarding agricultural soil capabilities and farm size. These criteria include the following: 1) the farm unit must be at least 35 acres in size, 2) at least 50 percent of the farm unit must be covered by soils which meet U. S. Natural Resources Conservation Service standards for national prime farmland or farmland of Statewide importance, and 3) the farm unit must be located in a block of farmland at least 100 acres in size. Areas which met these criteria within the Town of Fredonia planning area in 1990 are shown on Map 13. In 1990, about 13,722 acres, or about 59 percent of the planning area, were classified as prime agricultural land.

The rapid conversion of farmland to urban uses has become a matter of increasing public concern. Partly in response to this concern, the Wisconsin Legislature in 1977 adopted a law commonly known as the "Farmland

Preservation Act." It is designed to encourage individuals in local units of government to take action toward preservation of the State's farmland. Under the Act, owners of farmland zoned for exclusive agricultural use become eligible for tax relief in the form of a State income-tax credit. This legislation has resulted in increased interest in farmland preservation planning. A farmland preservation plan has been prepared for Ozaukee County by the Regional Planning Commission, set forth in SEWRPC Community Assistance Planning Report No. 87, *A Farmland Preservation Plan for Ozaukee County, Wisconsin*, May 1983. This Plan as it relates to the Town of Fredonia planning area is illustrated on Map 7 in Chapter I.

Soils Well Suited as a Source of Sand and Gravel

Sand and gravel are an important economic resource which should be carefully husbanded. The regional soil survey provides an indication of the location of potential commercially workable sand and gravel deposits. The regional soil survey rates soil mapping units as either "probable" or "improbable" sources of sand and gravel. The rating is intended only to show the probability of the presence of material of suitable quality in workable quantities. As shown on Map 14, about 11.5 square miles, or about 32 percent of the total planning area, are in soil mapping units which have been identified as probable sources of sand and gravel. These areas occur primarily in the south-central and north-central areas of the Town.

Topography

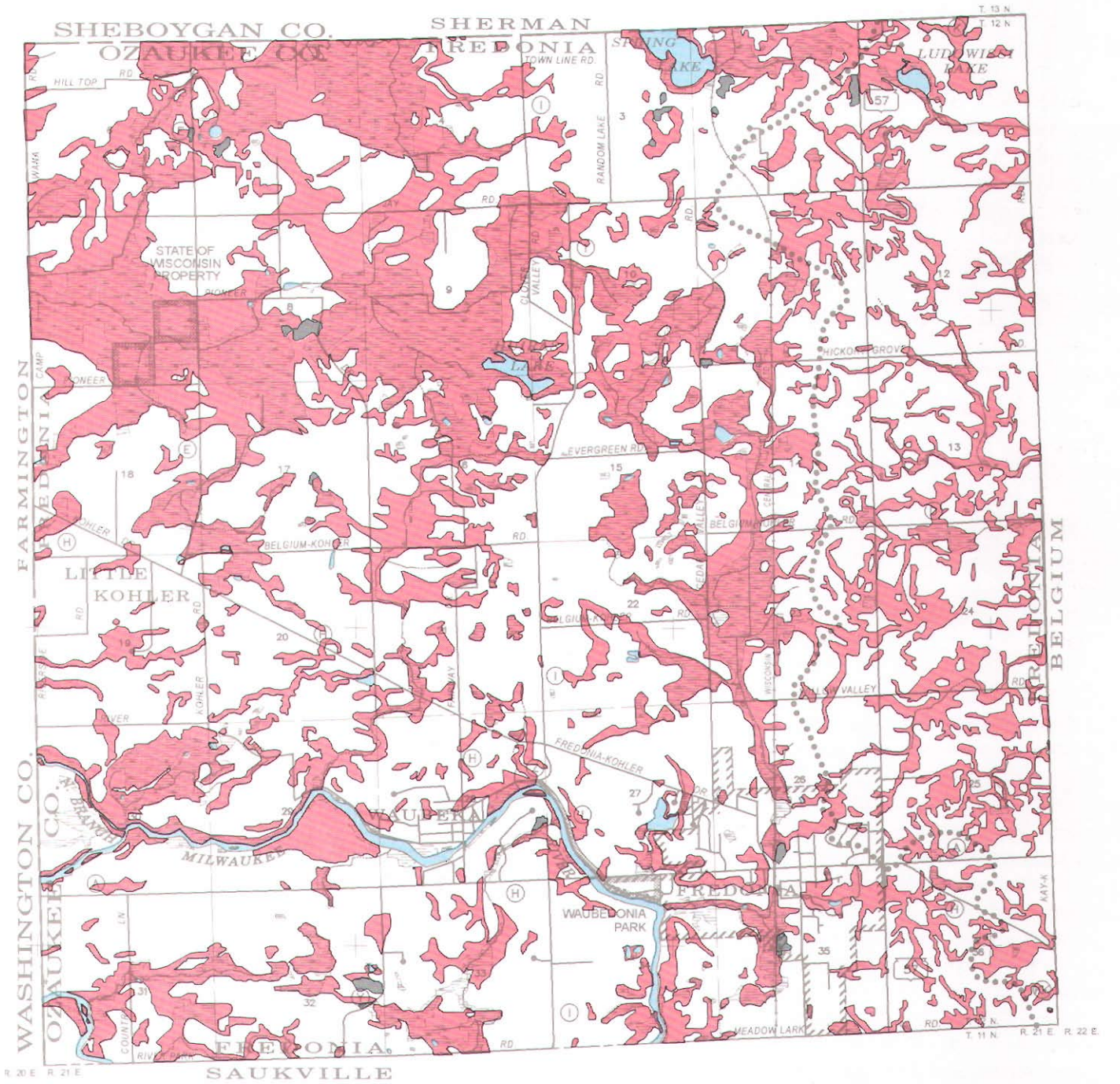
The topography, or relative elevation of the land surface, within the Town of Fredonia planning area has been determined by the configuration of the bedrock geology and by the overlying glacial deposits. In general, the topography of the planning area is characterized by rounded hills or groups of hills, ridges, broad undulating plains, and poorly drained wetlands.

Steep Slopes

Slope is an important determinant of the land uses practicable on a given parcel of land. Lands with steep slopes are generally poorly suited for urban development as well as for most agricultural purposes and, therefore, should be maintained in natural cover for erosion control. Lands with less severe slopes may be suitable for certain agricultural uses, such as pasturage, and for certain urban uses, such as carefully designed rural-density residential areas. Lands which are gently sloping or nearly level are best suited to agricultural production and to high-density residential, industrial, or commercial uses. It should also be noted that slope is directly related to water runoff and erosion hazards and, therefore, the type and

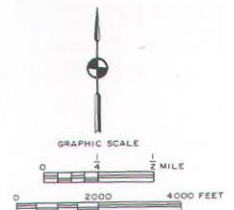
Map 12

**SUITABILITY OF SOILS FOR RESIDENTIAL DEVELOPMENT WITH PUBLIC
SANITARY SEWER SERVICE IN THE TOWN OF FREDONIA PLANNING AREA**



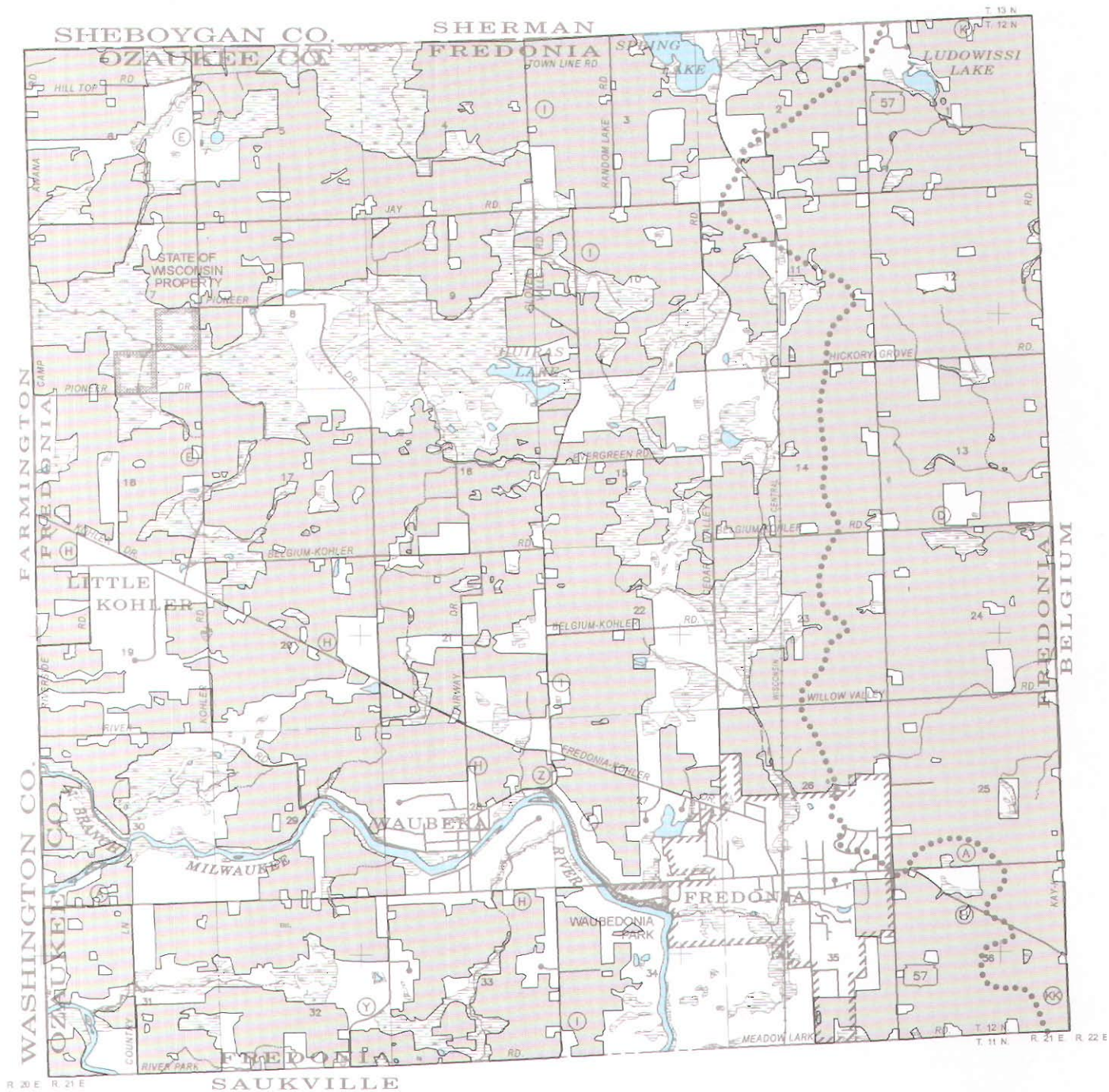
LEGEND

- AREAS COVERED BY SOILS HAVING SEVERE LIMITATIONS FOR RESIDENTIAL DEVELOPMENT WITH PUBLIC SANITARY SEWER SERVICE
- OTHER SOILS
- UNCLASSIFIED
- SURFACE WATER



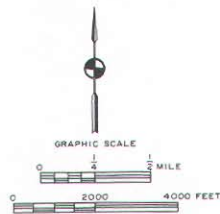
Source: U. S. Natural Resources Conservation Service and SEWRPC.

PRIME AGRICULTURAL LANDS IN THE TOWN OF FREDONIA PLANNING AREA: 1990



LEGEND

-  PRIME AGRICULTURAL AREAS
-  SURFACE WATER



Source: SEWRPC.

AREAS WHERE SOIL SURVEY DATA INDICATE THAT POTENTIAL SAND AND GRAVEL DEPOSITS MAY OCCUR IN THE TOWN OF FREDONIA PLANNING AREA



extent of both urban and rural land uses should be carefully adjusted to the slope of the land. In general, slopes of 12 percent or more should be considered unsuitable for urban development and most types of agricultural land uses and, therefore, should be maintained in essentially natural, open uses.

Map 15 provides a slope analysis of the planning area. This analysis serves to identify areas with slopes ranging from 0 to 11 percent, 12 to 20 percent, and greater than 20 percent. Approximately 3.9 square miles, or about 10 percent of the planning area, have slopes of 12 percent or more. Such areas present major difficulties in the preparation of the areas for development and generally require excessive grading, which destroys the natural cover, including any tree growth. Areas with slopes of 12 percent or more are poorly suited for urban development, as well as for most agricultural purposes, and should, therefore, be maintained in natural cover for erosion control.

Scenic Overlooks

Scenic overlooks are defined as areas which provide a panoramic or picturesque view. The following are two important components of a scenic overlook: the picturesque view itself, which usually consists of a diversity of natural or cultural features, and the vantage point, or viewpoint, from which to observe the diversity of features. In identifying the scenic overlooks in the Town of Fredonia planning area, the following three criteria were applied: 1) a variety of features to be viewed should exist harmoniously in a natural or rural landscape, 2) there should be one dominant or particularly interesting feature, such as a river or lake, which serves as the focal point of the picturesque view, and 3) the viewpoint should present an unobstructed observation point from which the variety of natural resources can be seen.

A special inventory of scenic overlooks meeting these criteria in the planning area was conducted. Using the best available topographic maps, areas with a relief greater than 30 feet and a slope of 12 percent or greater were identified. Areas of steep slope with a ridge at least 200 feet in length and a view of at least three features, including surface water, wetlands, woodlands, or agricultural lands, within approximately one-half mile of the ridge, were identified as scenic overlooks. In the Town of Fredonia planning area, 34 overlooks were identified, as shown on Map 16.

WATER RESOURCES

Watersheds and Subwatersheds

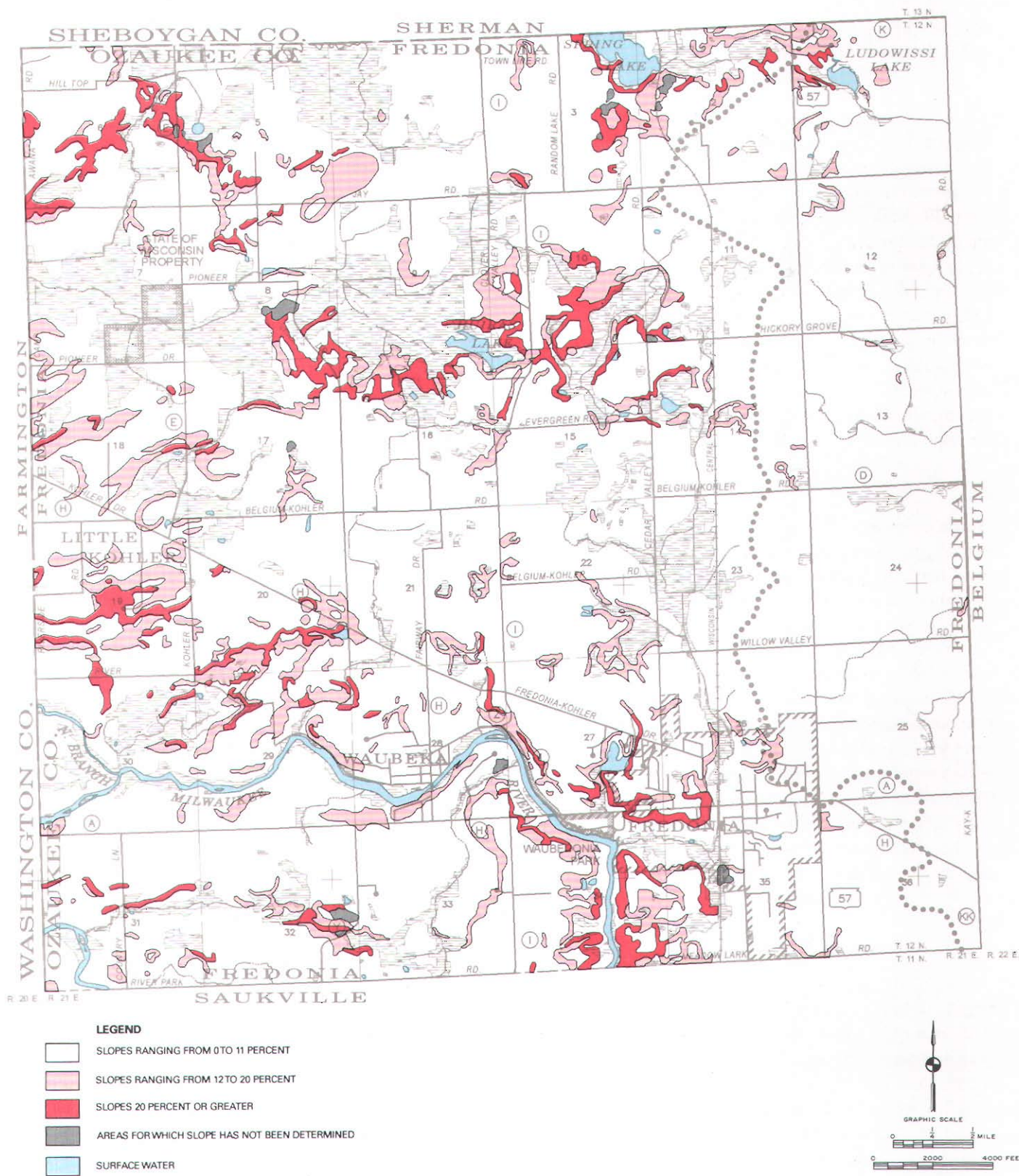
The Town of Fredonia planning area is located within two watersheds. As shown on Map 17, approximately 29 square miles, or about 80 percent, of the planning area are located within the Milwaukee River watershed, with the remaining seven square miles located within the Sauk Creek watershed. While a watershed plan has not been prepared for the Sauk Creek watershed, such a plan has been completed for the Milwaukee River watershed, set forth in SEWRPC Planning Report No. 13, *A Comprehensive Plan for the Milwaukee River Watershed*, Volume One, *Inventory Findings and Forecasts*, December 1970, and Volume Two, *Alternative Plans and Recommended Plan*, October 1971. The Milwaukee River watershed, lying in the western portion of the planning area, is further divided into the following three subwatersheds: the North Branch of the Milwaukee River, the Middle Milwaukee River, and the Upper Lower Milwaukee River, subwatersheds. The Sauk Creek watershed drains only a small area of the eastern edge of the Town along its boundary with the Town of Belgium.

Surface Water Resources

Surface water resources, consisting of lakes, streams, and associated floodlands, form a particularly important element of the natural resource base. Surface water resources influence the physical development, provide recreational opportunities, and enhance the aesthetic quality of the planning area. Lakes and streams constitute a focal point for water-related recreational activities; provide an attractive setting for residential development; and, when viewed in the context of open space areas, greatly enhance the aesthetic quality of the environment. Lakes and streams are readily susceptible to degradation through improper land use development and management. Water quality can be degraded by excessive pollutant loads, including nutrient loads; by malfunctioning and improperly located onsite sewage disposal systems; by sanitary sewer overflows; by urban runoff, including runoff from construction sites; and by careless agricultural practices. The water quality of lakes and streams may also be adversely affected by the excessive development of riparian areas in combination with the filling of peripheral wetlands, which remove valuable nutrient and sediment traps while adding nutrient and sediment sources. Surface water resources in the planning area are shown on Map 17 and are described in more detail in the following paragraphs.

Map 15

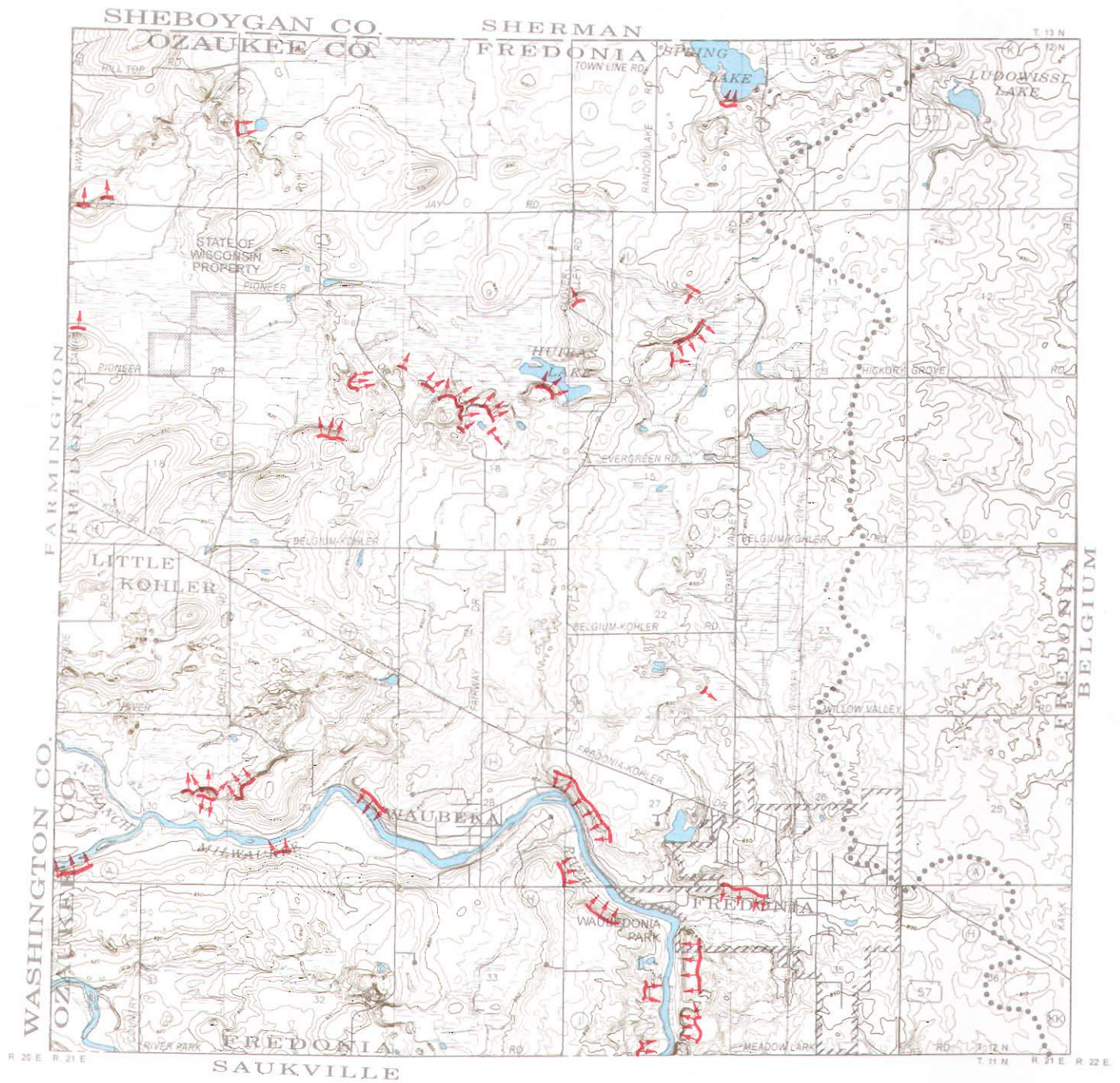
SLOPE ANALYSIS FOR THE TOWN OF FREDONIA PLANNING AREA






Source: U. S. Natural Resources Conservation Service and SEWRPC.

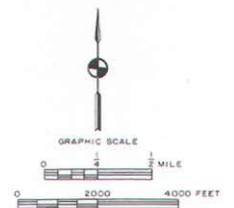
Map 16

TOPOGRAPHY AND SCENIC OVERLOOKS IN THE TOWN OF FREDONIA PLANNING AREA



LEGEND

-  CONTOUR INTERVAL LINES (10 FEET)
-  SCENIC OVERLOOK AND DIRECTION OF VIEW
-  SURFACE WATER



Source: SEWRPC.

Lakes

Lakes have been classified by the Regional Planning Commission as being either major or minor. Major lakes have 50 acres or more of surface water area; minor lakes have less than 50 acres of surface water area. The only major lake in the Town of Fredonia is Spring Lake, lying in the Milwaukee River watershed. Minor lakes include Huiras Lake in the Milwaukee River watershed and Ludowissi Lake in the Sauk Creek watershed. There are, in addition, a limited number of smaller, generally unnamed lakes and ponds in the planning area.

Streams

Streams are classified as either perennial or intermittent. Perennial streams are defined as watercourses which maintain, at a minimum, a small continuous flow throughout the year except under unusual drought conditions. Intermittent streams are defined as watercourses which do not maintain a continuous flow throughout the year. Major streams in the Town of Fredonia planning area include the Milwaukee River, flowing from west to east to south through the lower one-third of the Town, with a length of approximately 5.5 miles; the North Branch Milwaukee River, flowing eastward to its confluence with the Milwaukee River in U. S. Public Land Survey Section 30, with a length of approximately 0.8 mile; and the Middle Milwaukee River, flowing from south to north in U. S. Public Land Survey Sections 30 and 31, with a length of approximately 1.3 miles.

Floodlands

The floodlands of a stream are the wide, gently sloping areas contiguous to, and usually lying on both sides of, the stream channel. For planning and regulatory purposes, floodlands are normally defined as those areas, excluding the stream channel, subject to inundation by the 100-year recurrence interval flood event. This is the flood which may be expected to be reached or exceeded in severity once in every 100 years, or, stated another way, there is a 1 percent chance of this event being reached or exceeded in severity in any given year. Floodland areas are generally not well suited to urban development, not only because of the flood hazard, but also because of the presence of high water tables and, generally, of soils poorly suited to urban uses. The floodland areas also generally contain such important elements of the natural resource base as high-value woodlands, wetlands, and wildlife habitat and, therefore, constitute prime locations for parks and open space areas. Every effort should be made to discourage urban development on floodlands, while encouraging park and open space uses.

Within the Milwaukee River watershed portion of the Town of Fredonia planning area, floodlands were originally delineated by the Regional Planning Commission in the Milwaukee River watershed study. The findings and recommendations of that study are set forth in SEWRPC Planning Report No. 13, *A Comprehensive Plan for the Milwaukee River Watershed*, mentioned previously. In 1991, the Milwaukee River watershed floodland data were reviewed and updated, as necessary, by the Federal Emergency Management Agency (FEMA) when that agency completed a new flood insurance study for Ozaukee County.

With respect to that portion of the Town of Fredonia planning area lying in the Sauk Creek watershed, the Regional Planning Commission has not completed a watershed study. While the 1991 FEMA flood insurance study did include floodland data for selected streams in the Sauk Creek watershed, the stream reaches studied do not extend into the planning area. Accordingly, floodlands have not been delineated for that portion of the Sauk Creek watershed within the Town of Fredonia planning area.

The location and extent of the delineated floodlands in the Town of Fredonia planning area are shown on Map 17. These floodlands are regulated by Ozaukee County under State-mandated, Countywide floodland and shoreland zoning. About 3.9 square miles, or about 11 percent of the total planning area, were located within the 100-year recurrence interval flood hazard area, including affected surface water areas.

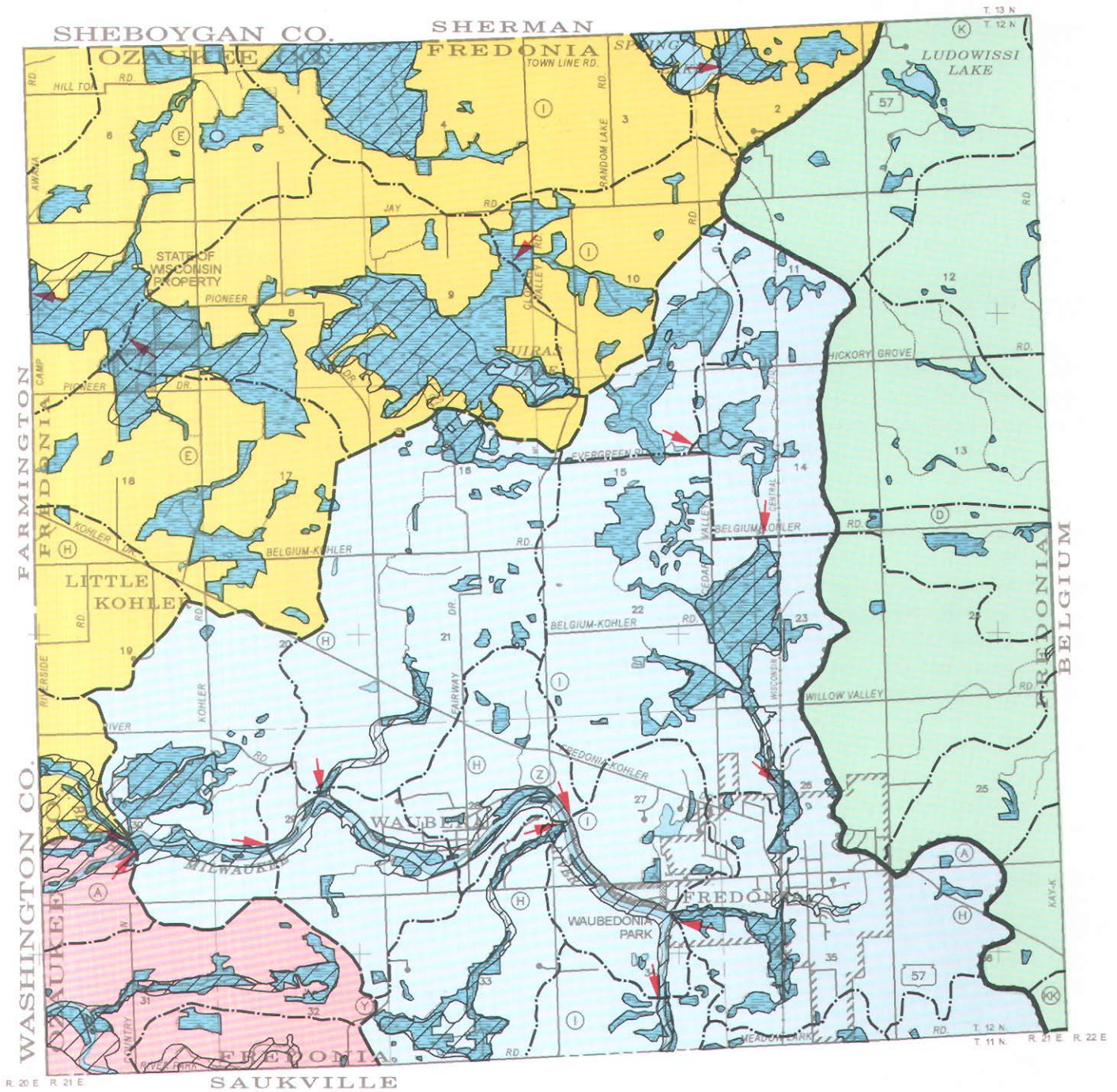
Wetlands

Wetlands are defined as areas which are inundated or saturated by surface or groundwater at a frequency, and with a duration sufficient to support, and which under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands include swamps, marshes, bogs, and similar areas. As shown on Map 17, wetlands cover about 5.0 square miles, or about 14 percent, of the Town of Fredonia planning area. It should be noted that such areas as tamarack swamps and other lowland wooded areas are classified as wetlands, rather than woodlands, because the water table is at, near, or above the land surface; such areas are also generally characterized by hydric soils, which support hydrophytic (water-loving) trees and shrubs.

Wetlands are generally unsuitable, or poorly suited, for most agricultural or urban uses. Wetlands, however, have important recreational and ecological values. Wet

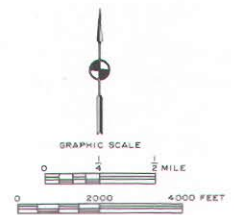
Map 17

**SURFACE WATER, WETLANDS, FLOODLANDS, AND WATERSHED
FEATURES IN THE TOWN OF FREDONIA PLANNING AREA**



LEGEND

- | | |
|---|---|
| — WATERSHED BOUNDARY | SAUK CREEK WATERSHED |
| - - - SUBWATERSHED BOUNDARY | |
| - - - SUBBASIN BOUNDARY | SUBWATERSHEDS OF MILWAUKEE RIVER WATERSHED |
| ➔ DIRECTION OF SURFACE DRAINAGE FLOW AT DISCHARGE POINT | UPPER LOWER MILWAUKEE RIVER |
| ▨ 100-YEAR RECURRENCE INTERVAL FLOODLANDS | NORTH BRANCH MILWAUKEE RIVER |
| WETLANDS | MIDDLE MILWAUKEE RIVER |
| SURFACE WATER | |



Source: Federal Emergency Management Agency and SEWRPC.

lands contribute to flood control and water quality enhancement, since such areas naturally serve to store excess runoff temporarily, thereby tending to reduce peak flows and to trap sediments, nutrients, and other water pollutants. Additional important natural functions of wetlands, which make them particularly valuable resources, include the provision of breeding, nesting, resting, and feeding grounds and predator escape cover for many forms of wildlife. In view of the important natural functions of wetland areas, continued efforts should be made to protect these areas by discouraging wetland draining, filling, and urbanization, which can be costly in both monetary and environmental terms.

WOODLANDS

Woodlands are defined as those upland areas one acre or more in size with 17 or more deciduous trees per acre, each measuring at least four inches in diameter at breast height and with 50 percent or more tree canopy coverage. Coniferous tree plantations and reforestation projects are also classified as woodlands. Woodlands have value beyond any monetary return for forest products. Under good management, woodlands can serve a variety of beneficial functions. In addition to contributing to clean air and water and regulating surface water runoff, woodlands can contribute to the maintenance of a diversity of plant and animal life. The existing woodlands in the planning area, which required a century or more to develop, can be destroyed through mismanagement within a comparatively short time. The deforestation of hillsides contributes to rapid stormwater runoff, the siltation of lakes and streams, and the destruction of wildlife habitat. Woodlands, as shown on Map 18, are scattered throughout the planning area. As previously noted, such lowland wooded areas as tamarack swamps were classified as wetlands. Woodland areas covered about 2.2 square miles, or about 6 percent, of the Town of Fredonia planning area. These woodlands should be maintained for their scenic, wildlife habitat, open space, education, recreation, and air and water quality protection values.

WILDLIFE HABITAT

Wildlife in the Town of Fredonia includes such upland game as rabbit and squirrel, such predators as fox and raccoon, such game birds as pheasant, and waterfowl. The remaining wildlife habitat areas provide valuable recreational opportunities and constitute an invaluable aesthetic asset to the planning area. The spectrum of wildlife species originally present in the planning area has, along with the habitat, undergone tremendous alterations since settle-

ment by Europeans and the subsequent clearing of forests and draining of wetlands for agricultural purposes. Modern-day practices which affect wildlife and wildlife habitat include the excessive use of fertilizers and pesticides, road salting, heavy traffic and its disruptive noise levels and damaging air pollution, and the introduction of domestic animals. It is therefore important to protect and preserve remaining wildlife habitat in the planning area.

In 1985, the Regional Planning Commission and the Wisconsin Department of Natural Resources cooperatively conducted an inventory of the Region's wildlife habitat. The results of that inventory, as it pertains to the Town of Fredonia planning area, are shown on Map 19. The inventory identified and delineated the following three classes of wildlife habitat: 1) Class I, defined as wildlife habitat areas containing a good diversity of wildlife, large enough to provide all the habitat requirements for each species, and generally located near other wildlife habitat areas, 2) Class II, defined as wildlife areas lacking one of the three criteria necessary for a Class I designation, and 3) Class III, defined as wildlife habitat areas which are generally remnant in nature and lack two of the three criteria for Class I designation.

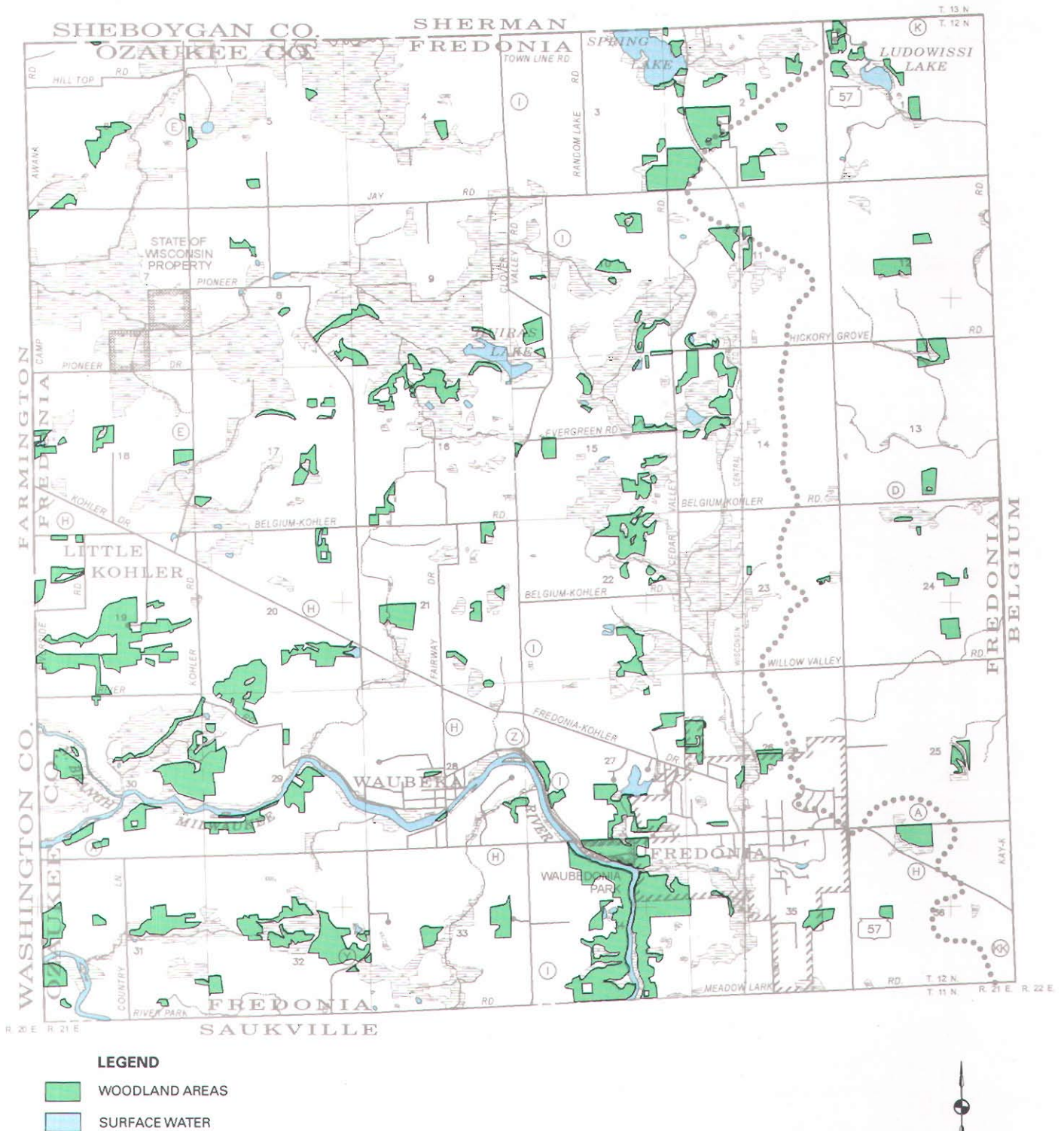
As shown on Map 19, wildlife habitat areas in the planning area generally occur in association with existing surface water, wetland, and woodland resources and in 1985 covered about 9.2 square miles, or about 25 percent of the Town of Fredonia planning area. Of this habitat area, about 3.6 square miles, or about 10 percent of the planning area, were rated as Class I; about 4.1 square miles, or about 11 percent, were rated as Class II; and about 1.5 square miles, or about 4 percent, were rated as Class III. It is recommended that Class I wildlife habitat areas be maintained in essentially natural, open uses.

PARK AND OPEN SPACE SITES

An inventory of park and open space sites and outdoor recreational facilities in the planning area indicates that, in 1990, there were 17 such sites, encompassing approximately 404 acres, or about 2 percent of the planning area. The following five park and open space sites are publicly owned: Fredonia Fireman's Park, Fredonia Village Park, the Fredonia Playground, Waubedonia County Park, and the State-owned wetland sites. In addition, the following four open space sites are associated with public schools: the Grandview School site, the Maple Lawn School site, and the Ozaukee Middle and High School sites. The Town

Map 18

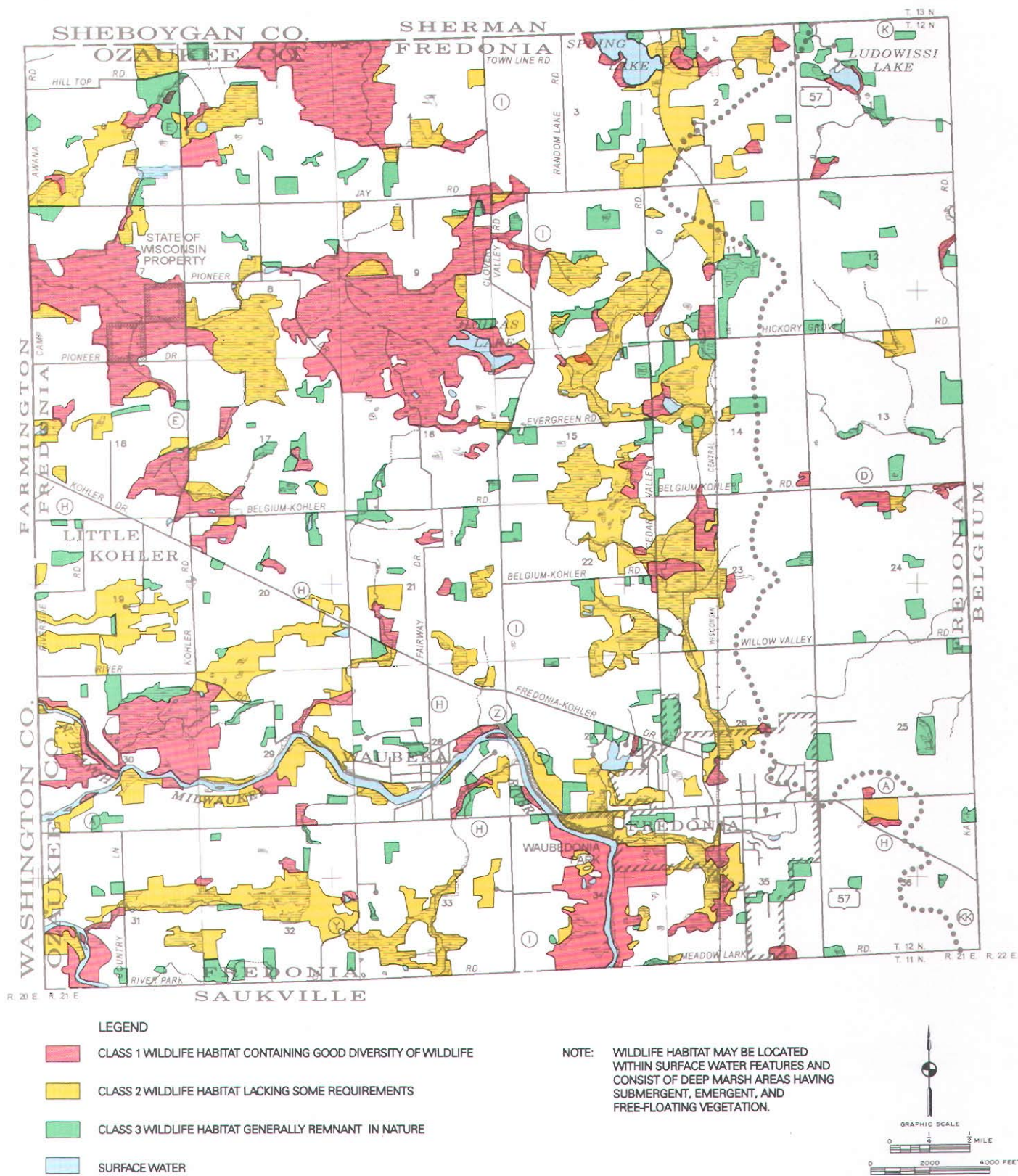
WOODLANDS IN THE TOWN OF FREDONIA PLANNING AREA: 1990



Source: SEWRPC.

Map 19

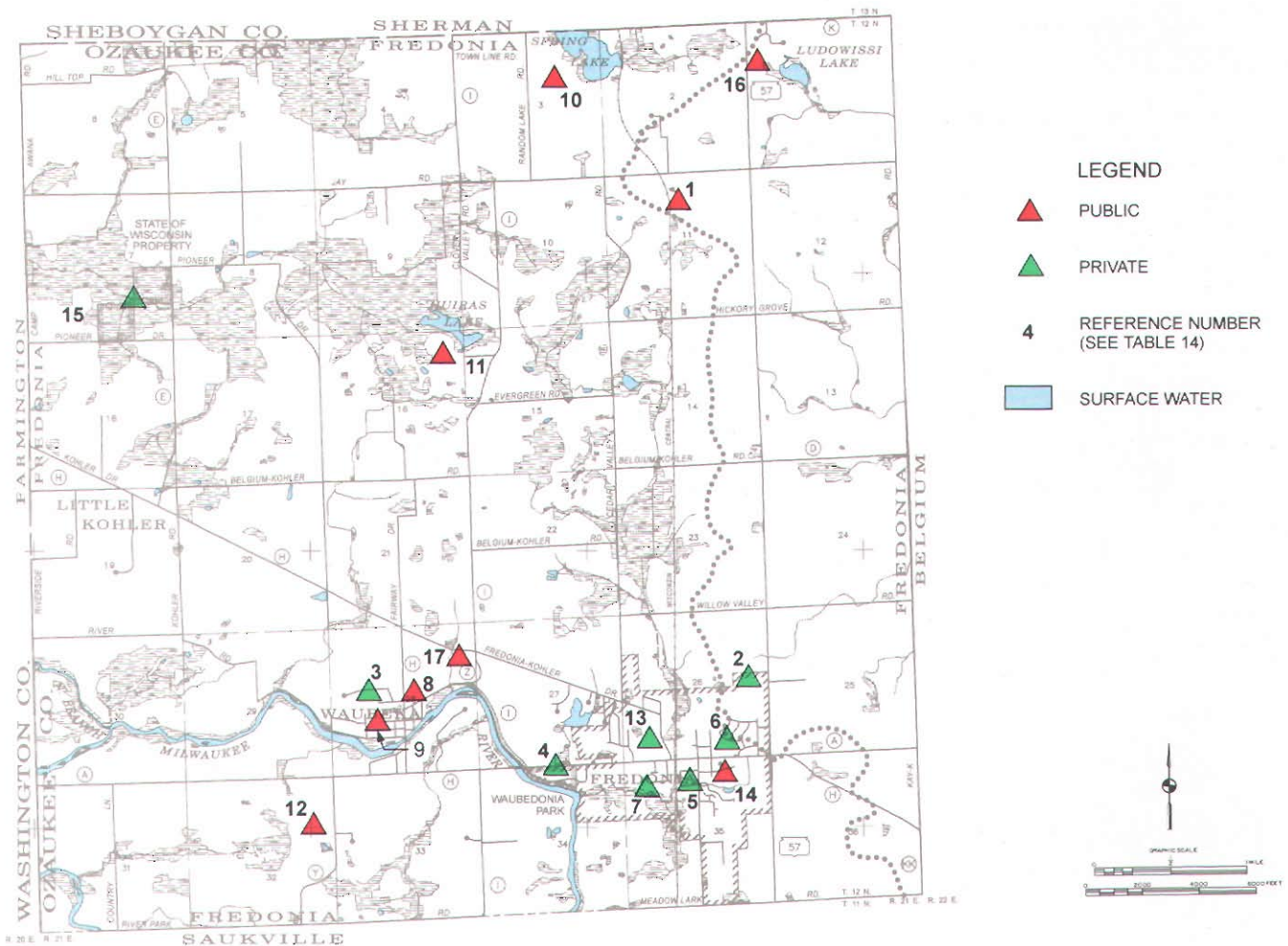
WILDLIFE HABITAT AREAS IN THE TOWN OF FREDONIA PLANNING AREA: 1985



Source: Wisconsin Department of Natural Resources and SEWRPC.

Map 20

PARK AND OPEN SPACE SITES IN THE TOWN OF FREDONIA PLANNING AREA: 1990



Source: SEWRPC.

of Fredonia owns no park sites. Park and open space sites within the planning area in 1990 are shown on Map 20 and listed in Table 14.

NATURAL AREAS

Natural areas are defined as tracts of land or water so little modified by human activities that they contain intact native plant and animal communities believed to be representative of the pre-European-settlement landscape. On the basis of the current condition of each natural area, each site was classified into one of the following three categories: natural areas of Statewide or greater significance, natural areas of countywide or regional significance, and natural areas of local significance. Classification of an area into one of the three categories

is based on consideration of the diversity of plant and animal species and community types present; the structure and integrity of the native plant or animal community; the extent of disturbance from such human activities as logging, grazing, water level changes, and pollution; the commonness of the plant and animal communities present; unique natural features within the area; the size of the area; and the area's educational value.

Thirteen natural areas, encompassing a total of about 3.0 square miles, or about 8 percent of the planning area, were identified in an inventory completed in 1994. These sites are shown on Map 21 and listed in Table 15. Three of the natural areas in the planning area are in public ownership and are thereby protected from incompatible development.

Table 14

PARK AND OPEN SPACE SITES IN THE TOWN OF FREDONIA PLANNING AREA: 1990

Number on Map 20	Ownership	Site Name	U.S. Public Land Survey Location				Approximate Area in Acres
			Township	Range	Section	Quarter Section	
1	Organizational	Random Lake Rod and Gun Club	T12N	R21E	11	NW	12
2	School District	Ozaukee Middle and High Schools	T12N	R21E	26	SE	27
3	School District	Grandview School	T12N	R21E	28	SE	12
4	Ozaukee County	Waubedonia Park	T12N	R21E	34	NE	42
5	Village of Fredonia	Fireman's Park	T12N	R21E	35	NW	3
6	School District	Maple Lawn School	T12N	R21E	26	SE	2
7	Village of Fredonia	Village Park	T12N	R21E	35	NW	3
8	Private	Peiffers Paradise	T12N	R21E	28	SE	1
9	Organizational	VFW Park	T12N	R21E	28	SW	2
10	Private	Rhingan's Boat Access	T12N	R21E	3	NE	6
11	Organizational	Camp JCC	T12N	R21E	16	NE	96
12	Organizational	Ozaukee County Fish and Game Recreation Preserve	T12N	R21E	32	NE	62
13	Village of Fredonia	Playground	T12N	R21E	26	SE	1
14	Organizational	St. Rose Mary School	T12N	R21E	35	NE	1
15	State	Scattered Wetlands	T12N	R21E	7	NE-SE	80
16	Private	Badger Camp Site	T12N	R21E	1	NW	53
17	Organizational	Stony Hill School Site	T12N	R21E	28	NE	1

Source: SEWRPC.

ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS

As defined by the Regional Planning Commission, environmental corridors are elongated areas in the landscape which encompass concentrations of recreational, aesthetic, ecological, and cultural resources and which, therefore, should be preserved and protected in essentially natural, open uses. Such areas generally include one or more of the following elements of the natural resource base which are essential for maintaining both the ecological balance and natural beauty of the region: 1) soils and topography, 2) water resources, including watershed boundaries, streams, lakes and associated shorelands floodlands and wetlands, 3) woodlands, 4) prairies, and 5) wildlife habitat areas. Elements which are closely related to the natural resource base include park and open space sites and scientific and natural areas.

The delineation of these natural resource and natural resource-related elements on a map results in an essentially linear pattern of relatively narrow, elongated areas which have been termed "environmental corridors" by

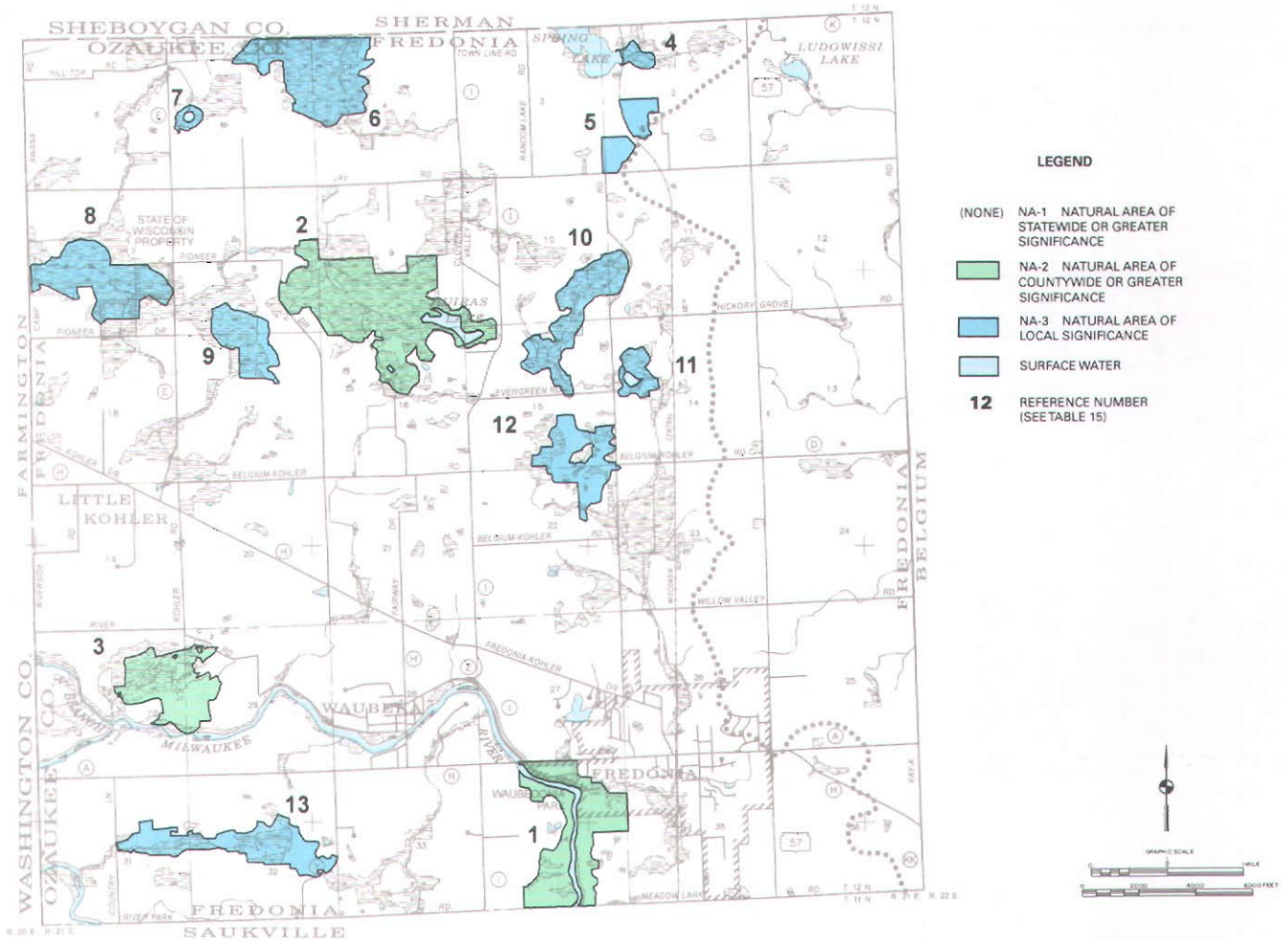
the Regional Planning Commission. Map 22 shows the location and extent of environmental corridors and other environmentally significant areas, termed "isolated natural resource areas," within the planning area as delineated by the Regional Planning Commission.²

In any consideration of environmental corridors and isolated natural resource areas, it is important to note that the preservation of such resources can assist in attenuation of flood flows, abatement of water pollution, reduction of glare, and favorable modification of climate. In addition, because of the many interacting relationships between living organisms and their environment, the destruction or deterioration of any one element of the natural resource base may lead to a chain reaction of deterioration and destruction. Draining and filling wetlands, for example, may destroy fish spawning grounds, wildlife habitat, groundwater recharge areas, and the natural filtration action and floodwater storage functions

²A detailed description of the process of refining the delineation of environmental corridors in Southeastern Wisconsin is presented in SEWRPC Technical Record, Vol. 4, No. 2, pages 1 through 21.

Map 21

NATURAL AREAS IN THE TOWN OF FREDONIA PLANNING AREA: 1994



Source: Wisconsin Department of Natural Resources and SEWRPC.

which contribute to maintaining high levels of water quality and stable streamflows and lake stages in a watershed. The resulting deterioration of surface water quality may, in turn, lead to the deterioration of the quality of the groundwater which serves as a source of domestic, municipal, and industrial water supply and on which low flows in rivers and streams may depend. Similarly, the destruction of woodland cover may result in soil erosion and stream siltation, more rapid stormwater runoff and attendant increased flood flows and stages, as well as destruction of wildlife habitat.

Although the effects of any one of these environmental changes may not in and of itself be overwhelming, the combined effects will eventually create serious environmental and developmental problems. These problems include flooding, water pollution, deterioration and destruction of wildlife habitat, loss of groundwater recharge, and destruction of the unique natural beauty of

the area. The need to maintain the integrity of the remaining environmental corridors and isolated natural resource areas thus becomes apparent.

Primary Environmental Corridors

In 1990, about 7.3 square miles, or about 20 percent of the Town of Fredonia planning area, were encompassed within the primary environmental corridors, shown on Map 22. The primary environmental corridors in the planning area are generally located along the major perennial streams, the Milwaukee River and its tributaries, and include the large wetland complexes associated with these and other, smaller, streams. The primary environmental corridors contain the best remaining woodlands, wetlands, and wildlife habitat areas within the planning area; are, in effect, a composite of the best individual elements of the natural resource base; and have truly immeasurable environmental and recreational value. The protection of the primary environmental cor-

Table 15

NATURAL AREAS IN THE TOWN OF FREDONIA PLANNING AREA: 1994

Number on Map 21	Area Name	Classification Code ^a	Location	Ownership	Size (acres)	Description and Comments
1	Milwaukee River Mesic Woods	NA-2 (RSH)	T12N, R21E Section 34 Town of Fredonia	Ozaukee County, Girl Scouts of Milwaukee, and private	382 ^b	Morainal deposits along a two-mile stretch of the Milwaukee River support moderate- to good-quality upland mesic woods, with lowland hardwoods in depressions. Species diversity is generally good throughout
2	Huiras Lake Woods and Bog	NA-2	T12N, R21E Sections 8, 9, and 16 Town of Fredonia	Milwaukee Jewish Welfare Fund and other private	435	Large lowland and upland forested area that has been relatively undisturbed since last cut. A bog is located in the southern portion. Good diversity of tree and groundlayer species. The small, landlocked seepage lake is valuable for waterfowl migration and nesting. A number of northern relict species are present
3	Janik's Woods	NA-2 (RSH)	T12N, R21E Section 30 Town of Fredonia	Private	163	A relatively large, good-quality woodlot that is recovering from past disturbance. Southern portion is an upland containing medium-aged red oak, sugar maple, and basswood, with a diverse ground flora. Lowland hardwoods to the north contain scattered conifers
4	Spring Lake Marsh	NA-3	T12N, R21E Section 2 Town of Fredonia	Private	19	Good-quality wetland complex bordering a clear, shallow lake. Good habitat diversity includes shrub-carr, sedge meadow, shallow marsh, and cedar-tamarack swamp
5	Spring Lake Beech Forest	NA-3	T12N, R21E Section 2 Town of Fredonia	Private	65	Small mesic hardwood forest dominated by small- to medium-sized beech, sugar maple, basswood, and white ash, with a long history of selective cutting
6	County Line Low Woods	NA-3	T12N, R21E Sections 4 and 5 Town of Fredonia	Private	272 ^c	Large, but mostly young lowland hardwoods of mixed composition and a history of disturbance. Many openings in canopy allow dense undergrowth. Extends north into Sheboygan County
7	Beekeeper Bog	NA-3	T12N, R21E Section 5 Town of Fredonia	Ozaukee County and private	15	Good example of a typical kettle hole bog with shallow water, shrub-carr, and northern wet-mesic white cedar forest. The southeast portion has been ditched. Contains a good number of species with more northerly affinities
8	Department of Natural Resources Lowlands	NA-3	T12N, R21E Section 7 Town of Fredonia	Department of Natural Resources and private	186	Primarily a disturbed lowland hardwood forest with streams. Ponds have been dredged by Department of Natural Resources

Table 15 (continued)

Number on Map 21	Area Name	Classification Code ^a	Location	Ownership	Size (acres)	Description and Comments
9	Pioneer Road Lowlands	NA-3	T12N, R21E Sections 8 and 17 Town of Fredonia	Private	94	A low, wet woodlot with a history of disturbance. North half contains a dense stand of tamarack, cedar, and black ash, with some large individual trees. South half has large scattered trees and thick undergrowth
10	Cedar Valley Swamp	NA-3	T12N, R21E Sections 10, 15, and 22 Town of Fredonia	Private	141	An irregularly shaped lowland area disturbed by Dutch elm disease, logging, and water level changes. Dominated by black ash, red maple, and white cedar, with small areas of tamarack. A small upland island in the center contains mature trees
11	Evergreen Road Bog	NA-3 (RSH)	T12N, R21E Section 14 Town of Fredonia	Private	44	Good-quality tamarack-cedar bog, with a large sedge-shrub area to the north and upland hardwoods to the southeast. Threatened by residential development
12	Kohler Road Woods	NA-3	T12N, R21E Sections 15 and 22 Town of Fredonia	Private	124	Primarily a low, wet woods of medium-aged red and silver maples, yellow birch, and black ash. South half is younger, with many cut stumps
13	Waubeka Low Woods	NA-3	T12N, R21E Section 32 Town of Fredonia	Ozaukee County and private	161	Primarily a wooded lowland of tamarack, black ash, and yellow birch, but with glacial ridges containing upland trees. There is a history of disturbance

^aNA-1 identifies Natural Area Sites of Statewide or Greater Significance; NA-2 identifies Natural Area Sites of Countywide or Regional Significance; NA-3 identifies Natural Area Sites of Local Significance; SNA, or State Natural Area identifies those sites officially designated as a State Natural Area by the State of Wisconsin, Natural Areas Preservation Council; and RSH, or Rare Species Habitat, identifies those sites which support rare, threatened, or endangered animal or plant species officially designated by the Wisconsin Department of Natural Resources.

^bA 265-acre portion of the total 382-acre site lies within the Town of Fredonia planning area.

^cA 214-acre portion of the total 272-acre site lies within the Town of Fredonia planning area.

Source: Wisconsin Department of Natural Resources and SEWRPC.

ridors from intrusion by incompatible rural and urban uses, and thereby from degradation and even destruction, should be one of the principal objectives of a local development plan. Preservation of these primary corridors in an essentially open, natural state, including park and open space uses and rural-density residential uses, will serve to maintain a high level of environmental quality in the area, protect its natural beauty, and provide valuable recreational opportunities. Preservation will also avoid the creation of such serious and costly

environmental and developmental problems as flood damage, poor drainage, wet basements, failing pavements and other structures, excessive infiltration of clear water into sanitary sewers, and water pollution.

Secondary Environmental Corridors

As shown on Map 22, a total of about 0.3 square mile, or about 1 percent of the planning area, was encompassed within the secondary environmental corridors in 1990. Secondary environmental corridors in the planning area

generally lie along intermittent streams or serve as links between segments of primary environmental corridors. These secondary environmental corridors often contain remnant resources from former primary environmental corridors which have been developed for intensive agricultural purposes or urban land uses. Secondary environmental corridors facilitate surface water drainage, maintain "pockets" of natural resource features, and provide for the movement of wildlife, as well as for the movement and dispersal of seeds for a variety of plant species. Such corridors should be preserved in essentially open natural uses as urban development proceeds within the planning area, particularly when the opportunity is presented to incorporate such corridors into urban stormwater detention areas, associated drainage-ways, and neighborhood parks and open spaces.

Isolated Natural Resource Areas

In addition to the primary and secondary environmental corridors, other, small concentrations of natural resource base elements exist within the planning area. These resource base elements are isolated from the environmental corridors by urban development or agricultural uses and, although separated from the environmental corridor network, may have important residual natural values. Isolated natural features may provide the only available wildlife habitat in an area, provide good locations for local parks and nature study areas, and lend aesthetic character and natural diversity to an area. Important isolated natural resource areas within the planning area include a geographically well-distributed variety of isolated wetlands, woodlands, and wildlife habitat. These isolated natural resource areas should be protected and preserved in a natural state whenever possible. Isolated natural resource areas are shown on Map 22. In 1990, these areas encompassed an area of about 0.7 square mile, or about 2 percent of the planning area.

SUMMARY AND CONCLUSIONS

This chapter has presented the results of an inventory and analysis of the natural resource base of the Town of Fredonia planning area undertaken in support of the preparation of a land use plan for the Town. The major findings of that inventory and analysis are described below.

1. Soil limitations for various urban and nonurban uses are an important consideration in any sound land use planning effort. Detailed soil survey data indicate that about 11.6 square miles, or about 32 percent of the total planning area, are covered by soils which have severe limitations for residen-

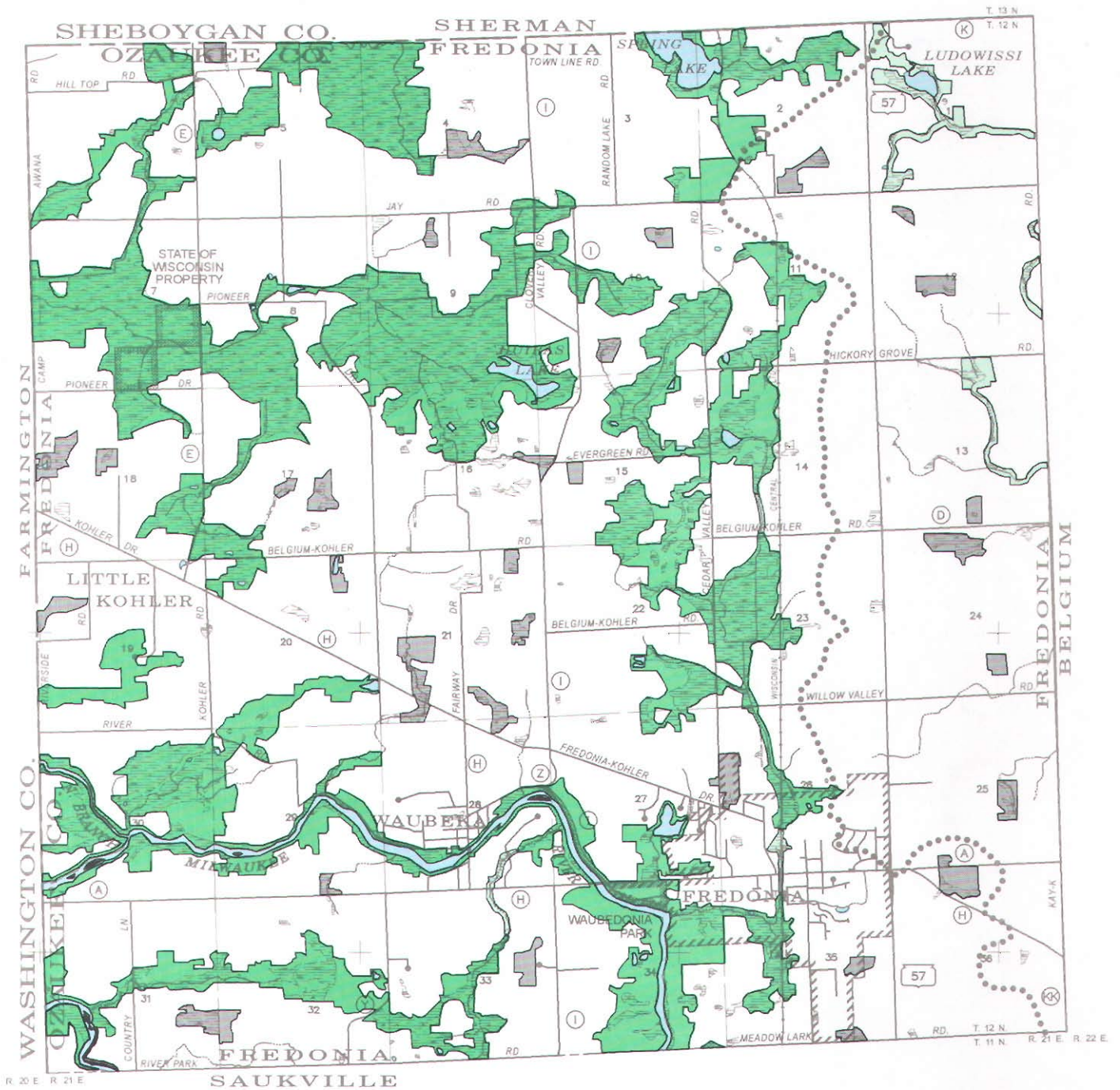
tial development served by public sanitary sewers, or stated differently, are poorly suited for residential development of any kind. With respect to unsewered development, the soil survey data indicate that about 21.6 square miles, or about 60 percent of the total planning area, are covered by soils classified as unsuitable for conventional onsite sewage disposal systems; about 3.2 square miles, or about 9 percent, are classified as suitable; and about 11.1 square miles, or about 30 percent, are covered by soils of uncertain suitability, requiring onsite inspection.

With respect to unsewered development served by mound sewage disposal systems, the soil survey data indicate that about 12.9 square miles, or about 36 percent of the total planning area, are covered by soils classified as unsuitable for such systems; about 14.1 square miles, or about 39 percent, are classified as suitable; and about 8.9 square miles, or about 24 percent, are covered by soils of uncertain suitability, requiring onsite inspection to determine suitability.

2. The Town of Fredonia has a rich agricultural base. In 1990, about 21.4 square miles, or about 59 percent of the total planning area, was covered by prime agricultural lands. These soils are particularly well suited for agricultural use and are an economic asset to the Town.
3. The Town of Fredonia planning area is rich in sand and gravel deposits. About 11.5 square miles, or about 32 percent of the total planning area is covered by soil mapping units which are probable sources of marketable sand and gravel. These deposits are an economic asset to the Town and their preservation for future extraction should be considered.
4. The Town of Fredonia planning area is located within two watersheds. About 80 percent lies within the Milwaukee River watershed and 20 percent lies within the Sauk Creek watershed. These watersheds are part of the Great Lakes-St. Lawrence River drainage system. The major surface water resources in the planning area include the Milwaukee River and its tributaries; one major lake, Spring Lake; and a limited number of smaller, generally unnamed, lakes and ponds. Areas of the planning area lying within the 100-year recurrence interval floodplain of the Milwaukee River

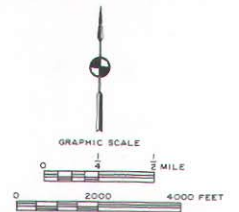
Map 22

ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL
AREAS IN THE TOWN OF FREDONIA PLANNING AREA: 1990



LEGEND

- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL RESOURCE AREA
- SURFACE WATER



and its tributaries encompass about 3.9 square miles, or 11 percent of the planning area.

5. The Town of Fredonia planning area exhibits some significant natural resource base features. In 1990, the planning area included wetland areas encompassing a total of 5.0 square miles, or 14 percent of the total planning area; woodlands encompassing 2.2 square miles, or 6 percent; and, in 1985, wildlife habitat areas encompassing 9.2 square miles, or 25 percent. The planning area includes 13 sites identified as natural areas under criteria established by the Wisconsin Natural Areas Preservation Council.
6. There are eight public outdoor recreation sites in the Town planning area. Three public parks and two recreation facilities associated with public schools are located in the Village of Fredonia, as is also Waubedonia County Park. The Grandview School playground and playfields are located in the Town and the State of Wisconsin owns 80 acres of wetlands within the Town.
7. The best remaining elements of the natural resource features of the Town of Fredonia, as in other parts of the Southeastern Wisconsin Region, occur in linear concentrations in the landscape. One of the most important tasks completed under the regional planning program for Southeastern Wisconsin has been the identification and delineation of these linear areas, or corridors. The most important elements of the natural resource base and features closely related to that base, including wetlands, woodlands, prairie, wildlife habitat, major

lakes and streams and associated shorelands and floodlands, and outdoor recreation sites, when combined, result in an essentially linear pattern referred to by the Southeastern Wisconsin Regional Planning Commission as environmental corridors.

Primary environmental corridors include a wide variety of important natural resource and resource related elements and are, by definition, at least 400 acres in area, two miles long, and 200 feet wide. Primary environmental corridors in the Town planning area are primarily associated with the natural resources located along major river valleys, and, in 1990, encompassed a total of about 7.3 square miles, representing about 20 percent of the total planning area.

Secondary environmental corridors also include a variety of important natural resource and resource related elements and are, by definition, at least 100 acres in area and one mile in length. These corridors often contain remnant resources from former primary environmental corridors which have been developed for intensive agricultural purposes or urban land uses. Secondary environmental corridors in the planning area encompassed a total of about 0.3 square mile in 1990, representing about 1 percent of the total planning area.

Other small concentrations of the natural resource base, known as isolated natural resource areas, encompassed a total of about 0.7 square mile in 1990, representing about 2 percent of the total planning area.

Chapter IV

INVENTORY AND ANALYSIS OF EXISTING LAND USES AND PUBLIC FACILITIES

INTRODUCTION

In order for the Town of Fredonia land use plan to constitute a sound and realistic guide for making decisions concerning the physical development of the Town, it must be based on consideration of pertinent features of the built environment, as well as consideration of the natural resource base of the area. For the purposes of plan preparation, the following pertinent features of the built environment were identified as: 1) existing land uses, 2) existing public facilities, and 3) existing public utility systems. Each of these features as it affects the physical development of the Town of Fredonia is described in this chapter.

EXISTING LAND USE

The Regional Planning Commission periodically conducts detailed inventories of existing land uses in the South-eastern Wisconsin Region, providing definitive information on the type, amount, and spatial distribution of the major land use categories within the Region. The first land use inventory was conducted in 1963, the most recent in 1990. The data gathered in this latest inventory were mapped and analyzed in order to provide a basis for planning the appropriate patterns for future land use development in the Town.

Land uses in the Town of Fredonia in 1990 are shown on Map 23 and the amount of land devoted to each use is set forth in Table 16. Of the approximately 34.9 square miles of land in the Town of Fredonia, about 32.5 square miles, or about 93 percent, were devoted to nonurban land uses, including surface water, wetlands, woodlands, agricultural lands, and undeveloped lands. Developed urban land uses occupied about 2.4 square miles, or about 7 percent, of the Town. The analysis area consisted of all of U. S. Public Land Survey Township 12 North, Range 21 East, excluding the area within the corporate limits of the Village of Fredonia.

Several important characteristics of the Town can be noted from Table 16 and Map 23. First, agriculture was

still the single largest land use in the Town in 1990, encompassing about 24.5 square miles, or about 70 percent of the Town. Second, residential land uses and associated transportation and utility land uses were the largest urban uses in the Town, each occupying about one square mile, or about 3 percent of the Town area.

Urban Land Uses

Residential Land Uses

Of the 2.4 square miles of urban uses, that is, residential, commercial, industrial, transportation and utilities, government and institutional, and recreational uses, residential lands comprised one of the largest single urban uses. Residential lands encompassed 616 acres, or about 40 percent of all urban land and about 3 percent of the total area of the Town. Residential land occurred in concentrations in the Waubeka and Little Kohler areas and scattered throughout other areas of the Town as well. With the exception of one acre of two-family residential development in U. S. Public Land Survey Section 27, adjacent to the Village of Fredonia, all residential development in the Town was single-family development.

Commercial Land Uses

In 1990, commercial uses, including retail sales, services, office buildings, and associated parking, occupied about 26 acres, or about 2 percent of all urban land and less than 1 percent of the total area of the Town. Commercial land uses in the Town were located predominantly in the Waubeka area, the Little Kohler area, and around Ludowissi Lake.

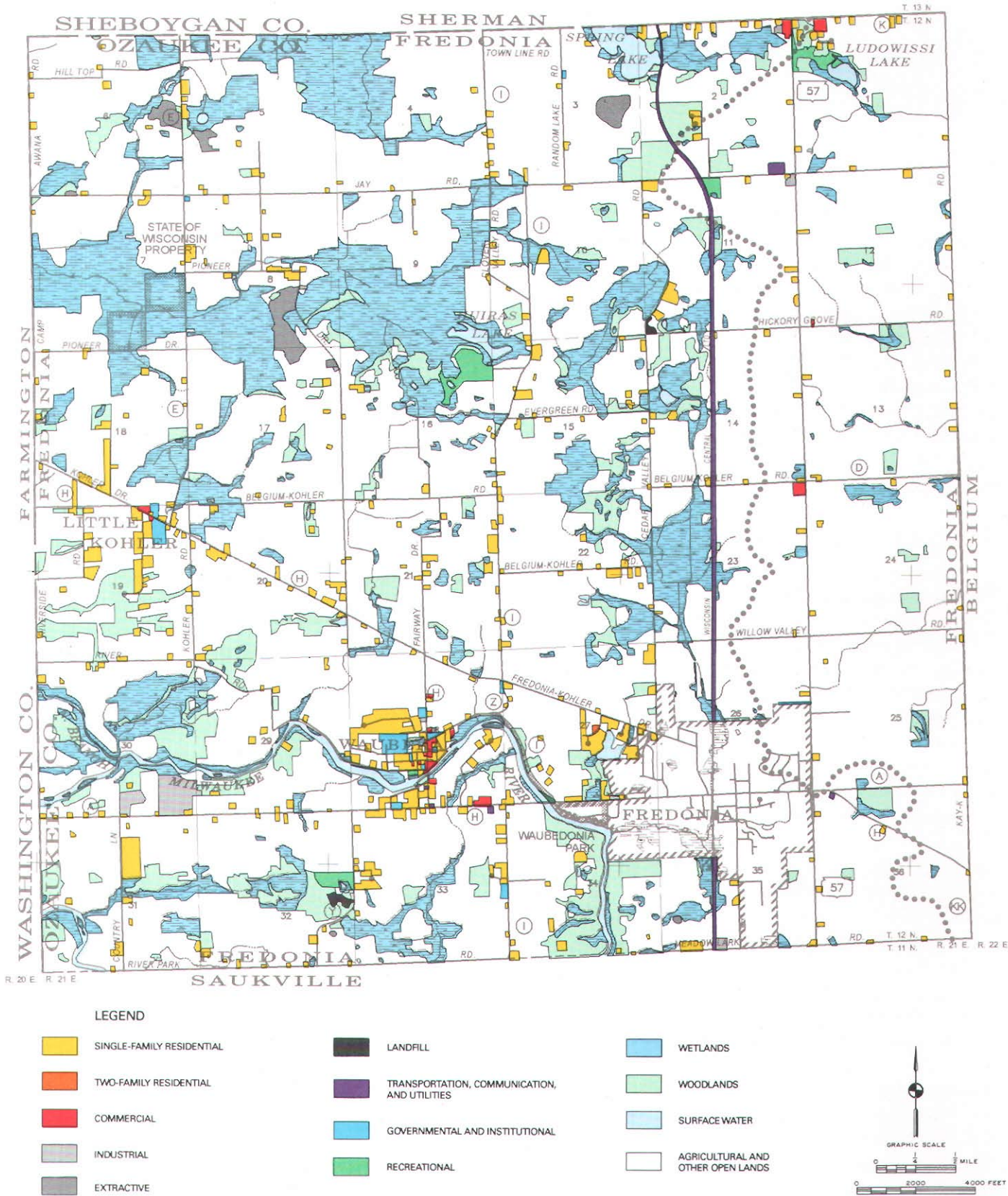
Industrial and Manufacturing Land Uses

In 1990, industrial and manufacturing land uses and associated parking occupied about 59 acres, or about 4 percent of all urban land and less than 1 percent of the total area of the Town. Industrial and manufacturing uses were located on scattered sites along CTH A and STH 57.

In addition to traditional manufacturing operations, the extraction of sand and gravel occurs in the Town of Fredonia. In 1990, extractive uses occupied 92 acres, or about 6 percent of all urban land and less than 1 percent of the total area of the Town.

Map 23

EXISTING LAND USE IN THE TOWN OF FREDONIA: 1990



Source: SEWRPC.

Table 16

**SUMMARY OF LAND USE IN
THE TOWN OF FREDONIA: 1990**

Land Use Category	Number of Acres	Percent of the Urban or Nonurban Subtotal	Percent of Total
Urban			
Residential			
Single Family ^a	615	39.4	2.8
Two Family	1	0.1	.. ^b
Subtotal	616	39.5	2.8
Commercial			
Land and Buildings	19	1.2	0.1
Related Off-Street Parking	7	0.5	.. ^b
Subtotal	26	1.7	0.1
Industrial			
Land and Buildings	55	3.5	0.3
Related Off-Street Parking	4	0.3	.. ^b
Subtotal	59	3.8	0.3
Quarries and Landfills	100	6.4	0.4
Transportation and Utilities			
Arterial Streets and Highways	194	12.4	0.9
Collector and Local Streets	390	25.0	1.8
Railways	53	3.4	0.2
Other Transportation and Utilities	9	0.6	.. ^b
Subtotal	646	41.4	2.9
Government and Institutional			
Land and Buildings	37	2.4	0.2
Related Off-Street Parking	2	0.1	.. ^b
Subtotal	39	2.5	0.2
Recreational ^c			
Public	2	0.1	.. ^b
Nonpublic	68	4.4	0.3
Related Off-Street Parking	3	0.2	.. ^b
Subtotal	73	4.7	0.3
Urban Subtotal	1,559	100.0	7.0
Nonurban			
Natural Areas			
Water	271	1.3	1.2
Wetlands	3,148	15.2	14.1
Woodlands	1,310	6.3	5.9
Subtotal	4,729	22.8	21.2
Agricultural Lands	15,679	75.4	70.1
Open Lands ^d	382	1.8	1.7
Nonurban Subtotal	20,790	100.0	93.0
Total	22,349	--	100.0

^aIncludes farm residences but not farm buildings, which were included in the agricultural land use category.

^bLess than 0.05 percent.

^cIncludes only those lands used for intensive outdoor recreational activities.

^dIncludes undeveloped lands that may be associated with urban areas, such as excess street rights-of-way, undeveloped platted lots, and residual lands or outlots attendant to existing urban development which are not expected to be developed.

Source: SEWRPC.

Transportation and Utilities Land Uses

Transportation and utility land uses, which include arterial streets and highways, collector streets, minor land-access streets, railroads, and utilities, occupied approximately 646 acres, or about 41 percent of all urban land and about 3 percent of the total area of the Town.

About 584 acres of this total were occupied by streets and highways.

Governmental and Institutional and Recreational Land Uses

In 1990 governmental and institutional land uses occupied about 39 acres and recreational lands about 73 acres. These uses occupied a total of about 7 percent of all urban lands and less than 1 percent of the total area of the Town.

Nonurban Land Uses

Natural Areas

Natural areas include surface water, wetlands, and woodlands. Natural areas encompassed about 7.4 square miles, or about 21 percent of the Town of Fredonia in 1990. Of this total, surface water areas encompassed about 0.4 square mile, or about 1 percent of the area of the Town; wetland areas encompassed about 4.9 square miles, or about 14 percent of the area of the Town; and woodlands encompassed about 2.0 square miles, or about 6 percent of the planning area. Information regarding the distribution and importance of natural areas in the planning area is provided in Chapter III of this report.

Agricultural and Open Lands

The agricultural land use category shown on Map 23 includes all croplands, pasturelands, orchards, nurseries, and fowl and fur farms. This category also includes farm buildings other than residences associated with farms. Farm residences, together with a 20,000 square foot dwelling site, were classified as single-family residential land uses. In 1990, prime and other agricultural lands occupied about 24.5 square miles, or about 70 percent of the Town of Fredonia.

Open lands include lands in rural areas that are not being farmed and lands in urban areas that have not been developed. Examples of open lands in urban areas include park sites that have not been developed, excess transportation rights-of-way, subdivision outlots, and undeveloped portions of commercial and industrial lots. Open lands accounted for about 0.6 square miles, or about 2 percent of the total area of the Town.

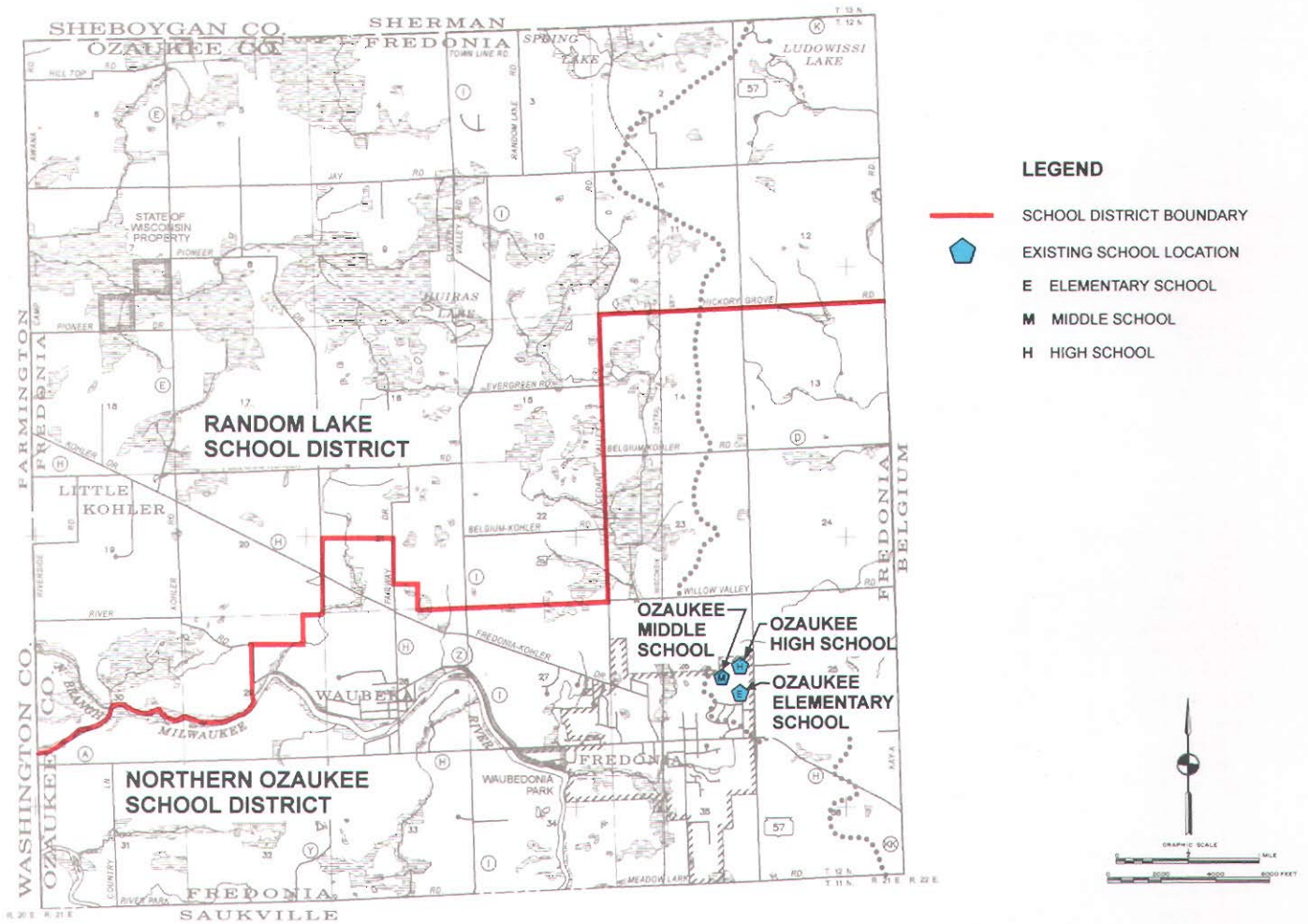
COMMUNITY FACILITIES

Public Schools

The Town of Fredonia is located in two different school districts. The northern portion of the Town, including the Little Kohler area, is part of the Random Lake School District. The southern portion of the Town, including the Village of Fredonia and the Waubeka area, is part of

Map 24

SCHOOL DISTRICT BOUNDARIES AND PUBLIC SCHOOL LOCATIONS IN THE TOWN OF FREDONIA PLANNING AREA: 1995



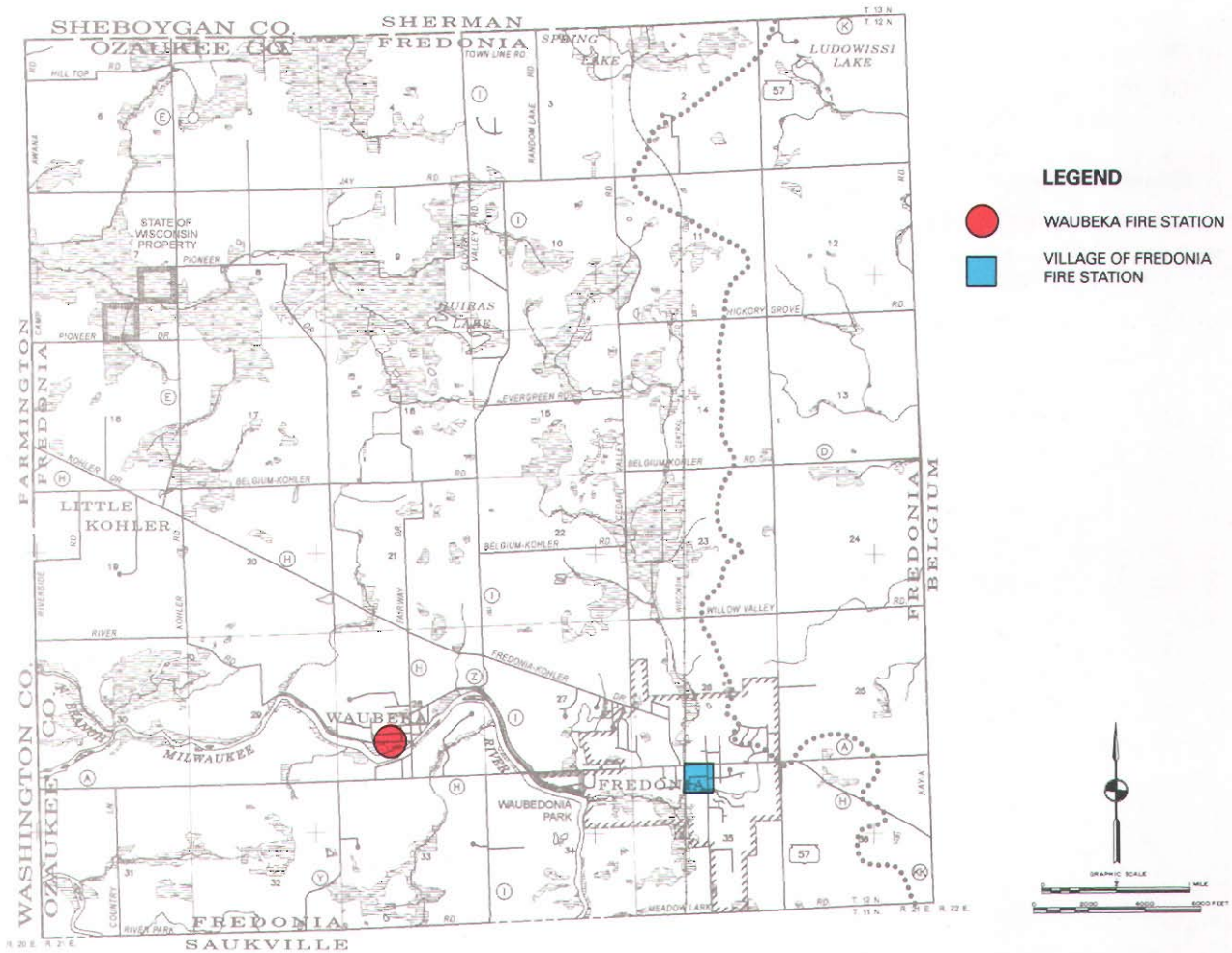
Source: SEWRPC.

the Northern Ozaukee School District. The 1995 boundaries of the two school districts in relation to the Town of Fredonia are shown on Map 24. In 1995, the Northern Ozaukee School District operated three schools, Ozaukee High School, Ozaukee Middle School, and Ozaukee Elementary School, all of which are located in the Village

of Fredonia. The Grandview and Maple Lawn Elementary Schools were recently replaced by the Ozaukee Elementary School, located near the existing Ozaukee Middle and High Schools. School District officials have indicated that all schools in the district are operating at, or near, capacity.

Map 25

FIRE STATIONS IN THE TOWN OF FREDONIA PLANNING AREA: 1995



Source: SEWRPC.

Fire-Protection Services and Facilities

There were two fire stations in the area in 1995. Their locations are shown on Map 25.

The Waubeka fire station is located in the Waubeka area of the Town of Fredonia. This fire department was staffed by 42 volunteer fire fighters in 1995 and provided ambulance services and emergency medical services. The Waubeka Fire Department had a total of four major pieces of fire-fighting and rescue equipment,

including two engine-pumper trucks, one grass-fire truck, and one ambulance.

The Village of Fredonia Fire Department is housed within the Village limits and was staffed by 25 volunteer fire fighters in 1995. The Village operated six pieces of fire-fighting and rescue equipment, including three engine-pumper trucks, one tanker truck, one grass-fire truck, and one ambulance.

Rating of Fire-Protection Services

The adequacy of fire protection in communities is evaluated by the Insurance Services Office (ISO)¹ through the use of the *Grading Schedule for Municipal Fire Protection*. The Schedule provides criteria to classify the fire defenses and physical conditions of municipalities. Gradings obtained under the schedule are used throughout the United States in establishing base rates for fire insurance. While the ISO does not presume to dictate the level of fire-protection services that should be provided by a municipality, reports of surveys made by its Municipal Survey Office generally contain recommendations for correcting any serious deficiencies found and, over the years, have been accepted as guides by many municipal officials in planning improvements to fire-fighting services. The gradings are made by the ISO on the basis of analyses of fire department equipment, alarm systems, water-supply facilities, fire-prevention programs, building construction, and the distance of potential hazard areas, such as the central business district, from a fire station. In rating a community, total deficiency points in the several areas of evaluation are used to assign a numerical rating between one and 10, with one presenting the best protection and 10 representing an essentially unprotected community. The fire-insurance rating in effect in 1995 for both the Town and the Village of Fredonia was a five.

PUBLIC UTILITIES

Public utilities are one of the most important elements influencing community growth and development. Urban development today is highly dependent on the systems which provide the individual land uses with power, heat, light, communication, water, and sanitary-sewer services. Moreover, certain utility facilities are closely linked to surface-water and groundwater resources and may, therefore, affect the overall quality of the natural resource base. This is particularly true of sanitary-sewerage, water-supply, and stormwater-drainage facilities, which are, in a sense, modifications or extensions of

¹*The Insurance Services Office (ISO) is a not-for-profit service organization within the insurance industry which makes available to any insurer, on a voluntary basis, statistical, actuarial, policy-form, and other related services, including fire protection grading of municipalities and fire insurance surveys on specific properties. The ISO was formed in 1971 by a merger of several state and regional organizations performing the aforementioned functions, including the Fire Insurance Rating Board in Wisconsin. The ISO is headquartered at 7 World Trade Center, New York, New York 10048.*

the natural lake and watercourse systems of the area and of the underlying groundwater reservoir. The provision of certain public utilities to a largely rural area is normally impractical. Conversely, the development of areas for extensive urban use without certain utilities may create serious and costly environmental and public health problems.

Sanitary-Sewer Service

The Town of Fredonia is not served by a centralized sanitary-sewerage system. The Village of Fredonia, however, is served by such a system. There is an adopted sewer service area for the Village and its environs which is described in SEWRPC Community Assistance Planning Report No. 96, *Sanitary Sewer Service Area for the Village of Fredonia*, dated July 1984. The sewer service area plan includes a portion of the Town of Fredonia within the planned sewer service area, as shown on Map 7 in Chapter I of this report. The decision to include a portion of the Town, essentially the unincorporated area of Waubeka, was based, in part, on a 1978 house-to-house survey conducted in the Waubeka area. Nearly 10 percent of the houses surveyed at that time had septic-tank systems which overflowed and were in direct violation of State and County codes. A significant percentage, about 23 percent of the septic systems surveyed, had the potential for major septic system problems and about 12 percent had required major septic system repairs in the past. Accordingly, the Waubeka area was identified as an area where public sanitary-sewerage service probably will be needed in the future.

Public Water-Supply System

The Town of Fredonia does not have a public water-supply system. Water for domestic and other uses is supplied by groundwater through the use of private wells. The Village of Fredonia operates a public water-supply system that provides water to those areas served by the municipal sanitary-sewer system.

Engineered Stormwater-Drainage System

Neither the Town of Fredonia nor the Village of Fredonia has an engineered stormwater system. Such drainage is provided by natural watercourses and roadside swales.

SUMMARY AND CONCLUSIONS

This chapter has presented a description of the existing land use pattern and other pertinent aspects of the man-made environment of the Town of Fredonia. The most important findings of this chapter are described below.

1. Existing urban development within the Town of Fredonia is concentrated in the Waubeka and Little Kohler areas. Despite scattered residential development in other areas of the Town, the Town still encompasses intact relatively large blocks of farmland.
2. Urban land uses, consisting primarily of residential commercial, industrial, recreational, governmental and institutional, and transportation and utility uses, encompassed about 2.4 square miles, or about 7 percent of the total area of the Town of Fredonia. Residential uses and associated transportation and utility land uses were the largest urban uses in the Town, each encompassing about one square mile and each representing about 40 percent of all urban land and 3 percent of the total area of the Town.
3. Nonurban land uses, such as agricultural lands, wetlands, woodlands, and other open lands, comprised about 32.5 square miles, or about 93 percent of the total area of the Town. Agricultural lands encompassed about 24.5 square miles in the Town in 1990, accounting for about 75 percent of all nonurban land and about 70 percent of the total Town area.
4. Public sanitary-sewer service is not currently provided in the Town of Fredonia. Surveys conducted in the Town have concluded that the unincorporated Waubeka area has experienced the failure of private septic-tank systems in the past and will continue to experience such failures in the future. Past regional and local plans have identified the Waubeka area as an area to be served by centralized sanitary-sewer service. Accordingly, the Waubeka area has been identified in this report as an area where public sanitary sewerage probably will be needed in the future.

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EXISTING LOCAL PLAN IMPLEMENTATION DEVICES

INTRODUCTION

The proper preparation of a land use plan for the Town of Fredonia requires consideration of existing pertinent land use and development regulations, including ordinances regarding zoning and land subdivision control. Each of these existing plan implementation devices is described in this chapter as it affects the physical development of the Town and the ability of the Town and other local governments involved to implement the adopted land use plan.

EXISTING ZONING

Good community development depends, not only upon sound long-range plan formulation at all levels of government, but also on practical plan implementation as well. Zoning is one of the major plan implementation devices available to any community. The primary function of zoning should be to implement the community's land use plan. A secondary function of zoning should be to protect desirable existing development. Zoning should be a major tool for the implementation of community plans, not a substitute for such plans.

A zoning ordinance is a public law which regulates and restricts the use of private property in the public interest. Zoning seeks to confine certain land uses to those areas in the community which are best suited to those uses and seeks to set aside land for these particular uses, thereby encouraging the most appropriate use of land throughout the community. Zoning seeks to assure adequate light, air, and open space for each building and to avoid overcrowding, traffic congestion, and the overloading or underuse of utility systems. Zoning should also be designed to protect and preserve the natural resource base. A single set of regulations applying to the entire community could not achieve these objectives of zoning, since different areas of the community differ in character and function. Accordingly, a zoning ordinance consists of two parts: 1) a map delineating the boundaries of various zoning districts and 2) a text setting forth the regulations that apply in each of the various zoning districts, together with related procedural, administrative, and legal provisions. The zoning ordinance text includes both "use" and "bulk" regulations for each district. Use

regulations specify the type of buildings or uses that can occupy land in a given district, including principal permitted uses; conditional uses, which require review and approval by the Plan Commission; and accessory uses, which are permitted if they are incidental to a principal use. Bulk regulations specify minimum lot sizes, maximum building heights, building setbacks from property lines, and similar details.

Zoning ordinances generally contain a number of different zoning districts, including, for example, agricultural districts, residential districts, business districts, industrial districts, park and institutional districts, and conservancy districts. The zoning ordinance lists specific regulations that apply to each district. In this respect the zoning ordinance differs from building, housing, and sanitation codes which, in general, apply uniformly to all lands or buildings of like use wherever they may be located in a community. It should be noted, however, that the same zoning regulations will apply to all properties within the same zoning district.

Wisconsin enabling legislation requires that zoning regulations be made in accordance with a "comprehensive plan." There are a number of different interpretations of the meaning of the term "comprehensive plan" in this context. These vary among the following ideas: that, to be deemed in accordance with a comprehensive plan, zoning must regulate land use, building height, and lot area; that zoning must be applied to the entire corporate limits of the community; that zoning must be based upon careful and comprehensive study prior to adoption; and that zoning must be based upon a documented long-range land use plan and must seek to implement that plan. The last definition is the one most commonly accepted by professional planners.

Town of Fredonia Zoning Ordinance

The Town of Fredonia enacted its initial zoning ordinance in 1965. That ordinance was updated in June 1978, following adoption of the Town's first land use plan, and again in February 1984, following adoption of the Ozaukee County farmland preservation plan. The Town zoning ordinance contains 16 zoning districts, including two agricultural districts, a suburban residential district, three urban single-family residential districts, two business

districts, three industrial districts, three park and institutional districts, a lowland conservancy district, and an upland conservancy district.

The application of these districts, as of April 1996, is shown on Map 26. Table 17 presents a summary of the zoning regulations applicable within each district as of April 1996, including principal and conditional uses, minimum lot area per housing unit, minimum lot size, minimum yard requirements, maximum building height, and the acreage and percent of the Town in each zoning district. About 65 percent of the Town is in the A-1 Exclusive Agricultural District, which is intended to preserve agricultural land in large blocks. About 11 percent of the Town was zoned for rural residential use in 1996 in the A-2 Agricultural or in the Rural Residential District and the C-2 Upland Conservancy District, each of which requires a minimum lot size of five acres. About 4 percent of the Town was zoned for suburban or urban residential use on lots within a minimum area of three acres or less. The remaining distribution of zoning districts in the Town of Fredonia in 1996 was about 0.2 percent zoned for commercial use; about 2 percent zoned for industrial use; about 0.8 percent zoned for public uses, including parks and public buildings; and about 17 percent zoned for lowland conservancy (wetlands) protection. Some 15 of the 16 districts in the Town are currently being utilized. The only district not in use is the P-3 Rural Institutional District. It should also be noted that only 65 acres of the 449 acres of industrially zoned lands, or 14 percent, is zoned for traditional manufacturing uses. The remaining 384 acres is zoned for mineral extraction. Mineral extraction operations are thus an important part of the Town's economy; the land use plan should take measures to protect the remaining important mineral resources.

The most significant problem related to the Town zoning ordinance is that the most current zoning district map is 15 years old, having been prepared in 1984. Research of actions taken by the Town Board since that time reveals that 32 rezonings have occurred from November 11, 1984, to April 11, 1996, and none of these rezonings have been entered on the Town's official zoning district maps. It is important for the management of the zoning ordinance that the zoning map be kept up to date. It should also be noted that one of the aforereferenced rezonings occurred in 1984, two occurred in 1985, two occurred in 1988, one occurred in 1989, two occurred in 1991, one occurred in 1992, four occurred in 1993, eight occurred in 1994, nine occurred in 1995, and two have occurred in 1996 through April. The large number of rezonings occurring in 1994 and 1995

suggests that the zoning ordinance is not being used effectively to implement the adopted land use plan; it is more likely that the zoning district map is being amended in a manner reactive to requests from land-owners and developers. The Town Plan Commission needs to renew its commitment to implementing the adopted land use plan.

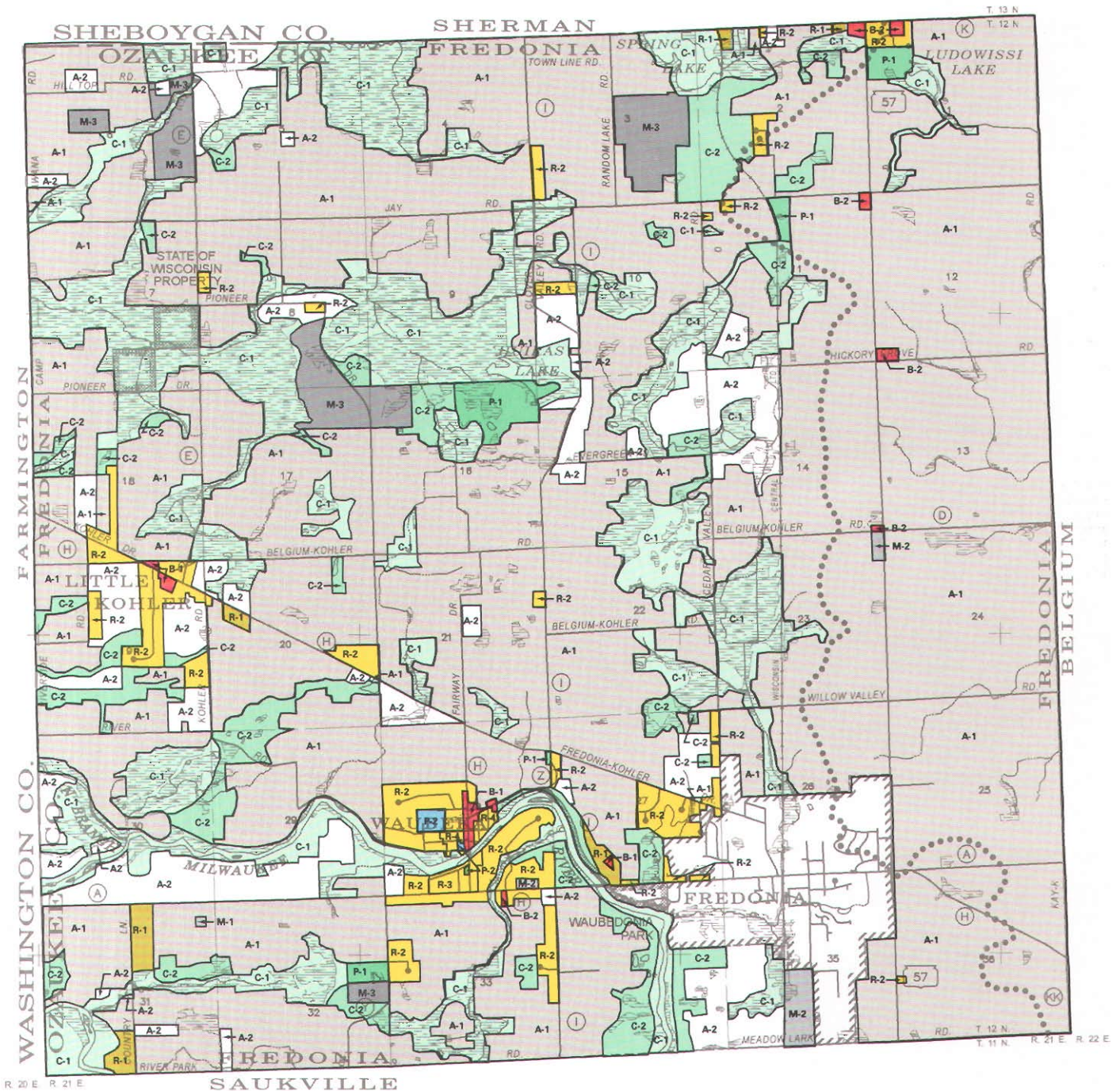
Ozaukee County Floodplain and Shoreland Zoning Ordinance

Ozaukee County has not adopted a Countywide general zoning ordinance; thus, the Town zoning ordinances are the principal zoning ordinances in effect within each of Ozaukee County's six unincorporated Towns. Pursuant to Section 59.971 of the Wisconsin Statutes, however, Ozaukee County has adopted a County Floodplain and Shoreland Zoning Ordinance. This ordinance applies to "shorelands" in all Towns within Ozaukee County. "Shorelands" are defined in the Wisconsin Statutes as all lands lying within 1,000 feet of the shoreline of navigable lakes, ponds, and flowages, or within 300 feet of the shoreline of navigable rivers and streams. Shorelands also include areas within the 100-year recurrence interval floodplain. If the floodplain extends more than 300 feet from the shoreline of the river or stream or 1,000 feet from the shoreline of navigable lakes, ponds, or flowages, the shoreland regulations apply to the landward edge of the floodplain. The Ozaukee County Floodplain and Shoreland Zoning Ordinance, as it applies to the Town of Fredonia, regulates the use of floodplains and shoreland-wetlands. In essence, the ordinance protects these areas from intensive development.

In addition, the Ozaukee County Floodplain and Shoreland Zoning Ordinance requires the following:

1. No structure, except navigational aids, piers, and boat-launching facilities, shall be located closer than 75 feet to the ordinary high-water mark of a navigable body of water. Greater setbacks, based on the height of lake bluffs, are required along Lake Michigan;
2. Cutting trees and clearing shrubbery within 35 feet of the ordinary high-water mark of all navigable waters is prohibited except for homesite development, development of park sites, access roads, construction of paths and trails, improvement of timber stands, customary trimming, removal of dead trees, and managed timber harvesting under a State District Forester's Plan. Any authorized tree cutting and shrubbery removal cannot involve

TOWN OF FREDONIA ZONING MAP: 1996



LEGEND

— ZONING DISTRICT BOUNDARY

A-1 EXCLUSIVE AGRICULTURAL DISTRICT

A-2 AGRICULTURAL/RURAL RESIDENTIAL DISTRICT

R-1 SUBURBAN SINGLE-FAMILY RESIDENTIAL DISTRICT

R-2 SINGLE-FAMILY RESIDENTIAL DISTRICT

R-3 SINGLE-FAMILY RESIDENTIAL DISTRICT

R-4 SINGLE-FAMILY RESIDENTIAL DISTRICT

B-1 COMMUNITY BUSINESS DISTRICT

B-2 URBAN INDUSTRIAL DISTRICT

M-1 HIGHWAY BUSINESS DISTRICT

M-2 GENERAL INDUSTRIAL DISTRICT

M-3 EXTRACTIVE DISTRICT

P-1 PARK DISTRICT

P-2 URBAN INSTITUTIONAL DISTRICT

(NONE) RURAL INSTITUTIONAL DISTRICT

C-1 LOWLAND CONSERVANCY DISTRICT

C-2 UPLAND CONSERVANCY DISTRICT

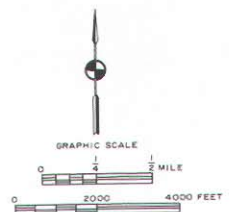


Table 17

SUMMARY OF TOWN OF FREDONIA ZONING DISTRICTS: 1996

Zoning District	Principal Permitted Uses	Conditional Uses	Minimum Lot Area and Width			Minimum Yard Requirements			Maximum Principal Building Height (feet)	Area of Town in Zoning District (acres)	Percent of Town in Zoning District
			Total Area (square feet)	Area per Dwelling Unit (square feet)	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)			
A-1 Exclusive Agricultural District	Agricultural crops, dairy farming, livestock raising, dwellings for farm operators, dwellings remaining after farm consolidation	Commercial feed lots, fur farms, egg production, a second farm dwelling needed to carry on the farm operation, airstrips and landing fields	1,524,600 (35 acres)	1,524,600 (35 acres)	330	75	25	50	60	14,524	65.0
A-2 Agricultural/Rural Residential District	Uses permitted in the A-1 Exclusive Agricultural District and agricultural warehousing, animal hospitals, commercial egg production, stables, and hatcheries	Bird seed production, graineries, fruit and vegetable drying, milk processing, livestock sales, poultry dressing, creameries, cheese production, and a second farm dwelling needed to carry on the farm operation	217,800 (5 acres)	217,800 (5 acres)	330	75	25	50	60	1,449	6.5
R-1 Suburban Single-Family Residential District	Single-family dwellings, and home occupations	Residential planned unit developments, conversion of a single-family dwelling to a two-family dwelling, and moving existing buildings	130,680 (3 acres)	130,680 (3 acres)	200	75	40	50	35	94	0.4
R-2 Single-Family Residential District	Single-family dwellings, and home occupations	Residential planned unit developments, conversion of a single-family dwelling to a two-family dwelling, and moving existing buildings	43,560 (1 acre)	43,560	150	75	25	50	35	644	2.9
R-3 Single-Family Residential District	Single-family dwellings, and home occupations	Conversion of a single-family dwelling to a two-family dwelling, and moving existing buildings	20,000	20,000	100	35	15	25	35	26	0.1
R-4 Single-Family Residential District	Single-family dwellings, and home occupations	Conversion of a single-family dwelling to a two-family dwelling and moving existing buildings	7,200	7,200	60	35	10	25	35	23	0.1
B-1 Community Business District	Retail sales and service, such as grocery stores, drug stores, hardware stores, sporting goods stores, building supply stores, furniture stores, variety stores, barber shops, beauty shops, restaurants, and taverns	Automotive sales and service, automotive body repair, food lockers, and funeral homes	7,200	--	60	--	--	25	35	24	0.1
B-2 Highway Business District	None. All uses are by conditional use permit	Drive-in establishments, gasoline stations, motels, lumber yards, taverns and supper clubs, grocery stores, and animal hospitals	43,560 (1 acre)	--	150	50	25	25	35	25	0.1
M-1 Urban Industrial District	Manufacturing and processing of appliances, foods, glass, jewelry, leather, fur products (not including tanning), pharmaceuticals, tobacco, and toiletries; distributing; wholesaling; warehousing; auto body repair; and farm machinery sales and service	Sewage treatment facilities, fueling stations and restaurants servicing industries, truck transfer stations, meat and poultry slaughtering, and production of dairy products	7,200	--	60	--	--	25	35	2	--

Table 17 (continued)

Zoning District	Principal Permitted Uses	Conditional Uses	Minimum Lot Area and Width			Minimum Yard Requirements			Maximum Principal Building Height (feet)	Area of Town in Zoning District (acres)	Percent of Town in Zoning District
			Total Area (square feet)	Area per Dwelling Unit (square feet)	Width at Setback (feet)	Front Yard (feet)	Side Yard (feet)	Rear Yard (feet)			
M-2 General Industrial District	Uses permitted in the M-1 district	Conditional uses permitted in the M-1 district, acid manufacturing, explosives, fat rendering, fertilizer manufacturing, glue manufacturing, hide tanning, paper manufacturing, stockyards, waste disposal sites, and outdoor storage	43,560 (1 acre)	--	150	50	25	25	35	65	0.3
M-3 Extractive District	None. All uses are by conditional use permit	Mining and processing of sand, gravel, rock, topsoil, and other minerals; asphalt plants; cement, lime, and gypsum manufacturing; storage of mineral products	--	--	--	100	100	100	35	384	1.7
P-1 Park District	Parks, playgrounds, golf courses, and nature trails	Country clubs, archery ranges, beaches, golf driving ranges, skeet and shooting ranges, stadiums, zoos and botanical gardens, sportsmen clubs, and campgrounds	43,560 (1 acre)	--	150	40	40	40	35	158	0.7
P-2 Urban Institutional District	Schools, churches, hospitals, funeral homes, libraries, government offices, public utility offices	Bus terminals, freight terminals, electric power plants, radio transmission towers, water towers, and cemeteries	7,200	--	60	--	--	25	35	16	0.1
P-3 Rural Institutional District	Schools, churches, hospitals, and government offices	Airports, bus terminals, freight terminals, electric power plants, radio transmission towers, water towers, and cemeteries	43,560 (1 acre)	--	150	75	25	25	35	--	--
C-1 Lowland Conservancy District	Agricultural uses conducted in accordance with conservation standards; fishing, hunting, scenic and historic preservation; sustained-yield forestry; streambank protection; water retention; and wild-life preserves	None	--	--	--	--	--	--	--	3,851	17.2
C-2 Upland Conservancy District	Agricultural uses conducted in accordance with conservation standards; fishing, hunting, scenic and historic preservation; forest and game management; parks and recreation areas; single-family dwellings	None	217,800 (5 acres)	217,800 (5 acres)	330	100	50	50	35	1,064	4.8
Total	--	--	--	--	--	--	--	--	--	22,349	100.00

*Less than one-tenth of one percent.

Source: Town of Fredonia Zoning Ordinance and SEWRPC.

the clear-cutting of more than 30 feet in any 100 feet of lake or stream frontage;

public hearing before the Ozaukee County Zoning Board of Adjustment;

3. Earth movements require the issuance of a special exception permit after a review and a

4. Tillage, grazing, livestock watering and feeding, and application of fertilizers is prohibited unless

conducted in accordance with applicable County, State, and Federal laws and regulations;

5. Withdrawal and diversion of surface water or its discharge for irrigation, processing, cooling, or other purposes require the issuance of a special-exception permit after a review and a public hearing before the Ozaukee County Zoning Board of Adjustment; and
6. Crop production on lands with an erosion factor of three or more, within shoreland areas, is prohibited and such lands shall be planted to permanent vegetation.

The Ozaukee County Floodplain and Shoreland Zoning Ordinance proposes four districts, all of which are overlay districts to local town zoning ordinance requirements: a shoreland-wetland district, a recreational-residential district, a general-purpose district, and a floodplain district. The shoreland-wetland district is intended to preserve wetlands of five acres or more within the statutorily defined "shoreland" jurisdiction. The floodplain district is intended to regulate development within the 100-year recurrence interval floodplain as identified in the *Flood Insurance Study for Ozaukee County and Incorporated Areas*, published by the Federal Emergency Management Agency (FEMA) in 1991. The floodplain district is divided into three subdistricts: the floodway subdistrict, the flood-fringe subdistrict, and the general floodplain subdistrict. Only the general floodplain subdistrict is mapped.

Overlay zoning districts provide for the possibility of superimposing certain additional requirements onto a basic zoning district. In the instance of conflicting requirements, the more stringent of the conflicting requirements applies. Accordingly, when there is a conflict between the Town's general zoning ordinance and the County's floodland and shoreland zoning ordinance, the more restrictive of the ordinances concerned applies.

Map 27 illustrates the extent of floodplain and shoreland zoning within the Town of Fredonia in 1995, which is based on 1985 shoreland boundaries, the 100-year recurrence interval floodplain as determined by the 1991 FEMA study, and existing 1995 wetlands. Approximately 3,833 acres, or 17.2 percent of the Town, lies within the County shoreland jurisdiction. Within that jurisdiction, about 2,427 acres, or 10.9 percent of the Town, have been mapped as floodplain; and about 1,699 acres, or 7.6 percent of the Town, have been mapped as shoreland wetland. The Ozaukee County Department of

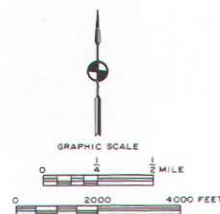
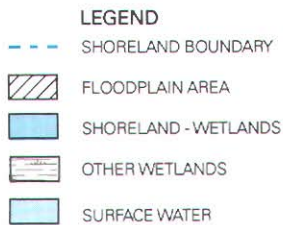
Natural Resources and the Southeastern Wisconsin Regional Planning Commission, has been working on updating the County shoreland and shoreland-wetland boundaries based upon field inspections of navigable waterways. Upon completion and subsequent adoption of all revisions to the shoreland maps, a set of these updated maps as they apply to the Town of Fredonia should be kept on file at the Town Hall to ensure proper administration of zoning regulations within the Town.

THE LAND SUBDIVISION CONTROL ORDINANCE

A land subdivision control ordinance is a public law regulating the division of land into smaller parcels. Land subdivision control ordinances provide for appropriate public oversight of the creation of new parcels and help ensure that new urban development is appropriately located; that farm and lot size minimums specified in zoning ordinances are observed; that adequate rights-of-way for arterial and collector streets are appropriately located and dedicated or reserved; that access to arterial streets and highways is appropriately limited in order to preserve the traffic-carrying capacity and safety of such facilities; that adequate land for parks, drainageways, and other open spaces is appropriately located and preserved; that street, block, and lot layouts are appropriate; and that adequate public improvements are provided.

Chapter 236 of the Wisconsin Statutes requires the preparation and approval of a subdivision plat when five or more lots of 1.5 acres or smaller are created. The State Statutes set forth requirements for surveying lots and streets, plat review and approval by State and local agencies, and recording approved plats. Section 236.45 of the State Statutes allows any city, village, town, or county that has established a planning agency to adopt a land division ordinance, provided the local ordinance is at least as restrictive as the State platting requirements. Local land division ordinances may include the review of other divisions of land not defined as "subdivisions" by the Wisconsin Statutes, such as when fewer than five lots are being created. Land division ordinances adopted by cities and villages may be applied to extraterritorial areas adjacent to the municipal boundaries, as well as to incorporated areas. It is possible for both a county and a town to have concurrent jurisdiction over land divisions in unincorporated areas. This may also occur within an incorporated city or village, a town, and a county in the incorporated municipality's extraterritorial plat approval area.

OZAUKEE COUNTY FLOODPLAIN AND SHORELAND ZONING IN THE TOWN OF FREDONIA: 1995



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Town of Fredonia Land Subdivision Control Ordinance

The Town of Fredonia land subdivision control ordinance is set forth in Town of Fredonia Ordinance No. 13, "Division and Platting of Land." The Ordinance regulates all land divisions in the Town and regulates the creation of "subdivisions" and "land divisions other than subdivisions." The ordinance defines subdivisions as the division of land into five or more parcels of five acres each or smaller or the division of land into five or more parcels of five acres each or smaller by successive division in a period of five years. The ordinance does not define other land division, but the implication is that all divisions not defined as a subdivision require the review of a certified survey map submitted by the landowner.

The land subdivision control ordinance requires that design standards and other specific data requirements be provided on all preliminary plats, final plats, and certified survey maps. The subdivision design requirements include the following:

1. Streets must conform to adopted official maps, if any, with regard to location and required right-of-way. In the absence of an official map, streets shall have a minimum right-of-way width of 66 feet.
2. Street layout design requirements include the following: that cul-de-sac street lengths should not normally exceed 500 feet; that the right-of-way of cul-de-sac turnarounds require at least a 65-foot radius; that street grades be limited to a maximum of 8 percent on all streets and no street have a grade of less than 0.5 percent; that horizontal curves be have a sight distance of at least 200 feet; that streets intersect each other at right angles unless topography or other limiting factors make this impractical; and street jogs with centerline offsets of less than 125 feet be avoided.
3. Lot design requirements include the following: side lot lines must be at right angles to straight street lines or radial to curved street lines, double-frontage lots are not permitted except where necessary to provide separation between residential development and arterial streets or to overcome topographical problems, corner lots should be designed to accommodate a full street setback from both streets on which the lot abuts, and lot depth in relation to lot width should not exceed a ratio of 2.5 to 1.

The Town subdivision control ordinance does not contain any standards requiring the installation of sanitary sewers,

public water-supply facilities, or storm sewers. Dedication of parklands is required when appropriate, but the ordinance does not state the amount of land to be dedicated, nor does it provide for the collection of fees-in-lieu of dedication.

The Town of Fredonia land subdivision control ordinance provides that the Town Plan Commission shall have 40 days in which to review a preliminary plat. A like amount of time is provided for the review of land divisions other than subdivisions. Chapter 236 of the Wisconsin Statutes provides that a municipality may have up to 90 days to review a preliminary plat. The local subdivision control ordinance sets the time for reviewing certified survey maps.

The Town of Fredonia should review its subdivision control ordinance and update it. At a minimum, the Town should revise the review periods so they are consistent with the review periods established in the Wisconsin Statutes. Review processes should be identified, including statutory reviews by State objecting agencies. The Town should consider expanding its design and improvement requirements to address such matters as sanitary-sewage disposal, provision of safe drinking water, and stormwater management.

Land Subdivision Regulation by Ozaukee County

The Ozaukee County Floodplain and Shoreland Zoning Ordinance contains a section addressing subdivision regulation which applies to all divisions of land resulting in the creation of a subdivision within the shorelands of unincorporated areas in Ozaukee County. A "subdivision" is defined as any land divisions that result in the creation of a five or more lots which are five acres each or less in area. The requirements of the County ordinance apply in addition to the requirements of Town land division ordinance. The requirements of the Ozaukee County ordinance are similar to those of the Town of Fredonia ordinance; however, the County ordinance does not regulate land divisions other than subdivisions. The County ordinance also provides for a 40-day preliminary plat review period rather than the 90 days authorized by the Wisconsin Statutes.

Extraterritorial Plat Review

The Wisconsin Statutes provide that any city or village which has adopted a local subdivision control ordinance may require the review and approval of subdivision plats and minor land divisions within its extraterritorial plat approval jurisdiction. The Village of Fredonia has the authority to review plats within one and one-half miles

of its corporate limits, but does not currently exercise such authority.

OFFICIAL MAPPING

Official maps, which are authorized by Section 62.23(6) of the Wisconsin Statutes, are an important, but historically underutilized, plan implementation tool. The official map is intended to identify precisely the location and width of existing and proposed streets, highways, parkways, and drainageways, and the location and extent of parks and playgrounds. The adoption of an official map prevents the construction of new buildings in the areas identified for existing and future public use. Neither the Town of Fredonia nor Ozaukee County has adopted an official map.

SUMMARY AND CONCLUSIONS

Land use development can be guided and shaped in the public interest through the sound application of public land use controls. Existing land use regulations in effect in the Town of Fredonia were examined as they relate to the physical development of the Town and to the ability of the Town government to implement the adopted land use plan. The following summarizes the findings set forth in the chapter:

1. The Town of Fredonia Zoning Ordinance regulates all land within the Town of Fredonia. About 65 percent of all land in the Town is zoned for agriculture, about 11 percent is zoned for rural residential use (rural residential being defined as residential development at a density of no more than one dwelling unit per five acres), about 0.4 percent is zoned for suburban residential use (suburban residential being defined as residential development on 1.5- to 5-acre lots), about 3 percent is zoned for urban residential use (urban residential being defined as residential development on lots smaller than 1.5 acres), and about 17 percent of the Town is protected by lowland conservancy

zoning. The remaining 3 percent is zoned for other urban uses, including business, industrial, park, and institutional uses.

2. The Town of Fredonia has not kept its zoning district map current. From 1984 to 1996, 32 rezonings occurred which were not entered on the Town of Fredonia zoning district map. The Town should take measures to assure that the zoning district map is kept current.
3. The Ozaukee County floodplain and shoreland zoning ordinance applies to lands in the Town of Fredonia lying within 1,000 feet of navigable lakes, ponds, and flowages; within 300 feet of navigable streams; and within 100-year recurrence interval floodplains. Shoreland and floodland zoning regulations apply to about 3,833 acres, or about 17 percent, of the lands in the Town of Fredonia.
4. Ozaukee County has been updating the County shoreland and shoreland-wetland boundaries based upon field inspections of navigable waterways. Upon completion and adoption of all revisions to the shoreland maps, a set of these updated maps as they relate to the Town of Fredonia should be kept on file at the Town Hall to ensure proper administration of zoning regulations within the Town.
5. Both the Town of Fredonia and Ozaukee County have adopted regulations for land subdivision control which are in effect in the Town. The Town land subdivision control ordinance covers all lands in the Town. The land division regulations of Ozaukee County extend to the 3,833 acres of shoreland in the Town of Fredonia. Both the Town of Fredonia land subdivision regulations and the Ozaukee County land subdivision regulations need to be updated to be consistent with the Wisconsin Statutes.
6. The Town of Fredonia has not adopted an official map ordinance pursuant to the requirements of Section 62.23(6) of the Wisconsin Statutes.

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Chapter VI

DEVELOPMENT OBJECTIVES, PRINCIPLES, AND STANDARDS AND THE ATTITUDINAL SURVEY

INTRODUCTION

Planning is a rational process for formulating and meeting objectives. Therefore, the formulation of objectives is an essential task that must be undertaken before preparation of a land use plan can proceed. Accordingly, a set of recommended land use development objectives was formulated for the Town of Fredonia. These objectives were based, in part, on the objectives of regional plans which were considered applicable to, and supportable by, the Town, and, in part, on the results of an attitudinal survey conducted by the Town. This chapter sets forth those objectives, together with supporting principles and standards. The land use development objectives relate primarily to the allocation and distribution of the various land uses and the provision to those land uses of essential community facilities and services required to meet the needs of the existing and probable future resident population of the Town of Fredonia during the next two decades. The standards perform a particularly important function in land use plan design since they form the basis on which estimates of future community land use needs are based. Community land use requirements based on these objectives, principles, and standards are presented in Chapter VII of this report.

THE TOWN OF FREDONIA ATTITUDINAL SURVEY

In order to assist in defining and assessing the attitudes of the residents of the Town of Fredonia with respect to issues related to land use planning, the Town of Fredonia, in September of 1995, conducted an attitudinal survey of the resident population. The survey was prepared and administered by the University of Wisconsin-Extension (UWEX) staff in Ozaukee County. The attitudinal survey data contained in this report were furnished to SEWRPC by the UWEX staff. The survey consisted of a return-mail questionnaire sent to all resident and nonresident property owners in the Town. In total, 870 questionnaires were mailed out and 364 property owners responded, a return rate of about 42 percent. Some of the issues addressed by the questionnaire included the residents' perceptions of acceptable land use development for the Town of

Fredonia, the importance of natural resource preservation, satisfaction with services provided in the Town, and what residents liked most and least about living in the Town.

Perceived Acceptable Land Use Developments in the Town of Fredonia

Residents were asked about future growth in the Town. Some 16 percent of those responding to the questionnaire indicated that there should be no more growth in the Town, 81 percent supported moderate growth, 2 percent supported rapid growth, and 1 percent expressed no opinion.

With regard to the preservation of farmland, 75 percent of those responding supported the preservation of farmland in the Town, 20 percent did not support the preservation of farmland, and 5 percent expressed no opinion. In addition, 61 percent of the respondents said farmland preservation should be the highest priority objective in the Town, 31 percent said farmland preservation should not be the highest priority objective, and 8 percent of the respondents expressed no opinion.

In response to questions regarding commercial and industrial development, 57 percent of the respondents indicated that there was a need for more commercial and retail development in the Town, 34 percent indicated there was not a need for more commercial development, and 9 percent expressed no opinion. Residents generally concurred that commercial development should occur around the Village of Fredonia, in the unincorporated area of Waubeka, and along STH 57.

With respect to future industrial development, 42 percent indicated that there was a need for future industrial development, 46 percent indicated there was not a need for more industrial development, and 12 percent expressed no opinion. Residents generally concurred that industrial development should occur around the Village of Fredonia and along STH 57.

Some 61 percent of the survey respondents indicated that prime agricultural land should not be divided for development purposes, while 65 percent of the respondents indicated that marginal farmland should be allowed to be

divided for such purposes. When asked what the preferred lot size for future residential development should be, 29 percent of the survey respondents indicated they preferred one-acre lots, 31 percent preferred three-acre lots, and 40 percent preferred five-acre lots.

When asked about the importance of protecting environmental corridors, woodlands, wetlands, and other open spaces, 62 percent indicated that the preservation of these resources was very important, 27 percent indicated natural resource preservation was somewhat important, 10 percent indicated natural resource preservation was not important, and 1 percent expressed no opinion. In addition, 60 percent of the respondents felt that preservation of wildlife habitat and recreational areas was very important, 29 percent indicated wildlife habitat and recreational area protection was somewhat important, 10 percent indicated such preservation was not important, and 1 percent expressed no opinion. It should be noted that 44 percent of the respondents supported the development of a Town park while 43 percent did not support the development of a Town park, and 13 percent expressed no opinion on this matter.

1995 Existing Levels of Services

Residents' ratings of existing services are indicated in Table 18. This table indicates a general satisfaction with all existing services. Residents were asked to indicate what services should be improved or established in the Town. Table 19 indicates service improvements desired. It should be noted that none of these services mentioned appeared on more than 4 percent of the questionnaires.

Residents were also asked to indicate what they liked best and what they liked least about living in the Town. The responses are summarized in Table 20 and Table 21, respectively. Residents generally supported the preservation of the rural character of the Town.

Finally, residents were asked to describe their vision for the Town over the next 10 to 20 years. These responses are summarized in Table 22. The largest single response was that the Town should remain rural. These responses should assist the Town Board in the formulation and evaluation of development objectives and related development standards.

BASIC CONCEPTS AND DEFINITIONS

The terms "objective," "principle," "standard," "design criteria," "plan," "policy," and "program" are subject to a range of interpretations. In order to clarify their meanings, the Regional Planning Commission has defined these

Table 18

ADEQUACY OF EXISTING SERVICES AS PERCEIVED BY THE RESIDENTS OF THE TOWN OF FREDONIA

Service	Above Average (percent)*	Average (percent)*	Below Average (percent)*	No Opinion (percent)*
Quality of Education: Northern Ozaukee School District	19	55	10	16
Quality of Education: Random Lake School District	20	54	9	17
Fire Protection Services	52	33	4	11
Ambulance and Rescue Services	48	34	2	16
Police-Protection Services	11	57	20	12

*Percent of respondents.

Source: The Town of Fredonia, The University of Wisconsin-Extension, and SEWRPC.

Table 19

NEED FOR NEW OR IMPROVED SERVICES AS PERCEIVED BY RESIDENTS OF THE TOWN OF FREDONIA

Service	Number of Respondents Indicating Need of the Service
Garbage Collection	16
Dump Services (Extended Hours)	4
Recycling	4
Sewer and Water Facilities	4
Responsive Town Board	4
Better Distribution of Information to Residents	4
Youth Programs	3
Snowplowing	2
Maintaining Valuable Resources	2
Services for Senior Citizens (i.e., Transportation)	2
No Burning Policy	2
Combine Waubeka and Village of Fredonia Fire Departments	2
Cable TV	1
Fix Waubeka Dam	1
Weed Control	1
Dog Control	1
Swimming Pool	1
Library	1
Visitor Information	1
Beautification of Bridge and Town Center . . .	1
Bike Trails	1
Stop Residential and Industrial Growth	1

Source: The Town of Fredonia, The University of Wisconsin-Extension, and SEWRPC.

terms as they are used in the context of this plan as follows:

1. Objective: a goal or end toward the attainment of which plans and policies are directed.

Table 20

WHAT RESIDENTS LIKE MOST ABOUT THE TOWN OF FREDONIA

Feature or Characteristic	Number of Respondents Indicating the Characteristic
Beauty of the Rural Area, Small Town, Friendly, Family-Oriented	183
Town Government	9
Proximity to Other Areas	8
Waubeka Dam	3
Low Crime	3
Growth Potential	2
Number of Farms	2
Low Taxes	2
Fire Protection	2
Low Traffic	1

Source: *The Town of Fredonia, The University of Wisconsin-Extension, and SEWRPC.*

2. Principle: a fundamental, generally accepted tenet used to support objectives and prepare standards and plans.
3. Standard: a criterion used as a basis of comparison to determine the adequacy of plan proposals to attain objectives.
4. Design criteria: a body of information which can be applied to the development of a solution or solutions to a specific design problem or a set of problems.
5. Plan: a design which seeks to achieve agreed-upon objectives.
6. Policy: a rule or course of action used to ensure plan implementation.
7. Program: a coordinated series of policies and actions to carry out a plan.

Although this chapter deals with only the first three of these terms, an understanding of their interrelationship and the concepts they represent is essential to understanding the land use development objectives, principles, and standards presented herein. The development objectives, principles, and standards address the following: 1) land use allocation, 2) spatial distribution of land uses, 3) protection of extractive resources, 4) protection of natural resources, 5) preservation of environmental

Table 21

WHAT RESIDENTS LIKE LEAST ABOUT THE TOWN OF FREDONIA

Feature or Characteristic	Number of Respondents Indicating the Characteristic
Residential Areas and Apartment Buildings Growing Too Fast	40
Lack of Restaurants and Small Businesses (Drugstore)	31
Town Board Not Responsive to Needs of Residents	19
Taxes	14
Run-Down Properties	12
Lack of Garbage Collection	10
Lack of Recreation	8
Needs to Be Cleaned Up	6
Traffic	6
Resistance to Progress	6
Bickering at Town Board Meetings	5
Road Conditions	4
Lack of Police Patrol	4
Inadequate School System	3
Dam Repair	3

Source: *The Town of Fredonia, The University of Wisconsin-Extension, and SEWRPC.*

Table 22

WHAT RESIDENTS WOULD LIKE TO SEE IN THE TOWN OF FREDONIA IN THE NEXT 10 TO 20 YEARS

Desired Vision	Number of Respondents Indicating the Vision
Stay the Same, Remain Rural	102
Moderate Controlled Residential, Industrial, and Retail Growth	73
Industrial Area Separate from Downtown and Residential Areas	8
Clean, Well-Kept Homes and Farms	8
Tourist Stop (Small Shops)	3
Career Opportunities to Keep People Working Here	3
Amtrack	1
Affordable Family Housing	1
Keep Historic Buildings	1

Source: *The Town of Fredonia, The University of Wisconsin-Extension, and SEWRPC.*

corridors, 6) provision of recreational opportunities, 7) provision of safe and efficient transportation facilities, 8) provision of fire protection services, and 9) provision of adequate housing and a variety of housing types. Each objective, together with its supporting principles and standards, is presented in the following section.

SPECIFIC OBJECTIVES, PRINCIPLES, AND STANDARDS APPLICABLE IN THE TOWN OF FREDONIA

1. **Land Use Allocation Objective:** A balanced allocation of space to the various land use categories in order to meet the social, physical, and economic needs of the resident population of the Town of Fredonia.

Principle: The planned supply of land set aside for any given use should approximate the known and anticipated demand for that use.

Standard: The amount of land area set aside for accommodating forecast growth in the Town of Fredonia should be determined by application of the standards set forth in Table 23.

2. **Land Use Spatial Distribution Objective:** To provide 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 and a compatible arrangement of land uses.

Principle: The transportation and public utility facilities and the land use pattern which these facilities serve and support are mutually interdependent in that the land use pattern determines the demand for, and loadings upon, transportation and utility facilities; these facilities, in turn, form a basic framework for land use development.

Standard: Urban development should be located to make maximum use of existing transportation and utility systems.

Standard: All lands developed or proposed to be developed for urban residential use should be located in areas that can be served by an existing public sanitary sewerage system and, preferably, within the gravity drainage area of that system.

Standard: All land developed or proposed to be developed for urban residential use should be located in areas that can be served by an existing public water-supply system.

Standard: Adequate stormwater drainage facilities should be provided for all urban development.

Principle: The proper allocation of urban uses can avoid or minimize hazards and dangers to health, safety, and welfare and can maximize amenity and convenience in terms of accessibility to supporting land uses.

Standard: Sites for commercial, educational, recreational, employment, and transit facilities to serve neighborhoods and the community at large should be provided in accordance with the standards set forth in Table 24.

Standard: Public buildings intended to serve all residents of the Town of Fredonia should be located in or near urban centers, where they will be near the center of business activity and be readily accessible to most residents of the Town through the arterial street system. When possible, public buildings should be located in a civic center setting to offer convenience to the public transacting business with a number of government agencies; to facilitate coordination between government agencies; to facilitate sharing of facilities and services such as parking, physical plant, and maintenance; and to provide a central symbol of civic interest and an aesthetic asset to the Town.

Standard: Urban residential uses, that is, residential areas with densities greater than one housing unit per five acres, should be located in areas that are served with centralized public sanitary-sewerage and water-supply facilities and contain, within a reasonable walking distance, necessary supporting local services, such as parks, shopping areas, and elementary schools. Urban residential uses should also be located in areas that have reasonable access through the appropriate component of the transportation system to employment centers, community and major shopping centers, cultural and governmental centers, and secondary and higher educational facilities. Housing types should be provided pursuant to Objective No. 9 and at densities consistent with those shown in Table 23.

Table 23

LAND USE STANDARDS FOR THE TOWN OF FREDONIA

Land Use Category	Development Standard (gross area) ^a
Residential	
Rural-Density, Single-Family (less than 0.2 dwelling units per net acre ^b)	588 acres per 100 dwelling units
Suburban-Density, Single-Family (0.2 to 0.6 dwelling units per net acre ^b)	320 acres per 100 dwelling units
Low-Density Urban, Single-Family (0.7 to 2.2 dwelling units per net acre ^b)	115 acres per 100 dwelling units
Medium-Density, Urban, Single-Family (2.3 to 6.9 dwelling units per net acre ^b)	32 acres per 100 dwelling units
Commercial	6 acres per 100 commercial employees
Industrial	12 acres per 100 industrial employees ^c
Governmental and Institutional^d	
Public Elementary	2.7 acres per 100 students ^e
Public Middle School	3.2 acres per 100 students ^f
Public High School	2.7 acres per 100 students ^g
Other ^h	4.5 acres per 1,000 persons
Public Outdoor Recreation Sites	
Major	In accordance with the adopted Ozaukee County Park and Open Space Plan
Community ⁱ	
In Park Sites	2.2 acres per 1,000 persons
In Middle School or High School Sites	0.9 acres per 1,000 persons
Park and School Combined	3.1 acres per 1,000 persons
Neighborhood ⁱ	
In Park Sites	1.7 acres per 1,000 persons
In Middle School or High School Sites	1.6 acres per 1,000 persons
Park and School Combined	3.3 acres per 1,000 persons

^aGross area includes associated street rights-of-way and off-street parking for each category. These standards are based on existing land use studies of the Southeastern Wisconsin Region since 1963 and are reasonably responsive to expected future, as well as to present, conditions.

^bNet residential density includes only those areas occupied by dwelling units and associated buildings, plus required yards and open spaces. It does not include associated street or utility areas.

^cAssuming a net land-to-building ratio of 7:1. If the net land-to-building ratio is 5:1, then nine acres per 100 employees should be used. If the net land-to-building ratio is 3:1, then six acres per 100 employees should be used.

^dThe overall standard for all governmental and institutional uses, including schools, churches, and municipal office buildings, is 12.0 acres per 1,000 persons.

^eRatio for elementary schools with 600 students.

^fRatio for middle schools with 900 students.

^gRatio for high schools with 1,800 students.

^hThis category includes hospitals, municipal office buildings, libraries, post offices, police and fire stations, and other related government and institutional uses.

ⁱNatural areas may be incorporated into the design of a park site; however, areas in floodlands, drainageways, wetlands, woodlands, and areas of steep slopes should not be included when determining whether acreage standards have been met.

Source: SEWRPC.

Table 24

FACILITY SITE AREA AND SERVICE RADIUS STANDARDS FOR THE TOWN OF FREDONIA

Facility Type	Number of Persons Served	Required Site Area (gross acres)	Service Radius in Medium-Density Neighborhood ^a (miles)	Maximum One-Way Travel Time (minutes at 25 mph)
Commercial				
Neighborhood Retail and Service Center	4,000-10,000	5-15	1.00	5
Community Retail and Service Center	10,000-75,000	15-60	1.50	10
Major Retail and Service Center	75,000-150,000	60 or more	10.00	30
Highway-Oriented Commercial Development	15,000 ^b	5-25	--	--
Community Office Center	1,000 or more employees	20 or more	--	15
Major Office Center	3,500 or more employees	60 or more	--	30
Industrial				
Community	300-3,500 employees	20-320	--	15
Major	3,500 or more employees	320 or more	--	30
Educational				
Public Elementary School (grades K-5)	600 students	16 ^{c,d}	0.50 ^a	--
Public Middle School (grades 6-8)	900 students	29 ^{c,e}	0.75 ^a	10
Public High School (grades 9-12)	1,800 students	48 ^{c,f}	1.00 ^a	15
Outdoor Recreational				
Neighborhood	7,000	5-24	0.75	--
Community	--	25 or more	2.00	10

^aA medium-density neighborhood is defined as an area having between 2.3 and 6.9 dwelling units per acre, with a population of approximately 7,000 persons per square mile.

^bMinimum average weekday traffic volume required on abutting arterial street or highway.

^cIncludes both land for the school and the associated outdoor recreational facilities.

^dElementary school area is based upon a standard of 10 acres plus one acre for each 100 students.

^eMiddle school area is based upon a standard of 20 acres plus one acre for each 100 students.

^fHigh school area is based upon a standard of 30 acres plus one acre for each 100 students.

^aMaximum one-way walking distance.

Source: SEWRPC.

Standard: Land developed for new retail and service commercial uses should be developed as planned shopping centers. Development of new commercial strip areas, that is, contiguous individual parcels of shallow depth with direct street access, should be avoided. Commercial development on each corner of an intersection should also be avoided. Avoiding strip and four-corner commercial development will help prevent traffic hazards, such as conflicts with turning movements and conflicts between pedestrian and vehicular traffic.

Standard: New industrial development should be located in planned industrial centers.

- 3. Extractive Resources Protection Objective:** To encourage the protection of sand, gravel, and limestone deposits to provide a source of raw material for concrete aggregate, gravel for road subgrades and surfaces, sand for mortar, crushed rock for ballast, molding sand, and building stone for dimensional stonework.

Principle: Sand, gravel and limestone deposits constitute an important raw material for construction and for certain industrial activities in the Region in that they provide concrete aggregate, gravel for road subgrades and surfacing, sand for mortar and molding sand, and building stone. Urbanization of lands overlaying these resources may make future

extraction of these resources economically unfeasible. Therefore, failure to identify these resources and encourage their preservation in the land use planning process may result in shortages and in increases in the costs of these materials, which would ultimately affect the tax base and the economic vitality of the Town and the Region of which the Town of Fredonia is a part.

Standard: Lands underlaid with sand, gravel, or limestone deposits meeting the following criteria should be protected from development which would preclude the establishment of extractive operations:

- a. Comprises an area greater than 40 acres in size.
 - b. Contains deposits located less than 10 feet from the surface.
 - c. Are readily accessible to the arterial highway and railroad systems.
 - d. Are located near compatible land uses, such as industrial, park and open space, and other extractive uses.
 - e. Have limited fragmentation of ownership.
4. Natural Resources Protection Objective: To Encourage the protection, preservation, and wise use of the natural resources in the planning area. Natural resources include agricultural lands, soils, lakes, streams, wetlands, woodlands, steep slopes, prairies, and wildlife.

Principle: The proper allocation of land uses can assist in maintaining an ecological balance between human activities and the natural environment.

Soils Principle: The proper relation of urban and rural land use development to soil type and distribution can serve to avoid costly environmental and developmental problems, aid in the establishment of better settlement patterns, and promote the wise use of an irreplaceable resource.

Standard: Unsewered rural development should not be located in areas covered by soils identified on Maps 10 and 11 in Chapter III as having unsuitable soils for development with onsite sewage-disposal systems.

Standard: Sewered urban development should not be located in areas covered by soils identified on Map 12 in Chapter III as having severe limitations for such development. When development is proposed on soils exhibiting severe limitations, careful attention must be given in the design to overcome these limitations properly. Sewered urban development should never occur in protected wetland areas.

Lakes and Streams Principle: Inland lakes and perennial streams contribute to the community's environmental health in a number of ways. They add to the atmospheric water supply through evaporation; provide a suitable environment for desirable and sometimes unique plant and animal life; provide the population with opportunities for certain scientific, cultural, and educational pursuits; constitute prime recreational areas; provide a desirable aesthetic setting for certain types of developments; store and convey flood waters; and provide a water supply.

Standard: The shorelines and floodwater-storage areas of inland lakes and perennial streams should be preserved and protected in accordance with the following standards:

- a. Floodlands should not be allocated to any urban development which would cause, or be subject to, flood damage.
- b. The floodwater-storage and hydrologic capacity of perennial stream channels and associated floodlands should not be reduced below existing conditions.
- c. Adequate stormwater drainage facilities should be provided for all urban development.

Wetlands Principle: Wetlands perform a variety of important functions which make them invaluable resources. These include: support for a wide variety of desirable and sometimes unique plant and animal life; assistance in the stabilization of lake levels and streamflows; retention and storage of plant nutrients in runoff, thus reducing the rate of enrichment of surface waters and obnoxious weed and algae growth; contribution to the atmospheric oxygen and water supply; reduction of stormwater runoff by providing floodwater impoundment and storage; filtration of soil particles suspended in runoff, thus

reducing stream sedimentation; and provision to the population of opportunities for certain scientific, educational, and recreational pursuits.

Standard: Wetlands adjacent to streams or lakes, shoreland wetlands, wetlands in primary environmental corridors, and wetlands with special wildlife or other natural values should not be drained or filled or allocated to any urban development except limited recreational uses. All wetlands five acres or larger in shoreland areas must be preserved in accordance with Chapters NR 115 and NR 117 of the Wisconsin Administrative Code.

Woodlands Principle: Woodlands assist in maintaining unique natural relationships between plants and animals; reduce storm water runoff; contribute to the atmospheric oxygen supply; contribute to the atmospheric water supply through transpiration; aid in reducing soil erosion and stream sedimentation; provide the resource base for the forest product industries; provide the population with opportunities for certain scientific, educational, and recreational pursuits; and provide a desirable aesthetic setting for certain types of land use development.

Standard: Woodlands with a minimum area of five acres should not be allocated to urban development other than limited recreational uses.

Standard: A minimum of five acres of woodland for each 1,000 residents should be maintained for recreational purposes.

Wildlife Principle: Wildlife, when provided with a suitable habitat, supplies the population with opportunities for certain scientific, educational, and recreational pursuits; comprises an integral component of the life systems which are vital to beneficial natural processes, including the control of harmful insects and other noxious pests and the promotion of plant pollination, provides food sources, and serves as an indicator of environmental health.

Standard: The most suitable habitat for wildlife, that is, the area where fish and game can best find food, shelter, and reproduce, is a natural habitat. Natural habitat for fish and game can best be achieved by preserving or maintaining in a wholesome state such other

natural resources as soil, air, water, wetlands, and woodlands. The standards for each of these other resources, if met, would ensure the preservation of a suitable wildlife habitat and population.

5. Environmental Corridor and Agricultural Land Preservation Objective: To preserve sufficient high-quality open space lands for protection of the underlying natural resource base and the enhancement of the social and economic well-being and environmental quality of the area.

Environmental Corridor Principle: Ecological balance and natural beauty are important determinants of a community's ability to provide a pleasant and habitable environment for all forms of life. Preservation of environmental corridors contribute to the maintenance of ecological balance, natural beauty, and the economic well-being of the Town of Fredonia. By protecting these elements of the natural resource base, flood damage can be reduced, soil erosion abated, water supplies protected, air cleansed, wildlife populations enhanced, and continued opportunities provided for scientific, educational, and recreational pursuits.

Standard: All remaining undeveloped lands in designated primary environmental corridors in the Town of Fredonia should be preserved in essentially natural, open uses.

Standard: All remaining undeveloped lands in designated secondary environmental corridors and isolated natural resource areas in the Town of Fredonia should be considered for preservation as urban development proceeds or used as drainageways, floodwater-detention areas, and parks.

Prime Agricultural Lands Principle: The preservation of prime agricultural lands ensures that the most productive existing farmlands will remain available for providing food and fiber, contributes to the agricultural and agriculture-related economy of the area, maximizes the return on capital invested in agricultural irrigation and drainage systems and soil and water conservation practices, minimizes conflicts between farming operations and activities associated with urban land uses, and contributes to energy conservation because prime agricultural soils require less energy to farm than do other soils.

Standard: Prime agricultural lands lying outside the planned urban service area that are included in parcels of at least 35 acres and in blocks of 100 acres or more should be preserved for agricultural use. Agricultural uses should be preserved through the application of zoning and land division regulations that allow only agricultural or agriculture-related uses to occur and require a minimum parcel size of 35 acres.

6. Recreation Objective: To provide an integrated system of public outdoor recreation sites and related open space areas, including areas for both resource-oriented and nonresource-oriented intensive outdoor recreational activities which will provide the resident population of the Town of Fredonia with adequate opportunity to participate in a wide range of outdoor recreation activities.

Principle: The opportunity to attain and maintain good physical and mental health is an inherent right of all residents of the Town of Fredonia. The provision of outdoor recreation sites and related open space areas contributes to the attainment and maintenance of physical and mental health by providing opportunities to participate in a wide range of activities. An integrated park and related open space system, properly related to the natural resource base, can generate the dual benefits of satisfying recreational demands in an appropriate setting and protecting and preserving valuable natural resources. Finally, an integrated system of outdoor recreation sites and related open spaces can contribute to the orderly growth of the Town of Fredonia area by lending form and structure to urban development.

Principle: Public outdoor recreation sites promote the maintenance of proper physical and mental health by providing opportunities to participate in physical activities which help to reduce everyday tensions and anxieties. Well-designed and properly located public outdoor recreation sites also provide a sense of community, bringing people together for social and cultural, as well as recreational, activities and will thus contribute to the desirability and stability of neighborhoods.

Standard: Local governments should provide outdoor recreation sites sufficient in size and number to meet the recreation demands of the resident population. Such sites should contain the natural resources or improvements

appropriate to the recreational activities to be accommodated and be spatially distributed in a manner that provides ready access to the resident population.

To achieve this standard, the site requirements contained in Table 25 should be met in that portion of the Town of Fredonia lying within the Village of Fredonia and Waubeka urban service area. Outside the urban service area, one Town-owned park should be provided to serve the need for organized recreational activities, such as softball and picnicking, for residents of the rural areas of the Town. As the community recreation facility, the Town Park should be readily accessible to Town residents and should be sited near another community facility which serves as a focal point for Town residents, such as a town hall, school, or fire station.

Major parks should be provided in the Town of Fredonia area in accordance with the adopted Ozaukee County park and open space plan.

Passive Recreational and Open Space Principle: Recreational and open space demands cannot be effectively satisfied solely by providing general use outdoor recreation sites. Certain recreational pursuits, such as hiking, biking, cross-country skiing are best provided through a system of linear recreation corridors located in areas where natural resource features are present. A well-designed system of recreational corridors offered as an integrated part of linear open space lands can also serve to connect existing and proposed general-use park sites, thus forming an integrated park system. Such open lands, in addition, satisfy the human need for natural surroundings, serve to protect the natural resource base, and ensure that scenic areas assume their proper place in the urban form of the community.

Standard: Resource-oriented recreational corridors should maximize use of environmental corridors for trail-oriented recreational and open space activities and as links between general-use recreational sites.

Standard: Local recreation corridors should be conveniently accessible to residents of the Town of Fredonia without the need to

Table 25

STANDARDS FOR PUBLICLY OWNED OUTDOOR RECREATION SITES IN THE TOWN OF FREDONIA

Site Type	Size (gross acres)	Parks			Schools ^a		
		Minimum Per Capita Requirements (acres per 1,000 persons)	Typical Facilities	Maximum Service Radius (miles)	Minimum Per Capita Requirements (acres per 1,000 persons)	Typical Facilities	Maximum Service Radius (miles)
Community ^b	25-249	2.2	Swimming pool or beach, soccer fields, boat launch, nature study area, playfield, softball and/or baseball diamond, tennis court, picnic areas, and passive activity areas ^c	2.00 ^d	0.9	Playfield, baseball diamond, softball diamond, tennis court	0.5-1.0
Neighborhood ^b	5-24	1.7	Picnic areas, playfield, playground, softball and/or baseball diamond, tennis court, basketball goal, ice-skating rink, passive activity areas ^c	1.00 ^e	1.6	Playfield, playground, baseball diamond, softball diamond, tennis court, basketball goal	0.5-1.0

^aIn urban areas, facilities for intensive nonresource-oriented activities are commonly located at school sites.

^bSites for community and neighborhood parks, unlike major park sites, rely more for location on the development characteristics of the area to be served than on natural resource amenities.

^cA passive activity area is defined as an area within an outdoor recreation site providing an opportunity for less athletic recreation pursuits, such as pleasure walking, relaxation, and informal picnicking. Such areas are generally located in all parks and consist of a landscaped area with shade trees and benches.

^dThe need for a community park can be met by the presence of a major park. Residents of the Town of Fredonia should be within two miles of either a community park or a major park.

^eThe maximum service radius for neighborhood parks is governed primarily by the population densities in the vicinity of the park. In high-density areas, each resident should be within 0.5 mile of a neighborhood park; in medium-density areas, each resident should be within 0.75 mile of a neighborhood park; in low-density areas, each resident should be within one mile of a neighborhood park. It should be noted that the need for a neighborhood park can be met by a community or a major park within the recommended service radius for a neighborhood park.

Source: SEWRPC.

use motorized vehicles. These local corridors should function as a parkway system that interconnects local parks and should ultimately connect to major and regional recreation corridors.

Standard: A minimum of 0.16 linear mile of recreation-related open space consisting of linear recreation corridors should be provided for each 1,000 persons in the Town of Fredonia. Recreation corridors should be sited, to the greatest extent possible, in areas of natural-resource features at least 200 feet in width.

7. **Transportation System Objective:** To provide an integrated transportation system which, through its location, capacity, and design, will meet the travel demand generated by the existing and proposed land use pattern.

Principle: An integrated area transportation system serves to interconnect the various land use activities in the neighborhoods, cities, villages, and towns of the Region freely, thereby providing the accessibility needed to support residents' activities.

Standard: The transportation system should provide access, not only to all land currently devoted to urban development, but also to land proposed to be used for such development, as well as an orderly functional hierarchy of arterials, collectors, land-access streets, and pedestrian paths to serve the Town of Fredonia. All streets and highways in the Town of Fredonia should be placed into one of the functional classifications listed below.

- a. **Land-Access Streets:** The primary function of land-access streets is to carry traffic to and from individual building sites.

- b. Collector Streets: The primary function of collector streets is to collect traffic from urban uses abutting land-access streets and convey it to arterial streets or activity centers.
- c. Arterial Streets: The primary function of arterial streets is to provide for the expeditious movement of through traffic into, out of, and within the community. Where possible, arterial streets should not pass directly through existing or proposed residential areas.

Standard: Arterial streets and highways in the Town of Fredonia should be improved to cross-sections similar to those recommended in the most recently adopted edition of *A Jurisdictional Highway System Plan for Ozaukee County*.

Standard: Off-street parking and loading facilities should be located near the land uses to which they are accessory.

Standard: Pedestrian and nonmotorized-vehicle trails should be provided as a part of an overall trail system plan and should be designed in conformance with the most recent edition of *Guide for Development of New Bicycle Facilities*, published by the American Association of State Highway and Transportation Officials in 1991. Bicycle paths:

- a. Should be provided to connect medium- and high-density residential areas with major activity centers lying within five miles and one mile, respectively, of such areas. Major activity centers include transit stations, including park-and-ride lots; office and retail centers; industrial centers; park and recreational facilities; such government and institutional centers as libraries, government administrative centers, medical centers, and technical and vocational schools.
- b. A pedestrian and nonmotorized-vehicle trail should be available within one mile of all residents in the urban areas of the Town of Fredonia.

- c. Nonmotorized-vehicle parking and storage facilities should be provided at all transit stations and at park-and-ride lots.

- 8. Fire-Protection Objective: To provide the facilities necessary to maintain high-quality fire-protection services throughout the urban service area.

Principle: The adequacy of fire protection in the urban service area depends on the relationship between the size and distribution of population and the locations of facilities available to serve that population.

Standard: Fire stations and equipment should be distributed based, in part, on the standards shown in Table 26

- 9. Housing Objective: To provide adequate location and choice of housing and housing types for all residents, regardless of age, income, or household size.

Principle: Adequate choice in size, cost, and location of housing units will assure equal housing opportunity.

Standard: Housing units in the Town of Fredonia should be well-distributed geographically and should include a full range of housing types, sizes, and costs.

Standard: The supply of vacant and available housing should be sufficient to maintain and facilitate ready occupant turnover. Vacancy rates should be maintained at a minimum of 4 percent and a maximum of 6 percent for rental units and a minimum of 1 percent and a maximum of 2 percent for homeowner units in a full range of housing types, sizes, and costs.

Standard: Residential densities in the Town of Fredonia should generally consist of the following:

- a. Approximately 50 percent of all housing units in the Town of Fredonia should consist of single-family housing units located on lots with an area of at least five acres or an equivalent overall density of no more than one dwelling unit per five acres.

Table 26

STANDARDS FOR DISTRIBUTION OF FIRE COMPANIES

Required Fire Flow (gallons per minute)	Optimum Service Radius in Miles ^a	
	From Engine Company	From Ladder Company
Less than 5,000	1.50 ^b	2.00 ^c
5,000 to 9,000	1.00	1.50
More than 9,000	0.75	1.00

^aDirect street-travel distance for first-due fire company.

^bMay be increased to two miles for residential areas consisting of single- and two-family dwellings and to four miles where such dwellings have an average separation of 100 feet or more.

^cA ladder company may not be needed in areas where there are less than five buildings of three or more stories.

Source: Insurance Services Office and SEWRPC.

- b. Approximately 5 percent of all housing units should consist of suburban-density, single-family housing units on about 1.5- to 5-acre lots, or 0.2 to 0.6 dwelling units per net residential acres. These lots should be developed adjacent to, or infilled within, similar existing developments.
- c. Approximately 35 percent of all housing units in the Town of Fredonia should consist of low-density, single-family housing units on about 20,000-square-foot to 1.5-acre lots, or 0.7 to 2.2 dwelling units per net residential acres. These lots should be developed adjacent to, or infilled within, similar existing developments, most of which are located near the Village of Fredonia and in the unincorporated areas of Waubeka and Little Kohler.
- d. Approximately 10 percent of all housing units in the Town of Fredonia should consist of medium-density, single-family housing units on about 6,500- to 20,000-square-foot lots, or 2.3 to 6.9 dwelling units per net acre.

SUMMARY AND CONCLUSIONS

This chapter has presented the formation of a series of planning objectives for the Town of Fredonia. The chapter also described the findings of an attitudinal survey of residents of the Town to determine citizen support for various types of land use development. The most important findings and recommendations of this chapter are described below.

1. The citizen survey showed that most Town residents favored development at a moderate rate of growth. Citizens of the Town strongly favor the preservation of agricultural lands and natural resources, generally prefer lots at least five acres in size, generally support the expansion of commercial development but were about equally divided in support of future industrial development in the Town, and were about equally divided in the support of a Town park.
2. This chapter sets forth a series of development objectives with supporting principles and standards intended to guide future planning and development. The development objectives set forth in this chapter propose that:
 - a. Development in the Town should be allocated in its amounts and distribution as is needed to meet the social, physical, and economic needs of the present and future resident population of the Town of Fredonia, based on the population forecasts set forth in Chapter II of this plan.
 - b. Development in the Town should be properly related to the supporting transportation, utility, and other public facilities in order to assure the economical provision of transportation, utility, and public services and a compatible arrangement of land uses.
 - c. Development in the Town should encourage the protection of such extractive resources as sand, gravel, and limestone deposits, to provide a source of raw material for future developments.
 - d. Development in the Town should encourage the protection, preservation, and wise use of the natural resources. Natural resources

include agricultural lands, soils, lakes, streams, wetlands, woodlands, steep slopes, prairies, and wildlife.

- e. The Town of Fredonia should provide the resident population of the Town with adequate opportunities to participate in a wide range of outdoor recreation.
- f. Development in the Town should be provided with an integrated transportation system which,

through its location, capacity, and design, will meet the travel demand generated by the existing and proposed land use pattern.

- g. Facilities necessary to maintain high quality fire protection throughout the Town should be provided.
- h. Development in the Town should provide adequate location and choice of housing and housing types for all residents, regardless of age, income, or household size.

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Chapter VII

LAND USE AND COMMUNITY FACILITY REQUIREMENTS

INTRODUCTION

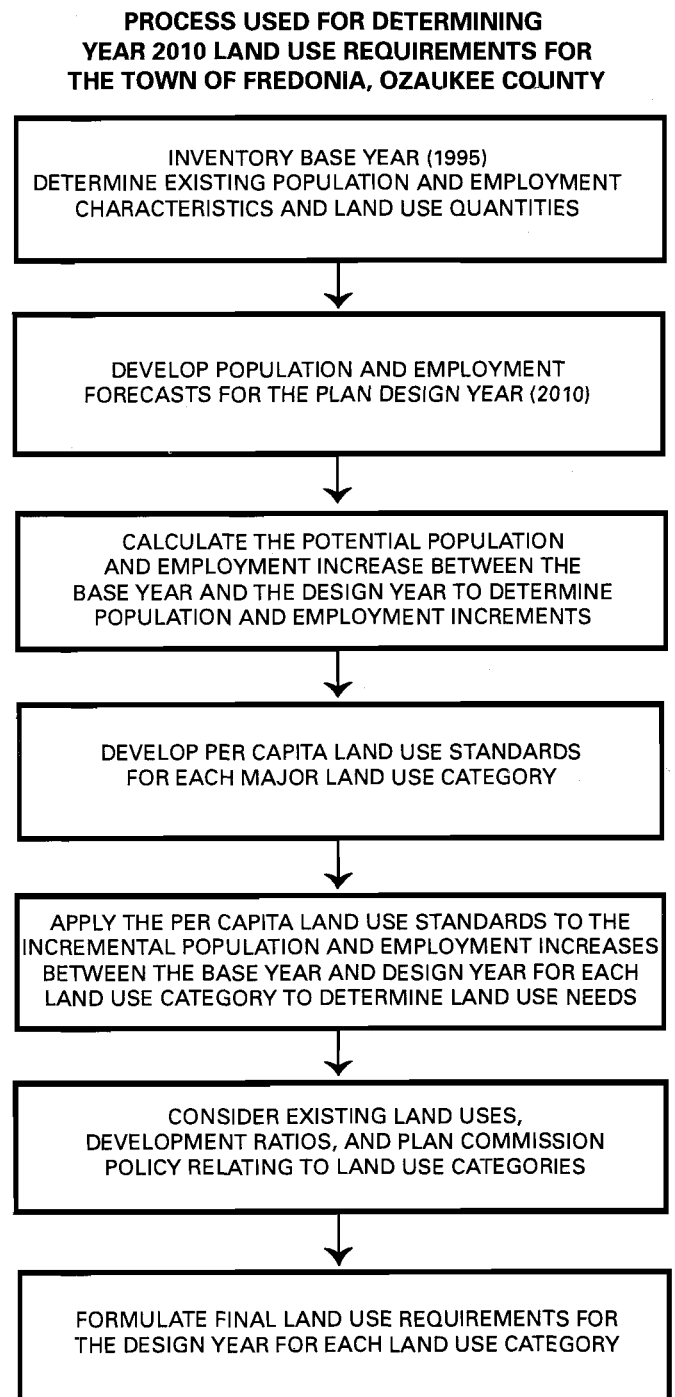
The objectives, principles, and standards set forth in Chapter VI of this report express the physical development objectives of the Town, and the standards to be used as a basis for formulating a land use plan to meet those objectives. The standards perform a particularly important function in the plan design process because they are used to identify the amount of residential, commercial, industrial, and other urban land uses that will be needed to serve residents and workers in the Town of Fredonia to the plan design year 2010.

As part of the land use planning process, the standards listed in Chapter VI were applied to the selected forecast population, household size, and employment levels identified in Chapter II, to develop a set of urban land use and community facility requirements to be met by the plan. The selected population forecast level was 2,670 persons in the Town of Fredonia; the selected forecast household size was 2.95 persons per household; and the selected forecast employment level was about 550 jobs. The process used to determine the year 2010 urban land use requirements for the Town of Fredonia is graphically illustrated in Figure 3, and is described in the following paragraphs.

LAND USE REQUIREMENTS

Table 23 in Chapter VI sets forth per capita standards to be used to determine land use requirements in the year 2010. The per capita standards are intended to help estimate the total number of acres of land needed to satisfy requirements for various types of urban land uses. The per capita standards in Chapter VI are expressed in the following terms: for residential land requirements, the standards are based on the number of acres needed to accommodate 100 housing units for each residential density classification; for commercial and industrial land requirements, the standards are based on the number of commercial and industrial employees; and for recreational areas and governmental and institutional land uses the requirements are based on the resident population of the Town.

Figure 3



Source: SEWRPC.

Table 27

SELECTED LAND USE REQUIREMENTS FOR THE TOWN OF FREDONIA: 2010

Urban Land Use Category	1995 Gross Area ^a (acres)	Percent of Total 1995 Gross Area	Estimated 1995 Number ^b	1995 Development Ratios	Adopted Development Standard	Forecast 1995-2010 Increment	Required Incremental Land Use Acreages per Development Standards	Year 2010 Planned Number ^b	Total Urban Land Requirements: 2010	
									Gross Acres ^a	Percent
Residential										
Rural-Density Single-Family (Less than 0.2 dwelling units per net acre)	830 ^c	52.1	160 housing units	--	588 acres per 100 housing units	120 housing units ^d	776 ^e	280 housing units	1,606 ^f	64.2
Suburban-Density Single-Family (0.2 to 0.6 dwelling units per net acre)	122	7.7	35 housing units	348.6 acres per 100 housing units	320 acres per 100 housing units	20 housing units ^d	70 ^e	55 housing units	192	7.7
Low-Density Single-Family (0.7 to 2.2 dwelling units per net acre)	477	29.9	26 housing units	180.0 acres per 100 housing units	115 acres per 100 housing units	40 housing units ^d	51 ^e	305 housing units	528	21.1
Medium-Density Single-Family (2.3 to 6.9 dwelling units per net acre)	25	1.6	70 housing units	35.7 acres per 100 housing units	32 acres per 100 housing units	0 housing units	0	70 housing units	25	1.0
Subtotal	1,454	91.3	530 housing units^g	--	--	180 housing units	897	710 housing units^g	2,351	94.0
Commercial	30	1.9	243 employees	12.3 acres per 100 employees	6.0 acres per 100 employees	11 employees	1	254 employees	31	1.2
Industrial	64	4.0	56 employees	114.3 acres per 100 employees	12.0 acres per 100 employees	2 employees	0 ^h	58 employees	64	2.6
Government and Institutional	42	2.6	2,078 persons	20.2 acres per 1,000 persons	13.1 acres per 1,000 persons	592 persons	8	2,670 persons	50	2.0
Recreational ⁱ	3	0.2	2,078 persons	1.4 acres per 1,000 persons	3.9 acres per 1,000 persons ^j	592 persons	2	2,670 persons	5	0.2
Total	1,593	100.0	--	--	--	--	908	--	2,501	100.0

^aGross area includes associated street rights-of-way and off-street parking for each land use category.

^bThe estimated 1995 and forecast 2010 population numbers are expressed in number of housing units for residential land use categories; number of employees for commercial and industrial land use categories; and total population for government and institutional, and recreational land use categories.

^cThis figure represents only the developed portion (at least five acres) of these residential lots and does not include the approximately 1,150 acres of excess, undeveloped land on some of these large lots, since these excess areas may be further subdivided into additional residential lots.

^dTo achieve the overall estimated housing mix established in Chapter VI, the required incremental housing units were allocated as follows: 60 percent in the rural-density residential category, 10 percent in the suburban-density residential category, and 20 percent in the low-density residential category. The remaining 10 percent were assumed to consist of residences located on mostly large agricultural parcels.

^eThe required incremental land use acreage for residential uses include 10 percent more land, in addition to that required by applying the development standards, to provide for site suitability considerations, housing vacancies, and market choice.

^fThis total does not include approximately 1,510 acres of upland areas within designated environmental corridors and isolated natural resource areas in which very limited residential development might occur at a density of no more than one dwelling unit per five acres.

^gThese figures do not include approximately 145 existing farm residences located on large agricultural parcels in 1995, since agricultural use is considered the principal land use of the properties. Also, these figures do not include approximately 4 percent (about 25 dwelling units in 1995) of the total dwelling units in the Town located in commercial buildings and group-quarters, since commercial use and institutional use, respectively, are considered the principal land use of these properties. It is assumed that residences located on large agricultural parcels will increase about 10 percent (about 20 residences) and that the number of dwelling units located in commercial buildings or group-quarters would remain the same in the year 2010.

^hLess than 0.5 acres.

ⁱThis category includes only those areas with public-owned, outdoor recreational facilities in sub-neighborhood, neighborhood, and community parks. It does not include undeveloped open space areas such as parkways, bicycle and hiking trails, and regional parks.

^jThis standard applies only to subneighborhood, neighborhood, and community parks. Regional parks should be provided in accordance with the Ozaukee County Park and Open Space Plan.

Source: SEWRPC.

Table 27 summarizes probable future urban land use requirements in the Town of Fredonia through the year 2010. The amount of land needed for each urban land use category shown in Table 27 was determined by applying the appropriate land use development standard to the population or employment increase expected to occur between 1995 and 2010, and adding the result for each land use category to the amount of land devoted to each use in 1995. Table 27 indicates that about 132 acres of rural or undeveloped land within the Town of Fredonia may be expected to be converted to urban use between 1995 and the year 2010. These acres consist of land devoted to all urban land uses except rural-density, single-family residential uses.

Based on a desire to preserve the rural environment of the Town, the standards in Chapter VI establish that a portion of land for new residential development in the Town be at very low densities of no more than one dwelling unit per five acres. Accordingly, the standards show a requirement for about 776 acres of additional land devoted to rural residential development.

In addition to the per capita standards, Chapter VI contains accessibility standards that are intended to assure that services such as schools, parks, and shopping centers are spatially distributed in a manner that is convenient and efficient for the population they are intended to serve. For example, the standards recommend that residents of medium-density and low-density residential areas should have to travel no more than approximately 0.75 and 1.0 mile, respectively, to a neighborhood park. Accessibility standards are used when designing and evaluating the land use plan. It should be recognized that in some situations, while per capita standards may be met, a need may still exist for additional sites or facilities to meet the accessibility standards.

It is important to note that while forecasts of future population, household size and employment levels must be prepared and used in the application of land use standards, these forecasts involve uncertainty and, therefore, must be used with caution and tempered by experienced judgement. Forecasts cannot take into account unpredictable events that may have major effects upon future conditions. The validity of the need and amount of land for each land use category determined through the application of the standards to forecast population and employment levels must, therefore, be periodically reexamined by the Town Plan Commission and other affected local governments.

While many of the objectives and standards relate to the resident population to be served, one of the most important objectives—that relating to the preservation and protection of the underlying natural resource base—is, in effect, independent of any resident population level. Preservation of the environmental corridors within the Town of Fredonia in an essentially open, natural state and preservation of important agricultural lands are necessary to achieve this important objective.

Residential Development

The amount of residential land needed in the Town of Fredonia by the year 2010 was determined by first dividing the forecast year 2010 household population of 2,670 persons by 2.95 persons per household, which is the average household size anticipated in the year 2010. The result indicates that a total of about 710 occupied housing units will be needed in the Town in the year 2010, excluding approximately 165 farm residences, which are included in the agricultural land use category, and the approximately 25 dwelling units located in commercial buildings or group-quarters, which were included in the commercial and institutional land use categories.¹ In 1995, there were about 530 total housing units in the Town, excluding about 145 existing farm residences and about 25 existing dwelling units in commercial buildings and group-quarters;¹ therefore, approximately 180 additional housing units will be needed between 1995 and 2010 to accommodate the need for housing in the year 2010, plus approximately 20 units that may be allocated to the agricultural land use category. These additional 180 housing units were distributed among three of the four residential density classifications listed in Table 27 to achieve the desired percentage of housing mix for the plan design year 2010 as identified in Chapter VI. Once the number of additional housing units within each density classification was determined, the standards were applied to calculate the number of acres needed to accommodate the additional units. An additional 10 percent was added to the resulting incremental acreage to allow for site suitability considerations and housing vacancies, and to provide for market choice.

Table 27 indicates that about 897 additional acres will be needed in the Town of Fredonia to provide housing for the

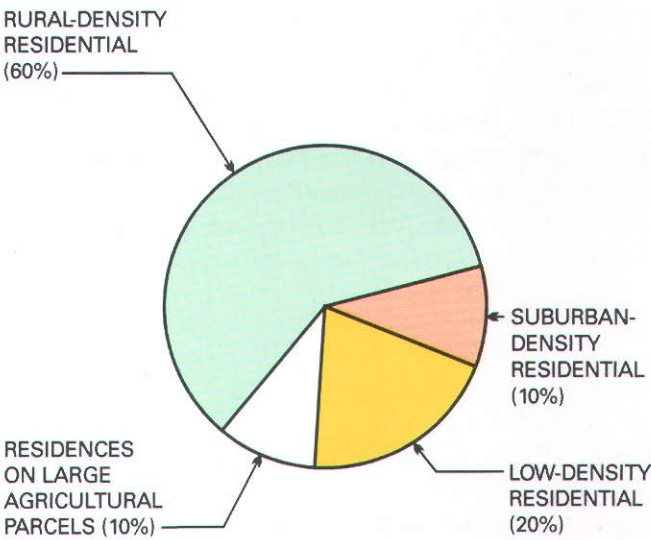
¹If farm residences and dwelling units in commercial buildings and group-quarters were included in the 2010 total, this total would be approximately 900 dwelling units. Similarly, if such types of units were included in the 1995 total, this total would be approximately 700 dwelling units.

forecast population of about 2,670 anticipated by the year 2010. Residential density classifications and the additional associated acreage and housing unit needs for the year 2010 were distributed as shown in Figure 4 and as follows:

- Approximately 60 percent of the additional housing units needed by the year 2010 were allocated to the rural-density residential classification, which includes single-family residential homes on lots with a minimum area of five acres per dwelling unit or equivalent overall density, and 10 percent were allocated to residences on very large agricultural parcels. Between 1995 and 2010, an additional 776 acres will be needed to accommodate the 120 additional housing units allocated to the rural-density classification. In the year 2010, there would be a total of about 280 housing units, occupying about 1,606 acres, in the rural-density residential classification. The approximately 60 percent allocation to this density classification would result in about 31 percent of the overall total 900 housing units within the Town consisting of rural residential development. An additional 10 percent allocation to residences on large agricultural parcels would result in about 19 percent of the total 900 housing units. Thus, about 50 percent of the overall total 900 housing units in the Town would consist of residential development at rural-densities or less.
- Approximately 10 percent of the additional housing units needed by the year 2010 were allocated to the suburban-density residential classification, which includes single-family detached homes on lots ranging from about one and one-half acres to five acres. Between 1995 and 2010, an additional 70 acres will be needed to accommodate the approximately 20 additional housing units allocated to this density classification. In the year 2010, there would be a total of about 55 housing units, occupying about 192 acres, in the suburban-density residential classification. The approximately 10 percent allocation to this density classification would result in about 5 percent of the overall total 900 housing units in the Town of Fredonia falling within the suburban-density classification in the year 2010. It is envisioned that most of these lots would be developed adjacent to or infilled within existing similar developments.
- Approximately 20 percent of the additional housing units needed by the year 2010 were allocated to the low-density residential classification, which

Figure 4

**FUTURE ADDITIONAL HOUSING UNIT NEEDS
BY RESIDENTIAL DENSITY CLASSIFICATION
FOR THE TOWN OF FREDONIA: 1995-2010**



Source: SEWRPC.

includes single-family detached homes on lots ranging from about 20,000 square feet to one and one-half acres in area. Between 1995 and 2010, an additional 51 acres will be needed to accommodate the approximately 40 additional housing units allocated to this density classification. In the year 2010, there would be a total of about 305 housing units, occupying about 528 acres, within the low-density residential classification. The approximately 20 percent allocation to this density classification would result in about 35 percent of the overall total 900 housing units within the Town of Fredonia falling within the low-density classification in the year 2010. It is envisioned that these lots would be developed adjacent to or infilled within existing similar developments mostly located near the Village of Fredonia and in the Waubeka and Little Kohler areas.

- No new housing units were allocated to the medium-density residential classification, which are defined as single-family homes on lots ranging from about 6,500 to 20,000 square feet in area. However, approximately 10 percent of the total housing units in the Town of Fredonia in 2010 would consist of existing medium-density, single-family detached homes. There would be a total of

about 70 such housing units, occupying about 25 acres, within the medium-density residential classification in 2010. These existing lots are mostly located adjacent to the Village of Fredonia and in the Waubeka area.

Commercial and Industrial Development

As indicated by Table 27, only one additional acre of commercial development and no additional industrial development will be needed to meet the forecast employment in those categories. During the planning process, concerns were expressed regarding the preservation of building materials—namely sand and gravel—indigenous to the Town. Accordingly, the land use plan should provide for a mineral resource reserve.

Governmental and Institutional Development

As indicated by Table 27 by the year 2010, there will be a need for about eight more acres in the Town of Fredonia to accommodate governmental and institutional uses, an increase of about 19 percent over the 1995 level of 42 acres. This additional land may be expected to accommodate expansion of existing facilities such as the Town hall and public meeting facilities, and the Waubeka fire station.

Park and Recreational Development

SEWRPC Planning Report No. 27, *A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000*, and SEWRPC Community Assistance Planning Report No. 133, *A Park and Open Space Plan for Ozaukee County*, contain specific recommendations addressing the need for resource-based park and open space sites and facilities within the planning area. These recommendations are described in Chapter I of this report and include recommendations concerning the preservation of primary environmental corridors and prime agricultural lands, and the provision of major parks, parkways, and trails.

Table 27 focuses on the need for community and neighborhood parks, which provide facilities for nonresource-oriented recreation activities such as baseball, softball, soccer, and tennis. These sites generally attract users from a relatively small service area and are provided primarily to meet the outdoor recreation needs of residents of the Town only. By the year 2010, two additional acres, for a total of about five acres, will be needed in the Town for community and neighborhood parks. If park facilities are to be developed in the Town, the site should be larger than is justified by the per capita standards and should accom-

modate team sports and other group activities on a single site.

TRANSPORTATION SYSTEM REQUIREMENTS

Map 28 shows existing 1995 streets and the arterial street and highway facilities needed to serve the probable future traffic demand within the Town of Fredonia planning area by the year 2010, as recommended in the adopted regional transportation system plan. State trunk highways are shown in red and county trunk highways are shown in blue. The plan map also indicates the number of traffic lanes needed for each arterial street segment in order to carry the anticipated arterial traffic volumes through the year 2010. Proposed improvements to arterial highways in the Town of Fredonia planning area are also indicated in Map 28.

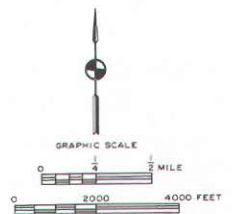
SUMMARY AND CONCLUSIONS

This chapter has identified the year 2010 land use and community facility requirements for the Town of Fredonia. The major determinations may be summarized as follows:

1. The amount of residential, commercial, industrial, and other land that will be needed to serve residents and workers in the Town of Fredonia were determined by applying per capita standards to the selected forecast population, household size, and employment levels. Based on these standards, it was determined that a total of about 900 occupied housing units, including farm residences and those units in commercial buildings and group-quarters, may be expected to be needed in the Town of Fredonia by the year 2010, representing an increase of about 200 housing units over the 1995 total of about 700 units. The additional housing units should be distributed to provide an adequate choice of housing and housing types throughout the Town.
2. Based on the aforereferenced population and employment forecast and development standards, it may be expected that one additional acre of commercial land may be needed over the 1995 level of 30 acres; no additional land will be needed for industrial development; an additional eight acres of governmental and institutional land may be needed over the 1995 level of 42 acres; and an additional two acres may be needed over the 1995 level of three acres for community and neighborhood parks.



- | | |
|---|---|
| | WIDENING AND/ OR OTHER IMPROVEMENT TO PROVIDE SIGNIFICANT ADDITIONAL CAPACITY TO STATE TRUNK ARTERIAL |
| | RESURFACING OR RECONSTRUCTION TO PROVIDE ESSENTIALLY THE SAME CAPACITY TO COUNTY TRUNK HIGHWAY |
| 4 | NUMBER OF TRAFFIC LANES FOR WIDENED AND/OR IMPROVED FACILITY (TWO LANES WHERE UNNUMBERED) |



90

3. In all, it may be expected that approximately 132 acres of rural or undeveloped land in the Town of Fredonia may need to be converted to urban use between 1995 and the year 2010; and 776 acres of land will be needed for additional rural residential housing.
4. Improvements to the arterial street and highway system within the town of Fredonia are

recommended in the adopted regional transportation system plan. The plan recommends improvements to provide significant additional capacity to STH 57. Resurfacing or reconstruction to provide essentially the same capacity that currently exists is recommended for County Trunk Highways A, D, E, H, I, K, Y, Z, AND KK.

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Chapter VIII

THE LAND USE PLAN

INTRODUCTION

A land use plan is an official statement of the major land use development objectives of a community. The land use plan for the Town of Fredonia, as set forth in this report, consists of recommendations for the type, amount, and spatial location of the various land uses required to serve the needs of the residents of the Town. The plan is intended to be used as a tool to help guide the physical development of the community into a more efficient and attractive pattern, and to promote the public health, safety, and general welfare.

The land use plan for the Town of Fredonia represents a refinement of the adopted regional land use plan. The regional land use plan, and, as a consequence, the land use plan for the Town of Fredonia, recognizes the effects and importance of the urban land market in shaping land use patterns; but also seeks to influence the operation of that market to achieve a more healthful, attractive, and efficient settlement pattern. The previous land use plan for the Town of Fredonia, prepared in 1979 and adopted by the Town Plan Commission, altered development trends by encouraging new development outside the Village of Fredonia urban service area only at rural densities requiring at least five or more acres of land for each dwelling unit and by encouraging the preservation of farmland and important environmental corridors. The plan set forth herein confirms the former land use plan; extends the design year of the plan from 2000 to 2010; and updates the plan to incorporate development trends and technologies that have changed since the former plan was prepared.

The land use plan should promote the public interest rather than the interests of individuals or special groups within the community. The very nature of the plan contributes to this purpose, for it facilitates consideration of the relationship of any development proposal, whether privately or publicly advanced, to the overall physical development of the entire community.

The plan is intended to assist in the political and technical coordination of community development. Political

coordination seeks to assure, to the extent practicable, that a majority of the citizens within the community are in accord with the proposed development objectives. Technical coordination seeks to assure a logical relationship between private land use development and public works development so that the planning and scheduling of public and private improvements will be both effective and efficient; thereby avoiding conflict, duplication, and waste.

The land use plan is long-range, providing a means of relating day-to-day development decisions to long-range development objectives. The land use plan, however, should not be considered as a rigid and unchangeable mold to which all development proposals must conform, but rather as a flexible guide to help local officials and concerned citizens review development proposals. As conditions change from those used as the basis for the preparation of the plan, the plan should be revised as necessary. Accordingly, the plan should be reviewed periodically to determine whether the land use development objectives, as set forth in Chapter VI, are still valid, as well as to determine the extent to which the various objectives are being realized through plan implementation.

PLAN STRUCTURE

The Town of Fredonia land use plan is designed for that area of U.S. Public Land Survey Township 12 North, Range 21 East, encompassing the Town of Fredonia, but excluding those areas of the township located in the Village of Fredonia.

The recommended land use plan for the Town of Fredonia recognizes that the Village of Fredonia prepared and adopted a land use plan in 1980 and adopted a refined sanitary sewer service area plan in 1984. Under those plans, urban development in the Village of Fredonia area would be mostly confined to lands within the existing corporate limits of the Village. The Town of Fredonia land use plan excludes those areas within the 1995 corporate limits of the Village of Fredonia from the Town plan.

PLAN DETERMINANTS

Population and Housing Forecasts

The selected population forecast presented in Chapter II of this report indicates that the Town of Fredonia may be expected to reach a resident population level of approximately 2,670 persons by the year 2010, about 590 persons over the estimated 1995 level of 2,080 persons, or about a 28 percent increase. It is anticipated that approximately 200 additional housing units will need to be added to the 1995 stock of about 700 housing units in the Town of Fredonia by the year 2010 to accommodate this population increase.

Plan Objectives

Planning is a rational process for formulating and meeting objectives. Therefore the formulation of objectives is an essential task which must be undertaken before plans can be prepared. The land use development objectives of the Town were identified and expressed in Chapter VI of this report. The Town conducted a citizen attitudinal survey in September 1995 to identify citizen concerns regarding development. The survey results were also described in Chapter VI of this report, and generally support the proposed Town development objectives. The development objectives, together with the survey results, relate to the amount and distribution of the various types of land uses within the Town and the provision of needed community facilities to those uses. The recommended Town land use plan is intended to achieve the following objectives:

- To provide a balanced allocation of space to each land use category in order to meet the social, physical, and economic needs of the Town.
- To encourage residential development only at densities and in locations compatible with the basically rural character of the Town and thus avoid the need to provide costly urban facilities and services to such development.
- To encourage that new urban development—residential development on small lots, commercial development, and industrial development—occur in areas where essential urban services, including municipal sanitary sewer and public water systems, already are available or are planned to be provided within the near future.
- To preserve prime agricultural lands in order to provide an agricultural reserve for future generations, to protect the agricultural resource base of

the Town, and to preserve the rural character of the Town.

- To preserve the remaining primary environmental corridors in the Town and, to the extent practicable, to preserve the remaining secondary environmental corridors and isolated natural resource areas, in order to maintain the overall quality of the environment.
- To preserve and protect all known economically viable non-metallic mineral deposits, to the extent practicable, within the Town to provide a reserve of such deposits for future generations.
- To accommodate new residential development outside planned urban service areas only at rural densities—five acres minimum per dwelling unit—in areas not identified as prime agricultural lands or primary environmental corridors.

GENERAL DESCRIPTION OF THE RECOMMENDED LAND USE PLAN

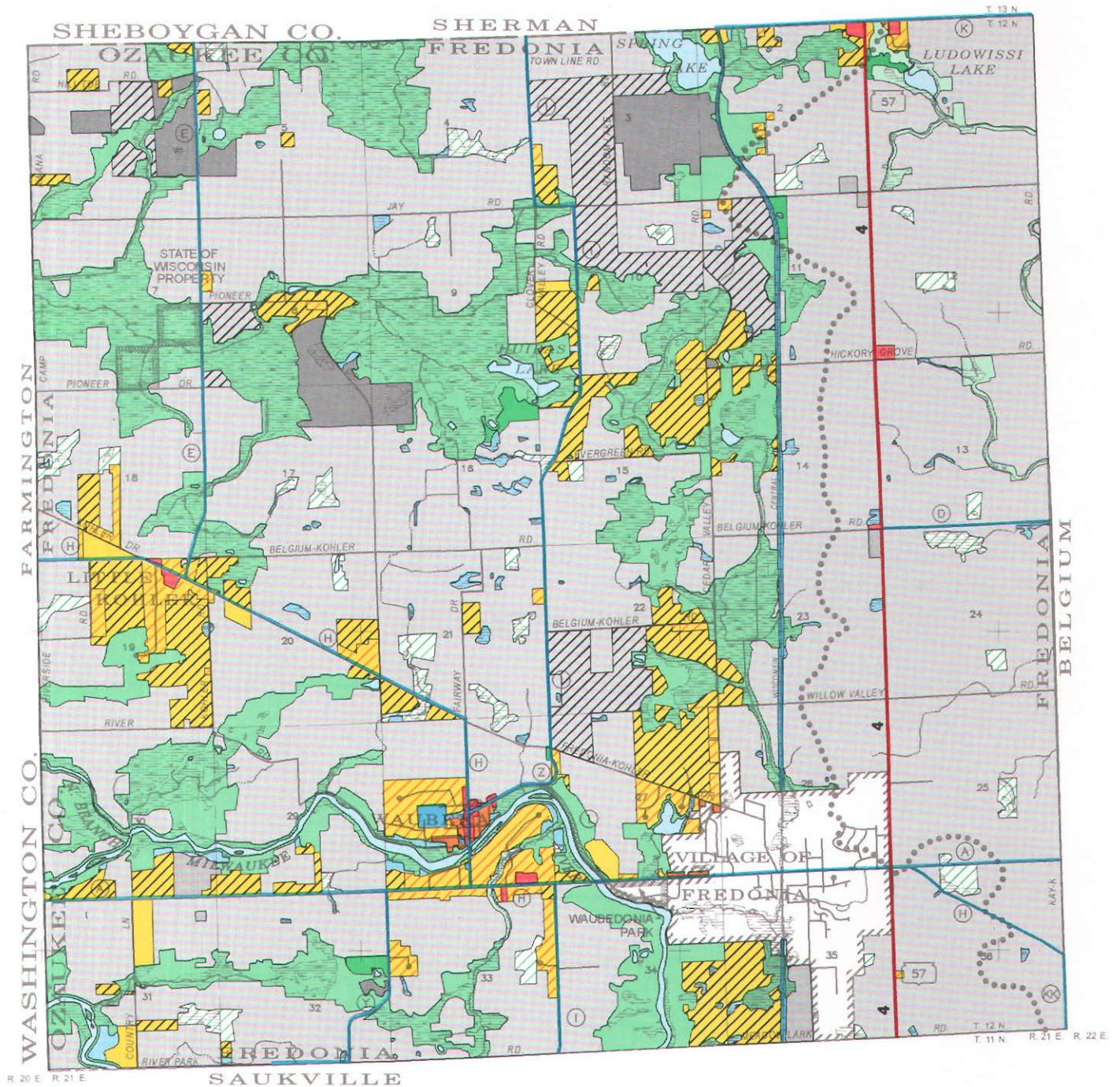
The recommended land use plan for the Town of Fredonia is shown in graphic summary form on Map 29. The major recommendations of the plan are described below.

Urban Service Area

The plan proposes that new urban growth—residential development on lots smaller than five acres in area, commercial development, and industrial development—occur in those areas where a full range of urban services, including centralized sanitary sewer and water distribution, can be provided. The regional water quality management plan has recommended and continues to recommend that such urban development should occur in the delineated sanitary sewer service areas in and around the Village of Fredonia and the unincorporated area of Waubeka. The Town of Fredonia Long Range Planning Committee determined, through its deliberations, that centralized sanitary sewer service in the Waubeka area is not likely to occur before the year 2010. Thus, the plan recommends that most new urban development occur within the Village of Fredonia.

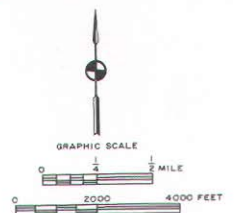
Through its recommendation to concentrate future population, household, and employment growth in planned urban service areas, the plan seeks to shape a long-term development pattern that is economically efficient and environmentally sound.

RECOMMENDED LAND USE PLAN FOR THE TOWN OF FREDONIA: 2010



LEGEND

- | | | |
|--|--|---|
| RURAL - DENSITY RESIDENTIAL
(LESS THAN 0.2 DWELLING UNITS PER ACRE) | GOVERNMENTAL, INSTITUTIONAL,
TRANSPORTATION, COMMUNICATIONS,
AND UTILITIES | SURFACE WATER |
| SUBURBAN - DENSITY RESIDENTIAL
(0.2 TO 0.6 DWELLING UNITS PER NET ACRE) | RECREATIONAL | STATE TRUNK HIGHWAY |
| LOW-DENSITY RESIDENTIAL
(0.7 TO 2.2 DWELLING UNITS PER NET ACRE) | PRIME AGRICULTURAL LAND | COUNTY TRUNK HIGHWAY |
| MEDIUM - DENSITY RESIDENTIAL
(2.3 TO 6.9 DWELLING UNITS PER NET ACRE) | PRIMARY ENVIRONMENTAL CORRIDOR | NUMBER OF LANES
(TWO WHERE UNNUMBERED) |
| COMMERCIAL | SECONDARY ENVIRONMENTAL CORRIDOR | |
| INDUSTRIAL | ISOLATED NATURAL RESOURCE AREA | |
| EXTRACTIVE AND LANDFILL | OTHER LANDS TO BE PRESERVED | |
| EXTRACTIVE RESERVE | | |



Development Beyond the Urban Service Area

Under the plan, development would occur in areas outside of the urban service area, but would consist mostly of rural-density—at least five acres of land per unit—residential development. The plan accommodates the development of about 120 rural-density homesites on approximately 780 acres of land between 1995 and 2010. The proposed homesites would not be located within either the delineated prime agricultural lands or primary environment corridors, but within the area identified on the plan map as “rural-density residential use.”

Infill Development Outside the Urban Service Area

Under the plan, it is also envisioned that some low- and suburban-density residential development would occur in areas outside of the urban service area. Such development would consist of one- to three-acre density residential uses and would be mostly located in the vicinity of existing one- to three-acre density residential development. The plan envisions the development of about 40 one-acre homesites in the unincorporated communities of Waubeka and Little Kohler, and about 20 three-acre homesites within existing subdivisions or near other three-acre development.

DESCRIPTION OF THE LAND USE ELEMENTS OF THE RECOMMENDED LAND USE PLAN

Table 28 lists the number of acres and the percentage of land allocated to each land use category in the recommended land use plan for the Town of Fredonia, and compares this information to the 1995 land use pattern in the Town. Specific recommendations regarding each type of major land use are described below.

Residential Land Uses

The plan map identifies four density classifications of residential land uses—rural, suburban, low, and medium—each of which consists primarily of single family housing units. Generally, residential development in the urban service area would fall in the medium- and low-density residential classification; while residential development outside the urban service/growth area is proposed to remain mostly in the rural- and suburban-density classification.

Rural-density residential development is proposed to be located in areas shown on the plan map in yellow with a black hatch, located outside of the urban service area, and would consist of dwellings constructed at a density of not more than one unit per five acres. It is envisioned that

about 1,611 acres of the 2,355 acres designated in the plan for residential development would be used for rural-residential purposes. Within the rural areas of the Town, cluster residential development could serve as a desirable alternative to conventional subdivision development which would uniformly divide lands into large lots. Cluster development techniques could be used to reduce individual lot sizes to about one acre for each dwelling unit while preserving up to four acres in permanent agricultural or open space use. Advantages of cluster development include the preservation of open space, protection and conservation of natural drainageways, and flexibility in subdivision design. An example of a rural cluster development is set forth in Figure 5.

Suburban-density residential development is proposed to be located in areas shown in yellow on the plan map. The number of housing units per net acre in the suburban residential development could range from 0.2 to 0.6, yielding lot sizes ranging from about 1.5 up to 5 acres per dwelling unit. The suburban residential development under the recommended land use plan would total about 194 acres by the year 2010, an increase of about 72 acres, or about 59 percent, over the 1995 level. Some new suburban residential development would occur in the Little Kohler area, and some represent infill development in similar areas of development that existed in 1995.

Low-density residential development is proposed to be located in areas shown in yellow with an orange hatch on the plan map. The number of housing units per net residential acre in the low-density residential areas could range from 0.7 to 2.2, equating to lot sizes ranging from about 20,000 square feet up to 1.5 acres per dwelling unit. The low-density residential development under the recommended land use plan would total about 525 acres by the year 2010, an increase of about 48 acres, or about 10 percent, over the 1995 level. The recommended low-density residential development represents infill development, primarily in the unincorporated areas of Waubeka and Little Kohler. Other than infilling, no new areas of low-density residential development are recommended in the plan.

Medium-density residential development is located in areas shown on the plan map in orange. The number of housing units per net residential acre in medium-density residential areas could range from 2.3 to 6.9, equating to lot sizes ranging from about 6,500 up to 20,000 square feet per dwelling unit. The medium-density residential development under the recommended land use plan would total about 25 acres which currently exists in the Waubeka area and on CTH H and Fredonia-Kohler Drive

Table 28

SUMMARY OF 1995 EXISTING AND 2010 PLANNED LAND USE IN THE TOWN OF FREDONIA

Land Use Category	Existing 1995 Land Use		Planned Change		Planned 2010 Land Use	
	Acres ^a	Percent	Acres ^a	Percent Change	Acres ^a	Percent
Urban						
Residential						
Rural-Density (Less than 0.2 dwelling units per net acre)	830	3.7	781	94.1	1,611	7.2
Suburban-Density (0.2 to 0.6 dwelling units per net acre)	122	0.6	72	59.0	194	0.9
Low-Density (0.7 to 2.2 dwelling units per net acre)	477	2.1	48	10.1	525	2.3
Medium-Density (2.3 to 6.9 dwelling units per net acre)	25	0.1	0	0.0	25	0.1
Residential Subtotal	1,454	6.5	901	62.0	2,355	10.5
Commercial	30	0.2	12	40.0	42	0.2
Industrial	64	0.3	45	70.3	109	0.5
Governmental, Institutional, Transportation, Communication, and Utilities	94	0.4	0	0.0	94	0.4
Recreational ^b	68	0.3	0	0.0	68	0.3
Urban Subtotal	1,710	7.7	958	56.0	2,668	11.9
Non-Urban						
Prime Agricultural Lands ^c	13,860	62.0	110	0.8	13,970	62.5
Other Agricultural and Open Lands	1,587	7.1	-1,399	-88.2	188 ^e	0.9
Extractive and Landfill	107	0.5	365	341.1	472	2.1
Primary Environmental Corridor ^d	4,517	20.2	-34	-0.8	4,483	20.1
Secondary Environmental Corridor ^d	160	0.7	0	0.0	160	0.7
Isolated Natural Resource Area ^d	408	1.8	0	0.0	408	1.8
Non-Urban Subtotal	20,639	92.3	-958	-4.6	19,681	88.1
Total	22,349	100.0	--	--	22,349	100.0

^aIncludes associated street rights-of-way and off-street parking areas for each land use category.

^bIncludes only intensive outdoor recreation areas.

^cIncludes related farm residences on large, prime agricultural parcels.

^dIncludes associated surface water areas.

^eThis total represents the areas identified as "Other Lands to be Preserved" and small surface water areas not encompassed by delineated environmental corridors or isolated natural resource areas in the recommended land use plan.

Source: SEWRPC

adjacent to the Village of Fredonia. No new areas of medium-density residential development are recommended in the plan.

Commercial Land Uses

Commercial development would be located in areas shown on the plan in red. The commercial areas encompass approximately 42 acres, an increase of about 12 acres over the 1995 level of about 30 acres.

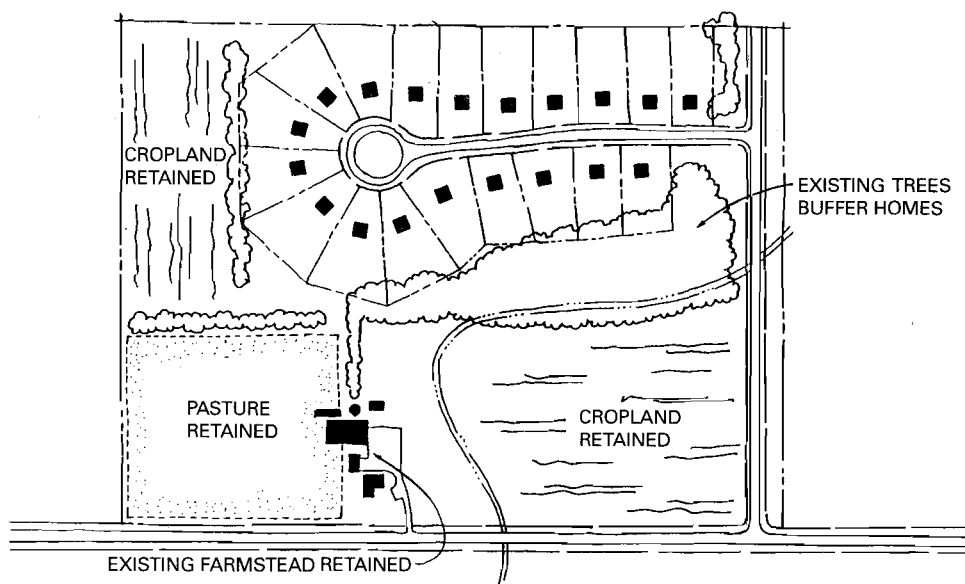
Commercial development would consist of the expansion of existing scattered commercial developments, most of which are located in the Waubeka and Little Kohler areas.

Industrial Land Uses

Industrial development would be located in areas shown on the plan in medium gray. The industrial areas encompass

Figure 5

TYPICAL RURAL RESIDENTIAL CLUSTER DEVELOPMENT



Nineteen one-acre homesites plus the original farmstead are developed on 100 acres for an average of five acres per unit. These homesites are grouped behind a treeline thereby preserving scenic views from the road and also preserving the surrounding open space which includes existing cropland and pasture.

Source: SEWRPC.

approximately 109 acres, an increase of about 45 acres over the 1995 level of about 64 acres. New industrial development would be located primarily in Section 35 of the Town of Fredonia and consist of industrial development adjacent to the Village of Fredonia Industrial Park.

Governmental, Institutional, Transportation, Communications, and Utility Land Uses

Development for governmental, institutional, transportation, communications, and utility land uses would be located in the areas shown on the plan in blue. Such uses encompass approximately 94 acres, which mostly exist within the unincorporated community of Waubeka, and include the Wisconsin Central Limited Railway located in the eastern part of the Town.

Recreational Land Uses

Park and recreational development is shown on the plan in dark green. The park and recreational areas encompass approximately 68 acres, all of which currently exist in the Town. Active outdoor recreational land uses are not planned to be expanded beyond those which presently exist. Existing private and public recreational land uses are supported by the presence of the Milwaukee River and its tributaries in the Town, which provides opportunities for water-related recreational activities ranging from fishing to canoeing.

Environmental Corridors and Other Environmentally Significant Areas

In order to effectively guide land use development within the Town of Fredonia into a pattern that is efficient, stable, safe, healthful, and attractive, it is necessary to consider the location of the various land uses as they relate to the natural resource base of the area. Locating new development outside the primary environmental corridors and other environmentally significant areas will serve to maintain a high level of environmental quality in the Town, and will also avoid the creation of costly developmental problems such as flood damage, wet basements, and failing pavements.

Environmental corridors, more fully described in Chapter III of this report, are linear areas in the landscape that contain concentrations of high value elements of the natural resource base. Primary environmental corridors contain almost all of the best remaining woodlands, wetlands, and wildlife habitat areas; as well as floodlands and steeply sloped areas where intensive development would be ill-advised. The protection of the primary

Primary environmental corridors are, by definition, at least two miles in length, 400 acres in area, and 200 feet in width.

environmental corridors against intrusion by urban development is an important objective of the recommended Town land use plan. Primary environmental corridors, shown in medium green on the plan map, occupy approximately 4,483 acres, or about 20 percent, of the Town. The primary environmental corridors are located throughout the Town, including along the Milwaukee River and around Huiras and Spring Lakes. Primary environmental corridors should, to the maximum extent practicable, be preserved in essentially natural, open uses for resource preservation and limited recreational purposes. The recommended land use plan map reflects a small decrease of primary environmental corridor between 1995 and 2010, primarily due to committed development prior to the time of plan preparation.

The secondary environmental corridors² in the Town of Fredonia, shown in light green on the plan map, are generally located along intermittent streams or serve as links between segments of primary environmental corridors. Secondary corridors occupy approximately 160 acres, or about 1 percent, of the Town under the recommended land use plan. The secondary environmental corridors should be carefully integrated into urban and rural development with the goal of preserving corridor resources. Such areas may also lend themselves for public purpose uses such as parks, drainageways, or stormwater detention or retention areas.

Isolated natural resource areas consist of small areas with important natural resource values, which are separated geographically from primary and secondary environmental corridors. Most of the isolated natural resource areas in the Town of Fredonia consist of wetlands or woodland areas that are at least 200 feet wide and five acres in area. Isolated natural resource areas, shown in white with a green hatch on the plan map, occupy approximately 408 acres, or about 2 percent, of the Town on the recommended land use plan map. The plan does not recommend the unqualified preservation of isolated natural resource areas; however, it is recommended that the Town give careful consideration to the potential preservation of such areas. Isolated natural resource areas may be well-suited for public purposes such as parks or stormwater detention or retention areas.

²Secondary environmental corridors are, by definition, at least one mile in length and 100 acres in area. Such corridors that link or serve to connect primary environmental corridor segments, particularly when the secondary corridors are related to surface drainage, have no minimum area or length criteria.

In addition to the delineated environmental corridors and isolated natural resource areas, approximately 188 acres are designated in the plan as other lands to be preserved. These areas consist mostly of small wetlands, less than five acres in size, and of floodlands located in areas planned for urban development adjacent to delineated corridors. Floodlands located within the delineated prime agricultural lands or within parks were not designated as other lands to be preserved. It is recommended that careful consideration be given to preserving such areas in essentially natural, open space use whenever practicable, since they may provide the only available wildlife habitat in an area and lend aesthetic character and natural diversity to an area. Some of these open lands may eventually be converted to, and reclassified as environmental corridors as natural vegetation develops on these areas during the life of the plan.

The plan recognizes that residential development at an overall density of no more than one dwelling unit per five acres may be permitted in environmental corridors and isolated natural resource areas, provided that the development is carefully designed to protect the natural resources involved. Such development should be designed to avoid disruption of steep slopes, poorly drained soils, wetlands, and other physical constraints. Figure 6 shows two of the many options for site design for development in environmentally sensitive areas. Cluster development is recommended over conventional development to gain greater design flexibility for minimizing the disturbance of significant natural features.

Prime Agricultural Lands

Prime agricultural lands consist of parcels 35 acres or larger that are covered by soils well suited for the production of food and fiber, and which occur in aggregate blocks of farmland or conservancy lands 100 acres or more in extent. Prime agricultural lands, shown in light gray on the plan map, encompass approximately 13,970 acres, or about 63 percent, of the Town of Fredonia. In the preparation of the land use plan, the Long Range Planning Committee added about 110 acres, an increase of about one percent to the identified prime agricultural lands. These lands consist primarily of smaller, existing farm parcels located within large blocks of prime agricultural land. The prime agricultural lands should remain in agricultural use throughout the plan design period.

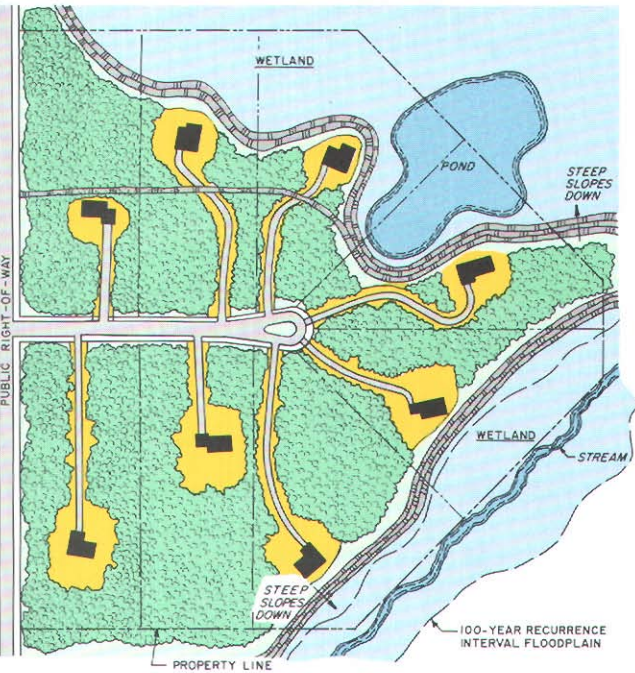
Nonmetallic Mineral Extraction Uses

Nonmetallic minerals, including sand and gravel, dimensional building stone, and organic materials have significant commercial value and are an important economical source of the construction materials needed for the

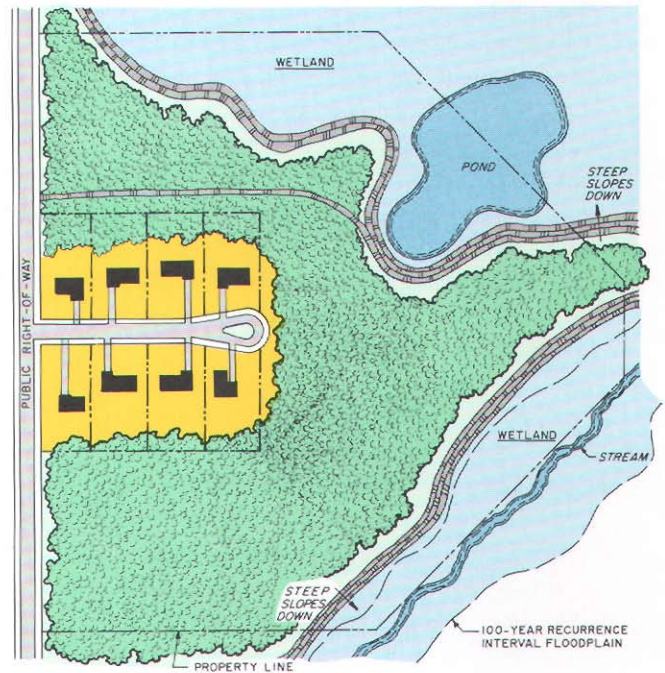
Figure 6

ALTERNATIVE RESIDENTIAL DEVELOPMENT DESIGNS COMPATIBLE WITH PRIMARY ENVIRONMENTAL CORRIDORS

A. Conventional Five-Acre or Greater Lot Design



B. Clustered One-Acre Lot Design



Source: SEWRPC.

continued development of the Town of Fredonia, Ozaukee County, and the Region and for the maintenance of the existing infrastructure. Permitting urban development of lands overlying these resources, or in the proximity of these resources may make it impossible to utilize such resources economically in the future and thus result in shortages and concomitant increases in the cost of those materials, which would ultimately be reflected in both consumer prices and the community tax structure.

There are four existing sand and gravel extractive operations located in the northern portion of the Town. The recommended land use plan recognizes the continued operation of these facilities, as well as the possible expansion of three of these areas to adjacent lands. Extractive development is shown on the recommended plan map in light gray with a black hatch. The existing extractive areas encompass approximately 472 acres, an increase of about 365 acres over the 1995 level of about 107 acres.

Much of the Town of Fredonia is underlain by potentially useable sand and gravel deposits, as described in Chapter III of this report. As shown on the plan map, about 1.2 square miles of land has been identified as extrac-

tive reserve.³ As further shown on the map, much of the area underlain by such deposits has been identified as prime agricultural land. Maintenance of these prime agricultural lands in open use would thus help ensure the availability of lands for future mineral extraction purposes.

Arterial Street and Highway System

An efficient arterial street and highway network provides the necessary means of access from rural and urban areas to supporting service, employment, education, recreational, and cultural centers. It is essential, therefore, that future development be designed to protect the capacity and safety of the arterial street and highway system and to utilize the existing system as fully as practicable.

³Extractive reserve is defined, in general, in the plan as parcels with an area of at least 100 acres on which 50 percent or more of the soils are classified as a probable source of sand and gravel by the U. S. Natural Resources Conservation Service (formerly U. S. Soil conservation Service).

Map 29 reflects the arterial street and highway system adopted as part of the year 2010 regional transportation system plan, as it relates to the Town of Fredonia. Major planned arterial street improvements in the Town of Fredonia include the reconstruction and widening of STH 57; and the resurfacing or reconstruction of County Trunk Highways A, D, E, H, I, K, Y, Z, and KK to provide essentially the same capacity on these roads that currently exists.

SUMMARY AND CONCLUSIONS

This chapter has presented land use objectives for the Town of Fredonia, together with a land use plan designed to achieve those objectives.

The principal function of the plan is to provide information that local officials can use over time in making decisions about growth and development in the Town of Fredonia. The plan recommends the preservation of existing environmentally sensitive areas and prime agricultural lands. At the same time, the plan provides for residential and non-residential growth that is compatible with, and reinforces, the objectives of the land use plan.

The land use plan should not be considered as rigid and unchangeable. Such a plan is intended to be used as a guide in the public review of development proposals and as a tool to help local officials make decisions concerning such proposals. As conditions change from those used as the basis in the plan preparation, the plan should be revised. Accordingly, the plan should be reviewed periodically to determine whether the objectives are still valid and the extent to which these objectives are being realized. The adopted plan should, however, represent a commitment by the Town Plan Commission and Town Board to strive for the selected land use objectives.

The recommended land use plan, together with the supporting implementation measures in Chapter IX, provides an important means for promoting the orderly development of the Town of Fredonia and providing for a safe, healthful, attractive, and efficient environment. Consistent application of the plan will help assure protection of the natural resource base of the Town, including environmental corridors and prime agricultural lands, while providing for the needs of the existing and probable future resident population of the Town.

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Chapter IX

PLAN IMPLEMENTATION

INTRODUCTION

The recommended land use plan for the Town of Fredonia is described in Chapter VIII. In a practical sense, however, the plan is not complete until the steps necessary to implement the plan are specified. After formal adoption of the land use plan, realization of the plan will require faithful, long-term dedication to the underlying objectives by the Town officials concerned with its implementation. Thus, adoption of the plan is only the beginning of a series of actions necessary to achieve the objectives expressed in this report. The plan should be used as a point of departure for making decisions concerning land development in the Town.

Attainment of the goals set forth in the recommended land use plan for the Town will require some changes in the development policies of the Town. Since the attainment and maintenance of the desired character of the Town is dependent to a considerable extent upon preserving and protecting the natural resource and agricultural base, new residential development in the Town on lots smaller than five acres should be directed to existing subdivisions where vacant, developable lots exist and infilling is possible. Residential development outside the planned urban growth area should be limited to the infilling of existing platted residential lots or to rural lots of five acres or larger per dwelling unit, or at equivalent overall densities, in order to preserve the rural character of the area. Development should be avoided if it entails converting prime agricultural lands to urban use, encroachment into environmental corridors or other environmentally significant lands, draining and filling wetlands, or grading hilly wooded areas. These policies are central to a sound development strategy for the Town. Development policies and practices that consider the limitations of the natural environment will, in the long term, not only preserve the overall quality of the environment in the Town, but will also avoid the creation of serious and costly environmental and developmental problems.

PUBLIC INFORMATIONAL MEETINGS, HEARINGS AND PLAN ADOPTION

Wisconsin community planning enabling legislation does not require local plan commissions to hold public hear-

ings on recommended plans before their adoption. It is nevertheless good planning practice to hold informational meetings and hearings in order to acquaint residents and landowners with the proposed plan and to solicit public reactions to the plan proposals. The plan should then be modified to reflect any pertinent new information and to incorporate any sound and desirable new ideas advanced at these meetings. Accordingly, a series of informational meetings were held on the recommended plan, and a formal public hearing was held on the plan on January 7, 1999. Detailed minutes of the public hearing were recorded by the Town and are on file in the Town Hall. On the basis of a review of comments received at these public meetings, it was the recommendation of the Town Plan Commission that the land use plan for the Town of Fredonia remain as presented at these meetings.

An important step in plan implementation is the formal adoption of the recommended plan by the Town Plan Commission and certification of the adopted plan to the Town Board, pursuant to State enabling legislation. Although formal adoption of the plan by the Town Board is not legally required, this step is recommended to demonstrate acceptance and support by the governing body. Upon such adoption, the plan becomes the official guide intended to be used by Town officials in making development decisions. The recommended land use plan was adopted by the Town Plan Commission on January 7, 1999, and subsequently adopted by the Town Board on January 14, 1999, as indicated in the resolutions in Appendices A and B, respectively.

ZONING

Of all the land use implementation devices currently available, the most important is the zoning ordinance. As indicated in Chapter V, at least certain lands in the Town of Fredonia are under the jurisdiction of both the Town of Fredonia Zoning Ordinance and the Ozaukee County Floodplain and Shoreland Zoning Ordinance. The zoning districts applicable to the Town have been summarized in Table 17 in Chapter V, and the current application of those districts within the Town is shown on Map 26 in that chapter.

In order for the Town to implement the recommended land use plan, changes to the existing Town zoning ordinance will be required. Key recommended changes to the text of the zoning ordinance and to the zoning district map are discussed below.

The existing zoning ordinance should permit design flexibility to help preserve the rural character and natural resources of the Town, while allowing some development. The existing zoning ordinance permits planned unit developments as a conditional use in the R-1 Suburban Single-Family Residential District and R-2 Single-Family Residential District. The ordinance should be amended to permit planned unit development, which may include cluster development, as a conditional use under the A-2 Agricultural/Rural Residential District and the C-2 Upland Conservancy District, both of which currently allow residential development on lots at least five acres or greater in size. Clustering of dwelling units provides greater flexibility in residential development design by allowing lot sizes smaller than those normally required by the basic zoning district, thereby preserving a larger undisturbed area of farmlands and natural resources and providing greater flexibility to situate dwelling units away from environmentally sensitive features. Additionally, consideration should be given to the implementation of design controls, for example, limiting the placement of dwelling units in the middle of 35 acre or larger parcels to keep farming units large enough to be efficiently farmed. The preservation of farmland and natural areas, in turn, helps preserve the rural character of the Town.

As indicated in Chapter V, the most substantial change needed in the existing Town zoning is that, because the current zoning map is more than ten years old, it should be amended to reflect zoning changes adopted since the map was prepared, as well as to implement the recommended land use plan.

The existing C-1 Lowland Conservancy District and C-2 Upland Conservancy District should be updated to properly reflect the protection of certain natural resources. The C-1 District requirements would be retained to preserve, protect, and enhance such environmentally sensitive lowland areas as the ponds, streams, and wetlands in the Town of Fredonia. The C-1 District should be applied to wetlands within the Town that are located within designated environmental corridors and isolated natural resources areas on the recommended land use plan. The C-2 district would be retained and applied to areas identified in the recommended land use plan as

the upland portions of environmental corridors and isolated natural resource areas.

The C-1 and C-2 Districts should contain additional provisions permitting existing agricultural uses provided they do not involve extension of cultivated areas, extension of or creation of new drainage systems, and further provided they do not substantially disturb or impair the natural fauna, flora, topography, or water regimen. These additional provisions will help preserve existing natural resources while allowing existing agriculture uses conducted in accordance with Ozaukee County Conservation Standards.

A detailed analysis of the existing zoning ordinance and attendant zoning district map should be conducted to determine any additional deficiencies for systematic implementation of the recommended land use plan. As a minimum, the Town Plan Commission and the Town Board should carefully consider the recommended changes discussed herein.

Following the adoption of the Town's land use plan, the plan should serve as a basis for the review of all rezoning proposals in the Town. It should be recognized that a proliferation of rezonings may negatively impact the ability of the Town to reach its growth management objectives; however, in those circumstances where a rezoning may appear to be in the best interests of the Town, such rezonings should be consistent with the land uses delineated on the recommended land use plan as shown on Map 29 in Chapter VIII.

SUBDIVISION AND CERTIFIED SURVEY MAP REVIEW

Sound land division regulations are an important means of implementing a land use plan and of coordinating the layout, design, and improvement of private land development proposals within the Town. Land divisions and improvement of land within the Town is governed by the Town ordinance, set forth in the Town of Fredonia Ordinance No. 13, "Division and Platting of Land," and the Ozaukee County Floodplain and Shoreland Zoning Ordinance, which contains a section that regulates subdivisions—the creation of five or more lots at least five acres each or less in area within a period of five years—within the unincorporated shoreland areas of the County.

As noted earlier in Chapter V, the Town ordinance contains some deficiencies which may be corrected

through various amendments. The Town subdivision control ordinance does not contain any standards requiring the installation of sanitary sewer, public water facilities, or storm sewer facilities. The Town should consider expanding its design and improvement requirements to address, at a minimum, such matters as sanitary sewage disposal, provisions for safe drinking water, and stormwater management.

The ordinance provides that the Town Board shall have 40 days in which to review a preliminary plat. The same amount of time is provided for the review of land divisions other than subdivisions. Chapter 236 of the Wisconsin Statutes, however, provides that a municipality may have up to 90 days to review a preliminary plat. The Town subdivision control ordinance sets the time for reviewing certified survey maps. The Town should, at a minimum, revise the review periods so they are consistent with the review periods established in Chapter 236 of the Wisconsin Statutes. Review processes should also be identified, along with statutory reviews by the applicable State objecting agencies.

Following the adoption of the Town's land use plan, the plan should serve as a basis for the review of all preliminary subdivision plats and certified survey maps in the Town. Each proposed land division should be properly related to existing and proposed land uses. Land divisions should consider the proper layout of streets, blocks, and such factors as topography, drainage, vegetation, and soils. The street and lot layout should recognize that the subdivision is an integral part of the larger community.

Land divisions that propose to create lots smaller than five acres, or at an average density of more than 0.2 dwelling units per acre, should not be approved in areas recommended to remain in nonurban uses unless the developer can fully justify changing the land use plan. Any such proposed departures from the plan should be carefully considered by the Town Plan Commission and should be made only when it is determined that such departures are in the public interest.

RATE-OF-GROWTH CONTROL SYSTEM

The land use plan, zoning ordinance, and land division regulations are all important elements of growth management in the Town of Fredonia. During the planning process, the Town Long Range Planning Committee discussed the possibility of instituting an additional element of growth management that would control the amount and rate of residential development. The objec-

tive would be to maintain the total number of new residential dwelling units constructed through the year 2010 to no more than the number projected to that year in Chapter II. Such a rate-of-growth control system is often referred to as a "building cap" although technically it may take the form of control of plats rather than control of building permits. A building cap typically controls the pace of development by limiting the permitted number of new residential dwellings each year to a predetermined number.

The Town Long Range Planning Committee reviewed several types of rate-of-growth controls used by various communities across the nation. The information compiled by the Committee is documented in Appendix C.

PLAN REEVALUATION

A land use plan is intended to serve as a guide for decision-making regarding land development in a community. As a practical matter, local land use plans should be prepared for a long-range planning period, typically from 15 to 20 years. The design year chosen as a basis for the preparation of the Town of Fredonia land use plan is 2010. A local land use plan should be reevaluated regularly to ensure that it continues to reflect local development conditions and local land use objectives. It is recommended that this reevaluation take place every ten years, or more frequently if warranted by changing conditions.

SUMMARY AND CONCLUSIONS

The land use plan implementation measures available to the Town include public informational meetings and hearings; plan adoption; subdivision plat and certified survey map review; review and comment on proposed zoning actions; and, perhaps most importantly, amending the existing Town zoning ordinance and attendant zoning map. Additionally, the Town may wish to consider a rate-of-growth control system. Some recommended changes to the Town zoning include revising the A-2 Agricultural/Rural Residential District and the C-2 Upland Conservancy District to accommodate cluster development, establishing design controls, and updating the Town's official zoning map to include past rezonings and to continue to protect its natural resources, while providing for a reasonable amount of growth. The adopted Town land use plan should be periodically reevaluated every ten years, or more frequently if warranted, to ensure that it continues to properly reflect current conditions and development objectives.

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Chapter X

SUMMARY

INTRODUCTION

In June 1995, the Town of Fredonia requested the Southeastern Wisconsin Regional Planning Commission to assist the Town in the review and update of the Land Use Plan for the Town of Fredonia: 2000. The update would extend the plan to a new design year 2010 and provide local officials with a tool to help guide and shape the physical development of the Town to at least the year 2010. This report sets forth the findings and recommendations of the planning effort undertaken in response to that request. The plan identifies the land development objectives of the Town and sets forth the means for achieving those objectives over time.

The planning effort involved extensive inventories and analyses of the factors and conditions affecting land development in the Town, including the preparation of projections of the possible range of future resident population, household, and employment levels; inventories of the natural resources such as soils, topography, flood hazards, wetlands, woodlands, and wildlife habitats; inventories of existing land uses and of local land use regulatory devices; analyses of the inventory findings; and, finally, the development of a land use plan that may be expected to accommodate probable future population, household, and employment levels in a manner consistent with the Town's objectives for land development. The plan, when adopted by the Town Plan Commission and the Town Board, will serve as a guide to protect, over time, the prime agricultural lands and environmentally significant areas and to direct future land development into a pattern consistent with the promotion of the public health, safety, and general welfare. A chapter-by-chapter summary of the planning report follows.

CHAPTER SUMMARY

Chapter I: Introduction

Chapter I serves primarily as an introduction to the Town land use planning process. It briefly describes the size and location of the planning area; its early history; the previously adopted Town of Fredonia 2000 Land Use Plan and how the regional land use, transportation, and park and open space plans relate to the Town; the purpose of

the planning efforts; and the procedure used to prepare the land use plan. The 36.3 square-mile planning area consists of all of the Town and Village of Fredonia, of which 1.4 square miles is occupied by the Village of Fredonia and the remaining 34.9 square miles is occupied by the Town of Fredonia in 1995. The recommended land use plan, however, applies only to the 1995 civil division of the Town, excluding the Village of Fredonia.

Chapter II: Population and Employment Inventories, Analyses, and Forecasts

Chapter II provides information on the size, characteristics, and distribution of the resident population, households, and employment in the Town of Fredonia, and on anticipated changes in these important socio-economic factors over time. This information is essential to the preparation of a sound community land use plan, because these factors directly influence land use requirements and needs. The primary purpose of the land use plan is to identify a sound means of meeting those needs in the future.

The selection of forecast population, household, and employment levels used in the preparation of a land use plan for the Town of Fredonia was based upon consideration of alternative population, household, and employment projections developed at the regional level to the design year 2010. A range of alternative projections was considered, with "high-growth" and "low-growth" future scenarios identifying the reasonable extremes, and the "intermediate-growth" scenario identifying a most probable future between the two extremes. An additional variable was added to the analysis of each scenario which deals with the degree of centrality of incremental urban land use development as measured by the relative nearness of new urban land uses to the major population centers of the Region, referred to as centralized and decentralized population distributions. In reviewing these alternative projections and noting historic and current trends in population, households, and employment levels for the Town, the intermediate future growth scenario with a decentralized-development pattern was selected for this planning effort. Based on recent development trends, the Town of Fredonia Long Range Planning Committee selected a population forecast of 2,670 persons, which is within the range of local population forecasts.

Under the selected forecast scenario, the Town of Fredonia population level, which stood at about 2,040 persons in 1990, is envisioned to increase by about 630 persons, or by about 31 percent, to a level of about 2,670 persons by the year 2010. The household level, which stood at about 640 occupied housing units in 1990, is envisioned to increase by about 265 units, or by about 41 percent, to a level of about 905 occupied housing units by 2010. The employment level in the Town of Fredonia, which stood at about 530 jobs in 1990, is envisioned to increase by about 20 jobs, or by about 4 percent, to a level of about 550 jobs by 2010.

Chapter III: Natural Resource Base Inventory and Analysis

Chapter III describes an inventory of the natural resource base of the Town of Fredonia planning area, including soils and topography characteristics; water resources, including watershed boundaries, lakes, rivers, streams, and associated floodlands and wetlands; woodlands; and wildlife habitat areas. Related elements such as scenic overlooks, park and open space sites, and natural areas of scientific value were also identified. The protection of primary environmental corridors and prime agricultural lands from the intrusion of urban uses is one of the principal objectives of the Town's land use plan.

Preserving primary environmental corridors in an essentially open, natural state, including park and open space uses, limited agricultural uses, and very low-density residential uses, will do much to maintain a high level of environmental quality in the Town. Such preservation can also help prevent serious and costly environmental and developmental problems such as flood damage, poor drainage, wet basements, failing foundations of roads and buildings, and water pollution. In 1990, about 7.3 square miles, or about 20 percent of the Town of Fredonia planning area, lay within the primary environmental corridors. Secondary environmental corridors and isolated natural resource areas should also be preserved where possible.

Prime agricultural lands are an important component of the natural resource base and, as such, should be preserved and protected as a matter of sound public policy. In 1983, after the enactment of the Wisconsin Farmland Preservation Act, the Ozaukee County Board of Supervisors adopted a farmland preservation plan for Ozaukee County. This plan was intended to serve as a guide to the preservation of both agricultural lands and environmental corridors within the County. In 1990, about 21.4 square miles of prime agricultural lands within the

planning area were inventoried, representing about 59 percent of the planning area.

Chapter IV: Inventory and Analysis of Existing Land Uses and Public Facilities

If the land use plan for the Town of Fredonia is to constitute a sound and realistic guide for making decisions concerning the physical development of the Town, pertinent features of the built environment must be given due consideration in plan design. For the purposes of the planning effort, existing land uses, community facilities, and public utilities were identified.

In 1990, the Southeastern Wisconsin Regional Planning Commission conducted inventories of existing land use throughout the Region, including the Town of Fredonia, to determine the current type, amount, and spatial distribution of the existing urban and rural land uses. Chapter IV analyzes this information to present both land use needs and appropriate patterns of future land use development in the Town.

Existing urban development within the Town of Fredonia is concentrated in the Waubeka and Little Kohler areas. Urban land uses, primarily residential, commercial, recreation, governmental, institutional, and transportation uses, encompassed about 2.4 square miles, or about 7 percent of the total areas of the Town in 1990. Among urban land uses, residential land uses and associated transportation and utility land uses were the largest urban uses in the Town, each occupying about one square mile, or about 3 percent of the Town. Nonurban land uses, which include surface water, wetlands, woodlands, agricultural lands, and other open lands, comprised about 32.5 square miles, or 93 percent of the total area of the Town in 1990. Despite scattered residential development in other areas of the Town, the Town still encompasses intact relatively large blocks of farmland. Agriculture was the largest single land use in the Town in 1990, encompassing about 24.5 square miles, or about 70 percent of the Town.

The Town of Fredonia is located in two separate school districts, the Random Lake School District in the northern portion of the Town and the Northern Ozaukee School District in the southern portion of the Town. In 1995, the Northern Ozaukee School District operated three schools—Ozaukee High School, Ozaukee Middle School, and Ozaukee Elementary School—all of which are located in the Village of Fredonia.

Two fire stations were located in the Fredonia area in 1995. The Waubeka fire station in the Town was staffed by 42 volunteer firefighters in 1995 and provided ambu-

lance services and emergency medical services. The Village of Fredonia Fire Department, located within the Village limits, was staffed by 25 volunteer firefighters in 1995.

Public sanitary sewer service is not currently provided in the Town of Fredonia. However, past regional and local plans have identified the Waubeka area as an area to be served by centralized sanitary sewer service in the future.

The Town of Fredonia does not have a public water supply system or an engineered stormwater system. Water for domestic and other uses is supplied by private wells. Stormwater drainage is provided by natural watercourses and roadside ditches and culverts.

Chapter V: Existing Local Plan Implementation Devices

Land development can be guided and shaped in the public interest through the application of sound public land use controls. Existing land use regulations in effect in the Town were examined as they relate to the physical development of the Town and are described in Chapter V. The most important of these are zoning and land division control.

The Town of Fredonia is regulated by the Town of Fredonia Zoning Ordinance and the Ozaukee County Floodplain and Shoreland Zoning Ordinance. The Town zoning ordinance contains 16 zoning districts, 15 of which are currently applied in the Town. The regulations applicable to each zoning district are summarized in Chapter V. The Ozaukee County Floodplain and Shoreland Zoning Ordinance contains four zoning districts: a shoreland-wetland district, a recreational-residential district, a general purpose district, and a floodplain district. The floodplain district is further divided into three subdistricts—the floodway subdistrict, the flood fringe subdistrict, and the general floodplain subdistrict. Only the general floodplain subdistrict is mapped.

Land division within the Town is regulated by the Town of Fredonia Ordinance No. 13, "Division and Platting of Land," and by the land subdivision regulations contained in the Ozaukee County Floodplain and Shoreland Zoning Ordinance. Both ordinances contain design standards and prescribe specific data to be provided on all preliminary plats, final plats, and, in the case of the Town ordinance, certified survey maps. The requirements of the County ordinance apply only to the division of lands resulting in the creation of a subdivision within the shorelands of the unincorporated areas of Ozaukee County.

Chapter VI: Development Objectives, Principles, and Standards and the Attitudinal Survey

Chapter VI of this report presents recommended development objectives, principles, and standards for the Town of Fredonia. The objectives are intended to express the long-term physical development goals of the Town. The principles are intended to support the validity of the objectives. The standards perform a particularly important function in that they form the basis upon which community land use needs are based. The development objectives, principles, and standards deal primarily with: 1) land use allocation, 2) spatial distribution of land uses, 3) protection of extractive resources, 4) protection of natural resources, 5) preservation of environmental corridors and agricultural lands, 6) provision of recreational opportunities, 7) provision of safe and efficient transportation facilities, 8) provision of fire protection services, and 9) provision of an adequate variety of housing types.

Chapter VI also discusses the results of an attitudinal survey conducted in 1995 by the University of Wisconsin-Extension to assess the attitudes of the Town residents with respect to land use planning related issues. The citizen survey showed that most Town residents favored development at a moderate rate of growth. Citizens of the Town strongly favored the preservation of agricultural lands and natural resources; generally preferred residential lots to be at least five acres in size; generally supported the expansion of commercial development, but were about equally divided regarding future industrial development in the Town. They were also equally divided regarding the development of a Town park.

Chapter VII: Land Use and Community Facility Requirements

As part of the planning process, the standards listed in Chapter VI, together with the selected forecast population, household, and employment levels presented in Chapter II, were used to estimate the land use requirements to be met in the plan design. The urban land use and community facility requirements developed for the Town and used in the land use plan design process are described in Chapter VII.

The land use requirements of the probable future resident population, household, and employment levels of the Town of Fredonia were determined by applying two basic types of standards: land use allocation standards and accessibility standards. The land use allocation standards, were used to estimate the number of acres of each major land use category expected to be needed to serve the resident population and economy of the Town by the year 2010. Accessibility standards are expressed as a

service radius for certain sites, land uses, or facilities, and were intended to assure that such features are spatially distributed in an efficient manner convenient for use by the resident population and the economic activities which they are intended to serve. Both the land use allocation standards and the accessibility standards were embodied in the recommended plan.

An estimated 776 acres of lands in the Town will be needed for additional rural residential housing, and about 132 acres of rural or undeveloped land will need to be converted to urban use by the year 2010 to meet the forecast population, household, and employment levels at the specified standards.

The arterial street and highway network required to serve the existing and probable future traffic demands within the Town of Fredonia planning area to the year 2010 was based upon the adopted 2010 regional transportation system plan for Southeastern Wisconsin. The jurisdictional responsibilities of the State, County, and local municipalities for the construction, maintenance, and operation of arterial streets and highways are identified and the number of traffic lanes needed for each arterial street segment to carry the anticipated arterial traffic volumes to the year 2010 are indicated. Proposed improvements to arterial highways in the Town include providing significant additional capacity to STH 57 and resurfacing or reconstructing County Trunk Highways A, D, E, H, I, K, Y, Z, and KK to provide essentially the same capacity on these roads that currently exists.

Chapter VIII: The Land Use Plan

Chapter VIII presents a recommended land use plan for the Town of Fredonia for the year 2010. The plan sets forth specific recommendations concerning the type, amount, and geographic location of the various land uses for the Town of Fredonia.

The previous land use plan, prepared and adopted by the Town Plan Commission in 1979, altered development trends existing at the time by encouraging new development outside the Village of Fredonia urban service area only at rural densities of five or more acres per dwelling unit and by encouraging the preservation of farmlands and environmentally significant lands. The plan set forth herein includes this recommendation of the former land use plan; extends the design year of the plan from 2000 to 2010; and updates the plan to incorporate development trends that have changed since the former plan was prepared.

The Town of Fredonia land use plan is designed for that area of U.S. Public Land Survey Township 12 North, Range 21 East, encompassing the civil division of the Town of Fredonia, but excluding those areas of the township located within the 1995 corporate limits of the Village of Fredonia. Of the total approximately 35-square-mile Town area considered in the recommended plan, four square miles, or 12 percent, would consist of "urban" uses, over half of which is rural-density residential development, and the remaining 31 square miles, or 88 percent, would consist of "nonurban" uses.

Several important elements of the character of the Town may be noted from the proposed plan. First, agricultural lands would still constitute the largest land use in the Town of Fredonia, occupying almost 63 percent of the Town. Preserved natural areas would continue as the next largest land use, representing about 24 percent of the Town, consisting of environmental corridors, isolated natural resource areas, and other environmentally sensitive lands. Third, residential land uses would represent about 11 percent of the Town. Residential uses, however, would represent the largest urban land use in the Town and would consist of primarily single-family dwelling units at a rural-density of at least five acres or more per dwelling unit. Commercial development would consist of expansions of existing scattered commercial developments, most of which are located in the Waubeka and Little Kohler areas. Industrial development would be located adjacent to the Village of Fredonia Industrial Park.

Active outdoor recreational land uses are not planned to be expanded beyond those which currently exist in the Town. Existing private and public recreation land uses are supported by the presence of the Milwaukee River and its tributaries in the Town which provides opportunities for water-related recreational activities ranging from fishing to canoeing.

The plan recognizes that much of the Town is underlain by potentially useable sand and gravel deposits, of which about 1.2 square miles has been identified as extractive reserve. Most of the reserve areas underlain by such deposits has been identified as prime agricultural land, which would ensure the availability of these lands for future mineral extraction purposes.

Chapter IX: Plan Implementation

The recommended land use plan provides a guide for the attainment of the community development objectives expressed in Chapter VI of this report. The plan is not

complete, however, until the steps necessary to implement that plan have been specified. Attainment of the plan objectives will require the application and modification of certain plan implementation measures. These measures are discussed in Chapter IX, including the consideration of a rate-of-growth control system to better control the pace of residential development in the Town. After holding public informational meetings and a hearing on the recommended land use plan, an important step in plan implementation is the formal adoption of the plan by the Town Plan Commission and the Town Board. Upon such adoption, the plan becomes the official guide to be used by the public officials of the Town in making development decisions over time. The recommended plan was adopted by the Town Plan Commission on January 7, 1999, and by the Town Board on January 14, 1999.

Following plan adoption, the Town Plan Commission should initiate appropriate amendments to the Town land division and zoning ordinances and the zoning district map, as necessary, to help implement the adopted plan. Some key recommended changes to the Town zoning include revising the A-2 Agricultural/Rural Residential District and the C-2 Upland Conservancy District to accommodate cluster development, establishing design controls, and updating the Town's official zoning map to include past rezonings and to continue to protect its farmlands and natural resources, while providing for a reasonable amount of growth. The adopted plan should

serve as a basis for the review of all rezoning requests by Town officials as well as preliminary subdivision plats and certified survey maps. Only those proposed rezonings or land divisions which are consistent with the objectives of the plan should be approved. The adopted land use plan should be periodically reevaluated to ensure that it continues to properly reflect current conditions and development objectives.

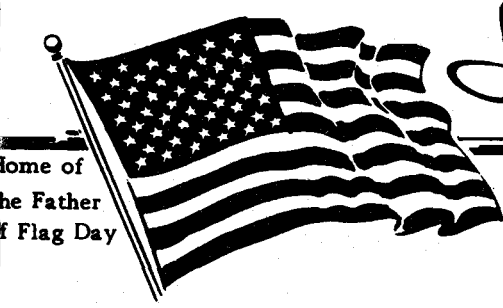
CONCLUDING REMARKS

The recommended land use plan, together with supporting plan implementation measures, provide a means for promoting the orderly growth of the Town of Fredonia in accordance with the public interest. The principal function of the Town land use plan is to provide information and recommendations that public officials can use in making decisions about growth and development in the Town. The land use plan recommends the preservation of existing environmentally sensitive areas and prime agricultural lands. At the same time, the plan provides for development that is compatible with and reinforces the development objectives of the Town. Consistent application of the plan will assure that individual development proposals are properly related to the development of the Town as a whole; will help to avoid costly developmental and environmental problems; and will help to maintain the overall quality of the environment, and the rural character and natural beauty of the Town.

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APPENDIX

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Town of Fredonia

FREDONIA, WISCONSIN 53021

RESOLUTION OF THE TOWN PLAN COMMISSION ADOPTING THE TOWN OF FREDONIA LAND USE PLAN

WHEREAS, the Town of Fredonia, pursuant to the provisions of Section 61.10(2)(c) of the Wisconsin Statutes, has been authorized to exercise village powers; and

WHEREAS, the Town of Fredonia, pursuant to the provisions of Section 62.23 of the Wisconsin Statutes, has created a Town Plan Commission; and

WHEREAS, it is the duty and function of the Town Plan Commission, pursuant to Section 62.23 (2) of the Wisconsin Statutes, to make and adopt a master plan for the physical development of the Town of Fredonia; and

WHEREAS, the Town of Fredonia requested the Southeastern Wisconsin Regional Planning Commission (SEWRPC) to help update a land use plan for the Town, which plan includes:

1. Collection, compilation, processing, and analyses of various types of demographic, economic, natural resource, recreation and open space, land use, transportation, and other information pertaining to the Town;
2. A forecast of growth and change;
3. Statements of land use objectives, principles, and standards, and results of an attitudinal survey;
4. A land use plan;
5. Recommended activities to implement the plan; and

WHEREAS, the aforementioned forecasts, inventories, analyses, objectives, land use plan, and implementation recommendations are set forth in a published report entitled SEWRPC Community Assistance Planning Report No. 33 (2nd Edition), A Land Use Plan for the Town of Fredonia: 2010, Ozaukee, Wisconsin; and

WHEREAS, the Town of Fredonia Plan Commission has held public meetings to acquaint residents, land owners, and local government officials with the plan recommendations, including a series of public informational meetings and a public hearing held on the 7th day of January, 1999; and

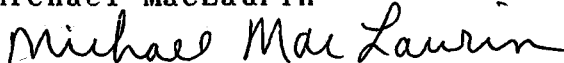
WHEREAS, the Town Plan Commission has carefully considered the plan over an extended period of time, including statements and requests during the planning process, and has proceeded to incorporate, where deemed appropriate, changes to the recommended land use plan; and

WHEREAS, the Town Plan Commission considers the plan to be a necessary guide to the future development of the Town; and

NOW, THEREFORE, BE IT RESOLVED, that pursuant to Section 62.23(3)(b) of the Wisconsin Statutes, the Town of Fredonia Plan Commission on the 7th day of January, 1999, hereby adopts SEWRPC Community Assistance Planning Report No. 33 (2nd Edition), entitled A Land Use Plan for the Town of Fredonia: 2010, Ozaukee County, Wisconsin, and the attendant recommended land use plan as a guide for the future development of the Town of Fredonia; and

BE IT FURTHER RESOLVED, that the Secretary of the Town of Fredonia Plan Commission transmit a certified copy of this resolution, after recording the action on the adopted plan, to the Town Board of the Town of Fredonia and to the Southeastern Wisconsin Regional Planning Commission.

Michael MacLaurin



Chairman
Town of Fredonia
Plan Commission

Attested to:

Carol Mueller



Secretary
Town of Fredonia
Plan Commission

Appendix B

RESOLUTION OF THE TOWN BOARD OF SUPERVISORS
ADOPTING THE TOWN OF FREDONIA LAND USE PLAN



RESOLUTION 99-1

A RESOLUTION OF THE TOWN BOARD OF SUPERVISORS
ADOPTING THE TOWN OF FREDONIA LAND USE PLAN

WHEREAS, the Town of Fredonia, pursuant to the provisions of Section 60.10(2)(3) of the Wisconsin Statutes, has been authorized to exercise village powers: and

WHEREAS, the Town of Fredonia, pursuant to the provisions of Section 62.23 of the Wisconsin Statutes, has created a Town Plan Commission; and

Whereas, the Town Plan has updated, with the assistance of the Southeastern Wisconsin Regional Planning Commission (SEWRPC), a plan for ;the physical development of the Town of Fredonia, said plan embodied in SEWRPC Community Assistance Planning Report No.33 (2nd Edition), A LAND USE PLAN FOR THE TOWN OF FREDONIA: 2010, OZAUKEE COUNTY, WISCONSIN; and

WHEREAS, the Town Plan Commission on the 7th day of January, 1999, adopted SEWRPC Community Assistance Planning Report No. 33 (2nd Edition) and the attendant recommended land use plan, and has submitted a certified copy of that resolution to the Town Board of the Town of Fredonia; and

WHEREAS, the Town Board of the Town of Fredonia concurs with the Town Plan Commission and the objectives and recommendations set forth in SEWRPC Community Assistance Planning Report No. 33 (2nd Edition).

NOW, THEREFORE, BE IT RESOLVED, that the Town Board of the Town of Fredonia hereby adopts SEWRPC Community Assistance Planning Report No. 33 (2nd Edition) and the attendant recommended land use plan as a guide for the future development of the Town of Fredonia; and

BE IT FURTHER RESOLVED, that the Town Plan Commission shall review the Town land use plan every ten years, or more frequently if necessary, and shall recommend extensions, changes, or additions to the Plan which the Commission considers necessary. Should the Town Plan Commission find that no changes are necessary, this finding shall be reported to the Town Board.

PASSED AND ADOPTED THE 14th day of January, 1999.

Michael MacLaurin

Michael MacLaurin
Chairman
Town of Fredonia

Carol Mueller

ATTEST: Carol Mueller
Clerk

Supervisors:

Christine D. Luft *Richard Mueller*
Christine Luft Richard Mueller

Russell Saueregg
Russell Saueregg

Susan S. Stockwell
Susan Stockwell

Appendix C

GROWTH CONTROL SYSTEMS

In considering the various growth management measures that are available to municipalities for managing development over time, the Town Long Range Planning Committee felt it would be useful to investigate the concept of a growth control system generally known as a building cap. Although no decision was made as to whether such a system would be suitable for the Town, the topic was researched and discussed at considerable length. This appendix documents some of the information that was compiled during that research process.

While building caps may be applied to all types of land uses, they are usually applied to residential uses, limiting the number of dwelling units that are permitted to be built in a year, over a predetermined number of years. The number of units permitted may not be arbitrarily established, but should be based upon a reasonable relationship between past trends in the number of units permitted, the community's population projections to a selected design year, and the degree to which the community wishes to limit growth.

For a building cap to successfully withstand legal challenges, it should be based upon sound land use planning, such as is contained in this land use plan. Building caps are usually related to timing in accordance with the ability to provide urban services. The cornerstone case in this area involved Ramapo Township, New York, in 1972, in which the court ruled that the adoption of a building cap was within the scope of delegated zoning powers. In this case the building cap was based upon an intensive study of existing land use, public facilities, transportation, industry and commerce, housing, and population projections. Later cases in Petaluma, California, and Aspen and Boulder, Colorado, laid the foundation for limiting growth to locally desired levels, rather than facility availability. In Petaluma, the case was made for preserving community "character" through growth controls.

The building caps in five townships in the ex-urban area around Nashua, New Hampshire were investigated (Hollis, Litchfield, Wilton, Lyndeborough, and Brookline). These were all approximately 30-40 square miles in size (similar to Fredonia) and had populations ranging from 1,200 to 5,400 people. The annual number of dwelling units permitted ranged from 15 to 200, and limited growth to 3-5 percent per year. One community discouraged large scale development, preferring scattered, single-lot development, while another preferred large scale development over scattered lot development. In Hollis, the number of permits granted to an individual was based on the amount of land owned by that individual. In Wilton, mandatory phasing of development projects was required when certain "triggers" were present in the community, such as reaching 80 percent capacity in the schools. The building caps were in place for 5 to 12 years, at the end of which time they were reviewed for possible extension.

Local building cap systems that were investigated were those of the Towns of Delafield and Vernon in Waukesha County. Both Towns used a point system to determine who should get a building permit. Both Towns tied their "Residential Development Control System" to the protection and wise use of the natural resources of the Town, preservation of land areas for agricultural uses, and preservation of the rural atmosphere of the Town, as well as the provision of urban services and limiting the tax burden on the residents. The Town of Delafield permitted 108 units per year, and the Town of Vernon permitted 50. Both Towns permitted any unused allotment to be carried forward to the following year, with some limits. The point systems used to evaluate permit applications included the following criteria:

- Method of sanitary disposal
- Compatibility with adjacent development
- Removal of significant agricultural land
- Degree of site alterations
- Adequacy of surface drainage and stormwater detention
- Density less than permitted by zoning

Amount of open space preserved
Traffic circulation and capacity
Outstanding site plan and architectural standards
Fire protection

For a proposal to qualify for a building permit, it had to achieve a minimum number of points. Qualifying developments were prioritized by point totals.

As in Delafield and Vernon, there was some interest by the Town Long Range Planning Committee in not only controlling the amount and rate of residential development, but also, through good site planning, the character of that development. Of particular concern was the preservation of rural landscape character and agricultural lands. Although adding site planning criteria to a growth control system could help a community achieve such objectives to some degree, the implementation tools for achieving such objectives most successfully are the zoning and subdivision control ordinances. A building cap system should not be seen as a substitute for these more effective ordinances.

This information on residential building caps is included in the Town Fredonia land use plan as a record of the information that was compiled by the Town Long Range Planning Committee. A more detailed point system was drafted by the Committee, but no consensus on whether such a system was suitable for the Town was reached; therefore, the detailed system is not included herein. It is available for reference, however, in the Town Clerk's office.

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