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1988 ANNUAL REPORT



Graduate Research Center
Dept. of Urban & Regional Planning
The University of Wisconsin-Madison

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SEP 28 1989

TWENTY-EIGHTH ANNUAL REPORT

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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July 1989

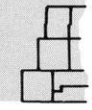
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July 14, 1989

TO: The State Legislature of Wisconsin and the Legislative Bodies of the Local Governmental Units Within the Southeastern Wisconsin Region

In accordance with the requirements of Section 66.945(8)(b) of the Wisconsin Statutes, this Commission each calendar year prepares and certifies an annual report to the State Legislature of Wisconsin and to the legislative bodies of the constituent county and local units of government within the Region. This, the 28th annual report of the Commission, summarizes the accomplishments of the Commission in calendar year 1988, and contains a statement of the financial position of the Commission as of the end of that calendar year as certified by an independent auditor.

While the Commission annual report is prepared to meet the legislative requirement noted above, the document also serves as an annual report to the state and federal agencies which fund several aspects of the Commission's work program. Importantly, however, the annual report is intended to provide county and local public officials and interested citizens with a comprehensive overview of current and proposed Commission activities, and thereby provide a focus for the active participation of those officials and citizens in regional plan preparation and implementation.

As do past annual reports, this report contains much useful information on development trends in the Region. In addition, this report summarizes the progress made during 1988 by the Commission in carrying out its three basic functions—data collection and dissemination, regional plan preparation, and promotion of plan implementation. During 1988, the Commission completed and adopted an important element of the regional transportation system plan, that being a comprehensive freeway traffic management plan for the greater Milwaukee area. In addition, the Commission, working with Kenosha County, completed and adopted a new park and open space plan for that County as an amendment to the regional park and open space plan. The Commission also adopted a number of important amendments to the regional water quality management plan, including sanitary sewer service area plans for the Cities of Hartford and West Bend and the Villages of Darien and Kewaskum. Progress in these and other plan development efforts, as well as plan implementation efforts, is summarized within this annual report.

The Commission hopes that the constituent units and agencies of government concerned are pleased with the work of the Commission in 1988. The Commission looks forward to continuing to serve its constituent local units of government and the state and federal agencies concerned by providing the planning services required to address the areawide environmental and developmental problems of southeastern Wisconsin, and by promoting the intergovernmental cooperation needed to resolve these problems.

Very truly yours,

Frank F. Uttech

Frank F. Uttech
Chairman

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ABOUT THE COMMISSION

AUTHORITY

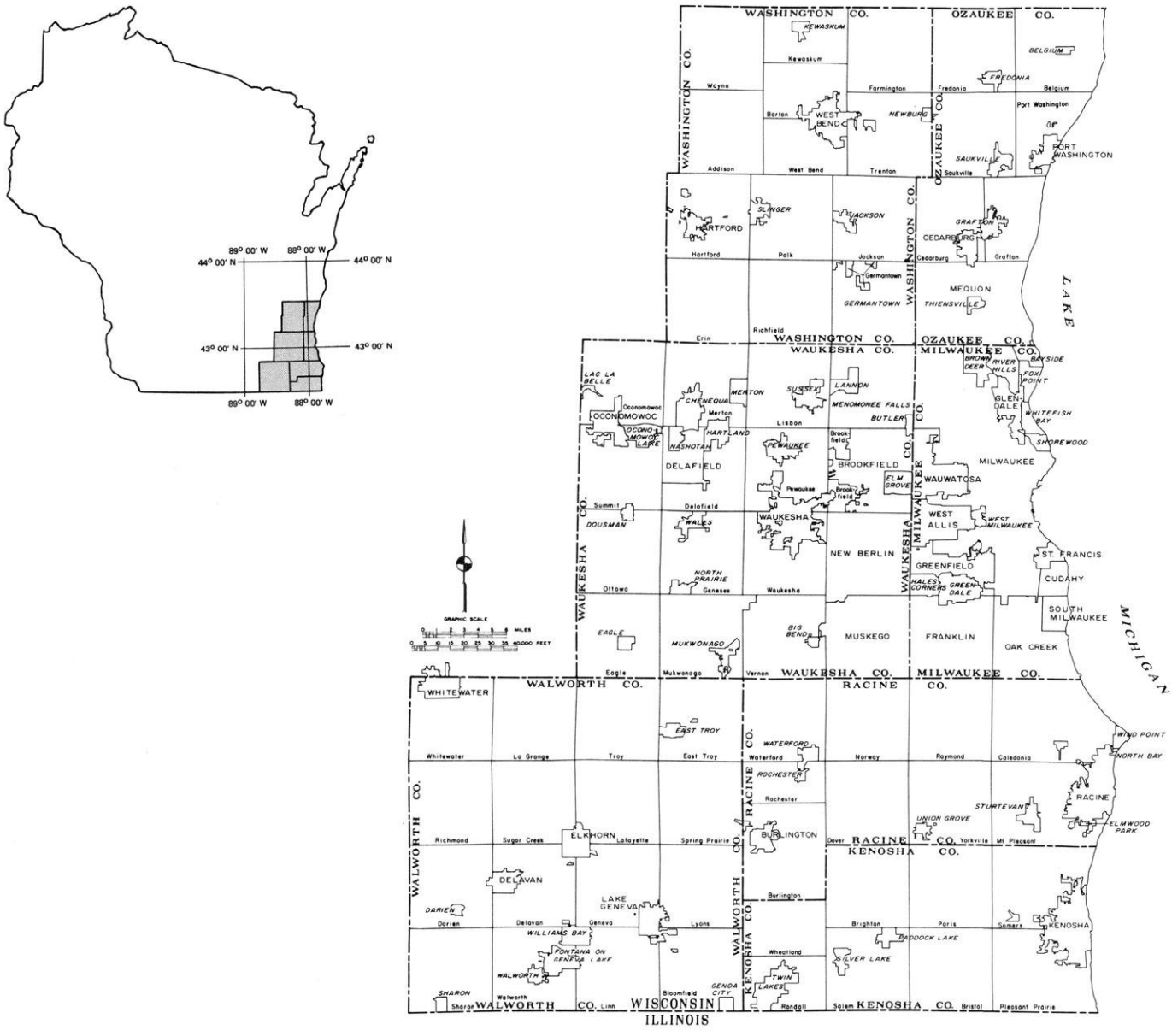
The Southeastern Wisconsin Regional Planning Commission was established in 1960 under Section 66.945 of the Wisconsin Statutes as the official areawide planning agency for the highly urbanized southeastern region of the State. The Commission was created to provide the basic information and planning services necessary to solve problems which transcend the corporate boundaries and fiscal capabilities of the local units of government comprising the Region.

AREA SERVED

The Commission serves a Region consisting of the seven counties of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha. These seven counties have an area of about 2,689 square miles, or about 5 percent of the total area of the State. These counties, however, have a resident population of 1.75 million persons, or about 36 percent of the total population of the State. The seven counties provide about 938,200 jobs, or about 40 percent of the total employment of the State,

Map 1

THE SOUTHEASTERN WISCONSIN REGION



and contain real property worth about $46.9 billion as measured in equalized valuation, or about 39 percent of all the tangible wealth of the State as measured by such valuation. There are 154 general-purpose local units of government in the seven-county Region, all of which participate in the work of the Commission.

BASIC CONCEPTS

Regional or areawide planning has become increasingly accepted as a necessary governmental function in the large metropolitan areas of the United States. This acceptance is based, in part, on a growing awareness that problems of physical and economic development and of environmental deterioration transcend the geographic limits and fiscal capabilities of local units of government, and that sound resolution of these problems requires the cooperation of all units and agencies of government concerned and of private interests as well.

As used by the Commission, the term "region" means an area larger than a county but smaller than a state, united by economic interests, geography, and common developmental and environmental problems. A regional basis is necessary to provide a meaningful technical approach to the proper planning and design of such systems of public works as highway and transit and sewerage and water supply, and of park and open space facilities. A regional basis is also essential to provide a sound approach to the resolution of such environmental problems as flooding, air and water pollution, natural resource base deterioration, and changing land use.

Private as well as public interests are vitally affected by these kinds of areawide problems and by proposed solutions to these problems, and it appears neither desirable nor possible for any one level or agency of government to impose the decisions required to resolve these kinds of problems. Such decisions can better come from consensus among the public and private interests concerned, based on a common interest in the welfare of the entire Region. Regional planning is necessary to promote this consensus and the necessary cooperation between urban and rural, local, state, and federal, and public and private interests. In this light, regional planning is not a substitute for federal, state, or local public planning or for private planning. Rather, regional planning is a vital supplement to such planning.

COMMISSION OFFICES
OLD COURTHOUSE
WAUKESHA COUNTY



The work of the Regional Planning Commission is entirely advisory in nature. Therefore, the regional planning program in southeastern Wisconsin has emphasized the promotion of close cooperation among the various governmental agencies concerned with land use development and with the development and operation of supporting public works facilities. The Commission believes that the highest form of areawide planning combines accurate data and competent technical work with the active participation of knowledgeable and concerned public officials and private citizens in the formulation of plans that address clearly identified problems. Such planning is intended to lead not only to a more efficient regional development pattern but also to a more desirable environment in which to live and work.

BASIC FUNCTIONS

The Commission conceives regional planning as having three basic functions. The first involves the collection, analysis, and dissemination of basic planning and engineering data on a uniform, areawide basis in order that better development decisions can be made in both the public and private sectors. The Commission believes that the establishment and utilization of

such data can in and of itself contribute to better development decision-making within the Region. The second function involves the preparation of a framework of long-range areawide plans for the physical development of the Region. This function is mandated by state enabling legislation. While the scope and content of these plans can extend to all phases of regional development, the Commission believes that emphasis should be placed on the preparation of plans for land use and supporting transportation, utility, and community facilities. The third function involves the provision of a center for the coordination of day-to-day planning and plan implementation activities of all of the units and levels of government operating within the Region. Through this function, the Commission seeks to integrate regional and local plans and planning efforts and thereby to promote regional plan implementation.

ORGANIZATION

The Commission consists of 21 members, three from each of the seven member counties, who serve without pay. One Commissioner from each county is appointed by the county board and is an elected county board supervisor. The remaining two from each county are appointed by the Governor, one from a list prepared by the county board.

The full Commission meets at least four times a year and is responsible for establishing overall policy, adopting the annual budget, and adopting regional plan elements. The Commission has four standing committees—Executive, Administrative, Planning and Research, and Intergovernmental and Public Relations. The Executive Committee meets monthly to oversee the work effort of the Commission and is empowered to act for the Commission in all matters except the adoption of the budget and the adoption of the regional plan elements. The Administrative Committee meets monthly to oversee the routine but essential housekeeping activities of the Commission. The Planning and Research Committee meets as necessary to review all of the technical work carried out by the Commission staff and its consultants. The Intergovernmental and Public Relations Committee serves as the Commission's principal arm in the communication process with the constituent county boards. The Committee meets as necessary to consider intergovernmental problems. The Commission and committee rosters are set forth in Appendix A. The Commission is assisted in its work by 28 technical, citizen, and intergovernmental coordinating and advisory committees. These committees include both elected and appointed public officials and interested citizens with knowledge in the Commission work areas. The committees perform a significant function in both the formulation and the execution of the Commission work programs. Membership on the advisory committees, which totals 515 persons, is set forth in Appendix B.

STAFFING

The Commission prepares an annual work program which is reviewed and approved by federal and state funding agencies. This work program is then carried out by a core staff of full-time professional, technical, administrative, and clerical personnel, supplemented by additional temporary staff and consultants as required by the various work programs underway. At the end of 1988, the staff totaled 95, including 75 full-time and 20 part-time employees.

As shown in Figure 1, the Commission is organized into eight divisions. Five of these divisions —Transportation Planning, Environmental Planning, Land Use Planning, Community Assistance Planning, and Economic Development Assistance—have direct responsibility for the conduct of the Commission's major planning programs. The remaining three divisions—Administrative Services, Information Systems, and Cartographic and Graphic Arts—provide day-to-day support of the five planning divisions.

FUNDING

Basic financial support for the Commission's work program is provided by county tax levies apportioned on the basis of equalized valuation. These basic funds are supplemented by state and federal aids. Revenues received by the Commission during 1988 totaled about $5.8 million, of which about 43 percent, or $2.5 million, represents contract revenues for local government data processing services. County tax levies in 1988 totaled $884,670, or about $0.51 per capita. The sources of this revenue for 1988 and the trend in funding since the inception of the Commission in 1960 are shown in Figures 2 through 5. It may be seen in Figure 2 that there has been little change in the tax levy for regional planning since 1963 when that levy is expressed in constant 1960 dollars.

Figure 1

SEWRPC ORGANIZATIONAL STRUCTURE

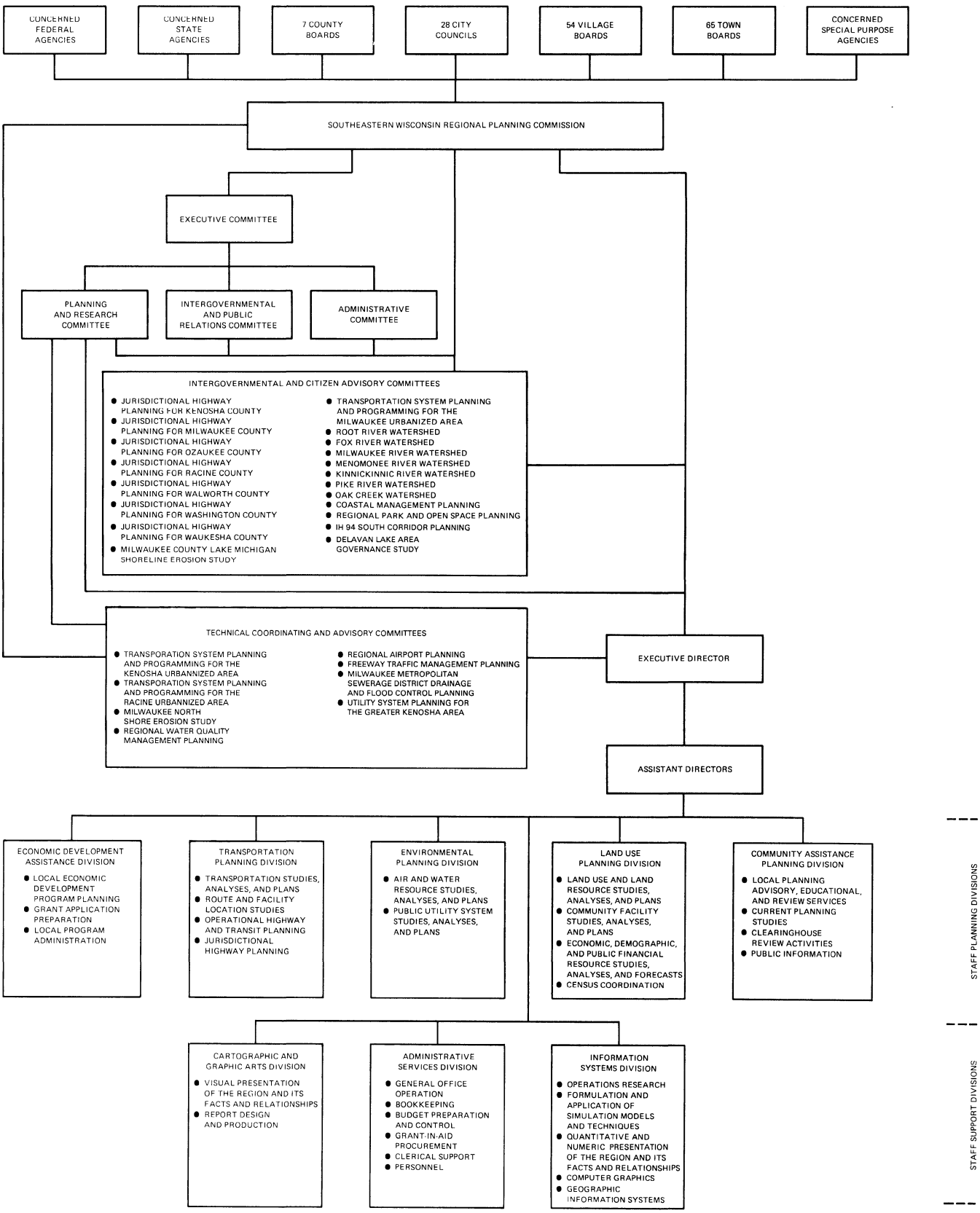


Figure 2

FUNDING TREND: 1961-1988

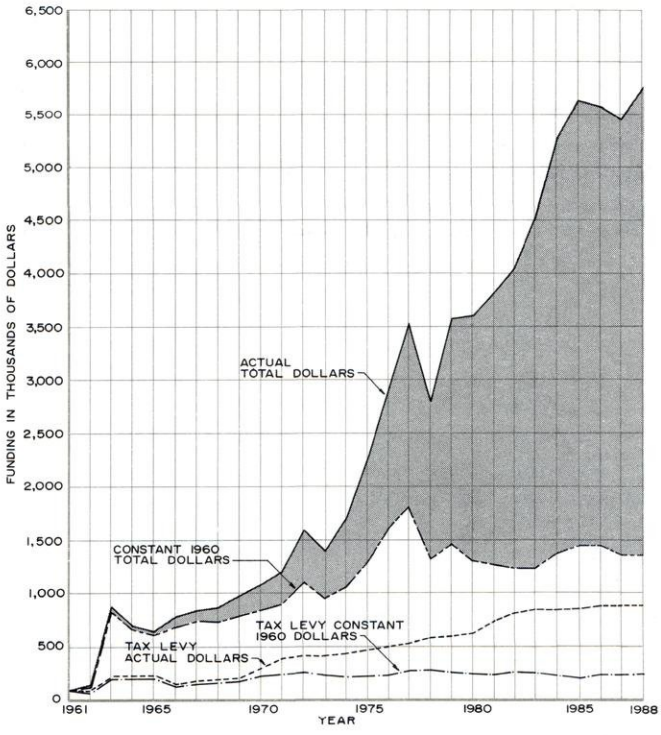


Figure 3

SOURCES OF REVENUES TREND: 1961-1988

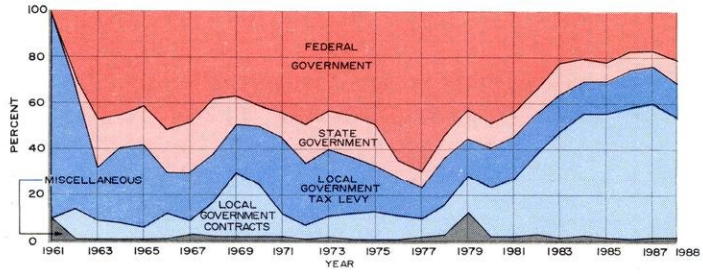


Figure 4

EXPENDITURES TREND: 1961-1988

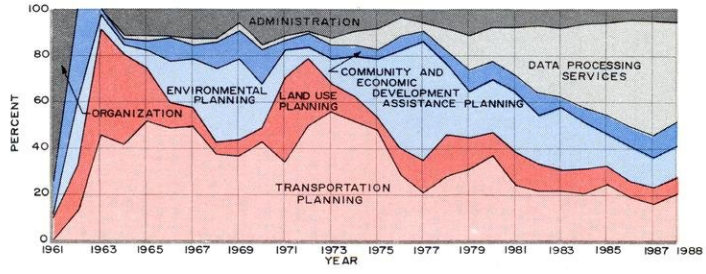
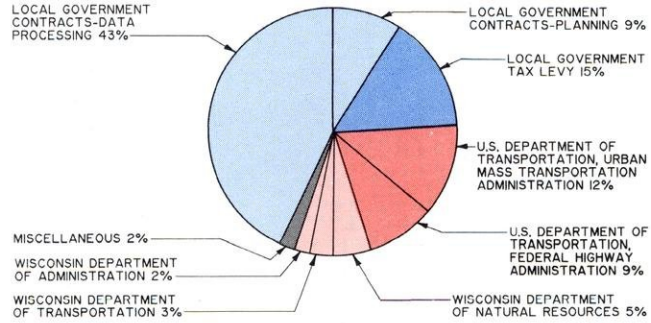


Figure 5

REVENUES AND EXPENDITURES: 1988

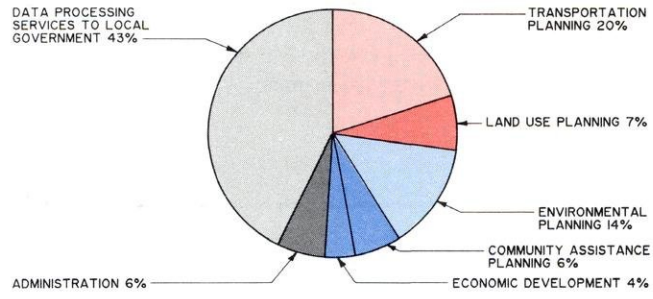
REVENUES

Federal Government	$1,220,195	21%
State Government	538,361	10%
Local Government Tax Levy	884,670	15%
Local Government Contracts	3,013,673	52%
Miscellaneous	104,718	2%
Total	$5,761,617	100%



EXPENDITURES

Transportation Planning	$1,148,043	20%
Land Use Planning	416,509	7%
Environmental Planning	812,486	14%
Community Assistance Planning	320,483	6%
Economic Development Assistance	248,783	4%
Data Processing Services to Local Governments	2,487,948	43%
Administration	327,365	6%
Total	$5,761,617	100%



1988 MEETINGS

COMMISSION AND ADVISORY COMMITTEE MEETINGS

Full Commission	4
Executive Committee	10
Administrative Committee	9
Planning and Research Committee	5
Intergovernmental and Public Relations Committee	0
Technical Coordinating and Advisory Committee on Regional Airport Planning	0
Technical and Intergovernmental Coordinating and Advisory Committees on Jurisdictional Highway System Planning	
Kenosha County	0
Milwaukee County	0
Ozaukee County	0
Racine County	2
Walworth County	0
Washington County	1
Waukesha County	1
Intergovernmental Coordinating and Advisory Committees on Transportation System Planning and Programming	
Kenosha Urbanized Area	1
Milwaukee Urbanized Area	1
Racine Urbanized Area	2
Technical Coordinating and Advisory Committee on Freeway Traffic Management	1
Watershed Committees	
Root River	0
Fox River	0
Milwaukee River	0
Menomonee River	0
Kinnickinnic River	0
Pike River	1
Oak Creek	0
Intergovernmental Coordinating and Technical Advisory Committee for the IH 94 South Freeway Corridor Development Plan	3
Technical Advisory Committee on Regional Water Quality Management Planning	0
Technical and Citizen Advisory Committee on Coastal Management in Southeastern Wisconsin	0
Technical Advisory Committee for the Milwaukee North Shore Erosion Study	1
Advisory Committee on Stormwater Drainage and Flood Control Planning for the Milwaukee Metropolitan Sewerage District and District Service Areas	3
Technical and Citizen Advisory Committee on Regional Park and Open Space Planning	0
Intergovernmental Coordinating and Technical Advisory Committee for the Milwaukee County Lake Michigan Shoreline Erosion, Bluff Recession, and Storm Damage Control Plan	3
Technical Advisory and Intergovernmental Coordinating Committee for Utility System Planning for the Greater Kenosha Area	6
Advisory Committee on the Governance of the Delavan Lake Area	2

STAFF TECHNICAL MEETINGS

Executive Director	227
Assistant Directors	207
Cartographic and Graphic Arts Division	19
Community Assistance Planning Division	189
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STAFF SPEAKING ENGAGEMENTS

Executive Director	24
Assistant Directors	36
Community Assistance Planning Division	2
Environmental Planning Division	20
Land Use Planning Division	25
Transportation Planning Division	2
Economic Development Assistance Division	6
Information Systems Division	5

The Commission has a complete financial audit performed each year by a certified public accountant. The report of this audit for 1988 is set forth in full in Appendix E. Under the federal Single Audit Act of 1984, the Commission's audit is subject to the review and approval of the Commission's federal cognizant agency, the Federal Highway Administration.

DOCUMENTATION

Documentation in the form of published reports is considered very important, if not absolutely essential, to any public planning effort. Printed planning reports represent the best means for disseminating inventory data that have permanent historic value and for promulgating plan recommendations and alternatives to such recommendations. Published reports are intended to serve as important references for public officials at the federal and state levels, as well as at the local level, when considering important development decisions. Perhaps most importantly, however, published reports are intended to provide a focus for generating enlightened citizen interest in, and action on, plan recommendations. Accordingly, the Commission has established a series of published reports.

The first and most important type of report in the series is the planning report. The planning report is intended to document the adopted elements of the comprehensive plan for the physical development of the Region. As such, these reports constitute the official recommendations of the Regional Planning Commission. Each planning report is carefully reviewed and formally adopted by the Commission.

The second type of report in the series is the planning guide. Planning guides are intended to constitute manuals of local planning practice. As such, planning guides are intended to help improve the overall quality of public planning within the Region, and thereby to promote sound community development properly coordinated on a regionwide basis. The guides discuss basic planning and plan implementation principles, contain examples of good planning practice, and provide local governments with model ordinances and forms to assist them in their everyday planning efforts.

The third type of report in the series is the technical report. Technical reports are intended to make available to various public and private agencies within the Region valuable information assembled by the Commission staff during the course of its planning work on a work progress basis. Technical reports document the findings of such important basic inventories as detailed soil surveys, stream water quality surveys, potential park and open space site inventories, and horizontal and vertical control surveys.

The fourth type of report in the series is similar to the technical report and is known as the technical record. This journal is published on an irregular basis and is intended primarily to document technical procedures utilized in the Commission planning programs. The documentation of such procedures assists other planning and engineering technicians in more fully understanding the Commission work programs and contributes toward advancing the science and art of planning.

The fifth type of report in the series is the community assistance planning report. These reports are intended to document local plans prepared by the Commission at the request of one or more local units of government. Occasionally, these local plans constitute refinements of, and amendments to, adopted regional and subregional plans, and are then formally adopted by the Regional Planning Commission.

The sixth type of report in the series is the planning program prospectus. Prospectuses are prepared by the Commission as a matter of policy as the initial step in the undertaking of any new major planning program. The major objective of the prospectus is to achieve a consensus among all of the interests concerned on the need for, and objectives of, a particular proposed planning program. The prospectus documents the need for a planning program; specifies the scope and content of the work required to be undertaken; recommends the most effective method for establishing, organizing, and accomplishing the required work; recommends a practical time sequence and schedule for the work; provides sufficient cost data to permit the development of an initial budget; and suggests how to allocate costs among the various levels and units of government concerned. Importantly, the prospectuses serve as the basis for the review, approval, and funding of the proposed planning programs by the constituent county boards.

The seventh type of report in the series is the annual report. The annual report has served an

increasing number of functions over the period of the Commission's existence. Originally, and most importantly, the Commission's annual report was, and still is, intended to satisfy a very sound legislative requirement that a regional planning commission each calendar year prepare, publish, and certify to the State Legislature of Wisconsin and to the legislative bodies of the local units of government within the Region an annual report summarizing the activities of the Commission. In addition, the annual report documents activities under the continuing regional land use-transportation study and as such serves as an annual report to the federal and state Departments of Transportation. The Commission's annual report is also intended to provide local public officials and interested citizens with a comprehensive overview of the Commission's activities and thereby to provide a focal point for the promotion of regional plan implementation.

The eighth type of report in the series is the memorandum report. These reports are intended to document the results of locally requested special studies. These special studies usually involve relatively minor work efforts of a short duration and are not normally intended to document formally adopted plans.

In addition to the eight basic types of reports described above, the Commission documents its work in certain miscellaneous publications, including the bimonthly newsletter, regional planning conference proceedings, study designs, public hearing and public informational meeting minutes, transportation improvement programs, and staff memoranda.

While many of the Commission's publications are relatively long and are, necessarily, written in a technical style, they do provide the conscientious, concerned citizen and elected official, as well as concerned technicians, with all of the data and information needed to comprehend fully the scope and complexity of the areawide developmental and environmental problems and of the Commission's recommendations for the resolution of those problems. A complete publication list is set forth in Appendix D.

THE EVOLVING COMPREHENSIVE PLAN FOR THE REGION

PLAN DESIGN FUNCTION

The Commission is charged by law with the function and duty of "making and adopting a master plan for the physical development of the Region." The permissible scope and content of this plan, as outlined in the enabling legislation, extend to all phases of regional development, implicitly emphasizing, however, the preparation of alternative spatial designs for the use of land and for supporting transportation and utility facilities.

The scope and complexity of areawide development problems prohibit the making and adopting of an entire comprehensive development plan at one point in time. The Commission has, therefore, determined to proceed with the preparation of individual plan elements which together can comprise the required comprehensive plan. Each element is intended to deal with an identified areawide developmental or environmental problem. The individual elements are coordinated by being related to an areawide land use plan. Thus, the land use plan comprises the most basic regional plan element, an element on which all other elements are based. The Commission believes the importance of securing agreement upon areawide development plans through the formal adoption of such plans not only by the Commission but also by county and local units of government and state agencies cannot be overemphasized.

The Commission has placed great emphasis upon the preparation of a comprehensive plan for the physical development of the Region in the belief that such a plan is essential if land use development is to be properly coordinated with the development of supporting transportation, utility, and community facility systems; if the development of each of these individual functional systems is to be coordinated with the development of the others; if serious and costly environmental and developmental problems are to be minimized; and if a more healthful, attractive, and efficient regional settlement pattern is to be evolved. Under the Commission's approach, the preparation, adoption, and use of the comprehensive plan are considered to be the primary objectives of the planning process; and all planning and plan implementation techniques are based upon, or related to, the comprehensive plan.

The validity of the concept of the comprehensive plan has been questioned in recent years and its application, in fact, opposed by some segments of the planning profession. The Commission believes, however, that the comprehensive plan remains a viable and valid concept, a concept essential to coping with the developmental and environmental problems generated by areawide urbanization. The comprehensive plan not only provides the necessary framework for coordinating and guiding growth and development within a multi-jurisdictional urbanizing region having essentially a single community of interest, but provides the best conceptual basis available for the application of systems engineering skills to the growing problems of such a region. This is because systems engineering basically must focus upon a design of physical systems. It seeks to achieve good design by setting good objectives; determining the ability of alternative plans to meet these objectives through quantitative analyses; cultivating interdisciplinary team activity; and considering all of the relationships involved both within the system being designed and between the system and its environment.

ADOPTED PLAN ELEMENTS—1988

The Commission initiated the important plan design function in 1963 when it embarked upon a major program to prepare a regional land use plan and a regional transportation plan. Since that time, increasing emphasis has been placed on the plan design function. Beginning in the early 1970's, this plan design function has included major plan reappraisal as well as the preparation of new plan elements.

By the end of 1988, the adopted regional plan consisted of 22 individual plan elements. These plan elements are identified in Table 1. Four of these elements are land use related: the regional land use plan, the regional housing plan, the regional library facilities and services plan, and the regional park and open space plan.

Table 1

THE ADOPTED REGIONAL PLAN—1988

Functional Area	Plan Element	Plan Document	Date of Adoption
Land Use, Housing, and Community Facility Planning	Regional Land Use Plan[a]	Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, Volume One, Inventory Findings; Volume Two, Alternative and Recommended Plans	December 19, 1977
	Amendment—Kenosha County	Community Assistance Planning Report No. 45, A Farmland Preservation Plan for Kenosha County, Wisconsin	June 17, 1982
	Amendment—Racine County	Community Assistance Planning Report No. 46, A Farmland Preservation Plan for Racine County, Wisconsin	June 17, 1982
	Amendment—Ozaukee County	Community Assistance Planning Report No. 87, A Farmland Preservation Plan for Ozaukee County, Wisconsin	June 16, 1983
	Amendment—Pewaukee Area	Community Assistance Planning Report No. 76, A Land Use Plan for the Town and Village of Pewaukee: 2000, Waukesha County, Wisconsin	December 1, 1983
	Amendment—Town of Pleasant Prairie	Community Assistance Planning Report No. 88, A Land Use Management Plan for the Chiwaukee Prairie-Carol Beach Area of the Town of Pleasant Prairie, Kenosha County, Wisconsin	March 11, 1985
	Regional Library Facilities and Services Plan	Planning Report No. 19, A Library Facilities and Services Plan for Southeastern Wisconsin	September 12, 1974
	Regional Housing Plan	Planning Report No. 20, A Regional Housing Plan for Southeastern Wisconsin	June 5, 1975
	Regional Park and Open Space Plan	Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000	December 1, 1977
	Amendment—Ozaukee County Park and Open Space Plan	Community Assistance Planning Report No. 133, A Park and Open Space Plan for Ozaukee County	September 14, 1987
	Amendment—Kenosha County Park and Open Space Plan	Community Assistance Planning Report No. 131, A Park and Open Space Plan for Kenosha County	December 5, 1988
Transportation Planning	Regional Transportation Plan[b]	Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, Volume One, Inventory Findings; Volume Two, Alternative and Recommended Plans	June 1, 1978
	Amendment— Lake Freeway South Corridor	Amendment to the Regional Transportation Plan—2000, Lake Freeway South Corridor	June 18, 1981
	Amendment—Milwaukee Area Primary Transit System	Planning Report No. 33, A Primary Transit System Plan for the Milwaukee Area	June 17, 1982
	Amendment—Racine County	Amendment to the Regional Transportation Plan—2000, Racine County	December 2, 1982
	Amendment—Waukesha County	Amendment to the Regional Transportation Plan—2000, Waukesha County	December 2, 1982
	Amendment—Milwaukee Northwest Side/ Ozaukee County	Planning Report No. 34, A Transportation System Plan for the Milwaukee Northwest Side/Ozaukee County Study Area	September 8, 1983
	Amendment—Lake Freeway North/Park Freeway East	Amendment to the Regional Transportation Plan—2000, Lake Freeway North/Park Freeway East	December 1, 1983
	Amendment—Stadium Freeway South Corridor	Amendment to the Regional Transportation Plan—2000, Stadium Freeway South Corridor	March 11, 1985
	Amendment—Waukesha County	Amendment to the Regional Transportation Plan—2000, Waukesha County	June 20, 1988
	Racine Area Transit Development Plan	Community Assistance Planning Report No. 3, Racine Area Transit Development Program: 1975-1979	September 12, 1974
	Regional Airport System Plan[c]	Planning Report No. 38, A Regional Airport System Plan for Southeastern Wisconsin: 2010	June 15, 1987

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Transportation Planning (continued)	Kenosha Area Transit[d] Development Plan	Community Assistance Planning Report No. 101, Kenosha Area Transit System Plan and Program: 1984-1988	March 11, 1985
	Transportation Systems Management Plan	Community Assistance Planning Report No. 50, A Transportation Systems Management Plan for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1981	December 4, 1980
	Amendment—Milwaukee Northwest Side/ Ozaukee County	Planning Report No. 34, A Transportation System Plan for the Milwaukee Northwest Side/Ozaukee County Study Area	September 8, 1983
	Amendment—Milwaukee Area	Planning Report No. 39, A Freeway Traffic Management System Plan for the Milwaukee Area	December 5, 1988
	Elderly-Handicapped Transportation Plan	Planning Report No. 31, A Regional Transportation Plan for the Transportation Handicapped in Southeastern Wisconsin: 1978-1982	April 13, 1978
	Amendment—Racine Area	SEWRPC Resolution No. 78-17	December 7, 1978
	Amendment—Racine Area	Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, Volume Three, Racine Urbanized Area	September 11, 1980
	Amendment—Racine Area	Memorandum Report No. 24, A Public Transit Program for Handicapped Persons—City of Racine Transit System	December 7, 1987
	Amendment—Milwaukee County	Community Assistance Planning Report No 39, A Public Transit System Accessibility Plan, Volume Two, Milwaukee Urbanized Area/Milwaukee County	June 20, 1980
	Amendment—Milwaukee County	Memorandum Report No. 21, A Public Transit Program for Handicapped Persons—Milwaukee County Transit System	December 7, 1987
	Amendment—Kenosha Area	Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, Volume One, Kenosha Urbanized Area	September 11, 1980
	Amendment—Kenosha Area	Memorandum Report No. 23, A Public Transit Program for Handicapped Persons—City of Kenosha Transit System	December 7, 1987
	Amendment—Waukesha County	Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, Volume Four, Milwaukee Urbanized Area/Waukesha County	September 11, 1980
	Amendment—Waukesha County	Memorandum Report No. 22, A Public Transit Program for Handicapped Persons—Waukesha County Transit System	December 7, 1987
	Amendment—City of Waukesha	Amendment to the Public Transit Accessibility Plan for the Milwaukee Urbanized Area/ Waukesha County, City of Waukesha Transit System Utility	June 18, 1981
	Amendment—City of Waukesha	Memorandum Report No. 17, A Public Transit Program for Handicapped Persons—City of Waukesha Transit System Utility	December 7, 1987
Environmental Planning	Root River Watershed Plan	Planning Report No. 9, A Comprehensive Plan for the Root River Watershed	September 22, 1966
	Fox River Watershed Plan	Planning Report No. 12, A Comprehensive Plan for the Fox River Watershed, Volume One, Inventory Findings and Forecasts; Volume Two, Alternative Plans and Recommended Plan	June 4, 1970
	Amendment—Water Pollution Control Time Schedule	Amendment to the Comprehensive Plan for the Fox River Watershed	September 13, 1973
	Amendment—Lower Watershed Drainage Plan	Community Assistance Planning Report No. 5, Drainage and Water Level Control Plan for the Waterford-Rochester-Wind Lake Area of the Lower Fox River Watershed	June 5, 1975
	Amendment—Pewaukee Flood Control Plan	Community Assistance Planning Report No. 14, Floodland Management Plan for the Village of Pewaukee	June 1, 1978

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	Milwaukee River Watershed Plan	Planning Report No. 13, A Comprehensive Plan for the Milwaukee River Watershed, Volume One, Inventory Findings and Forecasts; Volume Two, Alternative Plans and Recommended Plan	March 2, 1972
	Amendment—Lincoln Creek Flood Control Plan	Community Assistance Planning Report No. 13 (2nd Edition), Flood Control Plan for Lincoln Creek, Milwaukee County, Wisconsin	December 1, 1983
	Amendment—Milwaukee Harbor Estuary Plan	Planning Report No. 37, A Water Resources Management Plan for the Milwaukee Harbor Estuary, Volume One, Inventory Findings; Volume Two, Alternative and Recommended Plans	December 7, 1987
	Menomonee River Watershed Plan	Planning Report No. 26, A Comprehensive Plan for the Menomonee River Watershed, Volume One, Inventory Findings and Forecasts; Volume Two, Alternative Plans and Recommended Plan	January 20, 1977
	Amendment—Milwaukee Harbor Estuary Plan	Planning Report No. 37, A Water Resources Management Plan for the Milwaukee Harbor Estuary, Volume One, Inventory Findings; Volume Two, Alternative and Recommended Plans	December 7, 1987
	Wastewater Sludge Management Plan	Planning Report No. 29, A Regional Wastewater Sludge Management Plan for Southeastern Wisconsin	September 14, 1978
	Kinnickinnic River Watershed Plan	Planning Report No. 32, A Comprehensive Plan for the Kinnickinnic River Watershed	March 1, 1979
	Amendment—Milwaukee Harbor Estuary Plan	Planning Report No. 37, A Water Resources Management Plan for the Milwaukee Harbor Estuary, Volume One, Inventory Findings; Volume Two, Alternative and Recommended Plans	December 7, 1987
	Regional Water Quality Management Plan[e]	Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin, Volume One, Inventory Findings; Volume Two, Alternative Plans; Volume Three, Recommended Plan	July 12, 1979
	Amendment—Root River Watershed	Community Assistance Planning Report No. 37, A Nonpoint Source Water Pollution Control Plan for the Root River Watershed	March 6, 1980
	Amendment—Walworth County Metropolitan Sewerage District	Community Assistance Planning Report No. 56, Sanitary Sewer Service Areas for the Walworth County Metropolitan Sewerage District	December 3, 1981
	Amendment—Cities of Brookfield and Waukesha	Amendment to the Regional Water Quality Management Plan—2000, Cities of Brookfield and Waukesha	December 3, 1981
	Amendment—Kenosha County	Community Assistance Planning Report No. 45, A Farmland Preservation Plan for Kenosha County, Wisconsin	June 17, 1982
	Amendment—Racine County	Community Assistance Planning Report No. 46, A Farmland Preservation Plan for Racine County, Wisconsin	June 17, 1982
	Amendment—City of Muskego	Community Assistance Planning Report No. 64 (2nd Edition), Sanitary Sewer Service Area for the City of Muskego	March 3, 1986
	Amendment—Ashippun Lake, Waukesha County	Community Assistance Planning Report No. 48, A Water Quality Management Plan for Ashippun Lake, Waukesha County, Wisconsin	September 9, 1982
	Amendment—Okauchee Lake, Waukesha County	Community Assistance Planning Report No. 53, A Water Quality Management Plan for Okauchee Lake, Waukesha County, Wisconsin	September 9, 1982
	Amendment—Lac La Belle, Waukesha County	Community Assistance Planning Report No. 47, A Water Quality Management Plan for Lac La Belle, Waukesha County, Wisconsin	September 9, 1982
	Amendment—North Lake, Waukesha County	Community Assistance Planning Report No. 54, A Water Quality Management Plan for North Lake, Waukesha County, Wisconsin	December 2, 1982
	Amendment—City of West Bend	Community Assistance Planning Report No. 35, Sanitary Sewer Service Area for the City of West Bend, Washington County, Wisconsin	December 2, 1982
	Amendment—Village of Grafton	Amendment to the Regional Water Quality Management Plan—2000, Village of Grafton	December 2, 1982

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	Amendment—City of Brookfield	Amendment to the Regional Water Quality Management Plan—2000, City of Brookfield	December 2, 1982
	Amendment—Village of Sussex	Community Assistance Planning Report No. 84, Sanitary Sewer Service Area for the Village of Sussex, Waukesha County, Wisconsin	June 16, 1983
	Amendment—Ozaukee County	Community Assistance Planning Report No. 87, A Farmland Preservation Plan for Ozaukee County, Wisconsin	June 16, 1983
	Amendment—Village of Germantown	Community Assistance Planning Report No. 70, Sanitary Sewer Service Area for the Village of Germantown, Washington County, Wisconsin	September 8, 1983
	Amendment—Village of Saukville	Community Assistance Planning Report No. 90, Sanitary Sewer Service Area for the Village of Saukville, Ozaukee County, Wisconsin	December 1, 1983
	Amendment—City of Port Washington	Community Assistance Planning Report No. 95, Sanitary Sewer Service Area for the City of Port Washington, Ozaukee County, Wisconsin	December 1, 1983
	Amendment—Pewaukee	Community Assistance Planning Report No. 76, A Land Use Plan for the Town and Village of Pewaukee: 2000, Waukesha County, Wisconsin	December 1, 1983
	Amendment—Belgium Area	Amendment to the Regional Water Quality Management Plan—2000, Onion River Priority Watershed Plan	December 1, 1983
	Amendment—Geneva Lake Area	Amendment to the Regional Water Quality Management Plan—2000, Geneva Lake Area Communities	December 1, 1983
	Amendment—Village of Butler	Community Assistance Planning Report No. 99, Sanitary Sewer Service Area for the Village of Butler, Waukesha County, Wisconsin	March 1, 1984
	Amendment—City of Hartford	Community Assistance Planning Report No. 92, Sanitary Sewer Service Area for the City of Hartford, Washington County, Wisconsin	June 21, 1984
	Amendment—Mukwonago Area	Amendment to the Regional Water Quality Management Plan—2000, Village of Mukwonago, Towns of East Troy and Mukwonago	June 21, 1984
	Amendment—Village of Fredonia	Community Assistance Planning Report No. 96, Sanitary Sewer Service Area for the Village of Fredonia, Ozaukee County, Wisconsin	September 13, 1984
	Amendment—Village of East Troy	Community Assistance Planning Report No. 112, Sanitary Sewer Service Area for the Village of East Troy and Environs, Walworth County, Wisconsin	September 13, 1984
	Amendment—City of Milwaukee	Amendment to the Regional Water Quality Management Plan—2000, City of Milwaukee	September 13, 1984
	Amendment—Town of Pleasant Prairie	Community Assistance Planning Report No. 88, A Land Use Management Plan for the Chiwaukee Prairie-Carol Beach Area of the Town of Pleasant Prairie, Kenosha County, Wisconsin	March 11, 1985
	Amendment—Village of Belgium	Community Assistance Planning Report No. 97, (2nd Edition) Sanitary Sewer Service Area for the Village of Belgium, Ozaukee County, Wisconsin	June 15, 1987
	Amendment—Town of Addison	Community Assistance Planning Report No. 103, Sanitary Sewer Service Area for the Allenton Area, Washington County, Wisconsin	March 11, 1985
	Amendment—Town of Yorkville	Amendment to the Regional Water Quality Management Plan—2000, Town of Yorkville	March 11, 1985
	Amendment—Village of Williams Bay	Amendment to the Regional Water Quality Management Plan—2000, Village of Williams Bay/Walworth County Metropolitan Sewerage District	March 11, 1985
	Amendment—Town of Trenton City of West Bend	Amendment to the Regional Water Quality Management Plan—2000, City of West Bend/ Town of Trenton	March 11, 1985
	Amendment—Village of Hartland	Community Assistance Planning Report No. 93, Sanitary Sewer Service Area for the Village of Hartland, Waukesha County, Wisconsin	June 17, 1985
	Amendment—Village of Jackson	Community Assistance Planning Report No. 124, Sanitary Sewer Service Area for the Village of Jackson, Washington County, Wisconsin	June 17, 1985

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	Amendment—Pewaukee Area	Community Assistance Planning Report No. 113, Sanitary Sewer Service Area for the Town of Pewaukee Sanitary District No. 3, Lake Pewaukee Sanitary District, and Village of Pewaukee, Waukesha County, Wisconsin	June 17, 1985
	Amendment—City of Waukesha	Community Assistance Planning Report No. 100, Sanitary Sewer Service Area for the City of Waukesha and Environs, Waukesha County, Wisconsin	December 2, 1985
	Amendment—Village of Slinger	Community Assistance Planning Report No. 128, Sanitary Sewer Service Area for the Village of Slinger, Washington County, Wisconsin	December 2, 1985
	Amendment—Delafield/ Nashotah Area	Community Assistance Planning Report No. 127, Sanitary Sewer Service Area for the City of Delafield and the Village of Nashotah and Environs, Waukesha County, Wisconsin	December 2, 1985
	Amendment—Kenosha Area	Community Assistance Planning Report No. 106, Sanitary Sewer Service Areas for the City of Kenosha and Environs, Kenosha County, Wisconsin	December 2, 1985
	Amendment—Town of Eagle	Amendment to the Regional Water Quality Management Plan—2000, Eagle Spring Lake Sanitary District	December 2, 1985
	Amendment—Town of Salem	Community Assistance Planning Report No. 143, Sanitary Sewer Service Area for the Town of Salem Utility District No. 2, Kenosha County, Wisconsin	March 3, 1986
	Amendment—Friess Lake, Washington County	Community Assistance Planning Report No. 98, A Water Quality Management Plan for Freiss Lake, Washington County, Wisconsin	March 3, 1986
	Amendment—Geneva Lake Walworth County	Community Assistance Planning Report No. 60, A Water Quality Management Plan for Geneva Lake, Walworth County, Wisconsin	March 3, 1986
	Amendment—Pewaukee Lake Waukesha County	Community Assistance Planning Report No. 58, A Water Quality Management Plan for Pewaukee Lake, Waukesha County, Wisconsin	March 3, 1986
	Amendment—Waterford/ Rochester Area	Community Assistance Planning Report No. 141, Sanitary Sewer Service Area for the Waterford/ Rochester Area, Racine County, Wisconsin	June 16, 1986
	Amendment—City of Burlington	Community Assistance Planning Report No. 78, Sanitary Sewer Service Area for the City of Burlington, Racine County, Wisconsin	June 16, 1986
	Amendment—City of Waukesha/ Town of Pewaukee	Amendment to the Regional Water Quality Management Plan—2000, City of Waukesha/ Town of Pewaukee	December 1, 1986
	Amendment—Salem/Paddock Lake/Bristol Area	Community Assistance Planning Report No. 145, Sanitary Sewer Service Area for the Town of Salem Utility District No. 1, Village of Paddock Lake, and Town of Bristol Utility District Nos. 1 and 1B, Kenosha County, Wisconsin	December 1, 1986
	Amendment—Racine Area	Community Assistance Planning Report No. 147, Sanitary Sewer Service Area for the City of Racine and Environs, Racine County, Wisconsin	December 1, 1986
	Amendment—Town of Lyons	Amendment to the Regional Water Quality Management Plan—2000, Country Estates Sanitary District/Town of Lyons	March 2, 1987
	Amendment—Village of Silver Lake	Community Assistance Planning Report No. 119, Sanitary Sewer Service Area, Village of Silver Lake, Kenosha County, Wisconsin	June 15, 1987
	Amendment—Village of Twin Lakes	Community Assistance Planning Report No. 149, Sanitary Sewer Service Area, Village of Twin Lakes, Kenosha County, Wisconsin	June 15, 1987
	Amendment—Cedarburg/ Grafton Area	Community Assistance Planning Report No. 91, Sanitary Sewer Service Area, City of Cedarburg, Village of Grafton, Ozaukee County, Wisconsin	June 15, 1987

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	Amendment—Town of Walworth	Amendment to the Regional Water Quality Management Plan—2000, Town of Walworth Utility District No. 1/Walworth County Metropolitan Sewerage District	June 15, 1987
	Amendment—City of West Bend	Amendment to the Regional Water Quality Management Plan—2000, City of West Bend	June 15, 1987
	Amendment—City of Whitewater	Community Assistance Planning Report No. 94, Sanitary Sewer Service Area for the City of Whitewater, Walworth County, Wisconsin	September 14, 1987
	Amendment—Town of Lyons	Community Assistance Planning Report No. 158, Sanitary Sewer Service Area for the Town of Lyons Sanitary District No. 2, Walworth County, Wisconsin,	September 14, 1987
	Amendment—City of Hartford	Amendment to the Regional Water Quality Management Plan—2000, City of Hartford	September 14, 1987
	Amendment—Milwaukee Harbor Estuary Plan	Planning Report No. 37, A Water Resources Management Plan for the Milwaukee Harbor Estuary, Volume One, Inventory Findings; Volume Two, Alternative and Recommended Plans	December 7, 1987
	Amendment—City of New Berlin	Community Assistance Planning Report No. 157, Sanitary Sewer Service Area for the City of New Berlin, Waukesha County, Wisconsin	December 7, 1987
	Amendment—Village of Sussex	Amendment to the Regional Water Quality Management Plan—2000, Village of Sussex	December 7, 1987
	Amendment—Kenosha Area	Amendment to the Regional Water Quality Management Plan—2000, City of Kenosha and Environs	December 7, 1987
	Amendment—Village of Kewaskum	Community Assistance Planning Report No. 161, Sanitary Sewer Service Area for the Village of Kewaskum, Washington County, Wisconsin	March 7, 1988
	Amendment—Town of Darien	Amendment to the Regional Water Quality Management Plan—2000, Town of Darien/ Walworth County Metropolitan Sewerage District	June 20, 1988
	Amendment—Village of Sussex	Amendment to the Regional Water Quality Management Plan—2000, Village of Sussex	June 20, 1988
	Amendment—Village of Darien	Community Assistance Planning Report No. 123, Sanitary Sewer Service Area for the Village of Darien, Walworth County, Wisconsin	June 20, 1988
	Amendment—West Bend Area	Amendment to the Regional Water Quality Management Plan—2000, City of West Bend/Town of West Bend	September 12, 1988
	Amendment—Hartford Area	Amendment to the Regional Water Quality Management Plan—2000, City of Hartford	September 12, 1988
	Amendment—Town of Waterford	Amendment to the Regional Water Quality Management Plan—2000, Western Racine County Sewerage District	September 12, 1988
	Amendment—Hartford Area	Amendment to the Regional Water Quality Management Plan—2000, City of Hartford	December 5, 1988
	Amendment—City of Waukesha	Amendment to the Regional Water Quality Management Plan—2000, City of Waukesha	December 5, 1988
	Regional Air Quality Plan	Planning Report No. 28, A Regional Air Quality Attainment and Maintenance Plan for Southeastern Wisconsin: 2000	June 20, 1980
	Amendment—Emission Reduction Credit Banking and Trading System	Amendment to the Regional Air Quality Attainment and Maintenance Plan: 2000, Emission Reduction Credit Banking and Trading System	December 1, 1983
	Pike River Watershed Plan	Planning Report No. 35, A Comprehensive Plan for the Pike River Watershed	June 16, 1983
	Amendment—Town of Mt. Pleasant	Amendment to the Pike River Watershed Plan, Town of Mt. Pleasant	June 15, 1987
	Amendment—City of Kenosha/ Town of Somers	Amendment to the Pike River Watershed Plan, City of Kenosha/Town of Somers	June 15, 1987
	Oak Creek Watershed Plan	Planning Report No. 36, A Comprehensive Plan for the Oak Creek Watershed	September 8, 1986

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Community Assistance Planning	Kenosha Planning District Comprehensive Plan	Planning Report No. 10, A Comprehensive Plan for the Kenosha Planning District, Volumes One and Two	June 1, 1972
	Racine Urban Planning District Comprehensive Plan	Planning Report No. 14, A Comprehensive Plan for the Racine Urban Planning District, Volume One, Inventory Findings and Forecasts; Volume Two, The Recommended Comprehensive Plan; Volume Three, Model Plan Implementation Ordinances	June 5, 1975

[a]*The regional land use plan is a second generation plan. The initial regional land use plan was adopted by the Commission on December 1, 1966, and documented in SEWRPC Planning Report No. 7, Regional Land Use-Transportation Study, Volume Three, Recommended Regional Land Use and Transportation Plans—1990.*

[b]*The regional transportation plan is a second generation plan. The initial regional transportation plan was adopted by the Commission on December 1, 1966, and documented in SEWRPC Planning Report No. 7, Regional Land Use-Transportation Study, Volume Three, Recommended Regional Land Use and Transportation Plans—1990, and was subsequently amended by the adoption on June 4, 1970, of the Milwaukee County jurisdictional highway system plan documented in SEWRPC Planning Report No. 11, A Jurisdictional Highway System Plan for Milwaukee County; the adoption on March 2, 1972, of the Milwaukee area transit plan set forth in the document entitled, Milwaukee Area Transit Plan; the adoption on March 4, 1973, of the Walworth County jurisdictional highway system plan documented in SEWRPC Planning Report No. 15, A Jurisdictional Highway System Plan for Walworth County; the adoption on March 7, 1974, of the Ozaukee County jurisdictional highway system plan documented in SEWRPC Planning Report No. 17, A Jurisdictional Highway System Plan for Ozaukee County; the adoption on June 5, 1975, of the Waukesha County jurisdictional highway system plan documented in SEWRPC Planning Report No. 18, A Jurisdictional Highway System Plan for Waukesha County; the adoption on September 11, 1975, of the Washington County jurisdictional highway system plan documented in SEWRPC Planning Report No. 23, A Jurisdictional Highway System Plan for Washington County; the adoption on September 11, 1975, of the Kenosha County jurisdictional highway system plan documented in SEWRPC Planning Report No. 24, A Jurisdictional Highway System Plan for Kenosha County; and the adoption on December 4, 1975, of the Racine County jurisdictional highway system plan documented in SEWRPC Planning Report No. 22, A Jurisdictional Highway System Plan for Racine County.*

[c]*The regional airport system plan is a second generation plan. The initial plan was adopted by the Commission on March 4, 1976, and is documented in SEWRPC Planning Report No. 21, A Regional Airport System Plan for Southeastern Wisconsin.*

[d]*The Kenosha area transit development plan is a second generation plan. The initial plan was adopted by the Commission on June 3, 1976, and documented in SEWRPC Community Assistance Planning Report No. 7, Kenosha Area Transit Development Plan: 1976-1980.*

[e]*The regional water quality management plan is a second generation plan. The initial plan was adopted by the Commission on May 13, 1974, and documented in SEWRPC Planning Report No. 16, A Regional Sanitary Sewerage System Plan for Southeastern Wisconsin.*

Six of the plan elements relate to transportation. These consist of the regional transportation plan (highway and transit), the regional airport system plan, the transportation systems management plan, the elderly and handicapped transportation plan, and detailed transit development plans for the Kenosha and Racine urbanized areas.

Ten of the adopted plan elements fall within the broad functional area of environmental planning. These consist of the regional water quality management plan, the regional wastewater sludge management plan, the regional air quality attainment and maintenance plan, and comprehensive watershed development plans for the Root, Fox, Milwaukee, Menomonee, Kinnickinnic, and Pike River watersheds, and for the Oak Creek watershed.

The final two plan elements consist of comprehensive community development plans for the Kenosha and Racine urbanized areas.

During 1988, the Commission adopted 12 amendments to the regional plan. These included, importantly, a major amendment to the regional transportation plan consisting of a freeway traffic management system plan for the greater Milwaukee area. Also adopted during the year were an amendment to the regional park and open space plan in the form of a new park and open space plan for Kenosha County; an amendment to the Waukesha County jurisdictional highway system plan; and nine amendments dealing with changes to sanitary sewer service areas at various locations throughout the Region. As appropriate, each of these plan amendments is discussed in a subsequent section of this annual report.

THE CYCLICAL NATURE OF THE PLANNING PROCESS

The Commission views the planning process as cyclical in nature, alternating between system—or areawide—planning, and project—or local—planning. For example, with respect to transportation planning, under this concept transportation facilities development and management proposals are initially advanced at the areawide systems level of planning, and then an attempt is made to implement the proposals through local project planning. If for whatever reasons a particular facility construction or management proposal advanced at the areawide systems planning level cannot be implemented at the project level, that determination is taken into account in the next phase of systems planning. A specific example of this is the Milwaukee River Parkway arterial facility included in the initial regional transportation system plan but rejected in the project planning phase of the cycle. Similar examples could be given for land use development, park and open space facilities, library facilities, flood control facilities, water pollution abatement facilities, or any of the other types of facilities or services that are the subject of Commission plan elements.

By the end of 1979, the second cycle of areawide systems planning for land use, transportation, and water quality management programs had been completed. The resultant plans represent "second generation" plans for the Region, incorporating the "feedback" from the intensive project and facilities planning efforts completed by local agencies after, and in implementation of, the first generation areawide system plans.

The second generation regional land use plan is based upon the same three basic concepts that formed the basis of the initial regional land use plan; namely, the centralization of new urban land development to the greatest degree practicable, the preservation and protection of primary environmental corridor lands, and the preservation and protection of prime agricultural lands. While the second generation regional land use plan is thus conceptually identical to the original regional land use plan, it does differ in the detailed application of these concepts throughout the seven-county Southeastern Wisconsin Region, taking into account land use decisions that were made following adoption of the initial plan—sometimes at variance with that plan—as well as forecasts of reduced regional population and household growth. This second generation regional land use plan for the design year 2000 was adopted in December 1977.

The second generation regional transportation plan differs in some important respects from the first generation regional transportation plan, reflecting decisions made during the project planning phase of the first cycle of planning. For example, planned freeway segments—the Park Freeway-West in its entirety and the Stadium Freeway-North in its entirety, the Bay Freeway from Pewaukee to Whitefish Bay, the Metropolitan Belt Freeway in its entirety, and the Racine Loop Freeway—as well as one major transit proposal—the exclusive freeway in the east-west travel corridor of Milwaukee County—were deleted from the second regional transportation plan. This second generation transportation plan for the design year 2000 was adopted in June 1978.

The initial cycle of water quality management planning consisted of the regional sanitary sewerage system plan adopted by the Commission in 1974 and the project level planning carried out by local water quality management agencies since that time. In July 1979 the Commission adopted a second generation regional water quality management plan, taking into account the results of the project and facility level planning efforts of the first cycle. This second generation plan differed from the first generation plan primarily in scope and complexity, the second generation plan dealing with such areas as regional sludge management and the control of water pollution from nonpoint sources, as well as with the control of water pollution from point sources which was the focus of the first systems level planning effort.

PLAN ELEMENTS UNDER PREPARATION

At the end of 1988, the Commission had underway a number of programs designed to refine, detail, amend, or extend the existing plan elements. These work efforts included the following:

- The preparation of a third generation regional land use plan. This plan will be based upon new forecasts of regional population and economic activity to the design year 2010.

- The preparation of a third generation regional transportation system plan. Like the land use plan, this work effort would extend the transportation plan to the design year 2010. Work is being done first on a subregional basis, with particular concentration on county level and corridor studies, all intended to be integrated into a new regional plan. Underway at the end of the year were updated jurisdictional highway system plans for Racine and Washington Counties, as well as a corridor plan for the IH 94 South Freeway in Kenosha, Milwaukee, and Racine Counties.

- An update of the regional park and open space plan being carried out by preparing seven individual but coordinated county park and open space plans. By the end of 1988, such new plans had been completed and adopted for Ozaukee and Kenosha Counties, and were in various stages of preparation and review for the remaining five counties in the Region.

- Additional sanitary sewer service area plans being prepared to refine, detail, and amend the regional water quality management plan. At the end of 1988, such locally focused planning efforts were underway for the communities of Franklin and Oak Creek in Milwaukee County; Mequon and Thiensville in Ozaukee County; Williams Bay in Walworth County; and Brookfield, Elm Grove, Menomonee Falls, and Oconomowoc in Waukesha County.

- A composite stormwater drainage and flood control system plan for the Milwaukee Metropolitan Sewerage District and its contract service areas in Ozaukee, Racine, Washington, and Waukesha Counties. This work effort is reevaluating and updating prior Commission recommendations attendant to drainage and flood control in the Milwaukee, Menomonee, Kinnickinnic, and Root River watersheds and Oak Creek watershed, and extending those plans as necessary to develop definitive drainage and flood control recommendations for all streams and watercourses for which the MMSD has taken jurisdiction.

FUTURE WORK PROGRAMS

The Commission is committed to carrying out a series of continuing planning efforts designed to ensure that the already adopted plan elements are kept up-to-date and extended in terms of design year. Thus, the Commission carries on annually a continuing regional land use planning program designed in part to update and extend the regional land use and regional park and open space plans; a continuing regional transportation planning program designed to update and extend the regional highway, transit, and airport system plans; and a continuing regional environmental planning program designed to update, amend, and extend the series of watershed plans and the regional water quality management plan.

In addition to these major continuing planning efforts, the Commission from time-to-time prepares supplemental plan elements as a part of the master plan for the physical development of the Region. In so doing, the Commission follows an established policy of preparing a prospectus and/or study design prior to undertaking any major new planning efforts.

As reported in the 1987 Annual Report, the Commission completed during that year a prospectus for a study to deal with the impact of high Lake Michigan water levels on public and private lands, facilities, and structures in the Milwaukee central business district and adjacent areas along the shorelines of the outer harbor and of the Milwaukee, Menomonee, and Kinnickinnic Rivers. This prospectus was requested by the Milwaukee County Board of Supervisors and the Milwaukee County Executive. The prospectus recommended that a high lake level impact study be undertaken and be funded jointly by the Milwaukee Metropolitan Sewerage District and the Wisconsin Department of Administration, the latter using funds made available to Wisconsin through the federal Coastal Management Program. During 1988, federal funds for this study were not approved by the State Coastal Management Council. Accordingly, the study has been placed on an indefinite hold status.

Also during 1988, the Commission completed at the request of the Kenosha Water Utility a prospectus for the preparation of coordinated sanitary sewer and water supply system plans for the greater Kenosha area. The specific recommendations set forth in that prospectus are reported in a later section of this annual report.

LAND USE PLANNING DIVISION

DIVISION FUNCTIONS

The Land Use Planning Division conducts studies and prepares plan recommendations concerning the physical aspects of land use development. The Division is also responsible for developing demographic, economic, and public financial resource data that serve as the basis for the preparation of regional and subregional plans by the Commission. The kinds of basic questions addressed by this Division include:

- How many people live and work in the Region? How are these levels of population and employment changing over time?
- Where in the Region do people live and work? How are these distribution patterns changing over time?
- What is the most probable future level of population and employment in the Region? Where will people live and work in the future?
- What is the existing pattern of land use development in the Region? How is this pattern changing over time?
- Where are the significant natural resource areas of the Region located, including the wetlands, wildlife habitat areas, and prime agricultural lands? What is happening to these resources over time?
- What are the probable future demands within the Region for each of the land use categories, and what appears to be the best way to accommodate these demands?
- How can new urban development and redevelopment be adjusted to the limitations of the natural resource base?
- What is the demand for outdoor recreation in the Region, and how can this demand best be met through the provision of park and open space facilities?

In an attempt to provide answers to these and similar questions, the Land Use Planning Division, during 1988, conducted a number of activities in three identifiable areas: economic and demographic base data collation and analysis, land use planning, and park and open space planning.

ECONOMIC AND DEMOGRAPHIC BASE ANALYSIS

During 1988, the Division continued to monitor secondary data sources for changes in population, employment, and school enrollment levels and to provide pertinent socioeconomic data in support of the work of the Land Use, Transportation, and Environmental Planning Divisions.

Number of Available Jobs

An important measure of economic activity within the Region is the number of available jobs. Since jobs are enumerated at their location, they are often referred to as "place-of-work" employment data. It should be noted that the enumeration of jobs does not distinguish

Figure 6

LAND USE PLANNING DIVISION—1988 FUNDING

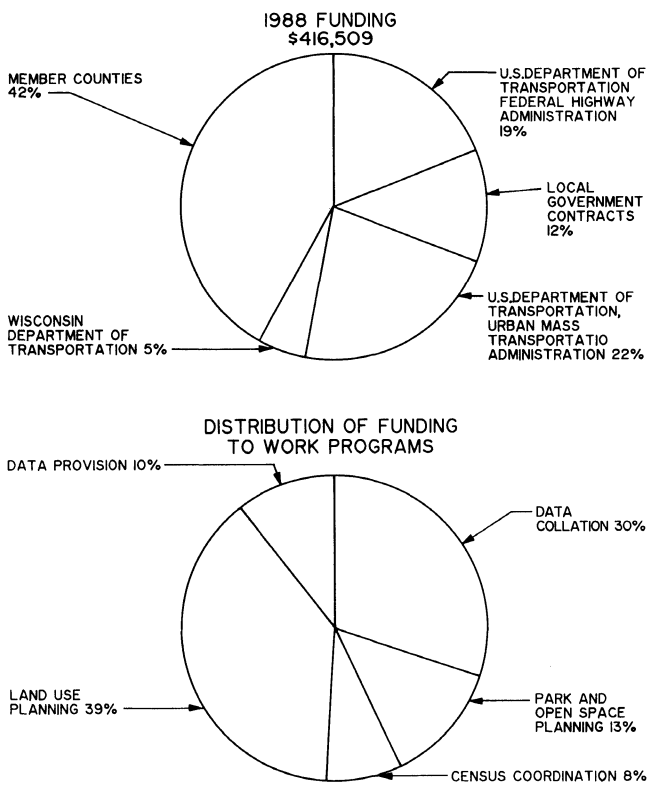


Table 2

REGIONAL EMPLOYMENT BY CATEGORY: 1970, 1980, AND 1988

Employment Category	Jobs			Difference			
				1970-1980		1980-1988	
	1970	1980	1988[b]	Number	Percent	Number	Percent
Agriculture	11,900	12,800	10,900	900	7.6	-1,900	-14.8
Construction	27,200	25,800	27,700	-1,400	-5.1	1,900	7.4
Manufacturing							
Food and Kindred Products	18,900	20,900	16,400	2,000	10.6	-4,500	-21.5
Printing and Publishing	14,900	16,300	22,800	1,400	9.4	6,500	39.9
Primary Metals	22,500	16,600	11,300	-5,900	-26.2	-5,300	-31.9
Fabricated Metals	24,600	31,800	27,100	7,200	29.3	-4,700	-14.8
Nonelectrical Machinery	68,100	73,100	55,100	5,000	7.3	-18,000	-24.6
Electrical Machinery	36,500	40,100	23,500	3,600	9.9	-16,600	-41.4
Transportation Equipment	22,000	21,500	15,500	-500	-2.3	-6,000	-27.9
Other Manufacturing	44,800	41,500	53,900	-3,300	-7.4	12,400	29.9
Manufacturing Subtotal	252,300	261,800	225,600	9,500	3.8	-36,200	-13.8
Transportation, Communication, and Utilities	36,700	39,600	38,600	2,900	7.9	-1,000	-2.5
Wholesale Trade	35,300	43,500	45,500	8,200	23.2	2,000	4.6
Retail Trade	115,700	131,900	145,900	16,200	14.0	14,000	10.6
Finance,Insurance, and Real Estate	32,800	41,200	49,200	8,400	25.6	8,000	19.4
Services	119,600	158,200	198,600	38,600	32.3	40,400	25.5
Government and Education	83,300	120,700	134,100	37,400	44.9	13,400	11.1
Self Employed, Except Farm	37,200	46,200	59,600	9,000	24.2	13,400	29.0
Miscellaneous[a]	1,700	2,500	2,500	800	47.1	0	0.0
Total Jobs	753,700	884,200	938,200	130,500	17.3	54,000	6.1

[a] *Includes agricultural services, forestry, commercial fishing, mining, and unclassified jobs.*

[b] *On January 1,1988, the Wisconsin Department of Industry, Labor and Human Relations adopted a revised and updated Standard Industrial Classification (SIC) system. The primary effect of this update was a reclassification of some jobs previously coded as electrial machinery to other manufacturing.*

between full- or part-time jobs or indicate whether or not the job is held by a resident of the jurisdiction in which the job is enumerated or by a commuter. The number of jobs available in the Region in the years 1970, 1980, and 1988 is set forth in Table 2 by employment category.

The number of jobs in the Region was estimated at 938,200 in 1988, an increase of 28,200 jobs, or 3 percent, over the 1987 level of 910,000. As shown in Table 2, a majority of the employment sectors continued to provide more jobs in 1988 than in 1980. There still were, however, about 36,000 fewer manufacturing jobs in 1988 than in 1980. While 50 percent of this decline occurred in the nonelectrical machinery manufacturing sector, which accounted for about 18,000 fewer jobs in 1988 than in 1980, employment within this manufacturing sector has stabilized within recent years. Within the manufacturing category, only the printing and publishing and "other" manufacturing sectors provided more jobs in 1988 than in 1980.

Employment distribution by county is shown in Table 3. In six counties—Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha—there were more jobs in 1988 than in 1980—about

Table 3

REGIONAL EMPLOYMENT BY COUNTY: 1970, 1980, AND 1988

County	1970	1980	1988	1970-1980		1980-1988	
				Number	Percent	Number	Percent
Kenosha	40,000	50,100	45,600	10,100	25.3	-4,500	-9.0
Milwaukee	507,100	542,300	556,200	35,200	6.9	13,900	2.6
Ozaukee	19,800	25,600	28,900	5,800	29.3	3,300	12.9
Racine	62,700	76,100	78,800	13,400	21.4	2,700	3.5
Walworth	24,500	31,100	33,100	6,600	26.9	2,000	6.4
Washington	23,100	31,400	37,300	8,300	35.9	5,900	18.8
Waukesha	76,500	127,600	158,300	51,100	66.8	30,700	24.1
Region	753,700	884,200	938,200	130,500	17.3	54,000	6.1

13,900, 3,300, 2,700, 2,000, 5,900, and 30,700, respectively. Kenosha County lost about 4,500 jobs, or about 9 percent, between 1980 and 1988.

Comparison of Estimated and Projected Employment Levels

As reported in the Commission's 1984 Annual Report, the Commission in 1984 developed a new set of projections of regional employment change. These projections are for the design year 2010 and will provide one of the bases upon which all adopted regional plan elements, particularly the adopted regional land use and regional transportation system plans, will be reappraised and extended to the design year 2010. These projections are documented in SEWRPC Technical Report No. 10 (2nd edition), The Economy of Southeastern Wisconsin.

Because of the increasing uncertainty surrounding future population levels, the Commission adopted an "alternative futures" approach in preparing a set of projections of regional employment levels for the year 2010. Three alternative regional economic scenarios were developed. Two of these were intended to represent "pessimistic" and "optimistic" extremes of future regional employment levels; the third was intended to identify an intermediate future—that is, a future that lies between the two extremes. While carried out under an alternative futures approach, the regional employment projections presented in Technical Report No. 10 were developed using an approach similar to that used successfully by the Commission in its previous employment projection efforts—that is, by preparing a range of projections for each of the dominant and subdominant industry groups within the Region in order to arrive at projections of total regional employment levels to the year 2010 under the most optimistic and most pessimistic futures that could be reasonably envisioned for the economy of southeastern Wisconsin. This range of employment projections allows for the development of system plans at the regional level, as well as facility plans at the local level, that may be expected to remain viable under greatly varying future conditions.

The employment level in the Region was anticipated to be 966,600 jobs in 1988 under the optimistic scenario, 869,300 jobs under the intermediate scenario, and 810,600 jobs under the pessimistic scenario. The estimated 1988 level of 938,200 jobs is about 3 percent below the level anticipated under the optimistic scenario and about 8 percent and 16 percent, respectively, above the levels anticipated under the intermediate and pessimistic scenarios. The 1988 employment levels projected for each of the Region's seven counties under each of the three alternative futures and the 1988 estimated county employment levels are set forth in Table 4 and Figures 7 through 14.

Civilian Labor Force Levels

Another important measure of economic activity within the Region is the composition of the Region's civilian labor force. By definition, the civilian labor force of an area consists of all of its residents 16 years of age and older who are

Table 4

EXISTING AND PROJECTED NUMBER OF AVAILABLE JOBS BY COUNTY: 1988

County	Estimated 1988 Jobs	Projected 1988 Jobs		
		Pessimistic Scenario	Intermediate Scenario	Optimistic Scenario
Kenosha	45,600	45,400	49,200	54,700
Milwaukee	556,200	487,700	516,600	568,300
Ozaukee	28,900	23,200	25,700	30,200
Racine	78,800	72,200	80,100	91,600
Walworth	33,100	29,600	33,600	38,400
Washington	37,300	31,300	34,700	39,500
Waukesha	158,300	121,200	129,400	143,900
Region	938,200	810,600	869,300	966,600

Figure 7

CURRENT AND ALTERNATIVE FUTURE NUMBER OF AVAILABLE JOBS FOR THE REGION: 1960-2010

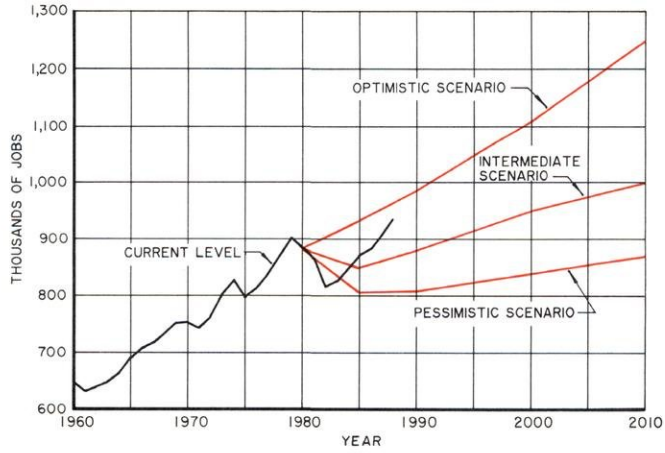


Figure 8

CURRENT AND ALTERNATIVE FUTURE NUMBER OF AVAILABLE JOBS FOR KENOSHA COUNTY: 1960-2010

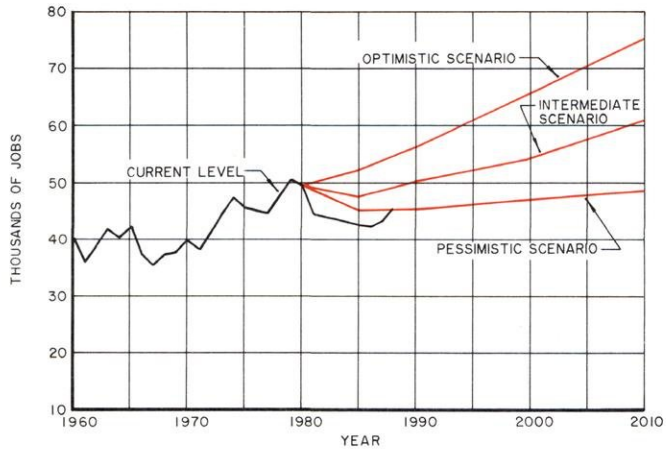


Figure 9

CURRENT AND ALTERNATIVE FUTURE NUMBER OF AVAILABLE JOBS FOR MILWAUKEE COUNTY: 1960-2010

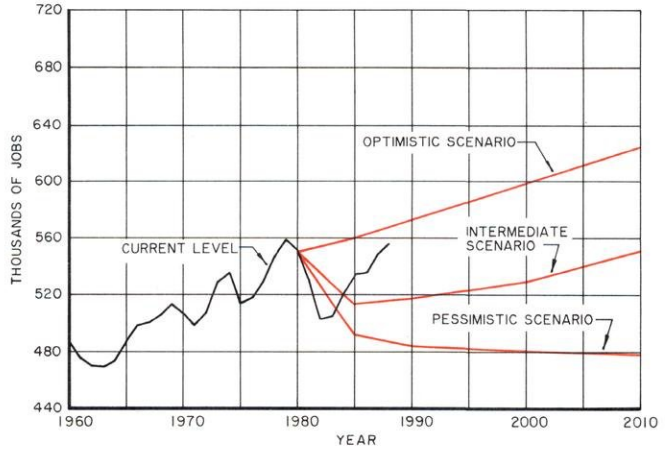
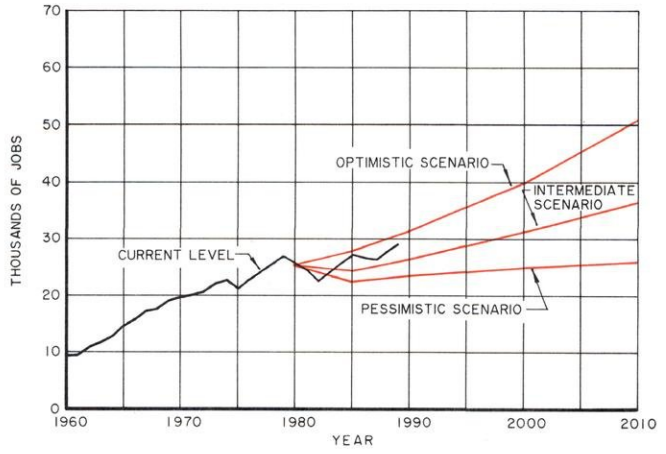


Figure 10

CURRENT AND ALTERNATIVE FUTURE NUMBER OF AVAILABLE JOBS FOR OZAUKEE COUNTY: 1960-2010



either employed at one or more jobs or temporarily unemployed. Civilian labor force data are often referred to as "place-of-residence" employment data. Because of the different definitions and estimation procedures utilized in their preparation, place-of-work and place-of-residence employment data for a particular geographic area will often differ in absolute values, but generally exhibit similar trends, as shown in Figures 15 through 22. In addition to providing information about regional economic activity, comparisons between place-of-work and place-of-residence employment data can provide important insights into such characteristics of the resident population of the Region as labor force participation and work trip commutation, and, when compared with changes in population levels, can provide indirect evidence of population migration.

The regional civilian labor force was estimated at 937,300 persons in 1988. Between 1987 and 1988, the civilian labor force increased by about 26,000 persons, or about 3 percent. During the same time, the number of employed members of the civilian labor force increased from about 861,300 in 1987 to about 898,300 in 1988, an increase of 37,000 persons, or about 4 percent. The number of unemployed members of the civilian labor force decreased from about 50,000 in 1987 to about 39,000 in 1988—a decrease of about 11,000, or about 22 percent. The unemployment rate in 1988 was 4.2 percent, in comparison to 5.5 percent in 1987.

Figure 11

CURRENT AND ALTERNATIVE FUTURE NUMBER OF AVAILABLE JOBS FOR RACINE COUNTY: 1960-2010

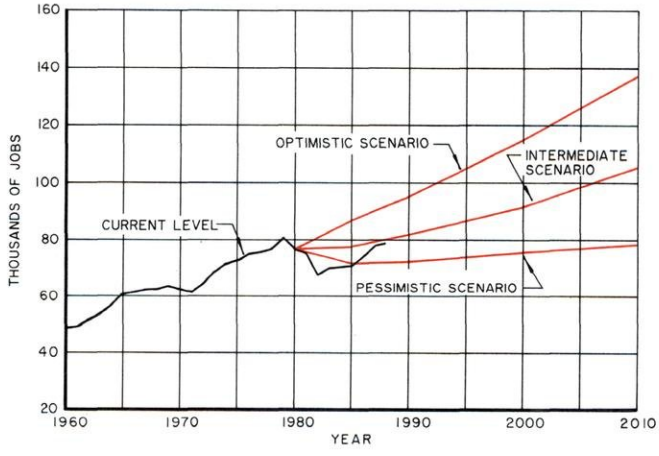


Figure 12

CURRENT AND ALTERNATIVE FUTURE NUMBER OF AVAILABLE JOBS FOR WALWORTH COUNTY: 1960-2010

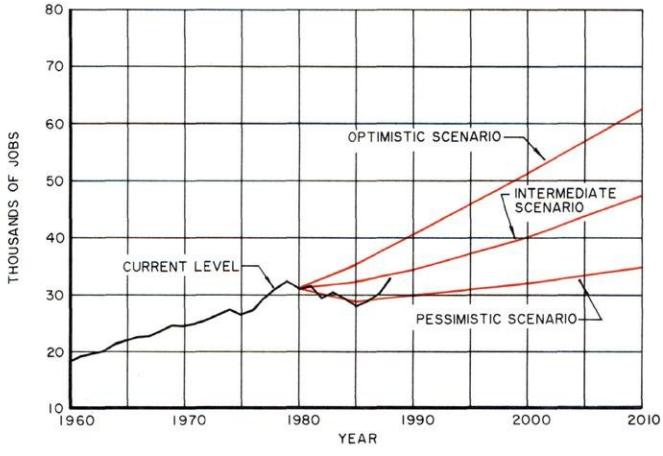


Figure 13

CURRENT AND ALTERNATIVE FUTURE NUMBER OF AVAILABLE JOBS FOR WASHINGTON COUNTY: 1960-2010

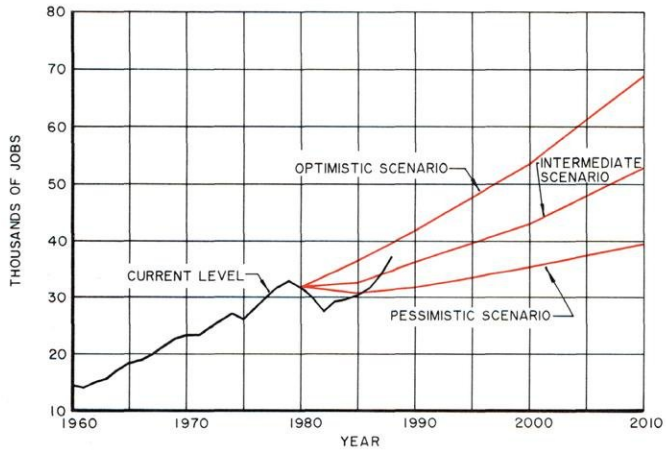


Figure 14

CURRENT AND ALTERNATIVE FUTURE NUMBER OF AVAILABLE JOBS FOR WAUKESHA COUNTY: 1960-2010

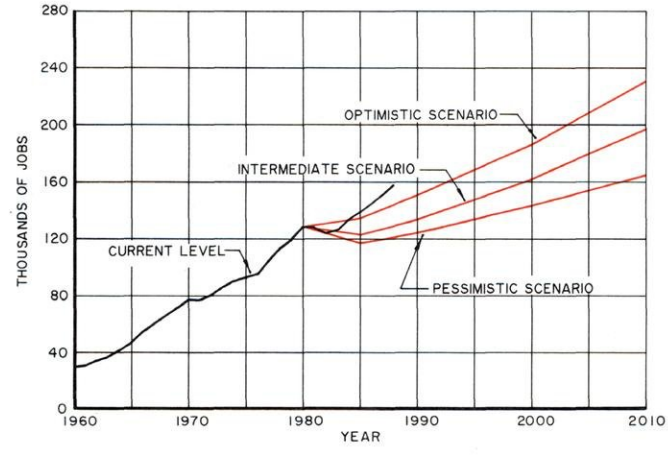


Figure 15

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR THE REGION: 1975-1988

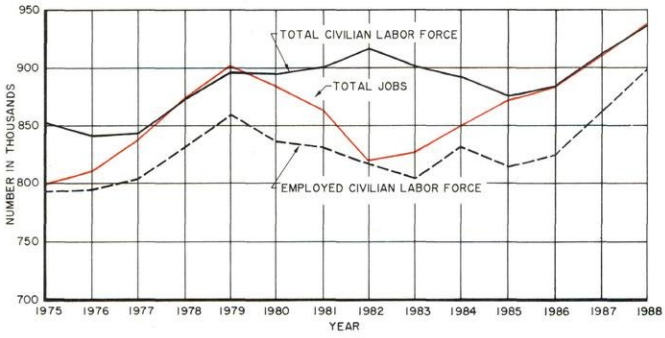


Figure 16

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR KENOSHA COUNTY: 1975-1988



Figure 17

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR MILWAUKEE COUNTY: 1975-1988

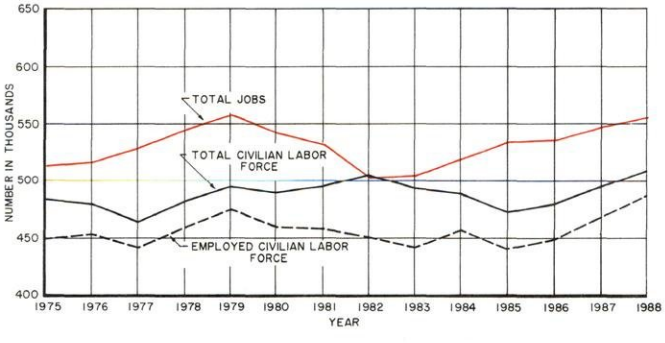


Figure 18

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR OZAUKEE COUNTY: 1975-1988

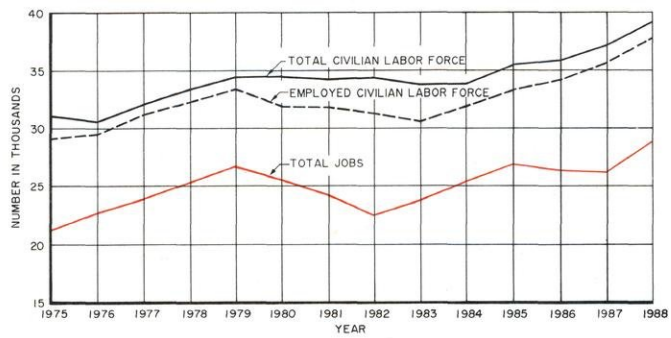


Figure 19

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR RACINE COUNTY: 1975-1988

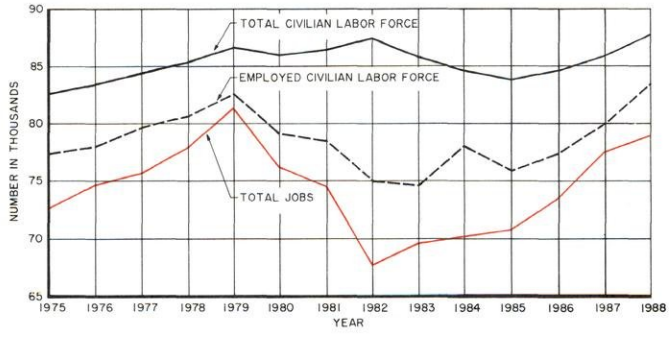


Figure 20

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR WALWORTH COUNTY: 1975-1988

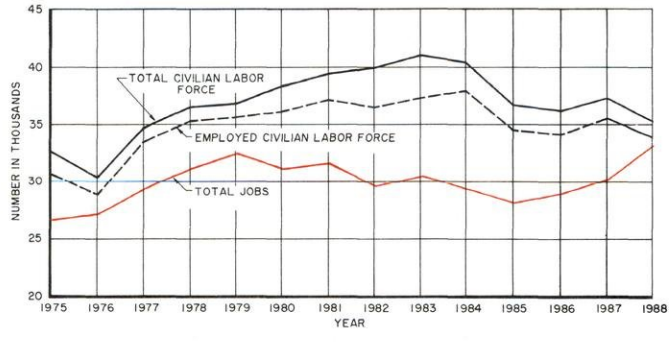


Figure 21

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR WASHINGTON COUNTY: 1975-1988

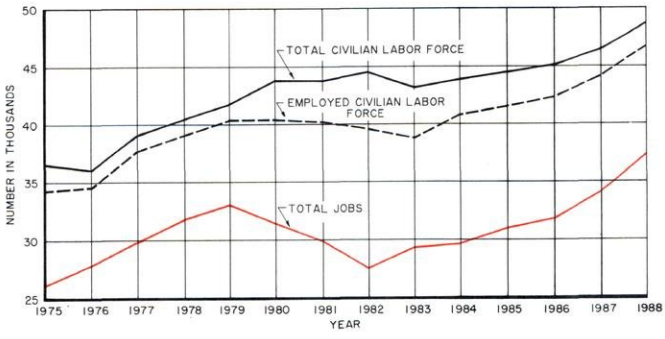
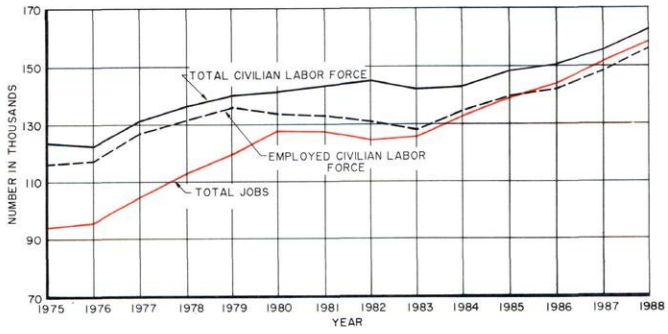


Figure 22

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR WAUKESHA COUNTY: 1975-1988



Current Population Levels

The size of the resident population of the Region remained virtually unchanged between 1970 and 1980, increasing from about 1,756,100 residents in 1970 to about 1,764,800 residents in 1980—an increase of only about 8,700 residents, or less than 1 percent. This stands in marked contrast to the large population increases of the immediately preceding decades—333,000 residents, or about 27 percent, from 1950 to 1960, and 182,500 residents, or about 12 percent, from 1960 to 1970. In 1988, the resident population of the Region was estimated by the Wisconsin Department of Administration to be 1,750,900 persons—an increase of about 8,300 persons, or 0.5 percent, over the 1987 estimated population of 1,742,600 persons. The 1988 population remained about 13,900, or about 1 percent, fewer persons than were enumerated in the 1980 federal census, and about 5,200, or about 0.3 percent, fewer persons than were enumerated in the 1970 federal census.

The Wisconsin Department of Administration (DOA) estimates of 1988 resident population levels are set forth in Table 5. The DOA has statutory responsibility for preparing intercensal population estimates as a basis for distributing state shared taxes to local units of government. These estimates are based upon symptomatic indicators of population change, including automobile registrations, the number of persons filing income tax returns, and the dollar value of exemptions for dependents claimed on income tax returns. According to these estimates, Milwaukee and Racine Counties experienced population declines—about 3 percent and 1 percent, respectively—since the 1980 federal census was taken. The aggregate loss of population in these two counties was about 36,400 persons. Four counties—Ozaukee, Walworth, Washington, and Waukesha—experienced increases of about 2,400 persons, 1,900 persons, 5,000 persons, and 13,200 persons, respectively. Kenosha County was estimated to have about the same population in 1988 as in 1980.

An examination of recent resident population levels in the Region indicates that the character of the population of the Region may be undergoing some fundamental changes. This is particularly true in the outlying counties of the Region. The population of an area such as southeastern Wisconsin is constantly changing with the occurrence of vital events such as births and deaths, and through the inflow and outflow of persons migrating from one area to another.

Population increases result from births and in-migration of persons; population decreases result from deaths and out-migration of persons. Thus, population change is not a simple phenomenon but comprises four major components: births, deaths, in-migration, and out-migration. The balance between births and deaths is termed "natural increase" and the balance between in-migration and out-migration is termed "net migration." Trends in natural increase and net migration over time thus provide one important basis for the evaluation of changes in resident population levels.

Table 5

POPULATION IN THE SOUTHEASTERN WISCONSIN REGION BY COUNTY: 1970, 1980, AND 1988

County	Population			1970-1980 Change		1980-1988 Change	
	1970 Census	1980 Census	1988 Estimate	Number	Percent	Number	Percent
Kenosha	117,900	123,100	123,100	5,200	4.4	0	0.0
Milwaukee	1,054,300	965,000	931,000	-89,300	-8.5	-34,000	-3.5
Ozaukee	54,500	67,000	69,400	12,500	22.9	2,400	3.6
Racine	170,800	173,100	170,700	2,300	1.3	-2,400	-1.4
Walworth	63,500	71,500	73,400	8,000	12.6	1,900	2.7
Washington	63,800	84,900	89,900	21,100	33.1	5,000	5.9
Waukesha	231,300	280,200	293,400	48,900	21.1	13,200	4.7
Region	1,756,100	1,764,800	1,750,900	8,700	0.5	-13,900	-0.8

Changes in natural increase and net migration over the past 12 years in the Region and each of the Region's seven counties are illustrated in Figures 23 through 30. The measurement of natural increase is straightforward and subject to relatively little error since the registration of births and deaths is virtually complete in Wisconsin. The measurement of migration, however, is indirect, since there are no records kept on the movement of persons between places. For small areas such as counties, migration generally must be measured as the net balance between total population change from a given date to a subsequent date and the computed natural increase between the two dates. When estimates, rather than counts, of resident population levels are used to compute total population change, any error between "true" population change and the estimated population change becomes incorporated into the estimates of net migration. Net migration levels computed in this manner must, therefore, be viewed as approximate rather than absolute.

Natural increase in the Region has been relatively stable over the past 12 years, ranging from about 10,000 to 13,000 persons yearly. Since 1979, there has been a trend toward slightly higher levels of natural increase due to a modest increase of about 2,000 yearly in the number of births in the Region.

In contrast to natural increase, yearly net migration levels for the Region have fluctuated greatly over the past 12 years, although they have consistently indicated that larger numbers of people are moving from the Region than to the Region. Net out-migration was recorded in Milwaukee County during the 1960's and in Kenosha, Milwaukee, and Racine Counties during the 1970's. These trends for the most part have continued into the 1980's. Of particular note, however, is the general change from net in-migration to net out-migration that occurred in some of the outlying counties of the Region. Ozaukee and Washington Counties are estimated to have experienced net out-migration for six out of the eight years since 1980, while Walworth and Waukesha Counties have fluctuated between overall in-migration and out-migration during this time period. It should be noted, however, that in the past year five of the seven counties—Kenosha, Ozaukee, Walworth, Washington, and Waukesha—experienced net in-migration. Only Milwaukee and Racine Counties experienced net out-migration during this time.

Comparison of Actual and Projected Population Levels

As reported in the Commission's 1984 Annual Report, the Commission in 1984 developed a new set of projections of regional population change. Like the previously described employment projections, these projections are for the design year 2010, and will provide one of the bases upon which all adopted regional plan elements, particularly the adopted regional land use and regional transportation system plans, will be reappraised and extended to the year 2010. These projections are documented in SEWRPC Technical Report No. 11 (2nd edition), The Population of Southeastern Wisconsin.

Figure 23

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR THE REGION: 1975-1988

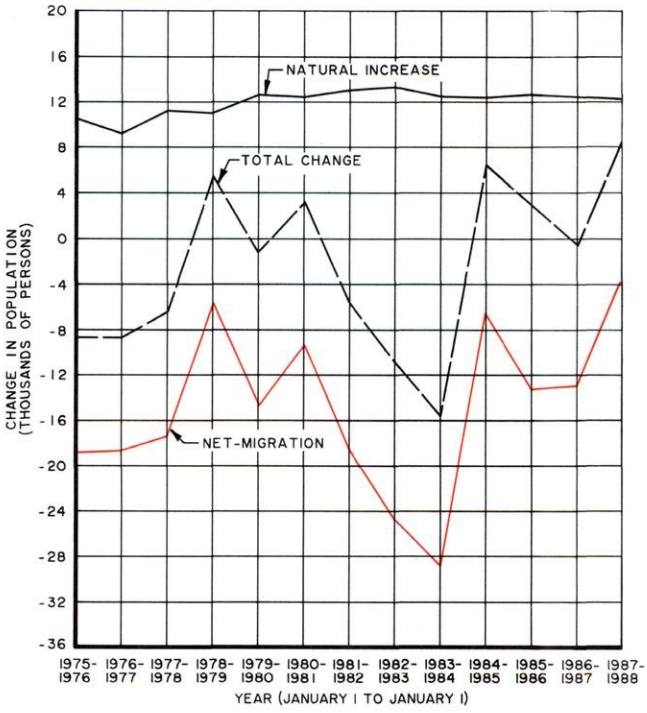


Figure 24

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR KENOSHA COUNTY: 1975-1988

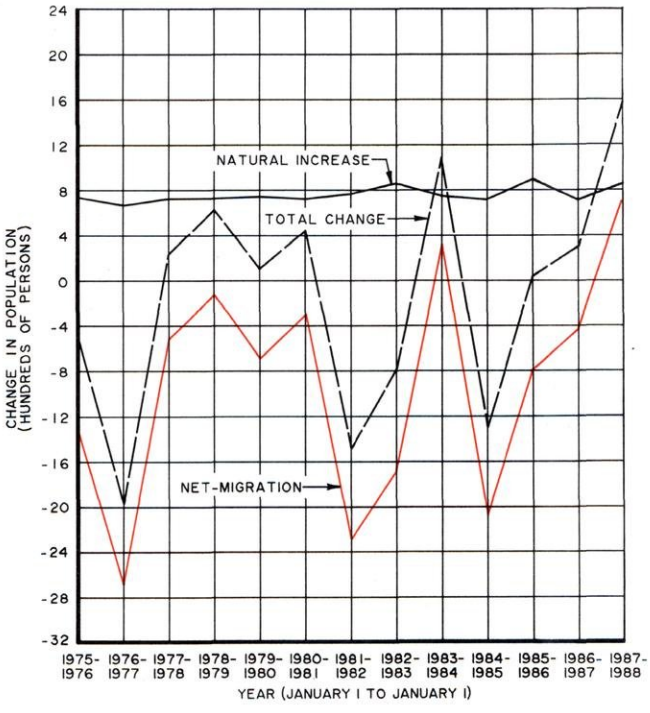


Figure 25

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR MILWAUKEE COUNTY: 1975-1988

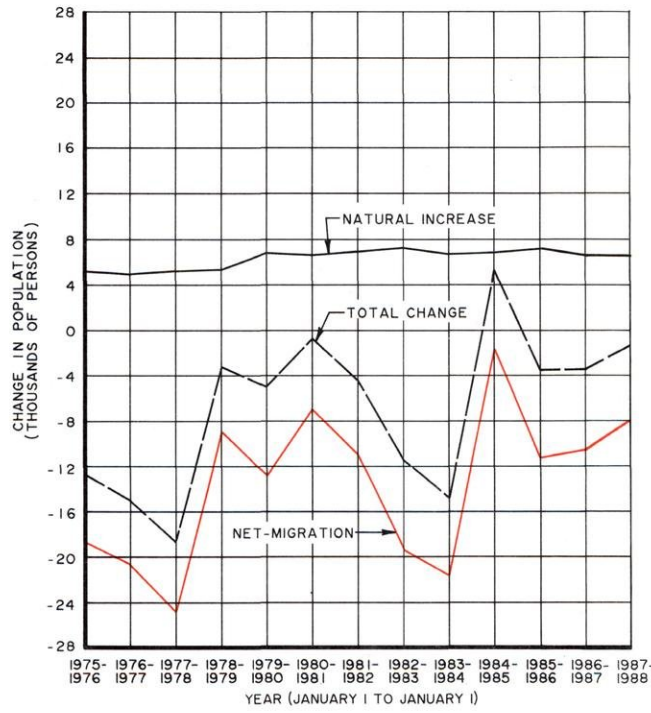


Figure 26

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR OZAUKEE COUNTY: 1975-1988

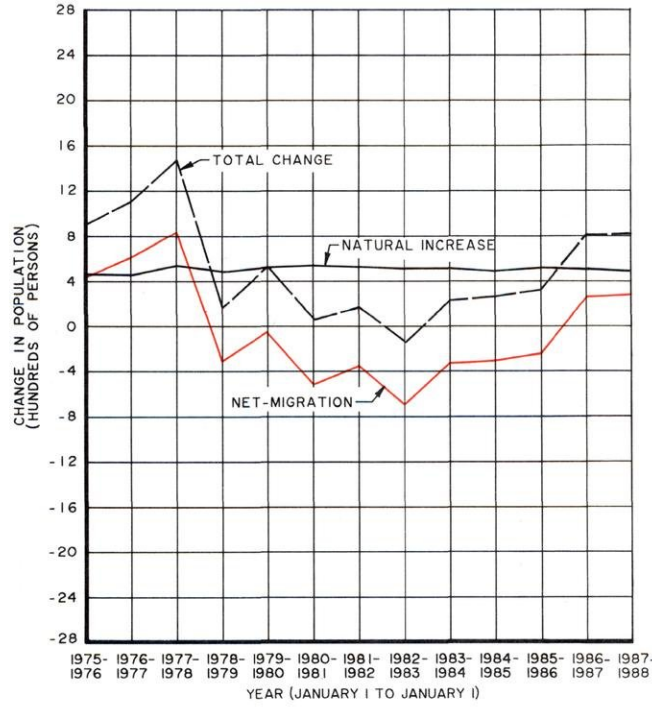


Figure 27

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR RACINE COUNTY: 1975-1988

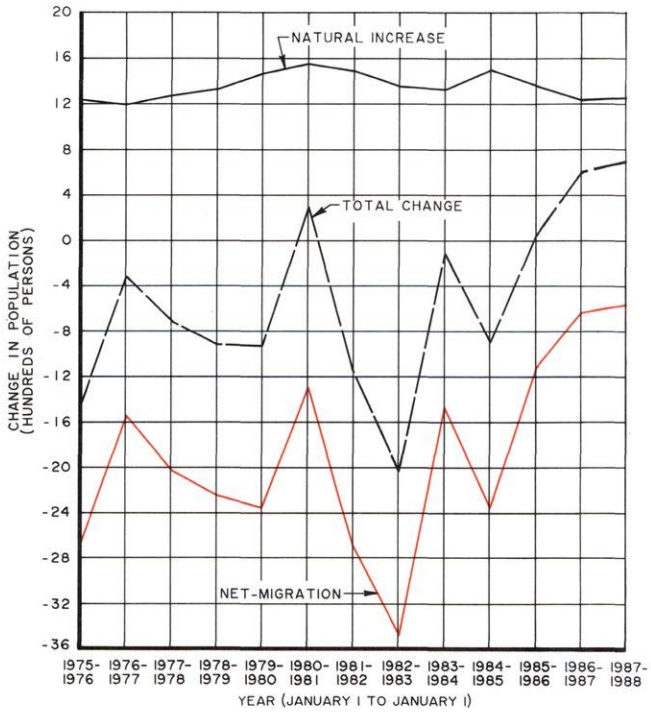


Figure 28

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR WALWORTH COUNTY: 1975-1988

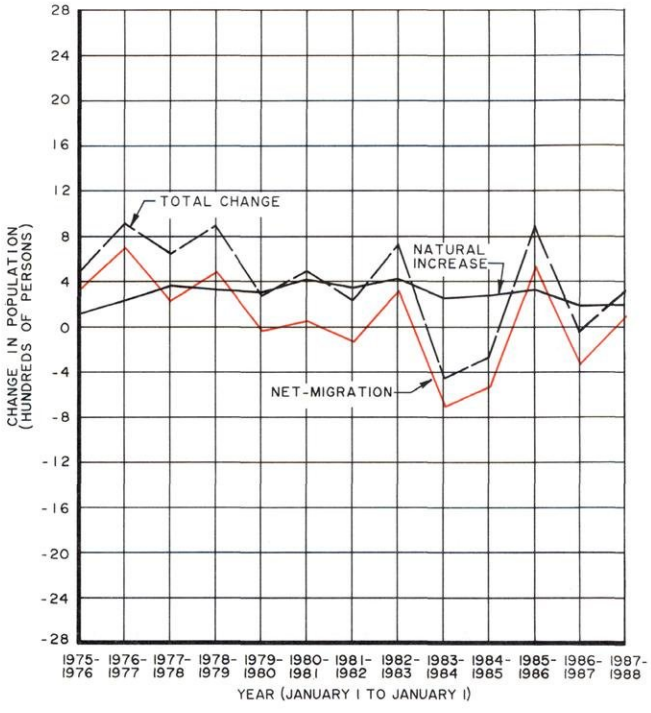


Figure 29

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR WASHINGTON COUNTY: 1975-1988

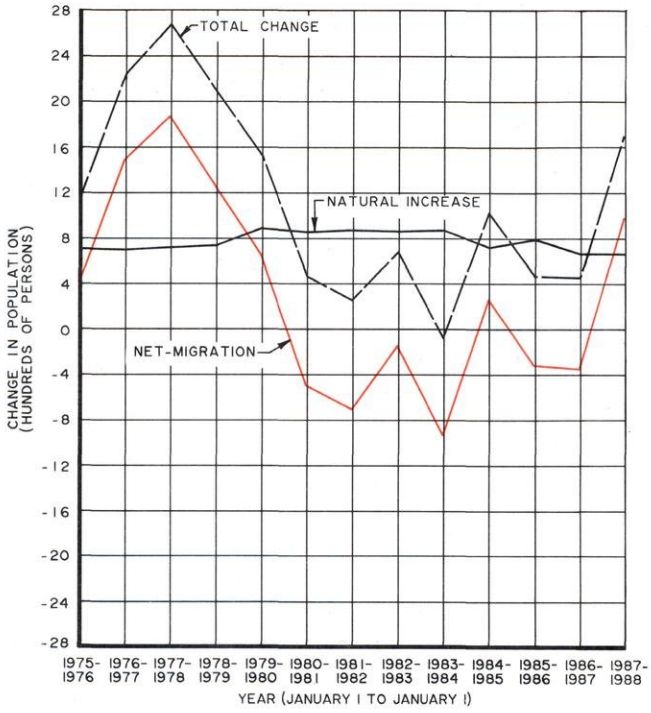


Figure 30

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR WAUKESHA COUNTY: 1975-1988

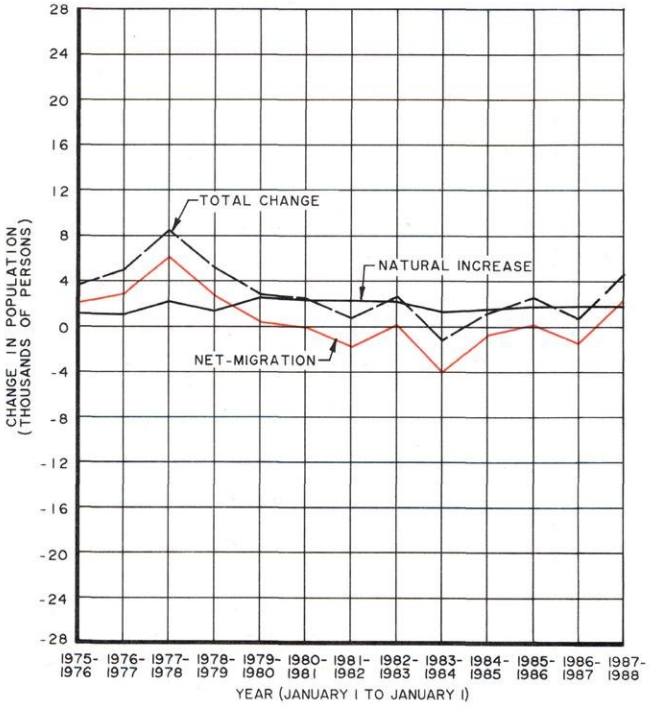


Table 6

EXISTING AND PROJECTED RESIDENT POPULATION LEVELS BY COUNTY: 1988

County	Estimated 1988 Population	Projected 1988 Population		
		Pessimistic Scenario	Intermediate Scenario	Optimistic Scenario
Kenosha	123,100	112,300	117,800	132,800
Milwaukee	931,000	880,800	925,500	963,200
Ozaukee	69,400	61,900	68,800	80,400
Racine	170,700	157,000	166,000	184,900
Walworth	73,400	68,300	76,200	82,500
Washington	89,900	79,700	93,500	108,100
Waukesha	293,400	270,900	297,200	338,100
Region	1,750,900	1,630,900	1,745,000	1,890,000

As in the preparation of employment projections, the conceptual framework used by the Commission to develop the population projections was the "alternative futures" method. Three alternative regional population scenarios were developed, each of which is closely linked to a corresponding economic scenario for the Region. Two of these were intended to represent "pessimistic" and "optimistic" extremes of future regional population levels; the third was intended to identify an intermediate future—that is, a future that lies between the two extremes. While carried out under an alternative futures approach, the regional population projections were developed using a cohort-component procedure similar to that used by the Commission in its previous population projection efforts.

Under the optimistic scenario, the population level of the Region was anticipated to be 1.89 million persons in 1988. The estimated 1988 regional population level of 1.75 million persons noted above is about 7 percent below this anticipated level. Under the pessimistic scenario, the population level of the Region was anticipated to be 1.63 million persons in 1988. The estimated 1988 population level is about 7 percent above this level. The regional population level of about 1.74 million persons anticipated in 1988 under the intermediate scenario differs from the 1988 estimated regional population level by less than 1 percent. The 1988 population levels projected for each of the Region's seven counties under each of the three alternative futures and the 1988 estimated county population levels are set forth in Table 6 and Figures 31 through 38.

School Enrollment

Enrollment in public and nonpublic schools within the Region totaled 340,300 students in 1988, representing a decrease of about 600 students, or less than 1 percent, from the 1987 level of 340,900 students. As indicated in Table 7, the 1988 regional school enrollment was about 29,000 students, or about 8 percent, below the 1980 level of 369,300. Enrollment in public schools was about 275,700 students in 1988, about 19,300 students, or 7 percent, below the 1980 level of 295,000. Enrollment in nonpublic schools was about 64,600 students in 1988, about 9,700 students, or 13 percent, below the 1980 level of 74,300.

Map 2 shows public school enrollment changes between 1980 and 1988 for public high school districts operating wholly or partially within the Region. Union high school districts and their constituent feeder K-8 school districts have been combined into a single district for the purpose of preparing this map. About 83 percent of the public K-12 and the combined union high school and K-8 districts have experienced enrollment declines of 5 percent or more since 1980. Three districts—Franklin Public Schools, Milwaukee Public Schools, and Mukwonago Area Schools—experienced an enrollment gain during this period.

Figure 31

CURRENT AND ALTERNATIVE FUTURE POPULATION LEVELS FOR THE REGION: 1950-2010

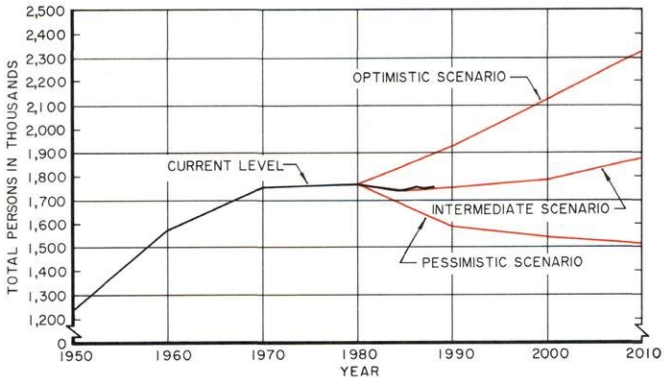


Figure 32

CURRENT AND ALTERNATIVE FUTURE POPULATION LEVELS FOR KENOSHA COUNTY: 1950-2010

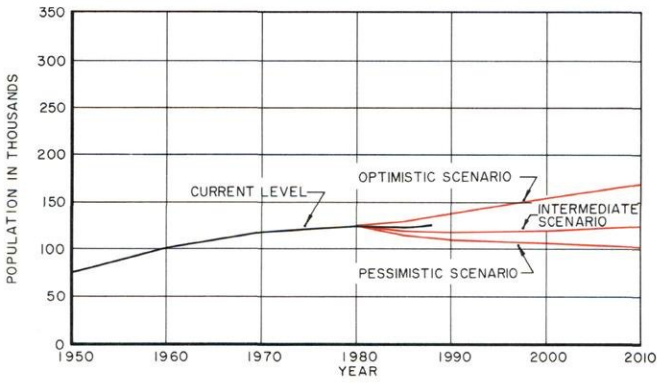


Figure 33

CURRENT AND ALTERNATIVE FUTURE POPULATION LEVELS FOR MILWAUKEE COUNTY: 1950-2010

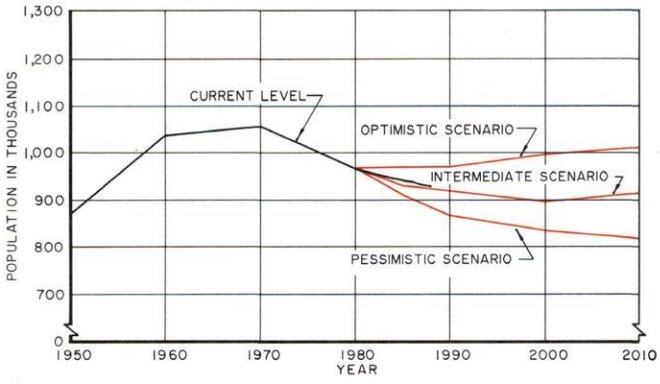


Figure 34

CURRENT AND ALTERNATIVE FUTURE POPULATION LEVELS FOR OZAUKEE COUNTY: 1950-2010

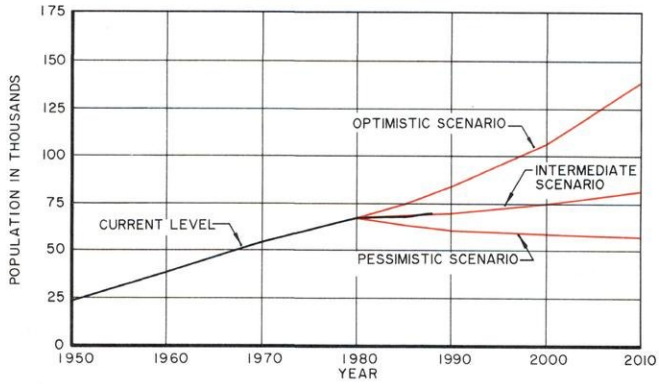


Figure 35

CURRENT AND ALTERNATIVE FUTURE POPULATION LEVELS FOR RACINE COUNTY: 1950-2010

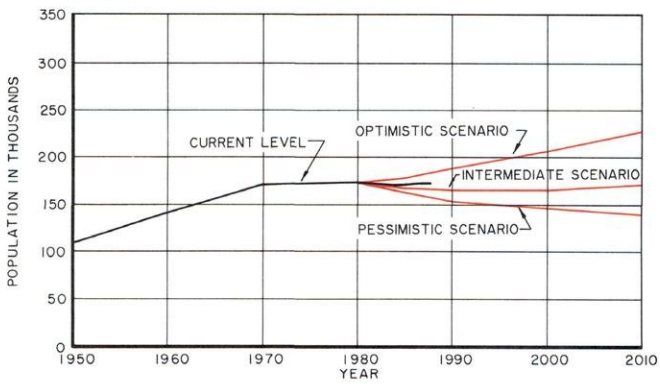


Figure 36

CURRENT AND ALTERNATIVE FUTURE POPULATION LEVELS FOR WALWORTH COUNTY: 1950-2010

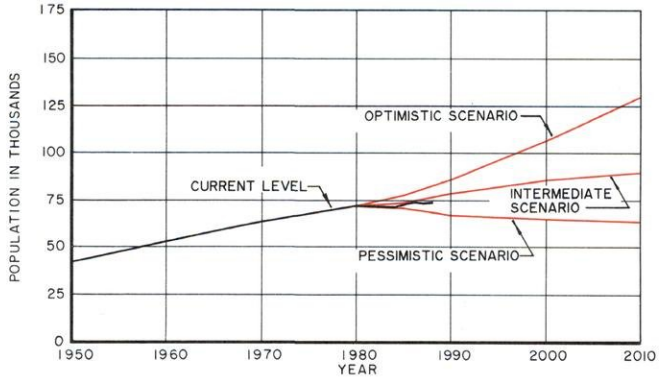


Figure 37

CURRENT AND ALTERNATIVE FUTURE POPULATION LEVELS FOR WASHINGTON COUNTY: 1950-2010

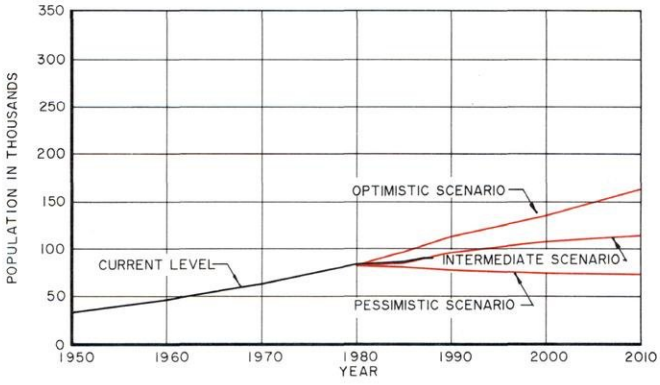
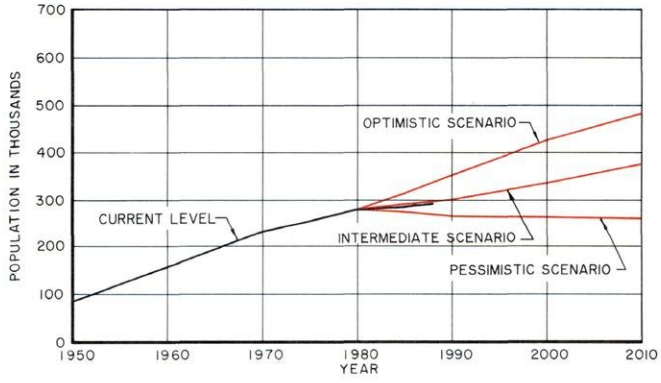


Figure 38

CURRENT AND ALTERNATIVE FUTURE POPULATION LEVELS FOR WAUKESHA COUNTY: 1950-2010



Census Coordination

The Commission serves a coordinating function for the U. S. Bureau of the Census in the seven-county Southeastern Wisconsin Region. Under agreements between the Commission and the Census Bureau, the Commission provides staff services to Census Statistical Areas Committees in each county. In this regard, the Commission serves as the census "Key Person" for Kenosha, Ozaukee, Walworth, Washington, and Waukesha Counties; provides direct staff support services to the census Key Person for Racine County; and serves as a member of the Census Statistical Areas Committee for Milwaukee County.

During 1988, the Commission staff assisted the U. S. Bureau of the Census in identifying the major employment centers within the Region. These centers will be coded in the U. S. Census Bureau's "Workplace" file by Commission staff. This file will then be used by the U. S. Bureau of the Census to provide accurate journey-to-work data from the 1990 Census of Population and Housing for use by transportation planning agencies.

As part of its continuing census coordinating function within the Region, the Commission also serves as a clearinghouse and central repository for a wide variety of census data holdings. A computer-readable geographic base file containing street address changes and census statistical tabulating and reporting unit boundaries is maintained by the Commission for portions of the Region. The Commission also participates in the U. S. Census Bureau State Data Center Program, a nationwide program under which the governor of each state designates an agency or group of agencies within the state government to serve as the lead agency within that state—the State Data Center—for the dissemination of the large volume of information collected and reported by the Census Bureau.

Within the State of Wisconsin, the State Data Center is a joint function of the Wisconsin Department of Administration and the University of Wisconsin-Madison. Under a joint agreement between the Commission and the Wisconsin State Data Center, the Commission serves as an affiliate member of the Data Center and supplies census data access and technical assistance to census data users in the seven-county Southeastern Wisconsin Region. Included in the census material held by the Commission are all published reports, maps, and micro-fiche cards which contain data for the Southeastern Wisconsin Region. Also included is a complete set of computer-readable summary tape files for the State of Wisconsin as produced by the Census Bureau. Assistance is provided to local units of government, the public, and local businesses in assessing these materials.

LAND USE PLANNING

During 1988, the Division efforts in land use planning were directed primarily toward implementation of the regional land use plan. Major

Map 2

RELATIVE PUBLIC SCHOOL ENROLLMENT CHANGES IN THE REGION: 1980-1988

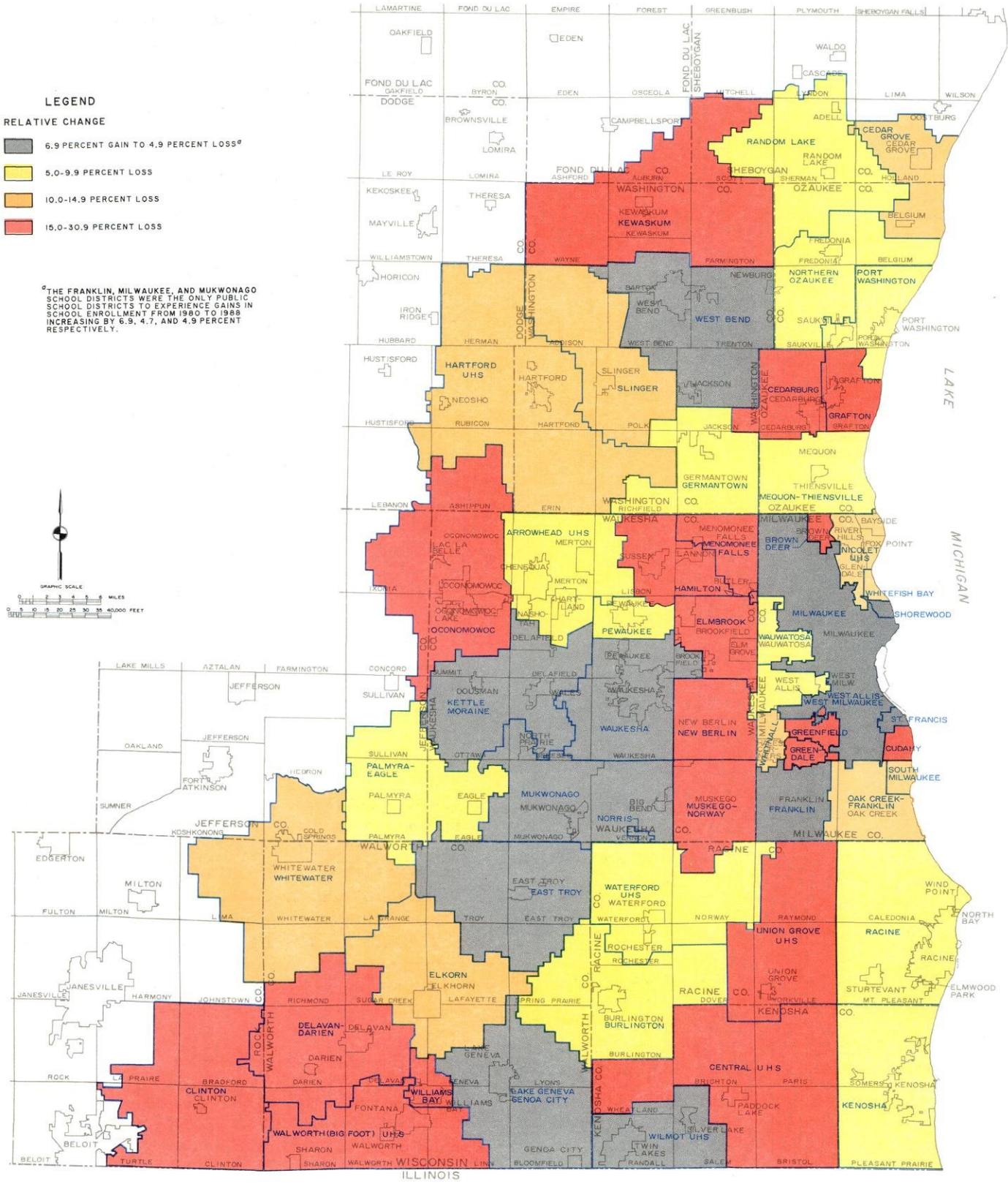


Table 7

REGIONAL SCHOOL ENROLLMENT BY COUNTY: 1970, 1980, AND 1988

County	School Enrollment			Difference			
				1970-1980		1980-1988	
	1970	1980	1988	Number	Percent	Number	Percent
Kenosha	32,300	26,700	23,700	-5,600	-17.3	-3,000	-11.2
Milwaukee	267,900	184,900	176,600	-83,000	-31.0	-8,300	-4.5
Ozaukee	15,900	15,000	13,100	-900	-5.7	-1,900	-12.7
Racine	48,600	38,800	34,300	-9,800	-20.2	-4,500	-11.6
Walworth	15,600	13,700	12,600	-1,900	-12.2	-1,100	-8.0
Washington	19,200	21,500	19,600	2,300	12.0	-1,900	-8.8
Waukesha	73,100	68,700	60,400	-4,400	-6.0	-8,300	-12.1
Region	472,600	369,300	340,300	-103,300	-21.9	-29,000	-7.9

efforts in this regard involved the completion of agricultural soil erosion control plans for Kenosha, Ozaukee, Racine, and Washington Counties. The Division also continued to monitor residential subdivision platting and farmland preservation activity within the seven-county Region during 1988.

Regional Land Use Plan—An Overview

The second generation regional land use plan, documented in SEWRPC Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, Volume Two, Alternative and Recommended Plans, was formally adopted by the Commission in December 1977, published in the spring of 1978, and subsequently certified to various units and agencies of government for adoption and implementation.

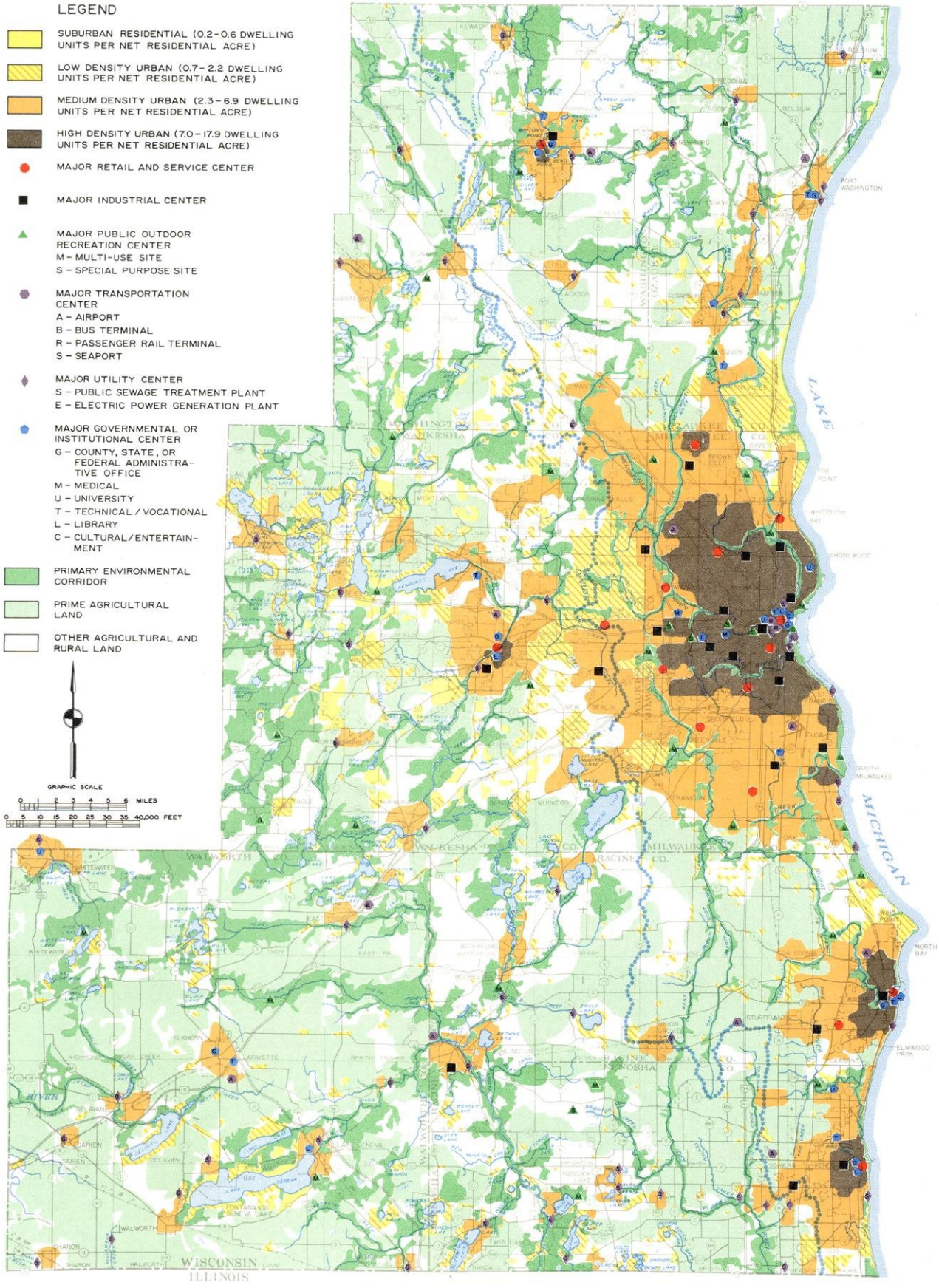
The recommended regional land use plan for the year 2000 is shown in graphic summary form on Map 3. The basic concepts underlying the land use plan are essentially the same as those underlying the first generation regional land use plan for the year 1990. That plan had been adopted by the Commission in 1966. Like the year 1990 plan, the year 2000 land use plan advocates a return to the historic development trends that were evident within the Region prior to 1950, with new urban development proposed to occur largely in concentric rings along and outward from the full periphery of the established urban centers of the Region.

The recommended land use plan seeks 1) to centralize land use development to the greatest degree practicable; 2) to encourage new urban development to occur at densities consistent with the provision of public centralized sanitary sewer, water supply, and mass transit facilities and services; 3) to encourage new urban development to occur only in areas covered by soils well suited to urban use and not subject to special hazards such as flooding and erosion; and 4) to encourage new urban development and redevelopment to occur in areas in which essential urban facilities and services are available—particularly the existing urban centers of the Region—or into which such facilities and services can be readily and economically extended. In short, the plan seeks to promote a more orderly and economic settlement pattern; to avoid the intensification of existing and the creation of new areawide developmental and environmental problems; and generally to guide the operation of market forces into conformance with sound areawide land use development activities.

The recommended regional land use plan envisions converting about 113 square miles of land from rural to urban use from 1970 through 2000, less than half of the approximately 235 square miles that would have to be converted if decentralization of urban development were allowed to continue unrestrained; and seeks to encourage new urban development to occur primarily in planned neighborhood development units at medium-density population levels—that is, about four dwelling units per net residential acre, or

Map 3

ADOPTED REGIONAL LAND USE PLAN FOR SOUTHEASTERN WISCONSIN: 2000



about 5,000 persons per gross square mile. The plan envisions that by the year 2000, about 92 percent of all urban land and 93 percent of all the people in the Region will be served with public sanitary sewer service.

The most important elements of the natural resource base of the Region, including the best remaining woodlands; wetlands; wildlife habitat areas; surface waters and associated shorelands and floodlands; areas covered by organic soils; areas containing rough topography and significant geological formations; scenic, historic, and scientific sites; groundwater recharge and discharge areas; existing park sites; and potential park and related open space sites have been found to occur largely together in linear patterns termed primary environmental corridors by the Commission. Like the year 1990 regional land use plan, the design year 2000 regional land use plan proposes that these environmental corridors be protected and preserved in essentially natural, open uses. Such protection and preservation is considered essential to the protection and wise use of the natural resource base; to the preservation of the Region's cultural heritage and natural beauty; and to the enrichment of the physical, intellectual, and spiritual development of the resident population. In addition, protecting and preserving the natural resource base serves to prevent the creation of new problems such as flooding and water pollution. The topography, soils, and flood hazards existing in these corridors, moreover, make them poorly suited to intensive urban development of any kind, but well suited to recreational and conservancy uses. The intrusion of urban development into these corridors may be expected to result in costly environmental and developmental problems, including flooding; water pollution; failing foundations for buildings, pavements, and other structures; wet basements; excessive operation of sump pumps; and excessive infiltration of clear water into sanitary sewers. Together, the primary environmental corridors encompass about 500 square miles, or about one-fifth of the total area of the Region.

Also like the year 1990 regional land use plan, the design year 2000 regional land use plan proposes to preserve, to the greatest extent practicable, those areas identified as prime agricultural lands. In 1970 these lands totaled about 746 square miles, or 28 percent of the area of the Region. The year 2000 plan proposes that only those prime agricultural lands that have already been, in effect, committed to urban development because of their proximity to expanding concentrations of urban uses and the prior commitment of heavy capital investments in utility extensions be converted to urban uses. Only about 13 square miles, or 2 percent, of the prime agricultural lands would be converted to urban use under the plan.

By the end of 1988, the year 2000 regional land use plan had been adopted by the Kenosha, Racine, Walworth, and Waukesha County Boards of Supervisors; the Common Councils of the Cities of Burlington and Milwaukee; the Village Board of the Village of River Hills; the Town Board of the Town of Norway; and the Kenosha County Park Commission, the City of Oconomowoc Plan Commission, and the Town of Dover Plan Commission. In addition, the plan had been endorsed by the U. S. Department of Housing and Urban Development; the U. S. Department of Transportation, Federal Highway Administration and Urban Mass Transportation Administration; the U. S. Department of Agriculture, Soil Conservation Service; the Wisconsin Department of Transportation; and the Wisconsin State Board of Soil and Water Conservation Districts (now the Wisconsin Land Conservation Board).

Preservation of Farmland

As already noted, a major recommendation of the regional land use plan is the preservation of the remaining prime agricultural lands in the Southeastern Wisconsin Region. Planning for the preservation of agricultural lands and implementation of such planning efforts through zoning received major impetus in 1977 with the passage of the Wisconsin Farmland Preservation Program, a program that combines planning and zoning provisions with tax incentives for the purpose of ensuring the preservation of farmlands. The program is intended to help county and local units of government preserve farmland through local plans and zoning and to provide tax relief, in the form of state income tax credits, to farmland owners who participate in the program. The following is a description of the Wisconsin Farmland Preservation Program and the status of farmland preservation planning within the Region.

Wisconsin Farmland Preservation Program

The Wisconsin Farmland Preservation Program provides property tax relief in the form of state income tax credits to eligible owners of farmland who decide to participate. Owners of farmland in "urban" counties, including all counties in southeastern Wisconsin, are eligible to participate in the program if their land has been placed in a state-certified exclusive agricultural zoning district and if certain other program eligibility requirements are met. For example, the farm must be at least 35 acres in size and must have produced a value of farm product of at least $6,000 in the last year or $18,000 in the past three years. In addition, all participants in the farmland preservation program are required to adhere to sound soil conservation practices.

Program changes enacted in 1988 also allow farmers in urban counties to participate on the basis of long-term agreements with the State that limit the use of their land to agricultural use. Farmers in urban counties may apply for such agreements between July 1, 1988, and June 30, 1991. After that period, the requirement of exclusive agricultural zoning for tax credit eligibility in urban counties will be restored. Tax credits through long-term agreements in urban counties will first be available for tax year 1989.

Under the Farmland Preservation Program, the level of income tax credit for which a farmland owner is eligible is determined in part by a formula which takes into account the owner's household income and the property tax on his farm. In general, the higher the property tax and the lower the household income, the higher the income tax credit. The level of tax relief for which a farmland owner is eligible is also dependent upon planning and zoning actions taken by county and local units of government to preserve agricultural lands. The highest tax credits are available where a county has prepared and adopted a farmland preservation plan and implemented that plan through the application of exclusive agricultural zoning.

A farmland owner who claims a farmland preservation tax credit on the basis of exclusive agricultural zoning must include in his state income tax return a certificate from the local zoning administrator verifying that the land in question is located within an exclusive agricultural zoning district. A total of 1,331 zoning certificates for farm parcels encompassing 181,850 acres were issued in the Region for tax year 1987 (see Table 8, Figure 39, and Map 4). Among the seven counties in the Region, Walworth County had the highest level of participation in the Farmland Preservation Program. A total of 774 zoning certificates for farm parcels encompassing 108,085 acres were issued in Walworth County for tax year 1987.

In tax year 1987, the average tax credit for participating landowners in southeastern Wisconsin was $1,341, or 37 percent of the average property tax of $3,596. Among the seven counties in the Region, the average tax credit level ranged from $758 in Milwaukee County to $1,572 in Kenosha County (see Table 9).

Farmland Preservation Planning

Considerable progress has been made in planning for the preservation of farmland within the Southeastern Wisconsin Region since the passage of the Wisconsin Farmland Preservation Act by the State Legislature in 1977. Six counties in the Region—Kenosha, Ozaukee, Racine, Walworth, Washington, and Waukesha—have adopted farmland preservation plans which were subsequently certified by the Wisconsin Land Conservation Board (see Map 5).

Farmland Preservation Zoning

Under Chapter 91 of the Wisconsin Statutes, exclusive agricultural zoning is defined as zoning which limits the use of land to agricultural use; specifies a minimum parcel size of 35 acres for a residence or farm operation; and prohibits structures or improvements on the land unless consistent with agricultural uses. By the end of 1988, exclusive agricultural zoning ordinances certified by the Wisconsin Land Conservation Board were in effect in 41 local units of government in the Region. Twenty-five towns—4 in Kenosha County, 2 in Racine County, 16 in Walworth County, and 3 in Waukesha County—have adopted exclusive agricultural zoning under county-enacted zoning ordinances. Thirteen towns—6 in Ozaukee County, 5 in Washington County, and 2 in Waukesha County—have applied exclusive agricultural zoning under town-enacted zoning ordinances. The City of Franklin in Milwaukee County, the City of Muskego in Waukesha County, and the Village of Germantown in Washington County have

Figure 39

PARTICIPATION IN THE WISCONSIN FARMLAND PRESERVATION PROGRAM FOR THE REGION: TAX YEARS 1977-1987

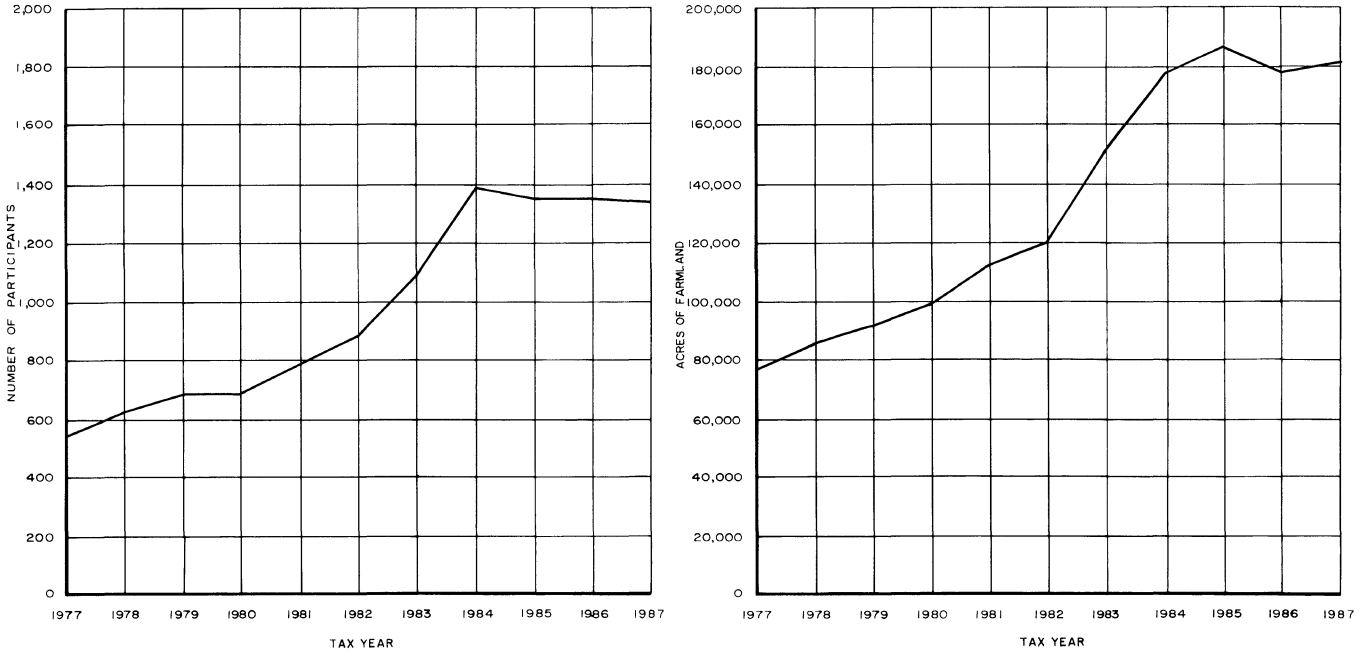


Table 8

PARTICIPATION IN THE WISCONSIN FARMLAND PRESERVATION PROGRAM: TAX YEAR 1987

County	Certificates Issued		Acres Certified	
	Number	Percent of Region	Number	Percent of Region
Kenosha	36	2.7	5,182	2.9
Milwaukee . . .	4	0.3	263	0.1
Ozaukee	239	18.0	30,334	16.7
Racine	31	2.3	6,285	3.5
Walworth . . .	774	58.2	108,085	59.4
Washington . .	127	9.5	15,498	8.5
Waukesha . . .	120	9.0	16,203	8.9
Region	1,331	100.0	181,850	100.0

Table 9

AVERAGE TAX CREDIT LEVELS UNDER THE WISCONSIN FARMLAND PRESERVATION PROGRAM: TAX YEAR 1987

County	Average Property Tax	Average Tax Credit	
		Amount	Percent of Property Tax
Kenosha	$3,924	$1,572	40.1
Milwaukee	2,300	758	33.0
Ozaukee	3,691	1,313	35.6
Racine	4,077	1,287	31.6
Walworth	3,512	1,361	38.8
Washington . . .	3,818	1,287	33.7
Waukesha	3,603	1,418	39.4
Region	$3,596	$1,341	37.3

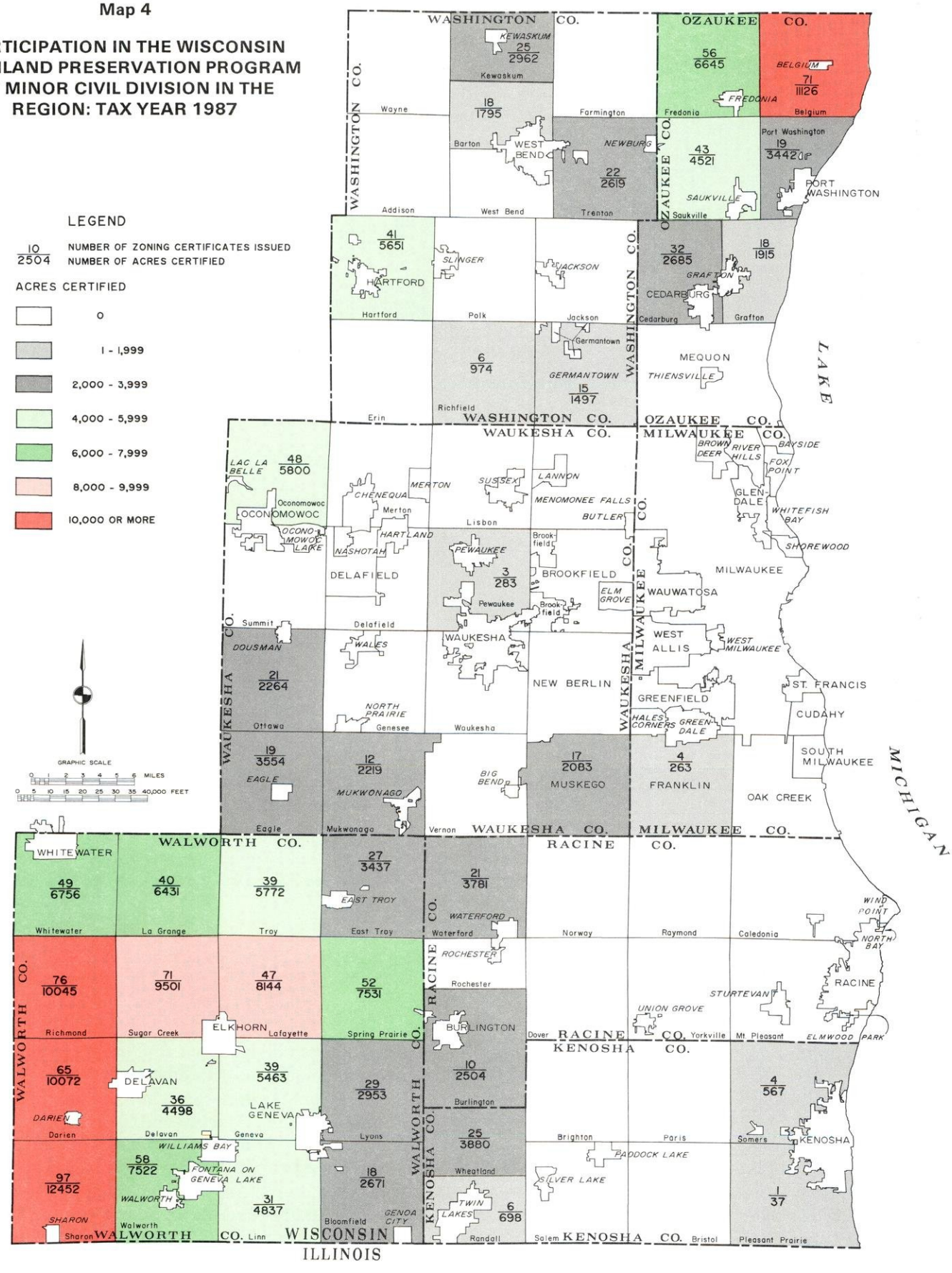
also adopted exclusive agricultural zoning in conformance with the standards of the Farmland Preservation Act (see Map 5).

Soil Erosion Control Planning

Cropland soil erosion is a matter of increasing concern, especially in light of shifts away from dairy farming and traditional crop rotation patterns to continuous row cropping operations, which result in increased soil erosion unless special precautions are taken. Recognizing this concern, the Wisconsin Legislature in 1982 revised the state soil and water conservation law, as set forth in Chapter 92 of the Wisconsin Statutes, to require the preparation of county soil erosion control plans focusing on cropland soil erosion. A total of 55 counties located generally

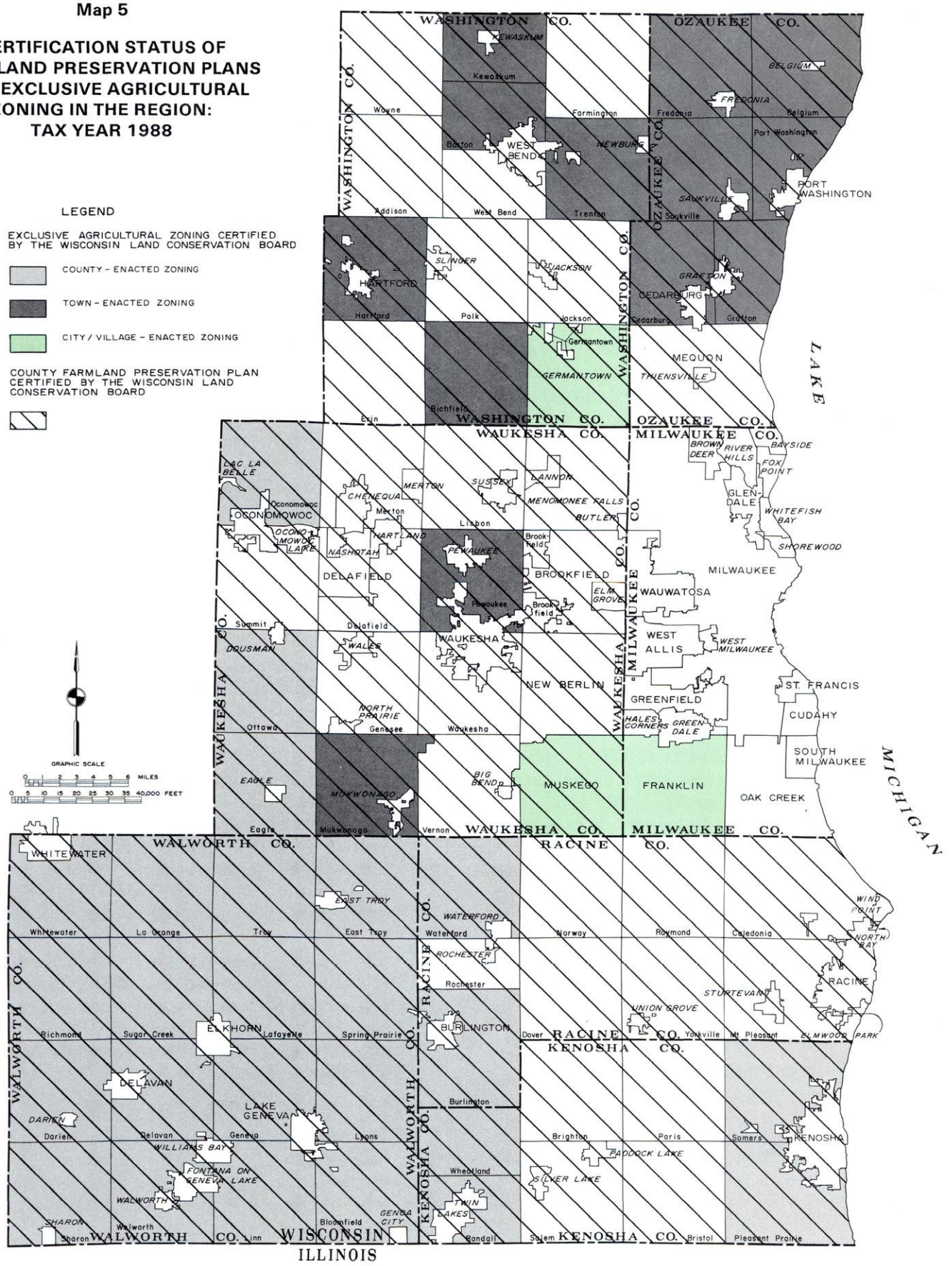
Map 4

PARTICIPATION IN THE WISCONSIN FARMLAND PRESERVATION PROGRAM BY MINOR CIVIL DIVISION IN THE REGION: TAX YEAR 1987



Map 5

CERTIFICATION STATUS OF FARMLAND PRESERVATION PLANS AND EXCLUSIVE AGRICULTURAL ZONING IN THE REGION: TAX YEAR 1988



in the southern two-thirds of the State, including all counties in southeastern Wisconsin, are required to prepare such a plan.

During 1988, the Commission continued to assist counties in the Region in the preparation of the required agricultural soil erosion control plans. The Commission published SEWRPC Community Assistance Planning Report No. 160, Racine County Agricultural Soil Erosion Control Plan, and completed report drafts summarizing the findings and recommendations of erosion control planning programs for Kenosha, Ozaukee, and Washington Counties, scheduled for publication in 1989. Each of the county soil erosion control plan reports identifies the agricultural soil erosion control problems existing in the county; recommends a soil erosion control objective and related standards; identifies the types and amounts of soil erosion control practices needed to reduce agricultural soil erosion to tolerable levels within the county; and identifies the actions which should be taken by the various units and agencies of government concerned to carry out the plan.

Residential Subdivision Platting Activity

The Commission annually monitors land subdivision activities in the Region. A total of 2,794 residential lots were created in the Region during 1988 through subdivision plats, compared with 2,295 lots platted in 1987. Of the total residential lots created in 1988, 2,391 lots, or about 86 percent, were served by public sanitary sewers, and the remaining 403 lots, or 14 percent, were designed to be served by onsite septic tank sewage disposal systems (see Table 10 and Map 6). With respect to the seven counties in southeastern Wisconsin, the number of residential lots created through subdivision plats in 1988 ranged from a low of 56 lots in Kenosha County to a high of 1,678 lots in Waukesha County. The historic trend in residential platting activity since 1960 is shown for the Region and by county in Figures 40 through 47.

Chiwaukee Prairie-Carol Beach Land Use Plan Implementation

One of the most complex and difficult planning programs undertaken by the Regional Planning Commission in recent years involved the preparation of a land use plan for the Chiwaukee Prairie-Carol Beach area of the Town of Pleasant Prairie, Kenosha County. A description of the plan was set forth in the Commission 1985 Annual Report. This planning program, which was undertaken by the Commission at the request of Kenosha County and the Town of Pleasant Prairie, attempted to achieve a sound balance between competing resource protection and urban development objectives for the Chiwaukee Prairie-Carol Beach area. It sought to do so by identifying in detail those lands—both wetlands and uplands—that should be protected and preserved in the public interest for their resource value despite prior subdivision platting activity, and those lands upon which urban growth should continue to be accommodated as sanitary sewers are introduced into the area. Importantly, the planning process sought a way to fairly compensate owners, in particular those owners of platted lots, whose land would have to be zoned against development to protect the natural resource base. The development of the plan was particularly complex and difficult because most of the wetlands in the Chiwaukee Prairie-Carol Beach area had in prior years been publicly sanctioned for development through approvals of subdivision plats at the state and local levels of government.

The key element of the plan for the Chiwaukee Prairie-Carol Beach area is the acquisition by the Wisconsin Department of Natural Resources (DNR) of certain lands recommended for open space preservation. Under the plan, the DNR was to acquire about 347 acres of land for resource protection purposes. This acquisition is made up of 686 individual platted lots and seven larger tracts. In 1988, the Department continued to secure appraisals on the lands in question and to negotiate on a voluntary basis with individual landowners for the purchase of the many properties involved. By the end of 1988, the DNR either had fully acquired or had accepted offers to purchase a total of 145 acres, representing 42 percent of the total proposed in the plan to be acquired. The acquired land is made up of 387 individual platted lots and three larger tracts of land. The area proposed in the plan to be acquired and the lands acquired to date within that area are shown on Map 7.

In addition to open space acquisition by the Department of Natural Resources, The Nature Conservancy, a private nonprofit organization, continues to negotiate on a voluntary basis with the landowners in its project area south of 116th Street, in accordance with the recommendations of the Chiwaukee Prairie-Carol Beach plan. The

Table 10

RESIDENTIAL SUBDIVISION PLATTING ACTIVITY IN THE REGION: 1988

County	Sewered Lots		Unsewered Lots		Total Lots	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Region
Kenosha	56	100.0	0	--	56	2.0
Milwaukee	256	100.0	0	--	256	9.2
Ozaukee	299	100.0	0	--	299	10.7
Racine	102	100.0	0	--	102	3.6
Walworth	9	12.3	64	87.7	73	2.6
Washington	272	82.4	58	17.6	330	11.8
Waukesha	1,397	83.3	281	16.7	1,678	60.1
Region	2,391	85.6	403	14.4	2,794	100.0

Map 6

RESIDENTIAL PLATTING ACTIVITY IN THE REGION: 1988

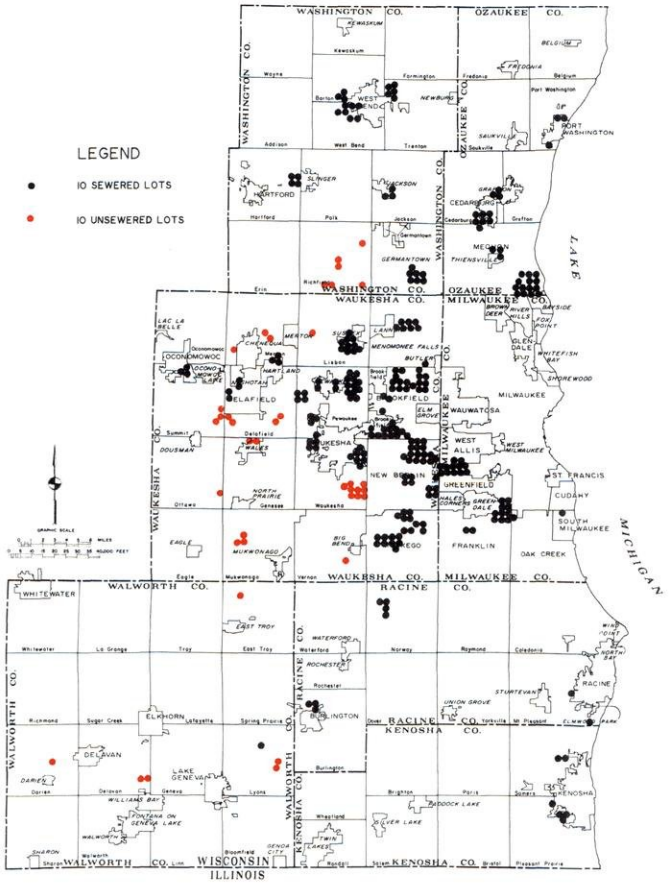


Figure 40

RESIDENTIAL LOTS PLATTED IN THE REGION: 1960-1988

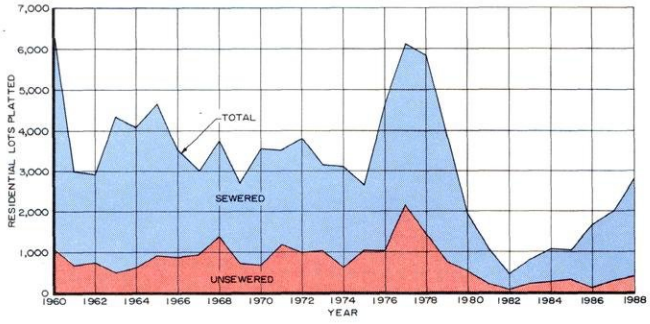


Figure 41

RESIDENTIAL LOTS PLATTED IN KENOSHA COUNTY: 1960-1988

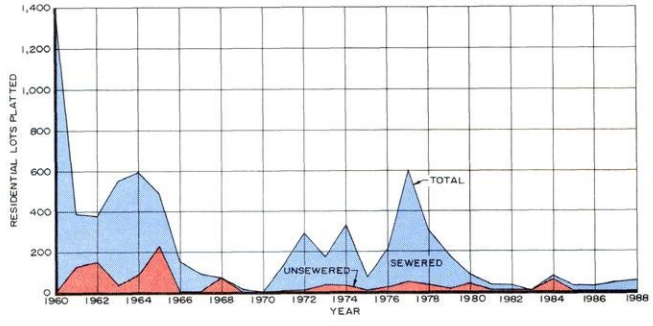


Figure 42

RESIDENTIAL LOTS PLATTED IN MILWAUKEE COUNTY: 1960-1988

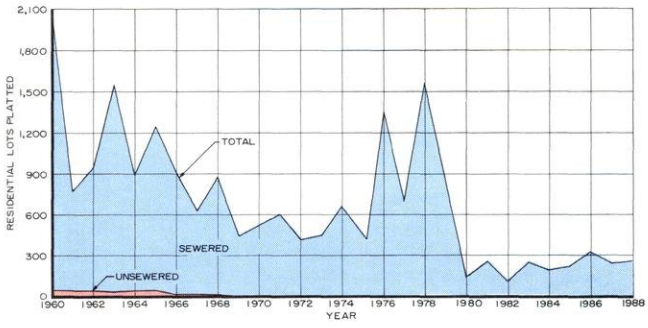


Figure 43

RESIDENTIAL LOTS PLATTED IN OZAUKEE COUNTY: 1960-1988

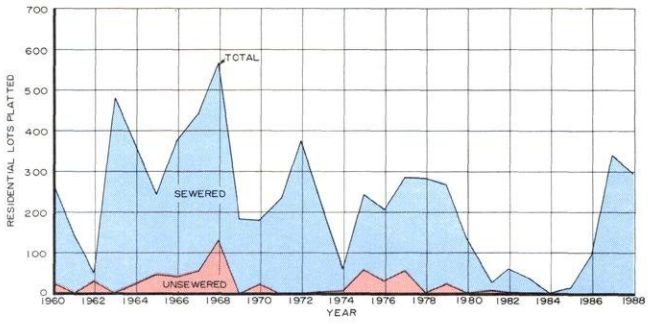


Figure 44

RESIDENTIAL LOTS PLATTED IN RACINE COUNTY: 1960-1988

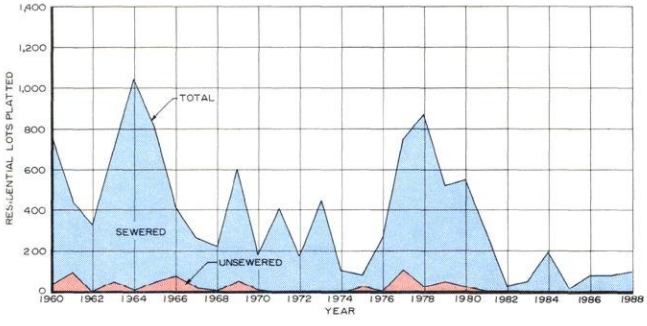


Figure 45

RESIDENTIAL LOTS PLATTED IN WALWORTH COUNTY: 1960-1988

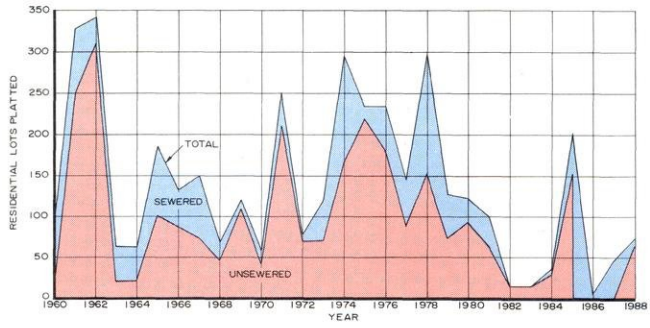


Figure 46

RESIDENTIAL LOTS PLATTED IN WASHINGTON COUNTY: 1960-1988

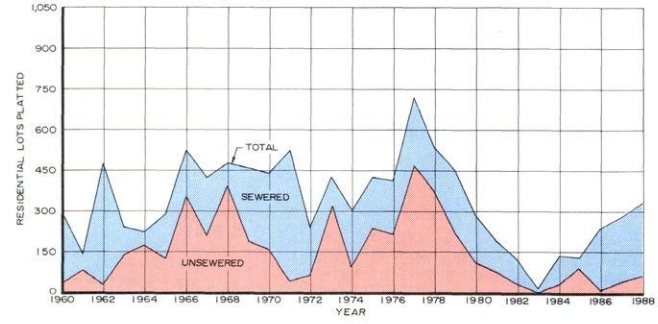
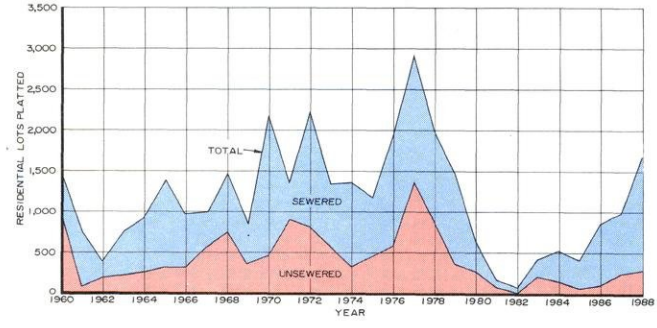


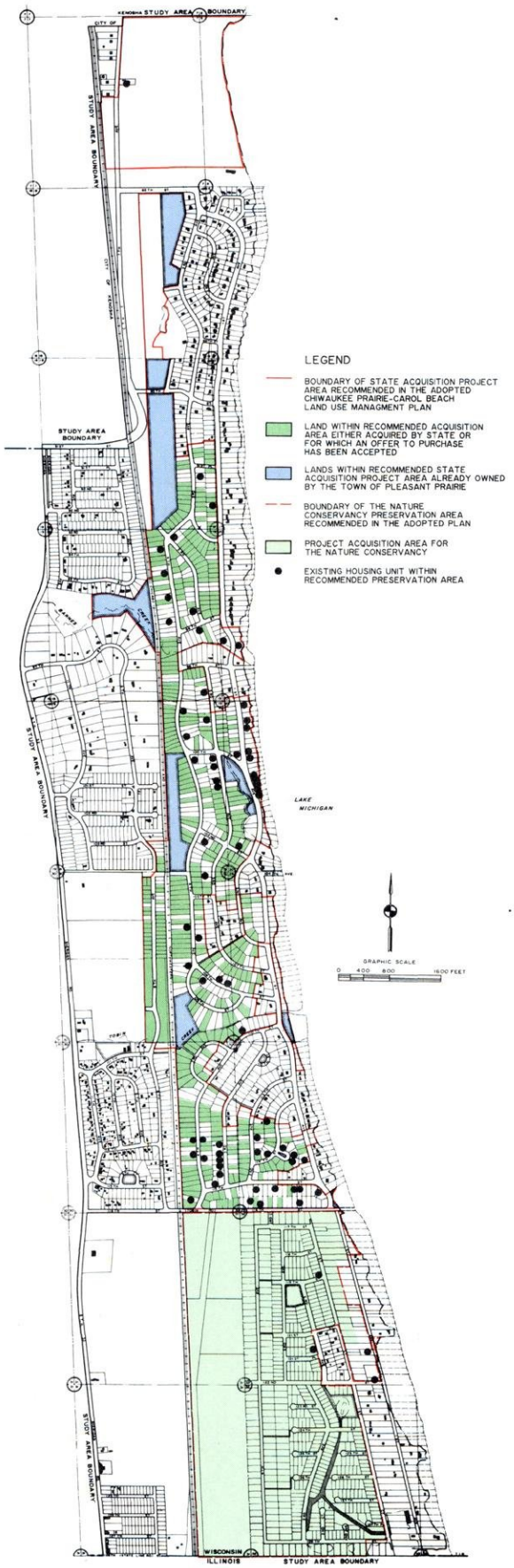
Figure 47

RESIDENTIAL LOTS PLATTED IN WAUKESHA COUNTY: 1960-1988



Map 7

STATUS OF LAND ACQUISITION IN THE CHIWAUKEE PRAIRIE-CAROL BEACH AREA



Nature Conservancy has enlarged its project area to include nearly the total preservation area recommended in the plan (see Map 7).

PARK AND OPEN SPACE PLANNING

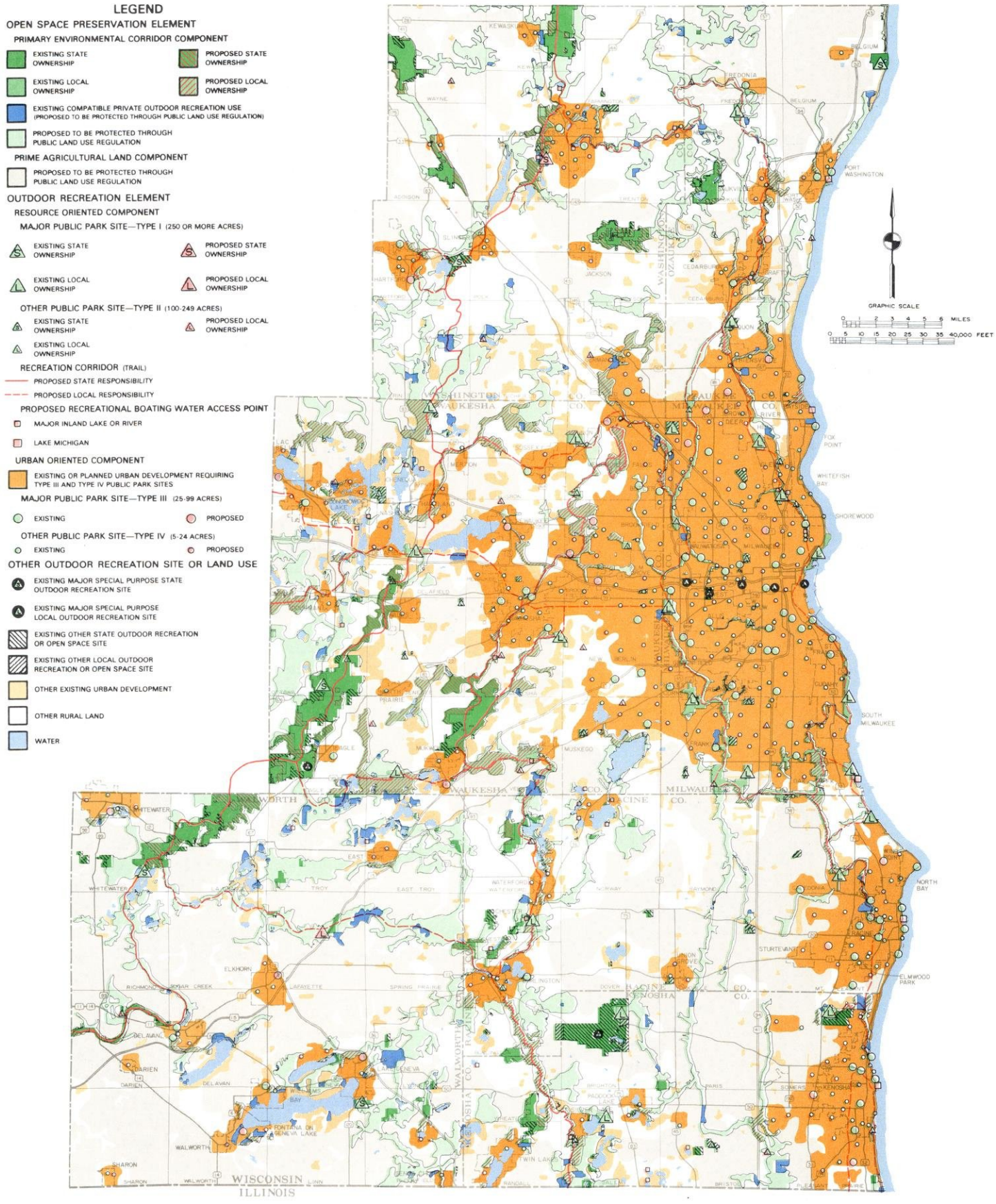
The Commission adopted a regional park and open space plan for southeastern Wisconsin on December 1, 1977. The plan consists of two basic elements: an open space preservation element and an outdoor recreation element. The open space preservation element consists of recommendations for the preservation of primary environmental corridors and prime agricultural land. The outdoor recreation element consists of: 1) a resource-oriented outdoor recreation plan, which provides recommendations for the number and location of large parks, recreation corridors to accommodate trail-oriented activities, and water access facilities to enable the recreational use of rivers, inland lakes, and Lake Michigan; and 2) an urban outdoor recreation plan, which provides recommendations for the number and distribution of local parks and outdoor recreational facilities required in urban areas of the Region. The plan is documented in SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000, and is graphically summarized on Map 8.

The regional park and open space plan was certified to various governmental units and agencies for adoption and implementation early in 1978. Five of the seven constituent counties in southeastern Wisconsin—Kenosha, Milwaukee, Racine, Washington, and Waukesha Counties—adopted the regional plan as their county plan in 1978. In addition, the Commission prepared a refinement of the regional plan as it relates specifically to Ozaukee County. That plan was adopted by Ozaukee County in 1978. Thus, all the counties in southeastern Wisconsin except Walworth County have adopted the regional park and open space plan or a refinement of that plan. In addition, the plan was endorsed by the Wisconsin Natural Resources Board in January 1979.

During 1988, Division efforts on park and open space planning were directed primarily toward the implementation of the regional park and open space plan. Implementation activities consisted of preparing detailed local park and open space plans consistent with the guidelines provided by the regional plan. These local plans are documented in SEWRPC community assistance planning reports and contain a set of park and open

Map 8

REGIONAL PARK AND OPEN SPACE PLAN: 2000



space preservation, acquisition, and development objectives and supporting standards relative to the needs of the citizens of the local community; present pertinent information on the supply of and need for park and open space sites in the community; and identify the actions required to meet park and open space needs.

Specifically, during 1988 the Commission published SEWRPC Community Assistance Planning Report No. 166, A Park and Open Space Plan for the Village of Sussex, Waukesha County, Wisconsin. Adoption of such plans by the local communities and approval of the plans by the Wisconsin Department of Natural Resources make the the local units of government eligible to apply for up to 50 percent state and federal assistance for the acquisition and development of the outdoor recreation and open space sites and related facilities proposed in the plans.

Also during 1988, the Commission continued work on the refinement of the regional park and open space plan as that plan relates to the county and state levels and agencies of government. A preliminary draft of each individual county park and open space plan was completed in 1986 and transmitted to the respective county park agencies and the Wisconsin Department of Natural Resources for review. The county plans are being documented in a series of seven community assistance planning reports. During 1988, the Commission published one of these county reports, SEWRPC Community Assistance Planning Report No. 134, A Park and Open Space Plan for Racine County. In addition, the Kenosha County plan—documented in SEWRPC Community Assistance Planning Report No. 131, A Park and Open Space Plan for Kenosha County, and published in 1987—was adopted by the Kenosha County Board of Supervisors on October 18, 1988, and the by Regional Planning Commission on December 6, 1988. The Ozaukee County plan was also published, and adopted by the Ozaukee County Board of Supervisors and the Commission, in 1987. The remaining four county reports are scheduled for completion in 1989. Adoption of each county plan by the county board of supervisors and approval by the Wisconsin Department of Natural Resources make each county eligible to apply for state and federal assistance for the acquisition of sites and development of facilities recommended in the plan.

DATA PROVISION AND TECHNICAL ASSISTANCE

Economic and Demographic Data

Considerable Division time is directed each year to answering requests for demographic, economic, and related data. This function includes the provision of technical assistance to local units of government, public agencies, and school districts in the conduct of special data acquisition activities and in the analysis of data. During 1988, the Division prepared letter responses to 127 requests for population, economic, and related information from the Commission data files. In addition, 103 requests were handled by telephone and 86 requests were accommodated through personal visits to the Commission offices. These requests came from county and local units of government, federal and state agencies, private firms, and individual citizens. The following are some examples of Division activity during 1988 in performing this function:

- Provision of existing and forecast demographic data to the Mequon-Thiensville, Twin Lakes, and West Allis-West Milwaukee School Districts, and the Waterford Union High School District for use in facilities planning studies.
- Provision of housing unit data to the Milwaukee Metropolitan Sewerage District for use in a special small area needs analysis.
- Provision of existing and forecast population and housing data to the Village of Fontana for use by the Village in the preparation of a new village outdoor recreation plan.
- Provision of information concerning potential sites for the relocation of the Waukesha County Animal Shelter to the Waukesha County Board.
- Provision of forecast population and water quality data to the consultant preparing a sewerage facilities plan for the Village of Jackson.
- Provision to the City of Waukesha of existing and planned city population levels for use in the city water supply radium reduction study.

Land Use and Park and Open Space Data

The land use and park and open space files are used extensively by state, county, and local governmental units and agencies and by private interests. Examples of the provision of land use and park and open space data during 1988 include the following:

- Provision of detailed delineations of 1980 and 1985 land use and related tabular data to the City of Kenosha for use by the staffs of both the Department of City Development and the Department of Public Works in a variety of local city planning and design projects.
- Provision of technical assistance to the Milwaukee County Department of Parks, Recreation and Culture in the preparation of a set of criteria to be used in the evaluation by the County of park and parkway lands proposed for disposition; and assistance in the application of the criteria to evaluate specific parcels of park and parkway lands.
- Provision of planned population, household, and related land use data to the Burlington School District for use in the preparation of enrollment estimates and for program planning.
- Provision of technical assistance to the Village of Grafton in the evaluation of the suitability of a parcel of land for use as a neighborhood park.
- Provision of natural resource and agricultural land use data to the Walworth County Conservationist for use in various resource management programs.
- Provision of land use, natural resource, and park and open space data for Washington and Waukesha Counties to the Ice Age Trail Council for use in the identification of a trail corridor.
- Provision of technical assistance to the Town of Lisbon in the preparation of a site analysis and general development plan for an undeveloped town park site.

Special Environmental Inventories, Assessments, and Evaluations

Reports evaluating and assessing the environmental quality of selected sites within the Region were prepared at the request of federal, state, and local units and agencies of government operating in the Region. During the year, a total of 101 requests for such information were received and fulfilled. Examples of such special environmental inventories, assessments, and evaluations prepared during 1988 include the following:

1. A field inspection of the primary environmental corridor lands adjacent to STH 50 in the Town of Salem Utility Districts 1 and 2, Kenosha County, Wisconsin, on November 14, 1988, at the request of the Town of Salem Utility District. The results of the investigation were used by the Town to determine the development capability of each parcel of land within a special assessment district.
2. Preparation of a wetland mitigation plan on a Freeman Builders, Inc., parcel located in the southeast one-quarter of U. S. Public Land Survey Section 20, Town of Cedarburg, Ozaukee County, as mitigation for a wetland filling associated with the extension of Harrison Avenue in the City of Cedarburg at the request of the City of Cedarburg.
3. A field inspection of a 76-acre parcel in and adjacent to the Donges Bay Gorge and Lake Michigan bluff primary environmental corridor in the City of Mequon, Ozaukee County, on October 5, 1988, at the request of the City of Mequon. The results of the field inspection were used by the City to determine the development potential of the site, and to determine the federal, state, or local environmental restrictions that would apply to the subject site.
4. An identification of the Environmental Overlay District and wetland boundaries on the Charles B. Steely residential lot located in the Village of Wind Point, Racine County, on November 9, 1988, at the request of the Village. The results of

the field inspection were used by the Village to determine the areal extent of the Village's Environmental Overlay District on the subject lot as part of a proposed land division.

5. A field inspection and staking of the wetlands located on the P. Becker development parcel in the City of Franklin, Milwaukee County, on May 4, 1988, at the request of the City of Franklin. The results of the field inspection and staking were used by the City to assist in determining the development potential of the subject parcel.

6. A field inspection and staking of the wetlands on the Hunters Run development parcel in the City of Oak Creek, Milwaukee County, on November 3, 1988, at the request of the City of Oak Creek. The results of the field inspection and staking were used by the City to assist in determining the development potential of the subject parcel.

7. A field inspection and staking of the primary environmental corridor and wetland boundary on the R. Fassel development parcel located in the City of Whitewater, Walworth County, on February 29, 1988, and April 12, 1988, at the request of the City of Whitewater and the U. S. Department of the Army, Corps of Engineers. The results of the field inspection and staking were used by the City to determine the areal extent of the buildable portion of the subject parcel and to clarify the areal extent of the Corps of Engineers jurisdiction on the parcel.

8. A field inspection of a proposed housing project site in the Rose Crest Addition Subdivision in the City of Whitewater, Walworth County, on April 25, 1988, at the request of the U. S. Department of Housing and Urban Development (HUD). The results of the field inspection were used by HUD to determine the feasibility of a proposed housing project with respect to flood hazard and wetland areas.

9. A field inspection and staking of the wetland and primary environmental corridor boundaries on the proposed Edgewood Subdivision/Erhardt parcel in the Town of Hartford, Washington County, on April 27, 1988, at the request of the Hilldale Sanitary District. The results of the field inspection and staking enabled the sanitary district to determine the areal extent of the buildable land on the subject parcel.

10. A field inspection and staking of the wetland boundary on the Russ Darrow development parcel in the City of West Bend, Washington County, on December 14, 1988, at the request of the City of West Bend. The results of the field inspection and staking were used by the City to determine the areal extent of the developable land on the subject parcel.

11. A field inspection and staking of the wetlands and primary environmental corridor boundaries on the A. Benecker property located in the City of New Berlin, Waukesha County, on August 16, 1988, at the request of the City of New Berlin. The results of the field inspection and staking were used by the City to determine the areal extent of the developable land on the subject parcel.

12. A field inspection of the C-1 Conservancy lands located at the north end of Marsh Avenue in the Town of Vernon, Waukesha County, on October 25, 1988, at the request of the Town of Vernon. The results of the field inspection were used by the Town to determine the need for any zoning changes to, and the development potential of, the subject parcel.

TRANSPORTATION PLANNING DIVISION

DIVISION FUNCTIONS

The Commission's Transportation Planning Division makes recommendations concerning various aspects of transportation system development within the Region. The kinds of basic questions addressed by the Division include:

- What are the travel habits and patterns in the Region? How are these changing over time?
- What is the existing supply of transportation facilities and services?
- How can existing transportation facilities best be used and transportation demand managed to avoid new capital investment?
- How much travel in the future will likely be accommodated by the various travel modes, particularly the private automobile and public transit?
- What new transportation facilities are needed to accommodate existing and anticipated future travel demand?
- Who should be responsible for providing needed transportation facilities?
- What are the relationships between land use and travel demand?

In attempting to find sound answers to these and other questions, to formulate plans containing recommendations concerning these questions, and to monitor transportation system development activities in the Region, the Transportation Planning Division during 1988 conducted a number of activities in eight identifiable areas: data collection, collation, and development; long-range planning; transportation systems management planning and traffic engineering; transportation improvement programming; elderly and handicapped transportation planning; rail transportation planning; air transportation planning; and data provision and technical assistance.

As the official metropolitan planning organization for transportation planning in the Southeastern Wisconsin Region, the Commission not only conducts transportation planning work programs with its own staff and with consultants, but also oversees related subregional transportation planning by other governmental agencies. In 1988 Milwaukee County undertook such planning work related to transit operations. The Commission is ultimately responsible for all transportation-related planning work funded by federal agencies. Accordingly, all transportation planning activities bearing upon the Commission's overall work program are reported herein irrespective of whether they are directly conducted by the Commission.

DATA COLLECTION, COLLATION, AND DEVELOPMENT

During 1988, the Division continued to monitor secondary data sources for changes in automobile and truck availability; mass transit ridership; carpool parking facility capacity and use; and traffic volumes.

Figure 48

TRANSPORTATION PLANNING DIVISION

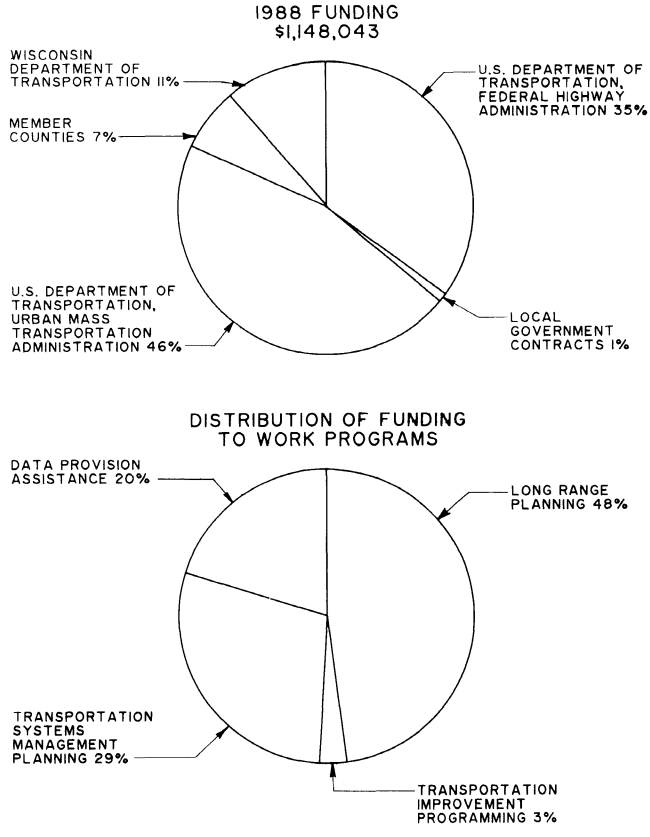


Table 11

AUTOMOBILE AVAILABILITY

County	1963	1972	1987	1988
Kenosha	35,160	48,010	60,910	63,270
Milwaukee	304,120	397,690	431,460	440,190
Ozaukee	14,320	24,430	38,110	39,480
Racine	47,580	68,270	85,050	87,590
Walworth	19,440	27,430	38,790	40,200
Washington	16,240	27,030	44,730	46,830
Waukesha	61,900	102,910	160,990	166,790
Total	498,760	695,770	860,040	884,350

Automobile and Truck Availability

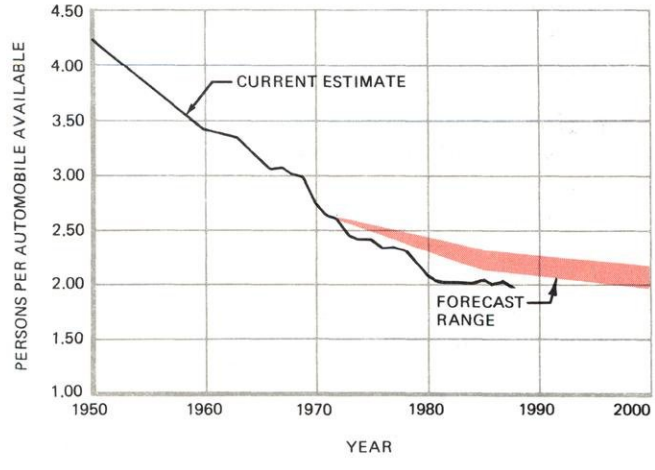
The number of automobiles available to residents of the Region in 1988 totaled 884,350. This represents an increase of 24,210, or about 2.8 percent, over the 1987 level of 860,040 (see Table 11). Increases in automobile availability in 1988 were experienced within each County in the Region, continuing the generally steady, long-term trend of continued increases in the number of automobiles available to residents of the Region over the past 28 years. The average annual rate of growth in automobile availability within the Region from 1963 through 1988 was 2.3 percent.

The number of persons per automobile within the Region was estimated to be 1.98 in 1988, slightly lower than the estimated 2.03 in 1987, as shown in Figure 49. The estimated number of automobiles available within the Region in 1988 may be compared to the forecast range of automobile availability as developed under the long-range regional transportation system plan, as shown in Figure 50, which depicts the historical and forecast growth in automobile availability. The 1988 forecast automobile availability ranged from 852,000 under the adopted regional transportation system plan to 929,000 under the "no build" alternative. Thus, the 1988 regional automobile availability of 884,350 was about 4.8 percent lower than the "no build" forecast, and about 3.8 percent higher than the automobile availability envisioned under the adopted regional transportation system plan.

The number of motor trucks available in the Region during the year totaled about 164,610, an increase of about 10,620, or 6.9 percent, over the 1987 level of 153,990 trucks (see Table 12 and Figure 51). The increase in 1988 motor truck

Figure 49

PERSONS PER AUTOMOBILE



availability follows the trend of annually increasing vehicle availability in spite of declines observed in 1961, 1962, and 1985. Light trucks accounted for about 57 percent of all trucks in 1960, 60 percent of all trucks in 1970, 74 percent of all trucks in 1980, and 75 percent of all trucks in 1988. The number of light trucks available in 1988 totaled about 123,630, an increase of 8,580, or about 7.4 percent, over the number of light trucks available in 1987. The number of heavy trucks and municipal trucks increased to 40,980 in 1988, an increase of about 2,040 trucks, or about 5.2 percent, over the 1987 level of 38,940. The average annual rate of growth in motor truck availability within the Region from 1963 to 1988 was 4.4 percent.

Table 12

TRUCK AVAILABILITY

County	1963	1972	1987	1988
Kenosha	4,860	7,040	14,170	15,600
Milwaukee	25,870	33,350	56,300	59,640
Ozaukee	2,290	3,290	7,010	7,500
Racine	6,200	9,140	18,250	19,510
Walworth	4,490	6,430	12,420	13,240
Washington	3,410	5,400	12,100	12,980
Waukesha	8,280	15,060	33,740	36,140
Total	55,400	79,710	153,990	164,610

Figure 50

FORECAST RANGE OF AUTOMOBILE AVAILABILITY

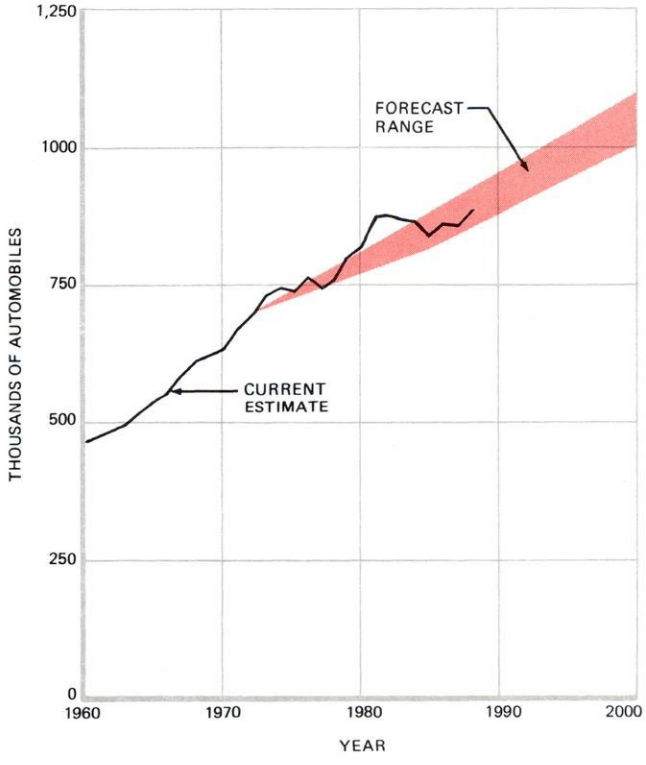
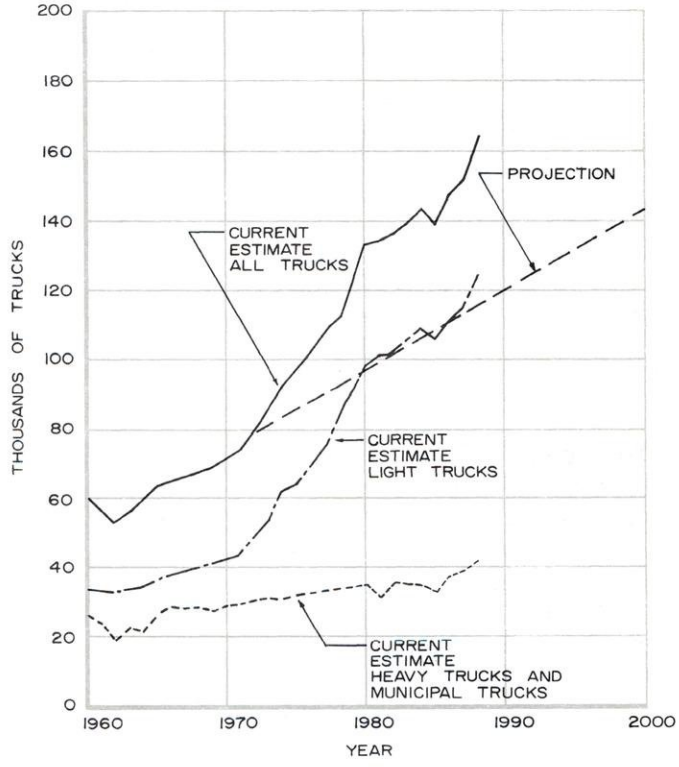


Figure 51

TRUCK AVAILABILITY



Public Transit Ridership

Publicly owned mass transit service is provided in the Region in the Kenosha, Racine, and Milwaukee urbanized areas, and in nonurbanized portions of the Region in the Cities of Hartford and Whitewater (see Table 13 and Figure 52). In the Kenosha urbanized area, ridership on the fixed-route public transit system serving the City of Kenosha increased during 1988 (see Figure 53). Ridership during the year approximated 1,180,500 revenue passengers, an increase of about 7 percent over the 1987 ridership level of about 1,098,300 revenue passengers. The number of bus miles operated in revenue service totaled about 663,800, an increase of about 2 percent over the 650,800 bus miles operated during 1987. The basic fare for the Kenosha system was $0.50 in 1988, unchanged from 1987.

Table 13

PUBLIC TRANSIT RIDERSHIP

Transit Operators By Area	1963	1972	1987	1988	Percent Change 1987-1988
Urbanized Areas					
Kenosha					
City of Kenosha	1,876,000	503,000	1,098,300	1,180,500	7.5
Milwaukee					
Milwaukee County	88,546,000	52,141,000	47,761,400	48,866,000	2.3
Waukesha County	--	--	266,200	271,500	2.0
City of Waukesha	451,000	227,000	347,300	374,000	7.7
Subtotal	88,997,000	52,368,000	48,374,900	49,511,500	2.3
Racine					
City of Racine— Local Bus	2,907,000	526,000	2,280,300	2,089,000	-8.4
City of Racine— Commuter Bus	165,000	153,000	75,000	71,100	-5.2
Subtotal	3,072,000	679,000	2,355,300	2,160,100	-8.3
Urbanized Area Total	93,945,000	53,600,000	51,828,500	52,852,100	2.0
Nonurbanized Areas					
City of Hartford	--	--	12,400	12,300	-0.8
City of Whitewater	--	--	38,300	42,700	11.5
Nonurbanized Area Total	--	--	50,700	55,000	8.5
Total Region	93,945,000	53,600,000	51,879,200	52,907,100	2.0

To assist in the public operation of the transit system, the Commission prepared, at the request of the City, a five-year transit development plan in 1976 for the years 1976-1980.[1] Many of the plan's recommendations regarding transit route layout and scheduling were implemented in the mid-1970's as ridership increased on the system. In 1984, the Commission completed work on another transit development plan for the City of Kenosha transit system for the period 1984-1988.[2] Virtually all of the routing changes recommended under the new plan were implemented by the transit system in late December 1984.

[1]*See SEWRPC Community Assistance Planning Report No. 7, Kenosha Area Transit Development Program: 1976-1980.*

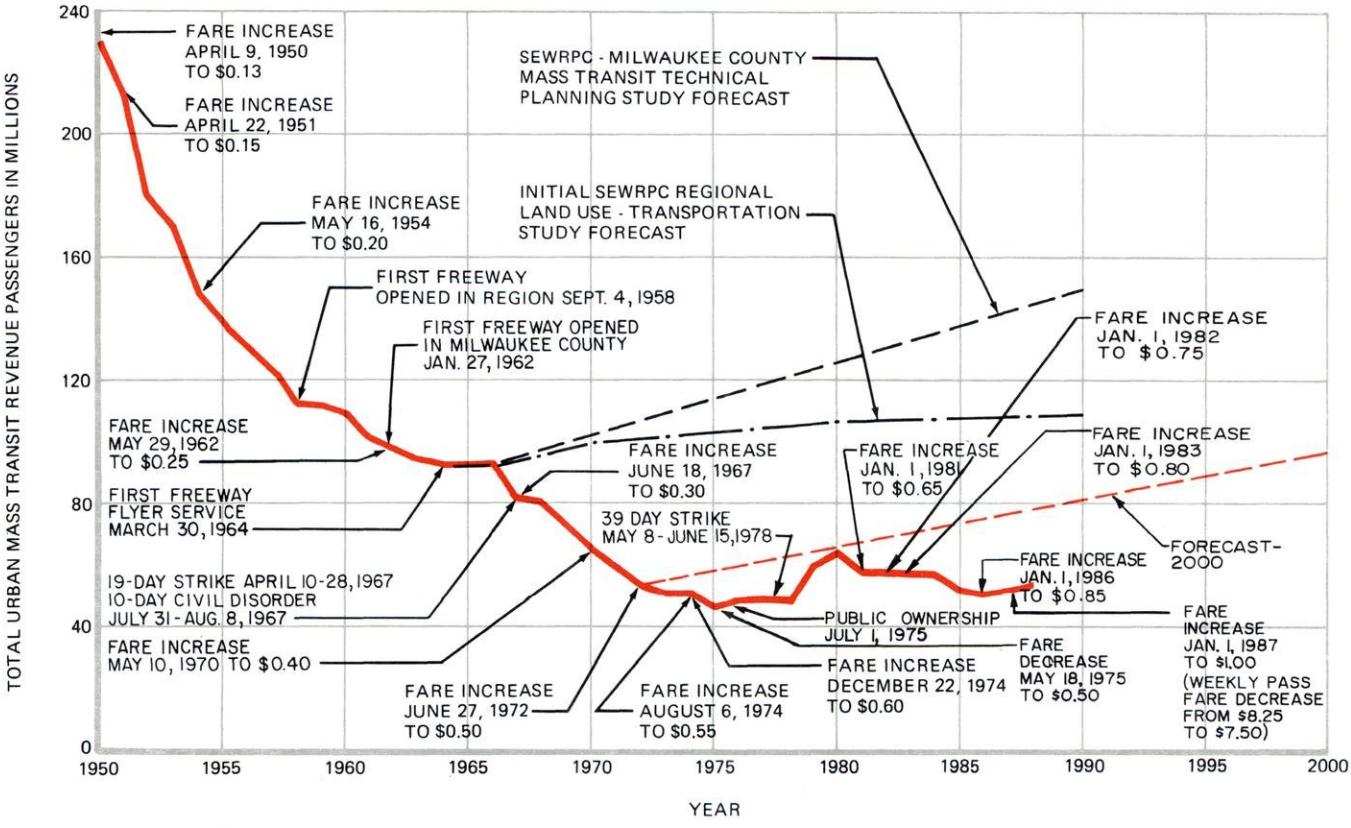
[2]*See SEWRPC Community Assistance Planning Report No. 101, Kenosha Area Transit System Plan and Program: 1984-1988.*

Ridership on the fixed-route public transit system serving the City of Racine decreased during 1988 approximately 8 percent—from the 1987 level of approximately 2,280,300 revenue passengers to about 2,089,000 revenue passengers in 1988. The number of bus miles operated in revenue service increased by less than 1 percent during 1988—from about 1,248,300 bus miles in 1987 to about 1,255,200 bus miles in 1988. The basic fare for the Racine transit system was increased from $0.35 in 1987 to $0.50 in 1988, a 40 percent increase.

Transit ridership declines on the City of Racine transit system during 1982 and 1983 and again during the years 1985 through 1988 broke a trend of increasing ridership which began in July 1975 with the public acquisition and operation of the formerly privately operated system. To guide the public acquisition of the system and its initial years of operation, the Commission prepared, at the request of the City

Figure 52

HISTORICAL TREND IN MASS TRANSIT RIDERSHIP IN THE REGION



NOTE: FARE INCREASES AND DECREASES SHOWN IN THIS FIGURE REFER ONLY TO THE MILWAUKEE COUNTY TRANSIT SYSTEM AND TO THE SINGLE-RIDE ADULT CASH FARE FOR LOCAL SERVICE.

of Racine, a transit development plan covering the years 1975 to 1979.[3] Nearly all of the plan recommendations for transit route layout, schedule, fare structure, and service levels were implemented in the first years of public operation. In 1984, the Commission completed work on another transit development program for the City of Racine transit system for the period 1984-1988.[4] Several of the routing changes recommended under the new plan were implemented by the transit system by December 1985.

During 1988, the City of Racine, in a joint effort with the City of Kenosha and Racine and Kenosha Counties, also provided commuter bus service between downtown Milwaukee and the Cities of Racine and Kenosha. The commuter bus service was provided by a private transit operator: Wisconsin Coach Lines, Inc. Until 1984, the route was operated without public subsidy, the passenger and freight revenues being sufficient to offset the operating costs. More recently, however, the operation of the route entailed a loss. During 1984, the Company approached the four governmental units and asked for financial assistance to subsidize the operation of the route. As a result, the four local units of government joined to help provide the Company with the financial assistance necessary to operate the bus service through the State of Wisconsin.

The City of Racine has assumed responsibility as the lead agency for the commuter bus project

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[3] *See SEWRPC Community Assistance Planning Report No. 3, Racine Area Transit Development Program: 1975-1979.*

[4] *See SEWRPC Community Assistance Planning Report No. 79, Racine Area Transit System Plan and Program: 1984-1988.*

Figure 53

MASS TRANSIT RIDERSHIP
KENOSHA URBANIZED AREA

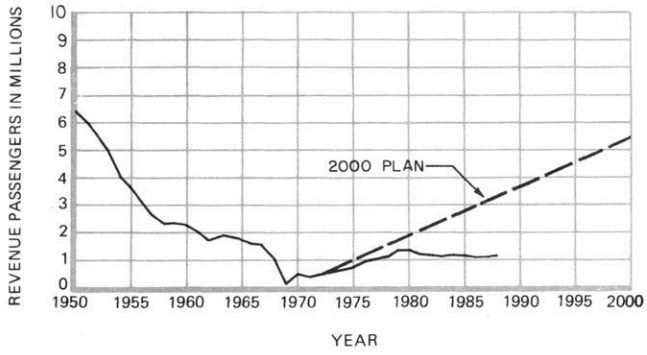
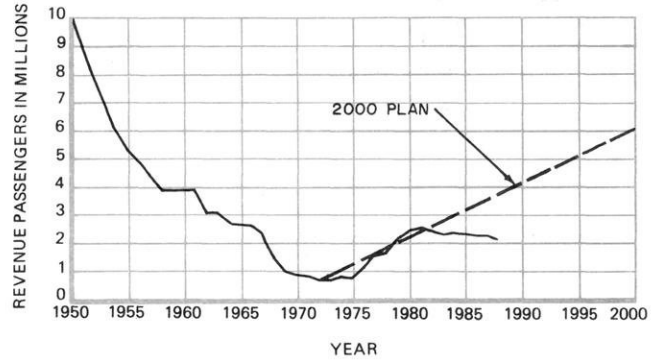


Figure 54

MASS TRANSIT RIDERSHIP
RACINE URBANIZED AREA



by acting as the applicant/grantee for the state urban transit assistance funds needed to subsidize the operation of the service. State transit assistance funds are the only public monies being used to subsidize the operating costs of the service. Ridership on the service approximated 71,100 revenue passengers during 1988, a decrease of about 5 percent from the 1987 ridership level of about 75,000 revenue passengers. The number of bus miles operated in revenue service increased by about 1 percent from 192,900 bus miles in 1987 to about 194,700 bus miles in 1988. Total transit ridership within the Racine urbanized area—including the City of Racine transit system and the special commuter bus service—decreased by about 8 percent—from the 1987 ridership level of 2,355,300 revenue passengers to about 2,160,100 revenue passengers in 1988 (see Figure 54).

In the Milwaukee urbanized area, publicly subsidized, fixed-route transit service was provided during 1988 by the Milwaukee County Transit System, Waukesha County, and the City of Waukesha. During 1988, the Milwaukee County Transit System embarked on the most extensive service revision program since 1980. Twelve major routing changes, including new or extended routes and several route reorganizations, were implemented during the summer months of 1988. Ridership on the transit system increased during 1988 by about 2 percent over the 1987 level of about 47,761,400 revenue passengers to 48,866,000 revenue passengers. The basic cash fare for the Milwaukee County Transit System was $1.00 in 1988, with the price of a weekly pass or a book of 10 fare tickets being $7.50, which allows regular users on the transit system to ride at a substantial discount from the full cash fare. The ridership increase in 1988 may be attributed to the service revisions implemented during the year, and to the use of the transit system as an alternative means of transportation during reconstruction of the high-rise bridge on the North-South Freeway (IH 94).

During 1988, Waukesha County continued to provide publicly supported, fixed-route bus service between Waukesha and Milwaukee Counties. Operated for Waukesha County on a contract basis by both the Milwaukee County Transit System and Wisconsin Coach Lines, Inc., bus service included the commuter-oriented service supported by the County since 1977 between the City of Milwaukee central business district and the Cities of Oconomowoc and Waukesha, and additional service provided over three bus routes initiated by the County during 1981. These three bus routes were originally part of a total of seven new routes implemented by Waukesha County on April 1, 1981. The Commission identified these seven routes in 1980 at the request of Waukesha County and proposed that any service implemented be on a trial basis.[5]

The three routes which continued to be operated during all or part of 1988 included two routes providing modified rapid, or "freeway flyer," transit service between the Milwaukee central business district and the Village of Menomonee

[5]*See SEWRPC Community Assistance Planning Report No. 44, Proposed Public Transit Service Improvements—1980, Waukesha County, Wisconsin.*

Figure 55

MASS TRANSIT RIDERSHIP
MILWAUKEE URBANIZED AREA

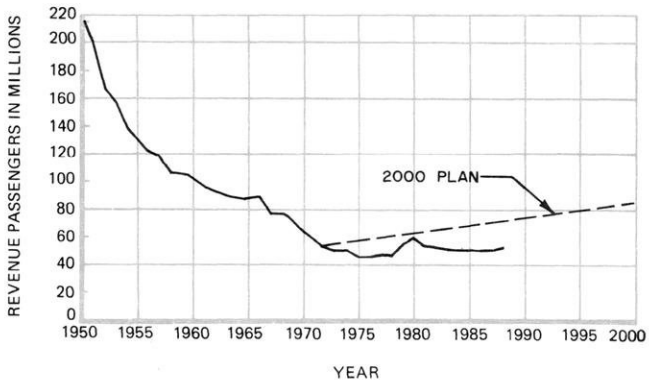
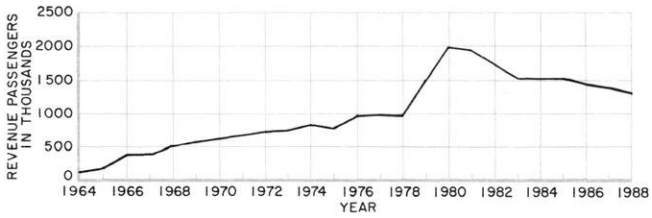


Figure 56

MILWAUKEE URBANIZED AREA
FREEWAY FLYER RIDERSHIP



Falls and the City of Oconomowoc, and one route providing local bus service from Milwaukee County to the Brookfield Square Shopping Center. The freeway flyer bus routes serving the City of Oconomowoc and the Village of Menomonee Falls, and the local bus route serving the Brookfield Square Shopping Center, continued to be successful in attracting transit ridership during 1988. However, bus service was reduced between the City of Oconomowoc and the Goerke's Corners public transit station over one of the original express bus routes subsidized by the County since 1977. This service change was based upon the analyses and recommendations presented in a new transit service plan for Waukesha County completed by the Commission during 1988.[6] Ridership on the Waukesha County transit system increased by about 2 percent in 1988, from 266,200 trips in 1987 to 271,500 trips in 1988. Transit fares on the Waukesha County Transit System—which are distance-related—were between $1.25 and $3.35 in 1988, unchanged from 1987.

Local bus service was reestablished in the City of Waukesha in August 1981, when the City placed into full-scale operation a new fixed-route transit system. The community had previously been without public transit service since June 1976, when local bus service provided by a private transit operator was discontinued. The reinstitution of transit service was guided by a transit development plan prepared by the Regional Planning Commission in 1980 at the request of the City of Waukesha.[7] The new Waukesha transit system—routes, schedule, service levels, and fare structure—was implemented essentially as recommended by that plan. During calendar year 1988, the system carried approximately 374,000 revenue passengers, an increase of about 8 percent over the 347,300 revenue passengers carried on the system during 1987.

The number of bus miles operated in revenue service in the Milwaukee urbanized area during the year totaled about 17.8 million, an increase of about 2 percent over the approximately 17.5 million bus miles operated during 1987. Total transit ridership within the Milwaukee urbanized area increased by about 2 percent over the 1987 ridership level of about 48.4 million revenue passengers to about 49.5 million revenue passengers in 1988 (see Figure 55). This ridership increase may be attributed primarily to the increase in ridership on the Milwaukee County Transit System.

During 1988, rapid transit service in the Milwaukee urbanized area was provided by freeway flyer bus service operated by both Milwaukee and Waukesha Counties from 19 outlying parking terminals to the Milwaukee central business district. Ridership on the freeway flyer bus service totaled about 1,283,300 passengers in 1988, representing a decrease of about 5 percent from the 1,350,600 passengers carried in 1987 (see Figure 56). This decrease in freeway flyer ridership can be directly attributed to continued low fuel prices.

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[6]*See SEWRPC Community Assistance Planning Report No. 105, Waukesha County Transit Plan: 1988-1992, September 1988.*

[7]*See SEWRPC Community Assistance Planning Report No. 31, Waukesha Area Transit Development Program: 1981-1985.*

Progress in providing the public transit stations recommended in the adopted year 2000 transportation plan is summarized on Map 9. During 1988, no new public transit stations were constructed to add to those which existed during 1987. Table 14 and Figure 57 provide data on both the number of parking spaces available and the number of parking spaces used on an average weekday in 1988 at all transit stations by patrons of freeway flyer bus service and carpoolers. As shown in the table, transit service was provided at 12 of the 14 public transit/park-ride stations and at seven shopping center lots. The total of 21 freeway flyer terminal facilities represents no change from the number of facilities that existed in 1987. The number of spaces available at public transit/park-ride stations—3,255 spaces—and at shopping center lots—1,075 spaces—remained unchanged from 1987 to 1988.

Of the 3,255 spaces available at the 14 public transit/park-ride stations, 1,475 spaces were used on an average weekday during the fourth quarter of 1988, representing a utilization rate of about 45 percent. Of the 1,075 spaces available at the seven shopping center lots, 390 spaces were utilized during the last quarter of 1988, representing a utilization rate of about 36 percent. In total, about 43 percent of all available parking spaces were used on an average weekday during the last quarter of 1988.

Publicly operated transit service was also provided in the nonurbanized portion of the Region during 1988 by the City of Hartford in Washington County, which operated a shared-ride taxicab service and a special commuter shuttle bus service. Operated by the City of Hartford Municipal Recreation Department, the taxicab service was initiated in 1981 and is available to the public seven days a week for travel primarily within the City of Hartford and environs. The special commuter bus service was initiated in late 1982 and is operated to shuttle passengers from Hartford and West Bend to and from a transit stop used by an intercity bus operator serving the Milwaukee urbanized area. The services are provided using funds available for capital and operating assistance under the federal Section 18 rural transportation assistance program. During 1988, the Hartford taxicab and shuttle bus services carried approximately 12,300 revenue passengers and operated about 59,000 total vehicle miles. These figures represent a decrease of less than 1 percent from the 12,400 revenue passengers carried in 1987, and a decrease of about 9 percent from the 64,800 total vehicle miles operated during 1987.

In January 1986, the City of Whitewater in Walworth County initiated operation of a shared-ride taxicab service. Operated by Brown's Cab Service based in Fort Atkinson, the taxicab service is available seven days a week for travel primarily within the Whitewater area. Adult fares for the service were established at $2.00 per one-way trip, with a half-fare program provided for students and elderly and handicapped users. The service was initiated using federal funds available for capital and operating assistance under the federal Section 18 rural transportation assistance program. During 1988, the Whitewater taxicab service carried approximately 42,700 revenue passengers—an increase of about 11 percent over the 38,300 revenue passengers carried in 1987—and operated about 81,400 total vehicle miles—an increase of about 13 percent over the 71,700 total vehicle miles operated in 1987.

Transit operating subsidies in the Region during 1988 totaled about $48.1 million, as compared with about $38.7 million during 1987, as shown in Table 15. The overall public operating subsidy per ride in the Kenosha urbanized area increased from about $1.31 in 1987 to about $1.34 in 1988 (see Figure 58). In the Racine urbanized area, the overall operating subsidy per ride increased from about $1.09 in 1987 to about $1.20 in 1988 (see Figure 59). In the Milwaukee urbanized area, the overall operating subsidy per ride increased from about $0.72 in 1987 to about $0.88 in 1988 (see Figure 60). By individual operator in the Milwaukee urbanized area, the per-ride subsidies in 1987 and 1988 were as follows: Milwaukee County Transit System, $0.69 and $0.86; Waukesha County, $2.41 and $3.42; and City of Waukesha, $2.28 and $2.36. The overall operating subsidy per ride for the taxicab and shuttle bus services operated by the City of Hartford increased markedly from about $7.67 per ride in 1987 to about $9.23 per ride in 1988 (see Figure 61). In Whitewater, the per-ride subsidy increased from $0.88 in 1987 to $1.33 in 1988 (see Figure 62).

Carpool Parking Facilities

During 1988, the Commission collected data on the use of available parking supply at carpool parking facilities within the Region. As shown

Map 9

PRIMARY TRANSIT SYSTEM PLAN FOR THE REGION: 2000

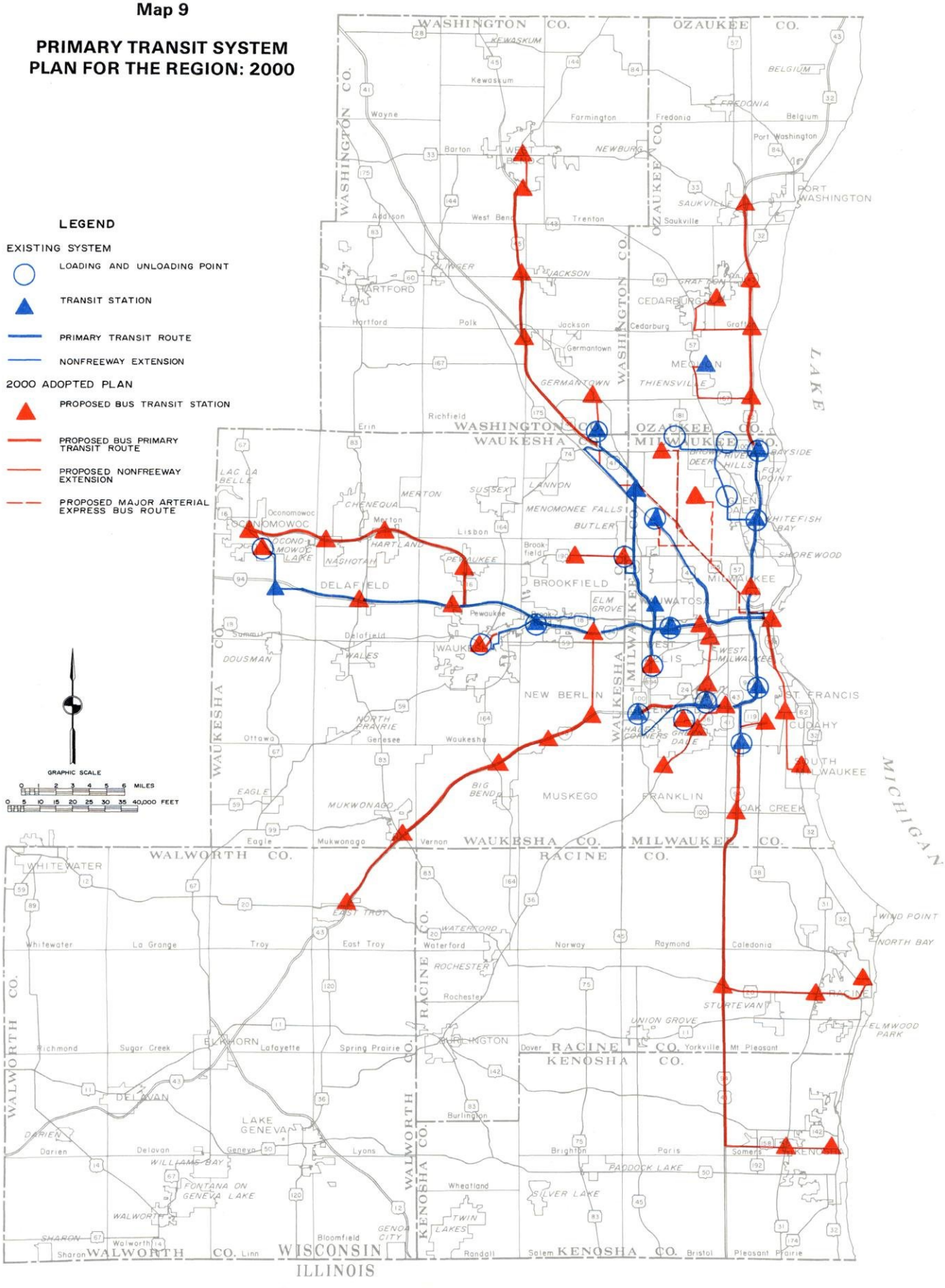


Table 14

USE OF PARKING AT FREEWAY FLYER TERMINALS: FOURTH QUARTER 1988

Location	Available Parking Spaces	Autos Parked on an Average Weekday—Fourth Quarter: 1988	Percent of Spaces Used
Public Transit Stations			
W. College Avenue (Milwaukee)	530	295	56
W. Watertown Plank Road (Wauwatosa)	200	86	43
North Shore (Glendale)	190	114	60
Brown Deer (River Hills)	250	127	51
Goerkes Corners (Brookfield)	250	128	51
Milwaukee Area Technical College (Mequon)	200	8[a]	4[a]
W. Holt Avenue (Milwaukee)	240	101	42
Whitnall (Hales Corners)	360	244	68
Pilgrim Road (Menomonee Falls)	65	59	91
STH 67 and IH 94 (Summit)	80	29	36
State Fair Park (West Allis)	200	105	52
Timmerman Field (Milwaukee)	140	41	29
W. Loomis Road (Greenfield)	415	123	30
W. Good Hope Road	135	15[a]	11[a]
Subtotal	3,255	1,475	45
Shopping Center Lots			
Northland (Milwaukee)	100	21	21
Zayre-Kohls (West Allis)	250	110	44
Zayre (Brookfield)	200	51	25
Southridge (Greendale)	250	123	49
Northridge (Milwaukee)	100	25	25
Zayre (Brown Deer)	125	60	48
Olympia (Oconomowoc)	50	--[b]	--[b]
Subtotal	1,075	390	36
Total	4,330	1,865	43

[a] *Public transit service to this station was not provided during 1988. The number of autos parked represents use by carpoolers.*

[b] *Data not available.*

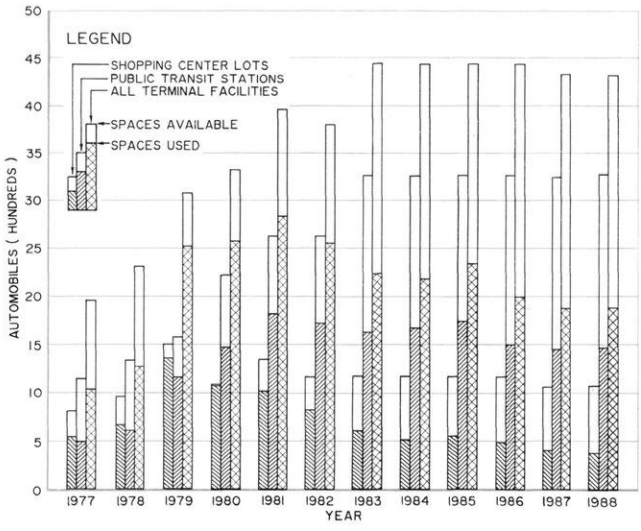
in Table 16, 17 publicly owned carpool parking facilities were in operation at key freeway interchanges in the outlying areas of the Region in 1988. This number represents an increase of two carpool parking facilities over the number of facilities available in 1987. A new carpool parking facility located at IH 94 and CTH G in Waukesha County was opened for public use in June 1988. Another new facility located at STH 60 and CTH P in Washington County was opened in October 1988. During the fourth quarter of 1988, about 361 of the total 1,270 parking spaces available were used on an average weekday (see Figure 63). This represents a utilization rate of 28 percent in 1988, compared with a utilization rate of 30 percent in 1987. The progress in providing the carpool parking lots recommended in the adopted year 2000 regional transportation plan is summarized on Map 10.

Traffic Count Data

The Commission collates on a continuing basis traffic count data collected by other state, county, and local agencies during the year.

Figure 57

FREEWAY FLYER PARKING LOT USE FOURTH QUARTER: 1977-1988



These data are essential to monitoring changes in travel occurring in the Region and to determining levels of, and trends in, vehicle miles of travel. During 1988 traffic volume data were collected from the Wisconsin Department of Transportation, the Milwaukee County Department of Public Works, and the City of Milwaukee, all of which operate regular traffic-counting programs. In addition, during the year the Commission conducted traffic counts for use in the analysis and planning activities of the community assistance and traffic engineering services provided to municipalities within the Region. At selected sites, data were collected on vehicle classification, turning movements, peak-hour factors, and other traffic engineering considerations.

LONG-RANGE PLANNING

Long-Range Transportation System Plan

On June 1, 1978, the Commission adopted a long-range regional transportation system plan for the design year 2000. This plan is documented in SEWRPC Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, Volume Two, Alternative and Recommended Plans. The plan extends and amends the regional transportation system plan for the design year 1990 adopted in 1966. The adopted plan is graphically summarized on Map 11. The long-range regional transportation system plan was prepared to accommodate the existing and probable future travel demand in the Region. Such demand is expected to increase by about 28 percent—from a total of about 4.5 million person trips per average weekday in 1972 to about 5.7 million such trips by the year 2000. Total vehicle miles of travel on an average weekday is anticipated to increase by more than 49 percent—from about 20.1 million to about 30.1 million. The design year 2000 regional transportation system plan seeks to provide the Region with a safe, efficient, and economical transportation system which can effectively serve the existing and probable future travel demand within the Region, which will meet the recommended regional transportation system development objectives, and which will serve and promote implementation of the adopted regional land use plan.

The plan did not include a number of previously planned freeways, including the Milwaukee Metropolitan Belt Freeway, the Bay Freeway from Pewaukee to Whitefish Bay, the Stadium Freeway-North, the Park Freeway-West, and the Racine Loop Freeway. The plan did, however, include the following freeways: the West Bend Freeway (USH 45), the USH 41 Freeway conversion in Washington County, the STH 16 Freeway in Waukesha County, the USH 12 Freeway in Walworth County, the Lake Freeway-South, the Milwaukee Downtown Loop Freeway, and the Stadium Freeway-South.

In 1981 the plan was amended to replace the Lake Freeway-South with a four-lane, limited access surface arterial. In 1983 the plan was further amended to remove the Milwaukee Downtown Loop Freeway and to add in its place a connection of the Park Freeway-East leg of that loop to N. Jefferson Street and a permanent connection of the East-West Freeway and Lake Freeway-North to N. Harbor Drive. Construction of the recommended permanent treatments at the end of the Park Freeway-East and the Lake Freeway-North and East-West Freeway to the surface arterial system began in 1984. The connections of the Lake Freeway-North and East-West Freeway were opened to traffic in December 1985.

Table 15

PUBLIC TRANSIT OPERATING SUBSIDIES WITHIN THE REGION: 1987-1988

Area	Public Transit Operating Assistance (dollars)							
	1987 Actual				1988 Estimated			
	Federal	State	Local	Total	Federal	State	Local	Total
Urbanized Areas								
Kenosha								
City of Kenosha	628,400	703,300	112,500	1,444,200	566,800	770,100	252,000	1,588,900
Milwaukee								
Milwaukee County	5,759,500	23,523,100	3,912,200	33,194,800	5,273,800	27,241,900	9,476,700	41,992,400
Waukesha County	226,900	372,400	42,700	642,000	183,300	459,000	285,100	927,400
City of Waukesha	226,900	355,300	212,100	794,300	183,300	392,500	299,500	875,300
Subtotal	6,213,300	24,250,800	4,167,000	34,631,100	5,640,400	28,093,400	10,061,300	43,795,100
Racine								
City of Racine—								
Local Bus	1,121,600	1,141,600	78,600	2,341,800	1,133,500	1,173,100	0	2,306,600
City of Racine—								
Commuter Bus	0	166,600[a]	32,000[a]	198,600[a]	0	187,900	98,300	286,200
Subtotal	1,121,600	1,308,200	110,600	2,540,400	1,133,500	1,361,000	98,300	2,592,800
Urbanized Area Subtotal	7,963,300	26,262,300	4,390,100	38,615,700	7,340,700	30,224,500	10,411,600	47,976,800
Nonurbanized Areas								
City of Hartford	47,500[a]	42,600[a]	4,900[a]	95,000[a]	49,800	48,600	15,100	113,500
City of Whitewater	4,800	28,700	0	33,500	21,300	35,500	0	56,800
Subtotal	52,300	71,300	4,900	128,500	71,100	84,100	15,100	170,300
Nonurbanized Area Total	8,015,600	26,333,600	4,395,000	38,744,200	7,411,800	30,308,600	10,426,700	48,147,100

Area	Operating Subsidy per Ride (cents)							
	1987 Actual				1988 Estimated			
	Federal	State	Local	Total	Federal	State	Local	Total
Urbanized Areas								
Kenosha								
City of Kenosha	57	64	10	131	48	65	21	134
Milwaukee								
Milwaukee County	12	49	8	69	11	56	19	86
Waukesha County	85	140	16	241	68	169	105	342
City of Waukesha	65	102	61	228	49	106	81	236
Average	13	50	9	72	11	57	20	88
Racine								
City of Racine—								
Local Bus	49	50	3	102	54	56	0	110
City of Racine—								
Commuter Bus	0	222[a]	43[a]	265[a]	0	264	138	402
Average	48	56	5	109	52	63	5	120
Nonurbanized Areas								
City of Hartford	383	344	40	767	405	395	123	923
City of Whitewater	13[a]	75[a]	0[a]	88[a]	50	83	0	133
Nonurbanized Area Average	103	141	10	254	129	153	27	309

[a] *Estimated.*

Figure 58

MASS TRANSIT OPERATING SUBSIDIES IN THE KENOSHA URBANIZED AREA: 1975-1988

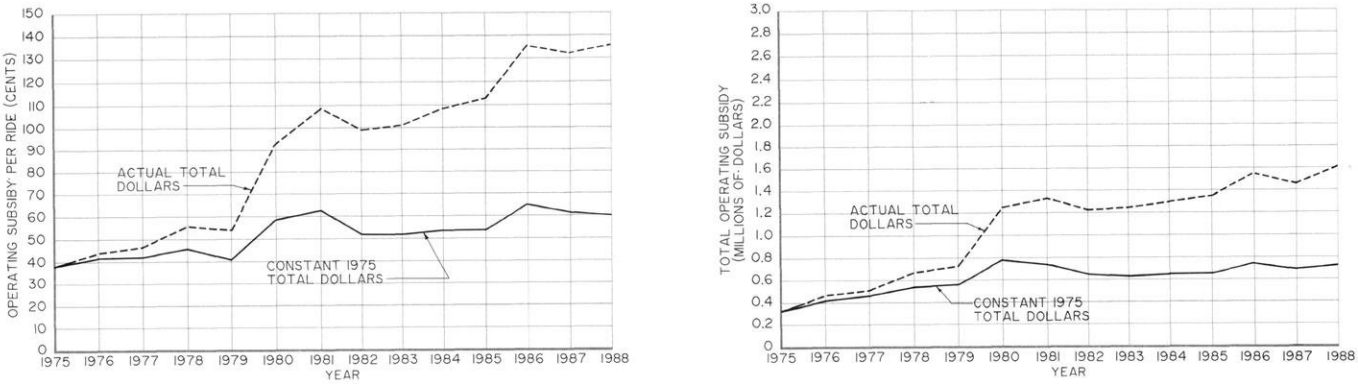
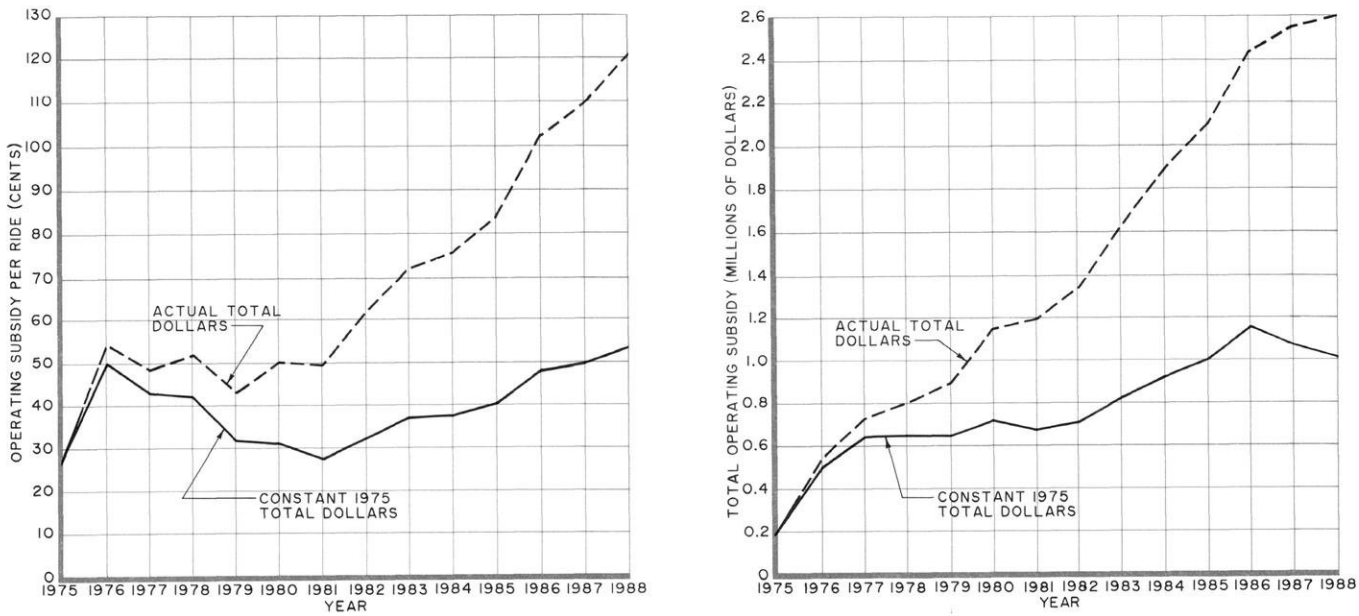


Figure 59

MASS TRANSIT OPERATING SUBSIDIES IN THE RACINE URBANIZED AREA: 1975-1988

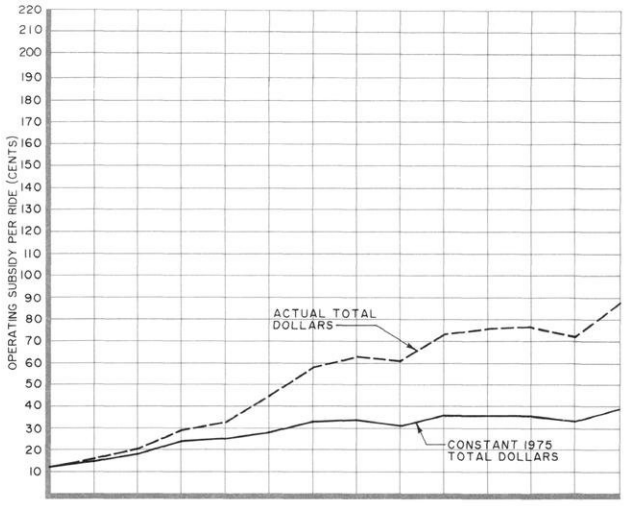


In March 1985, the Commission further amended the plan to incorporate recommended changes in the Stadium Freeway-South corridor. These changes consist of the deletion from the plan of the Stadium Freeway-South from W. National Avenue to the Airport Freeway and the addition of a freeway "stub end" improvement at W. National Avenue, consisting of a new at-grade intersection directly connecting to S. 43rd Street. From that intersection, S. 43rd Street would be improved to a divided boulevard section south to W. Lincoln Avenue. These Stadium Freeway-South improvements are more fully described in the 1984 Annual Report, and were opened to traffic late in 1988.

On March 3, 1986, the Commission created a 28-member Task Force to seek a community-based

Figure 60

MASS TRANSIT OPERATING SUBSIDIES IN THE MILWAUKEE URBANIZED AREA: 1975-1988



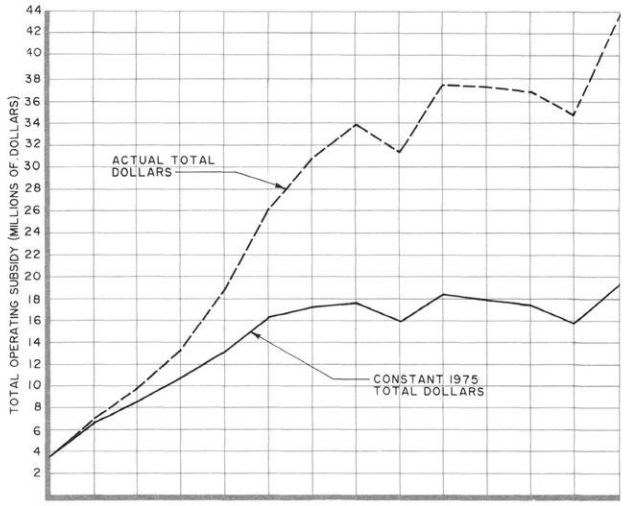


Figure 61

MASS TRANSIT OPERATING SUBSIDIES IN THE CITY OF HARTFORD: 1982-1988

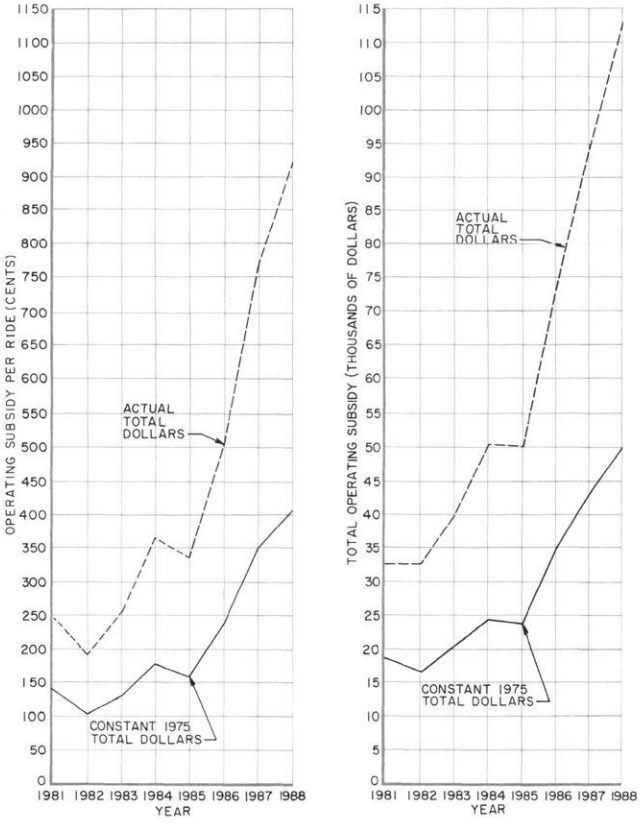


Figure 62

MASS TRANSIT OPERATING SUBSIDIES IN THE CITY OF WHITEWATER: 1986-1988

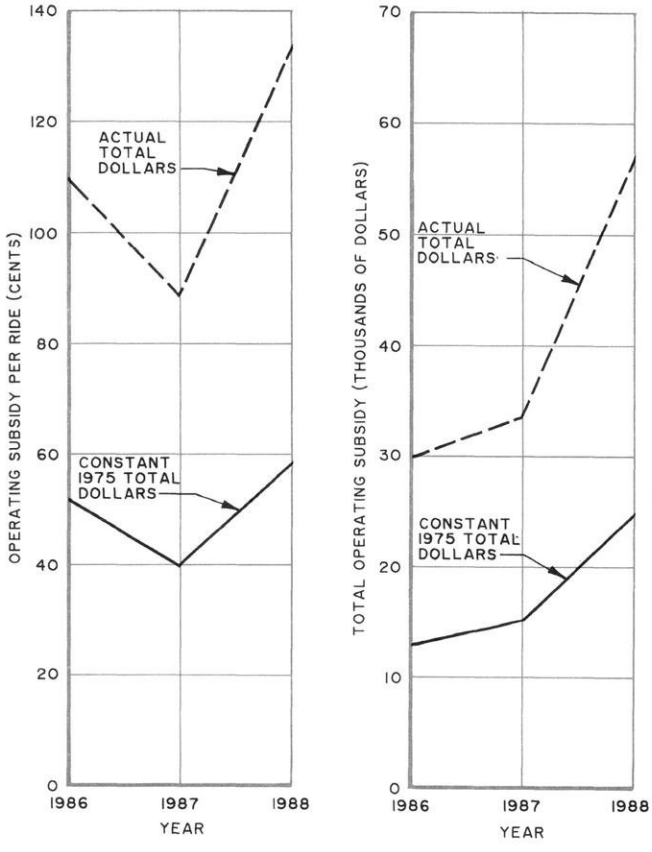


Table 16

USE OF PARKING SUPPLY AT CARPOOL PARKING LOTS: FOURTH QUARTER 1988

Location	Available Parking Spaces	Autos Parked on an Average Weekday Fourth Quarter 1987	Percent of Spaces Used
Ozaukee County			
IH 43 and STH 57 (Saukville)	100	14	14
IH 43 and CTH C (Grafton)	50	23	46
STH 57 and STH 84 (Fredonia)	20	4	10
Washington County			
USH 41 and CTH Y (Germantown)	100	18	18
STH 60 and CTH P (Jackson)	30	--[a]	--[a]
Waukesha County			
STH 16 and CTH C (Nashotah)	50	9	18
STH 16 and STH 83 (Chenequa)	65	8	12
IH 94 and STH 67 (Oconomowoc)	80	29	36
STH 16 and CTH P (Oconomowoc)	40	15	37
IH 94 and CTH CC (Delafield)	30	20	67
IH 94 and CTH G (Pewaukee)	100	10	10
IH 94 and STH 164 (Pewaukee)	80	35	44
IH 43 and STH 83 (Mukwonago)	95	41	43
IH 43 and STH 164 (Big Bend)	100	32	32
IH 43 and CTH Y (New Berlin)	60	16	27
IH 43 and CTH O (New Berlin)	200	28	14
USH 41 and Pilgrim Road (Menomonee Falls)	70	59	84
Total	1,270	361	28

[a]*Data not available.*

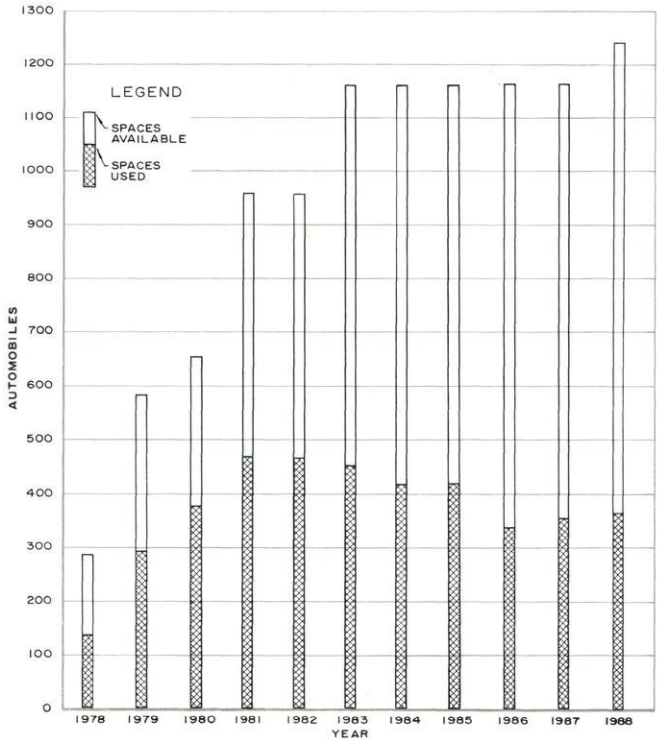
consensus as to how best to resolve the growing costly and disruptive traffic problems at the south end of the Daniel Webster Hoan Memorial Bridge, while, at the same time, preserving community values in the Bay View area and encouraging the sound development and redevelopment of the St. Francis, Cudahy, and South Milwaukee areas. The Task Force was created at the request of Commissioner Harout O. Sanasarian, Milwaukee County Board Supervisor, in response to a request from concerned citizen leaders and elected officials.

In December 1986, the Hoan Bridge South Task Force, after review of alternatives and their estimated impacts, acted to recommend construction of a four-lane arterial connection from the southern end of the Hoan Bridge to and along the Chicago & North Western Railway right-of-way to a connection with S. Pennsylvania Avenue at E. Layton Avenue. The new facility as proposed by the Task Force would be developed with special attention to aesthetics, including extensive plantings of trees and shrubs and the use of stone facings on structures and retaining walls.

The final environmental impact statement for the proposed facility was completed in the fall of 1987 by the Wisconsin Department of Transportation. Construction is set to begin in 1990, and the facility is anticipated to be completed and open to traffic in 1994. The work of the Task Force and its recommendations are presented in SEWRPC Memorandum Report No. 6, Report of the Hoan Bridge South Task Force.

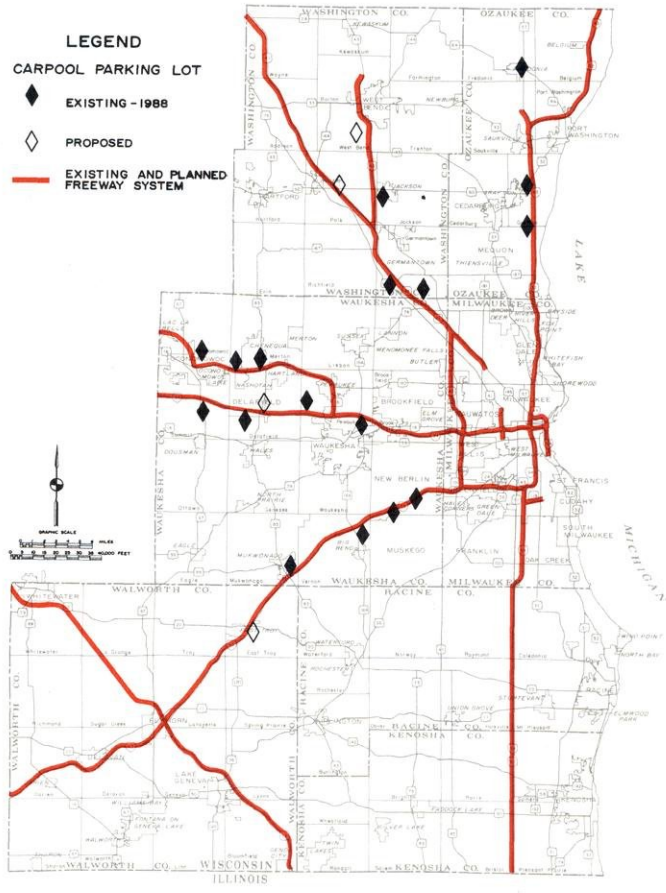
Figure 63

CARPOOL PARKING LOT USE: 1978-1988



Map 10

EXISTING 1988 AND PROPOSED CARPOOL PARKING LOTS



Racine County Jurisdictional Highway System Plan Update

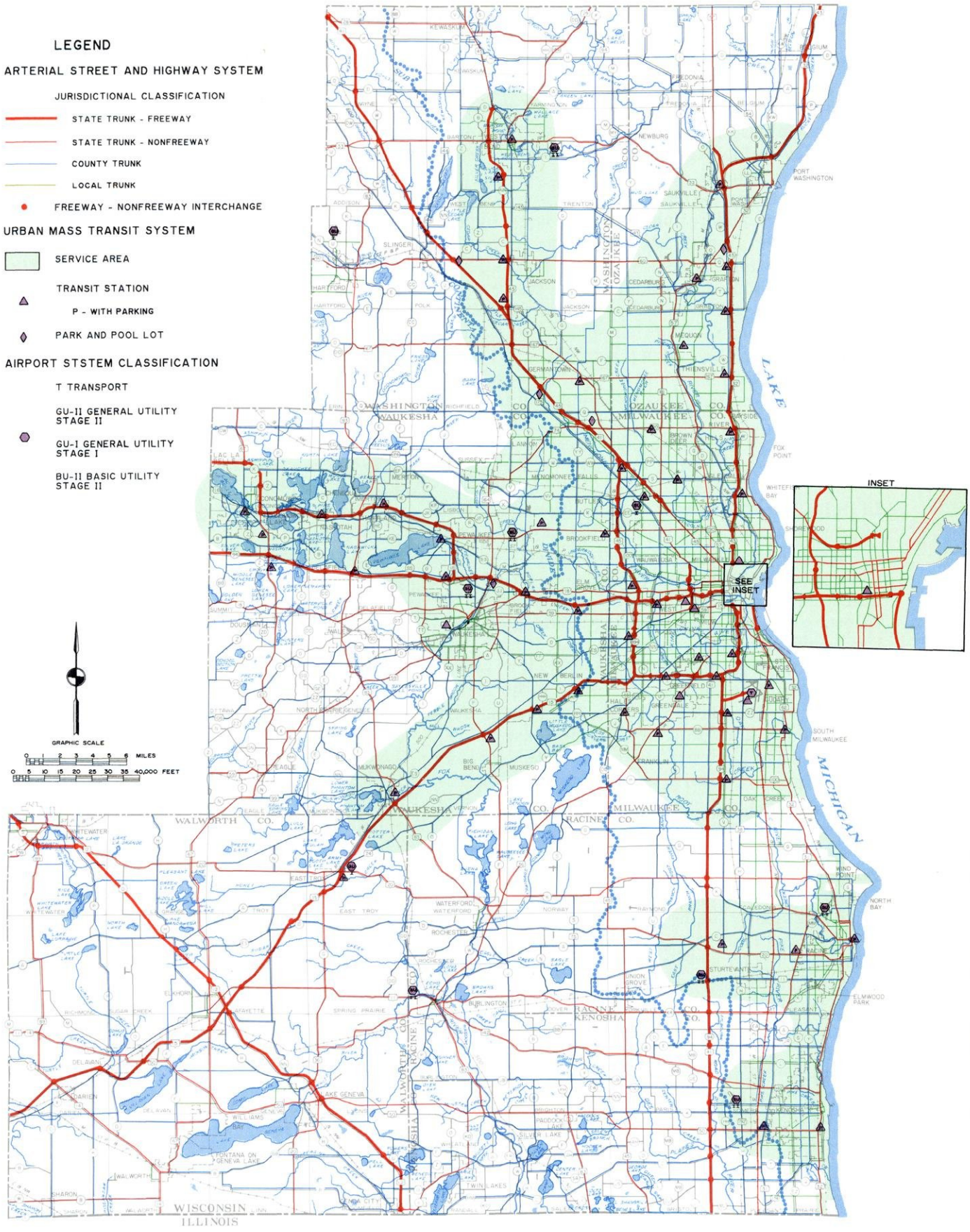
On August 27, 1985, the Racine County Board requested the Commission to conduct a study of the need for highway improvements in eastern Racine County. This area of the County was in 1966 proposed to be served by a freeway loop. In 1978, this freeway loop was removed from the regional transportation system plan and replaced with an arterial loop. Of the proposed arterial improvements comprising the loop, only the widening of STH 31 to six lanes between STH 11 and CTH MM has been implemented, having been completed from STH 11 to STH 20 in 1975, and from STH 20 to CTH MM in 1982. The Racine County Board requested the study because no action was being taken to implement the remainder of the arterial loop improvements, and yet major land use developments that were to have been served by this arterial loop were already in place or underway.

The requested study investigated existing and probable future transportation needs in eastern Racine County, and, more specifically, in the area bounded by the proposed arterial loop. A grid system of arterial street improvements was recommended to resolve existing and probable future traffic problems in the eastern Racine County study area. This study and its recommendations are documented in SEWRPC Memorandum Report No. 9, An Arterial Highway System Plan for Eastern Racine County. The study report was approved by the Racine County Public Works Committee in February 1987.

The Commission, also at the request of Racine County, has subsequently initiated the task of updating the Racine County jurisdictional highway system plan to take into account the new arterial street recommendations in eastern Racine County which differ from the adopted long-range plan.

Map 11

REGIONAL TRANSPORTATION SYSTEM PLAN FOR THE SOUTHEASTERN WISCONSIN REGION: 2000



The Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Racine County met once in 1988 to review the adopted Racine County jurisdictional highway system plan, the actions which have been taken to date to implement the plan, and the proposed changes to the plan in eastern Racine County, as well as to identify other amendments to the plan which should be considered. Among the amendments suggested by the Advisory Committee for consideration was an outer bypass facility in the Burlington area. Also, as part of this jurisdictional highway system plan update, the Commission conducted a special study at the request of Racine County of alternative alignments for the extension of Three Mile Road between Green Bay Road and STH 31. It is anticipated that the update of the jurisdictional highway system plan will be completed in 1989.

Washington County Jurisdictional Highway System Plan Update

In July 1987, the Mayor of the City of Hartford approached the Commission with a request that the Washington County Jurisdictional Planning Committee reexamine the arterial street and highway needs of the County, particularly with respect to the need for additional arterial capacity in the western portion of the County. In making the request, the Mayor pointed to recent events that have led to the creation of a new large industrial park on the west side of the City of Hartford, and noted that there was a perceived need in the Hartford community for better access from that park to the regional freeway system and, in particular, to the planned USH 41 freeway east of Hartford. In response, the Commission indicated that it would reconvene the Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Washington County; conduct whatever study efforts may be necessary to address the Hartford area issue raised by the Mayor, as well as other needs that may be perceived throughout Washington County; and amend the county jurisdictional highway system plan as may be necessary.

The Advisory Committee met once in 1988 to review the adopted Washington County jurisdictional highway system plan and the actions which have been taken to date to implement the plan, and to identify potential amendments to the plan, including those in the City of Hartford, which should be considered. It is anticipated that the update of the jurisdictional highway system plan will be completed in 1989.

Blue Mound Road Corridor

In August 1986, the City of Brookfield and the Wisconsin Department of Transportation asked the Commission to prepare updated land use and transportation system plans for the Blue Mound Road corridor. The plans were requested because rapid changes in land development within the corridor were perceived as creating massive traffic congestion within the corridor and a need for extensive roadway improvements beyond those currently planned. The plan preparation effort was also needed to assist the City in considering alternative land use plans for a portion of the corridor, and to assist the Department of Transportation in considering the need for additional interchanges on IH 94.

The transportation system plan identified those streets and highways in the corridor that are proposed to function as arterials in the year 2010, and that will therefore have as a primary function the carrying of traffic within and through the corridor. The plan, based upon a land use plan also prepared for the design year 2010, identified all improvements to the arterial street system needed to meet current and probable future needs in the design year 2010.

In December 1987 the Commission staff and advisory committee established to guide the study recommended a transportation system plan for the Blue Mound Road corridor, including required new streets and street extensions; required street widenings to provide additional traffic lanes; required freeway improvements, including an additional freeway interchange at Calhoun Road with the surface arterial street system; and the jurisdictional classification for each arterial street and highway in the Blue Mound Road corridor. Those recommendations are documented in SEWRPC Community Assistance Planning Report No. 151, A Transportation System Plan for the Blue Mound Road (USH 18) Corridor.

Milwaukee Northwest Corridor Rapid Transit Study

In 1988, work was completed on the second phase of the Milwaukee northwest corridor rapid transit study. The first phase of this study was

completed in 1982 and documented in SEWRPC Planning Report No. 33, A Primary Transit System Plan for the Milwaukee Area. One of the primary recommendations of that study was for Milwaukee County to consider further the possible construction of a light rail transit line in the northwest corridor of Milwaukee County. At the request of the Milwaukee County Executive and Milwaukee County Board, the Commission prepared a prospectus setting forth the general scope of the necessary detailed facility planning and preliminary engineering work attendant to this matter. The second phase of the study would provide a comprehensive comparison of the benefits and costs of alternative light rail and express bus service in the Milwaukee northwest corridor, generally defined as extending from the Milwaukee central business district north and west to the Northridge Shopping Center. The study would also include a detailed assessment of the environmental, social, and economic development impacts attendant to the basic light rail and express bus alternatives.

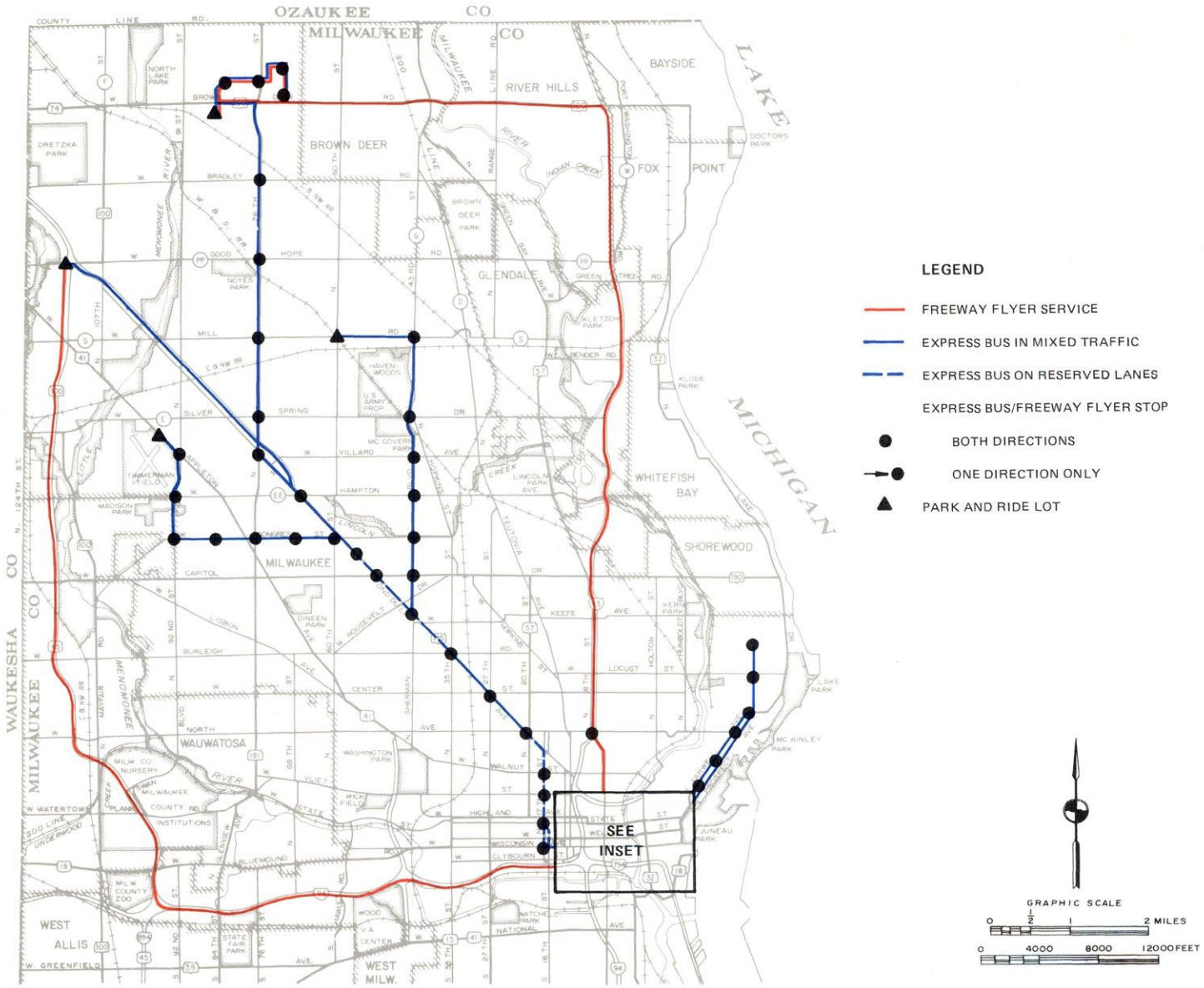
Work on the second phase of the Milwaukee northwest corridor rapid transit study began in September 1984, after funds were made available by the federal Urban Mass Transportation Administration, which provided $713,800, or 80 percent, toward the cost of the study; and by the Wisconsin Department of Transportation and Milwaukee County, which equally shared the remaining $178,450, or 20 percent, of the study cost. A consultant team headed by the firm of Parsons, Brinckerhoff, Quade & Douglas, Inc.—a national engineering firm with experience in both bus and rail systems development—was retained to assist the Commission staff in the conduct of the study. The study was guided by a 25-member advisory committee appointed by the Milwaukee County Executive whose membership included citizens, representatives from the business and labor communities, and elected and appointed officials of federal, state, and local units and agencies of government.

The findings and recommendations of the study are presented in the two major reports prepared under the study which were published during 1988. The first of these reports was published as SEWRPC Community Assistance Planning Report No. 150, A Rapid Transit Facility Plan for the Milwaukee Northwest Corridor. This report documents the findings and recommendations of the study with regard to the preferred rapid transit alternative for the Milwaukee northwest corridor, as recommended by the study advisory committee. In this respect, the advisory committee acted unanimously to adopt the recommendations set forth in SEWRPC Community Assistance Planning Report No. 150 on December 22, 1986, identifying as the "best" express bus alternative an express bus line to be operated over W. Fond du Lac Avenue, and as the "best" light rail alternative, a light rail line to be operated over the N. 33rd Street railway right-of-way. The best express bus and light rail alternatives are shown on Maps 12 and 13, respectively. The advisory committee did not make a recommendation concerning which alternative should be implemented, determining that such a decision should be made cooperatively by the elected officials of Milwaukee County, the City of Milwaukee, and the State of Wisconsin.

The second major study report was prepared by the firm of Parsons, Brinckerhoff, Quade & Douglas, Inc., and is entitled, Milwaukee Northwest Corridor Rapid Transit Study Environmental Assessment of Alternatives. This report documents the findings of an assessment of the potential environmental impacts and the costs and benefits broadly defined of the alternatives considered. The two major study reports are based upon findings presented in a series of 17 technical reports which document the methodologies followed in critical analysis areas along with the results of the analyses conducted during the study. Sixteen of these reports were also prepared by the firm Parsons, Brinckerhoff, Quade & Douglas, Inc., and include Milwaukee Northwest Corridor Rapid Transit Study Reports No. 1, Detailed Study Design; No. 3, Operating and Maintenance Cost Estimation and Analysis Procedures; No. 4, Capital Cost Estimation and Analysis Procedures; No. 5, Financial Analysis Procedures; No. 6, Alternative Plan Evaluation Methodology; No. 7, Environmental Analysis Methodologies; No. 8, Public Involvement Procedures; No. 9, Land Development and Redevelopment Assessment Procedures; No. 10, Description of Alternatives; No. 11, Design Standards and Criteria; No. 12, Preliminary Operating Plans for the Alternatives; No. 13, Final Alternatives and Operating Plans; No. 14, Operating and Maintenance Cost Estimates; No. 15, Capital Cost Estimates; No. 16, Financial Plans; and No. 17,

Map 12

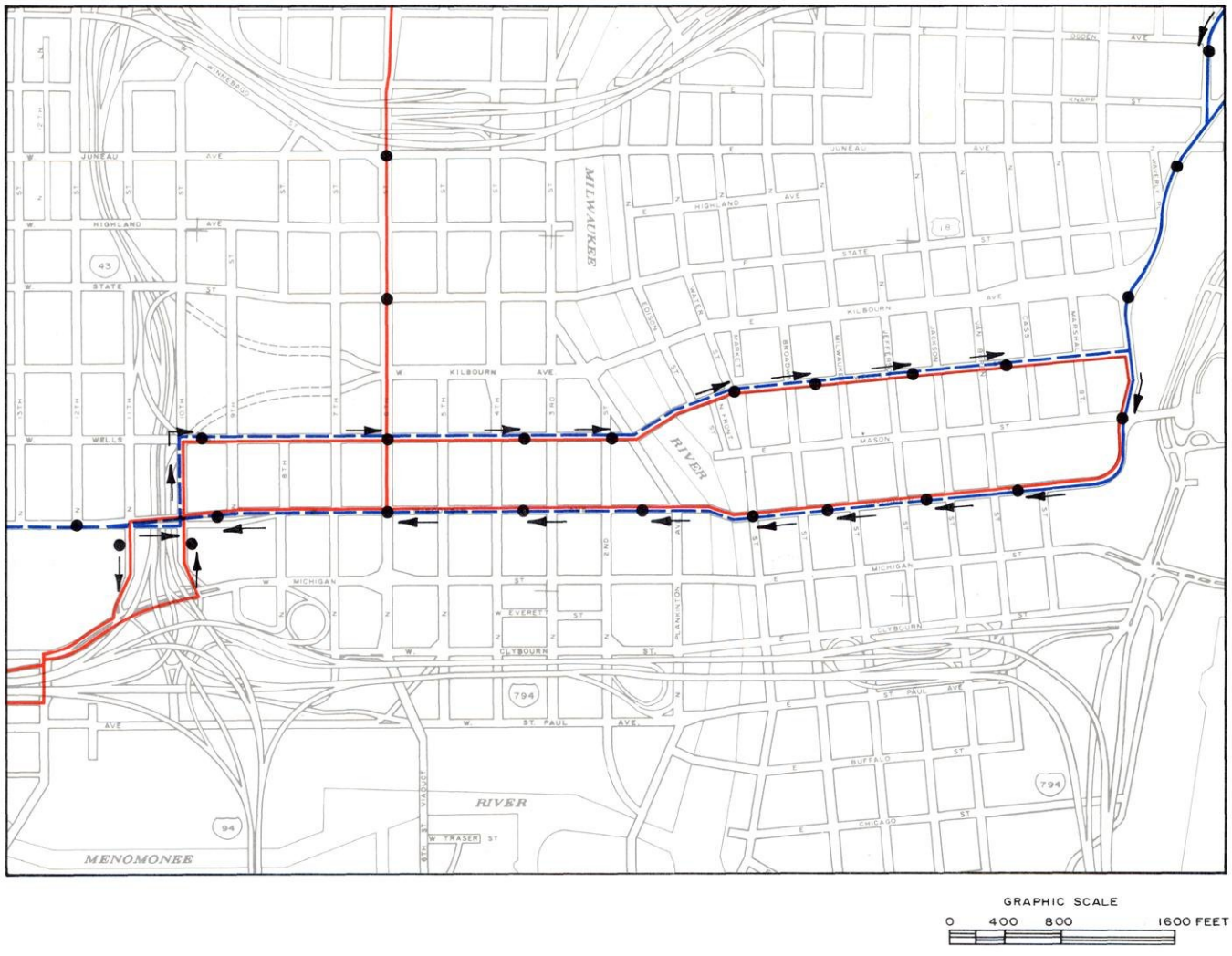
RECOMMENDED EXPRESS BUS PLAN



Land Development Potential Analysis. The Regional Planning Commission staff prepared Milwaukee Northwest Corridor Rapid Transit Study Report No. 2, Travel Simulation Models. All 17 technical reports were also published during 1988.

The Milwaukee County Board of Supervisors acted on October 1, 1987, to adopt the Commission's planning report, thus endorsing the recommended best express bus and light rail alternatives; and to specifically endorse the implementation of the best express bus alternative at the present time. During 1988 Milwaukee County followed up on this action by preparing a grant application for $25.5 million in federal transit capital assistance for use by Milwaukee County in implementing the recommendations for providing improved express bus service as proposed under the best express bus alternative. The federal funds which Milwaukee County applied for were to be used to cover 80 percent of the costs of several projects, including planning and design of traditional, as well as

Map 12 Inset

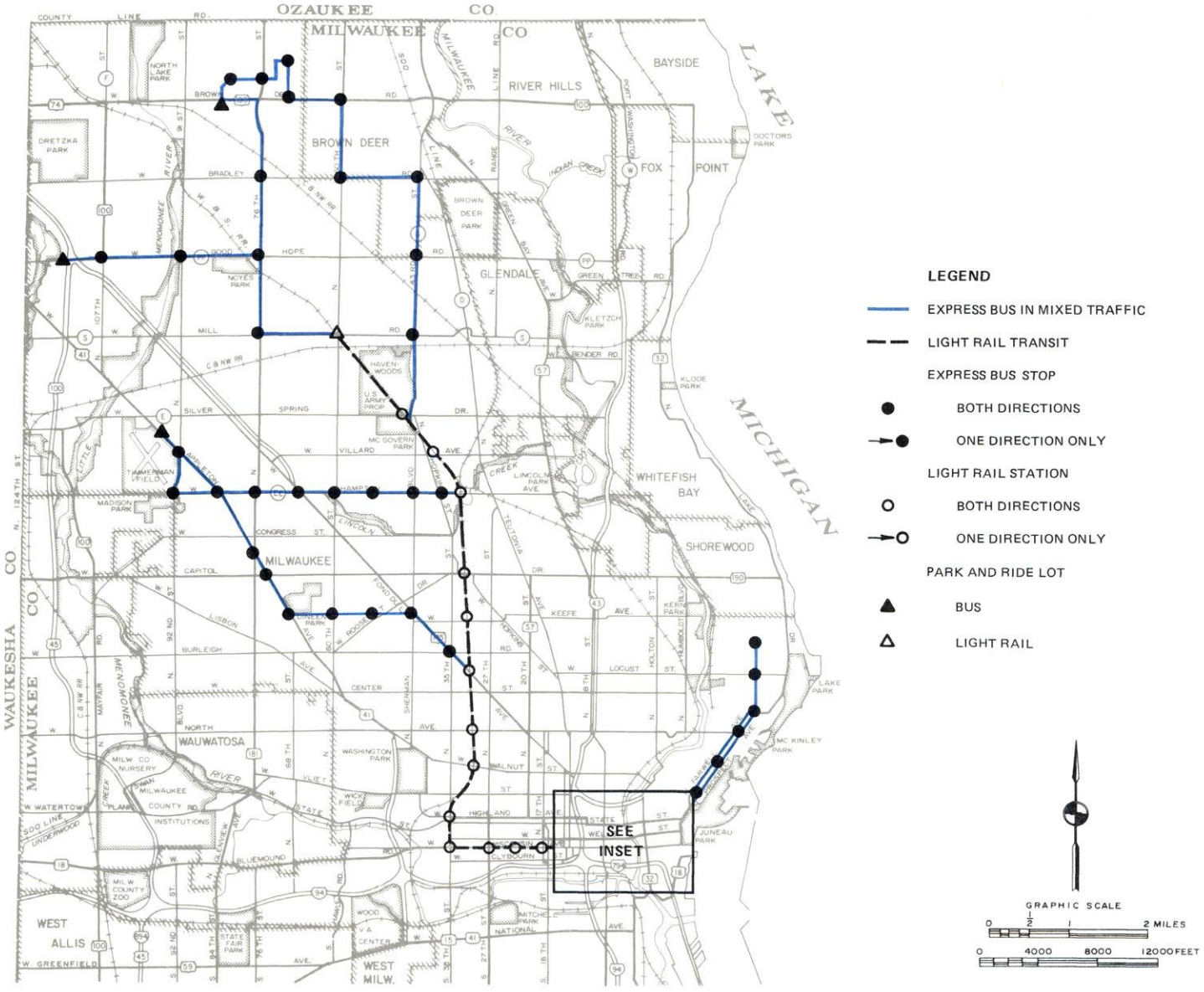


reverse, commuter express bus services; the development of three outlying transit centers, including a freeway flyer park-ride lot near the Northridge Shopping Center, an express bus transfer center near the Capitol Court Shopping Center, and an express bus shuttle center near N. 60th Street and W. Mill Road; the purchase of new standard 40-foot transit buses to be used in line-haul express service, as well as small transit vehicles to be used in shuttling reverse-commute transit riders to outlying employment centers in the far northwest corner of the County; the design and construction of bus flow improvements on W. Fond du Lac Avenue and in the City of Milwaukee central business district; the development of a bus marshalling facility and downtown transit center in the Milwaukee central business district; and the installation of bus passenger shelters and bus stop signs along the proposed express bus routes.

The grant application was approved by the U. S. Department of Transportation, Urban Mass Transportation Administration, in November

Map 13

LIGHT RAIL AND FEEDER EXPRESS BUS SERVICE UNDER RECOMMENDED LIGHT RAIL PLAN

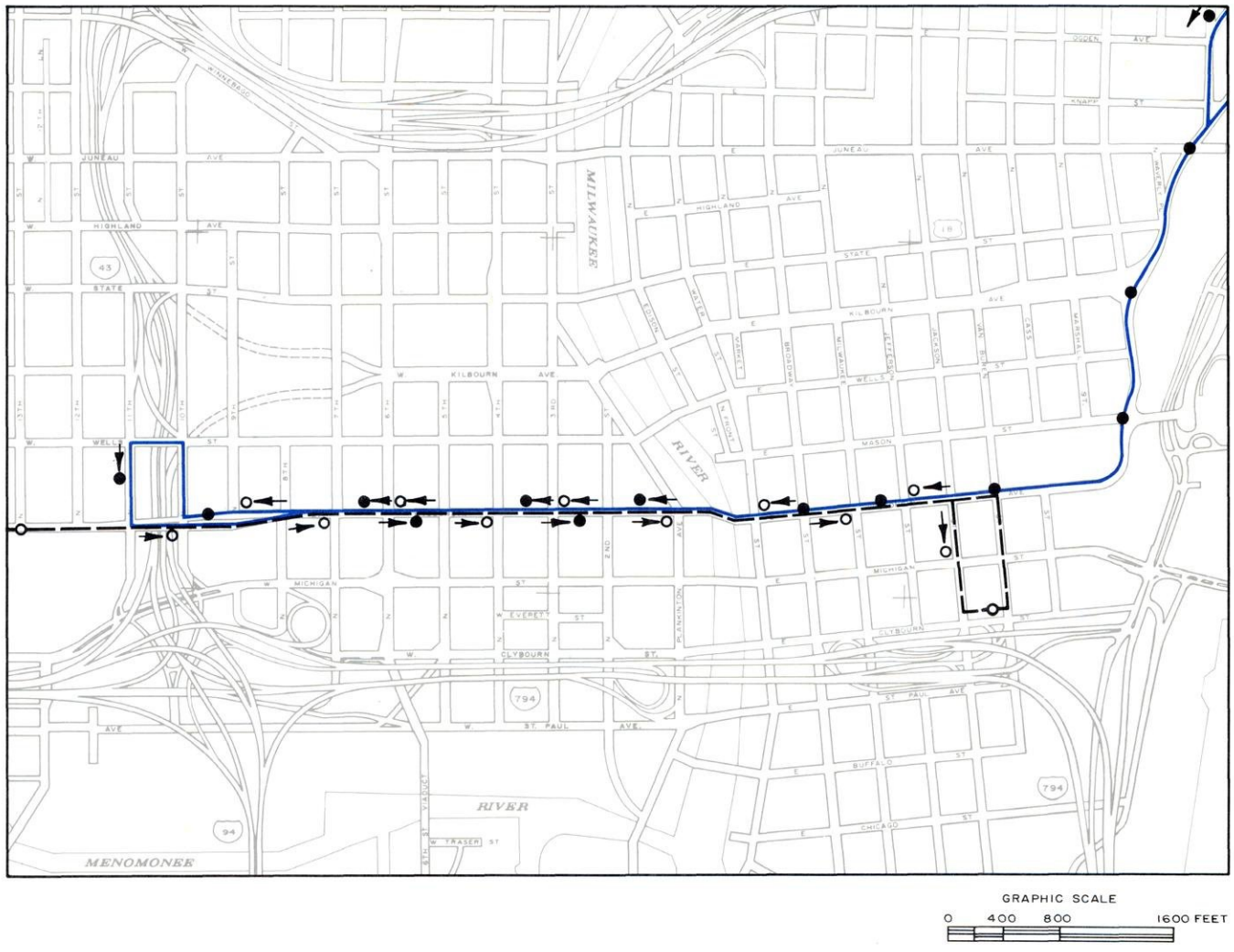


1988. With the proposed capital projects, express bus service in the northwest corridor of Milwaukee County will be greatly improved to provide travel in both the peak and reverse commuter directions. The expanded and more frequent express bus service will facilitate travel by central city residents to both the central business district and outlying employment and shopping centers in the far northwest corner of the County, as well as trips of county residents from outlying areas of the County to downtown Milwaukee.

TRANSPORTATION SYSTEMS MANAGEMENT PLANNING

During 1988, the Commission completed a number of transportation systems management planning efforts for communities in southeastern Wisconsin. These included a traffic engineering study of a segment of Milwaukee Avenue—STH 36—in the City of Burlington; a traffic management and control plan for the Village of Whitefish Bay; and a plan to address through traffic problems in the Village of West

Map 13 Inset



Milwaukee. In addition, the Commission conducted other work efforts attendant to ridesharing, transit system short-range planning, and the completion of the freeway traffic management plan for the Milwaukee area.

Traffic Engineering Study of Milwaukee Avenue—STH 36—Between the Central Business District and the Northern Corporate Limits of the City of Burlington

In October 1987 the City of Burlington requested the Commission staff to conduct a traffic engineering study of the segment of Milwaukee Avenue—STH 36—between the fringe of the City of Burlington central business district at Commerce Street and the northern corporate limits of the City. The study, including analysis of alternative improvements and recommendations, is documented in SEWRPC Memorandum Report No. 36, Traffic Engineering Study of Milwaukee Avenue (STH 36) Between the Central Business District and the Northern Corporate Limits of the City of Burlington.

Over the past several years, local elected officials and residents of the City of Burlington have become increasingly concerned about the traffic congestion and safety problems being experienced on this arterial facility, particularly at the approaches to streets and driveways which intersect this segment of STH 36. Plans for the future development of the City and current proposals for such development, includ-

ing the Bear Meadows Subdivision, indicate that these traffic problems may be expected to increase in the future.

The study presented the findings and recommendations of the requested traffic engineering study. The report described the traffic problems that exist on this segment of STH 36; identified and evaluated alternative traffic engineering actions which may be expected to abate these traffic problems; and recommended traffic engineering measures for implementation which may be expected to alleviate existing traffic problems. The traffic engineering actions recommended to alleviate the traffic congestion and accidents included:

1. Prohibiting parking on the entire segment of Milwaukee Avenue under study, with the option of allowing parking at all times at the existing 20 spaces between Pine Street-Commerce Street and 250 feet south of Bridge Street, and allowing parking at selected midblock spaces between Bridge Street and Wegge Road on weekends, and on weekdays from 6:00 p.m. to 6:00 a.m.;

2. Installing actuated traffic signals and exclusive southbound left-turn-lane pavement markings at the intersection of Milwaukee Avenue and Bridge Street;

3. Installing traffic signals and pavement markings at the intersection of Milwaukee Avenue and Grove Street to provide one shared northbound left-turn and through lane, one northbound through lane, and two southbound through lanes;

4. Converting the two existing Fox River Plaza two-way driveways to a pair of one-way driveways, installing pavement markings to provide an exclusive left-turn lane into the Fox River Plaza, installing signing and visual cues in advance of the Fox River Plaza driveways, and installing a semi-actuated traffic signal at the southern Fox River Plaza driveway; and

5. Interconnecting the traffic signals at Bridge Street and Grove Street on Milwaukee Avenue.

These short-range traffic engineering actions were designed to abate existing traffic problems and maximize efficiency and safety without resorting to capital-intensive construction. However, it must be recognized that there is a limit to the improvement in the level of service that can be obtained through the implementation of low-cost traffic engineering actions. Ultimately, when the limits of the capacity and safety enhancements provided by traffic engineering actions are reached, it becomes necessary to consider the implementation of more capital-intensive construction or reconstruction alternatives to meet expected increases in travel demand.

The City of Burlington is conducting the necessary engineering design to implement the traffic signal and parking improvements, and construction is scheduled for late 1989.

Traffic Management and Control Plan for the Village of Whitefish Bay

During 1988, the Commission completed a comprehensive traffic management study for the Village of Whitefish Bay. The study was intended to identify traffic problems in the Village and to recommend specific actions to abate those problems. The study was also intended to establish guidelines to assist village officials in considering future requests for the installation of traffic control devices. An advisory committee, consisting of public officials and concerned citizens, was created by the Village to assist the Commission in the conduct of the study. The study was completed in July 1988 with the publication of SEWRPC Community Assistance Planning Report No. 153, Traffic Management and Control Plan for the Village of Whitefish Bay, which sets forth the findings and recommendations of the study.

The primary purpose of the study was to develop a traffic management plan for the Village of Whitefish Bay, a plan directed at providing for the more efficient and safer operation of the existing arterial street and highway system. The plan emphasizes short-range, low-capital traffic management actions such as modifications in signal timing, signing, pavement markings, and isolated roadway improvement projects. Significantly, the plan also recommends traffic management control criteria to be used by Village of Whitefish Bay officials in evaluating requests for installation of, or changes in existing, traffic control measures and devices; and to ensure uniformity in the placement and installation of traffic control measures throughout the Village.

The study inventoried the physical characteristics and operating conditions of the existing arterial street and highway system; developed traffic management control criteria; identified existing arterial street and highway system problems; designed and evaluated alternative traffic management actions to alleviate the identified problems; and recommended and prioritized a set of coordinated traffic management actions to alleviate the identified problems. The Village of Whitefish Bay traffic management plan recommends traffic management actions to solve or mitigate traffic problems at 68 locations in the study area and sets forth an implementation priority, as shown in Table 17. The majority of the alternative traffic management actions recommended would have a low capital cost. The total investment in 1988 dollars required to implement those actions is estimated at $132,525, with the cost of individual actions ranging from $50 to remove a Yield sign and install a Stop sign at the westbound approach to the intersection of W. Chateau Place and N. Lydell Avenue, to $14,000 for the construction of a sidewalk on the east side of N. Lake Drive between E. School Road and E. Belle Avenue. Table 17 also sets forth the governmental agency or agencies responsible for implementation of each recommended traffic management action. Of the 71 traffic management actions recommended in the plan, the Wisconsin Department of Transportation is responsible for the implementation of two actions, the Village of Whitefish Bay is responsible for 66 actions, and the City of Glendale is responsible for three actions.

On March 6, 1989, the Village of Whitefish Bay formally adopted the traffic management and control plan. The implementation of the plan should provide the direction necessary to ensure that future transportation needs are more readily and economically met in the Village.

A Plan for the Abatement of Through Traffic Problems in the Village of West Milwaukee at the Terminus of the Stadium Freeway-South

In November 1987, the Village of West Milwaukee requested that the Commission conduct a study of the through traffic problem that might remain in the Village following construction of the new S. 43rd Street arterial connection to the Stadium Freeway-South—USH 41. Prior to the construction of the S. 43rd Street arterial, it was estimated that the through traffic on local streets in the Village near the freeway stub end was 4,000 vehicles per average weekday. It was estimated that the arterial improvements would reduce such through traffic to about 2,500 vehicles per average weekday. The study, including the analysis of alternative improvements and recommendations, is documented in SEWRPC Memorandum Report No. 29, A Plan for the Abatement of Through Traffic Problems in the Village of West Milwaukee. Since the construction of the Stadium Freeway-South—USH 41—stub end at W. National Avenue in 1955, certain local land access streets in the Village of West Milwaukee have been used by through traffic as a connection between the freeway stub end and other arterials, such as W. Beloit Road. The study was to identify the through traffic problems on local land access streets in the Village and present and evaluate alternative means of abating the residual through traffic problems.

Seven different alternative actions to abate the movement of through traffic over local land access streets were considered, in addition to a "do nothing" alternative which would maintain the existing street system in the study area after the construction of the new S. 43rd Street arterial.

It was recommended that the Village of West Milwaukee pursue the alternative providing for the development of a two-way service road paralleling W. National Avenue. While this alternative would have the highest capital cost of all the alternatives considered—$1.5 million—and would require the most right-of-way acquisition, it would virtually eliminate the movement of through traffic in the area concerned, while providing minimal disruption of access to residents of the area. In addition, the alternative would improve traffic flow on W. National Avenue by separating through traffic from local traffic and curb parking, and providing an increase in the number of traffic lanes from two to four. Also, this alternative could be expected to improve access to the Clement Zablocki Veterans Administration Medical Center from W. National Avenue, as it would remove one leg from the two intersections providing principal access to the medical center, eliminate most conflicts with curb parking, and increase the number of traffic lanes on W. National Avenue from two to four.

Table 17

RECOMMENDED TRAFFIC MANAGEMENT ACTIONS AND IMPLEMENTATION PRIORITY AND RESPONSIBILITY[a]

Highest Priority for Implementation			
Problem Disruption and Location	Description of Recommended Action	Implementing Unit of Government/Agency	Estimated Cost
Through Traffic on Lakeview, Day, and Belle Avenues	Silver Spring Drive at Lydell Avenue		
	• Provide separate signal cycles by time of day	Village of Whitefish Bay Bay/City of Glendale	$ --
	• Provide two westbound intersection approach traffic lanes by prohibiting parking on north side of Silver Spring Drive 150 feet east of intersection		$ 150
	• Interconnect all traffic signals on Silver Spring Drive in Village		$10,500 total cost of interconnecting all traffic signals in Village
	• Install 12-inch signal lenses and mast arm signal heads on eastbound and westbound approaches		$ 8,400
	• Provide exclusive eastbound left-turn lane and remove eastbound left-turn arrow		$ 6,200
	Silver Spring Drive at Bay Ridge Avenue		
	• Provide separate signal cycles by time of day	Village of Whitefish Bay	$ --
	• Interconnect all traffic signals on Silver Spring Drive in Village		Included in Silver Spring Drive at Lydell Avenue
	Silver Spring Drive at Santa Monica Boulevard		
	• Provide separate signal cycles by time of day	Village of Whitefish Bay	$ --
	• Provide two traffic lanes on eastbound and westbound intersection approaches by prohibiting parking on north side of intersection 150 feet east of intersection; and on south side of intersection 150 feet west of intersection		$ 350
	• Interconnect all traffic signals on Silver Spring Drive in Village		Included in Silver Spring Drive at Lydell Avenue
	• On southbound approaches install signs prohibiting right turn on red when children are present		$ 100
	Silver Spring Drive at Lake Drive and Marlborough Drive		
	• Provide separate signal cycles by time of day	Village of Whitefish Bay/Wisconsin Department of Transportation	$ --
	• Interconnect all traffic signals on Silver Spring Drive in Village		Included in Silver Spring Drive at Lydell Avenue
	• Install "No Rignt Turn on Red When Pedestrians are Present" signs on westbound approach; and install "No Right Turn 3:00 p.m. to 6:00 p.m." sign on westbound Lake Drive at Shore Drive		$ 200
	• Install 12-inch signal lens and mast arm signal heads		$11,300
	• Install thermoplastic lane and arrow markings		$ 800
	• Install "Left Lane Must Turn Left" signs		$ 200

Table 17 (continued)

Highest Priority for Implementation			
Problem Disruption and Location	Description of Recommended Action	Implementing Unit of Government/Agency	Estimated Cost
Through Traffic on Lakeview, Day, and Belle Avenues (continued)	Bay Shore Shopping Center Area Access to and from Lydell Avenue • Work toward implementing in the long range closure of shopping center driveways on Lydell Avenue (or one of the several options to such closure)	Village of Whitefish Bay/City of Glendale/ Bay Shore Shopping Center, and Kohl's Department and Food Stores	$9,300 to $244,000 (depending on option selected)
Student/Pedestrian Safety on Belle Avenue from Santa Monica Boulevard to Berkeley Boulevard	• Prohibit schoolday parking from 7:30 a.m. to 4:30 p.m. on north side of street • Provide ongoing student education program concerning street crossing safety	Village of Whitefish Bay	$ 200 $ --
Student/Pedestrian Safety on Day Avenue from Santa Monica Boulevard to Lake Drive	• Strict, frequent enforcement of parking prohibitions and restrictions • Provide ongoing student education program concerning street crossing safety	Village of Whitefish Bay	$ 1,300 $ --
Traffic Safety on Fairmount Avenue and Lake Drive at Palisades Road	• Convert street lighting to high-pressure sodium • Install chevron alignment signs on outside of curve adjacent to northbound pavement • Install thermoplastic pavement markings with reflective beads to indicate lanes, arrows, and 20-mph speed • Install rumble strips south of curve in northbound pavement	Village of Whitefish Bay/Wisconsin Department of Transportation	$ 2,500 $ 700 $ 300 $ 1,000
Student/Pedestrian Safety on Marlborough Drive from Hampton Road to Courtland Place	• Increase area at driveway on east side of street where parking is prohibited by 10 feet to the north and 20 feet to the south • Inform parents of students through a mailing of the parking restrictions and their purpose • Enforce parking restrictions on occasional basis to assure compliance	Village of Whitefish Bay	$ 300 $ -- $ 700
Inconvenience of Truck and Bus Traffic on Local Street—Lydell Avenue from Lakeview Avenue to Silver Spring Drive	• Prohibit truck traffic on northbound Lydell Avenue, as well as on Lakeview, Day, and Belle Avenues, between Bay Ridge and Lydell Avenues • Reroute bus traffic from Lydell Avenue to route in Bay Shore Shopping Center area	Village of Whitefish Bay/City of Glendale	$ 800 $62,000

Table 17 (continued)

Medium Priority for Implementation			
Problem Disruption and Location	Description of Recommended Action	Implementing Unit of Government/Agency	Estimated Cost
Inadequate Traffic Control at Devon Street at Kent Avenue	• Replace yield sign with stop sign on northbound approach	Village of Whitefish Bay	$ 50
Inadequate Traffic Control at Devon Street at Shoreland Avenue	• Replace yield sign with stop sign on northbound approach	Village of Whitefish Bay	$ 50
Pedestrian Safety on Lake Drive from School Road to Belle Avenue	• Construct sidewalk on east side of Lake Drive	Village of Whitefish Bay	$14,000
Unnecessary Parking Restrictions on Bay Ridge Avenue from Monrovia Avenue to Montclaire Avenue	• Eliminate schoolday parking restrictions	Village of Whitefish Bay	$ 300
Lack of Compliance with Stop Sign at Montclaire Avenue at Lydell Avenue	• Install larger stop sign on northbound approach	Village of Whitefish Bay	$ 50
Inadequate Traffic Control at Birch Avenue at Shoreland Avenue	• Replace yield signs with stop signs on north- and southbound approaches[b]	Village of Whitefish Bay	$ 100
Lack of Traffic Control at Birch Avenue and Danbury Road	• Install yield sign on southbound approach[b]	Village of Whitefish Bay	$ 100
Lack of Traffic Control at Fleetwood Place at Idlewild Avenue	• Install stop sign on westbound approach[b]	Village of Whitefish Bay	$ 100
Lack of Traffic Control at Briarwood Place at Idlewild Avenue	• Install stop sign on westbound approach[b]	Village of Whitefish Bay	$ 100
Inadequate Traffic Control at Lexington Boulevard and Bay Ridge Avenue	• Replace yield signs with stop signs on east- and westbound approaches	Village of Whitefish Bay	$ 100
Lack of Traffic Control at Lakeview Avenue and Consaul Place	• Install stop sign on northbound approach[b]	Village of Whitefish Bay	$ 100

Table 17 (continued)

Medium Priority for Implementation			
Problem Disruption and Location	Description of Recommended Action	Implementing Unit of Government/Agency	Estimated Cost
Lack of Traffic Control at Lexington Boulevard at Shoreland Avenue	• Install yield sign on north- and southbound approaches[b]	Village of Whitefish Bay	$ 200
Lack of Traffic Control at Sylvan Avenue and Idlewild Avenue	• Install yield sign on westbound approach[b]	Village of Whitefish Bay	$ 100
Inadequate Sight Distance— E. Henry Clay Street from N. Kimbark Place to N. Ardmore Avenue	• Prohibit parking on north side of Henry Clay Street from Kimbark Place to 150 feet east of driveway	Village of Whitefish Bay	$ 100
Inadequate Traffic Control at Lancaster Avenue and Lydell Avenue	• Replace yield sign with stop sign on westbound approach[b]	Village of Whitefish Bay	$ 50
Lack of Traffic Control at Lancaster Avenue and Kent Avenue	• Install yield signs on north- and southbound approaches[b]	Village of Whitefish Bay	$ 200
Lack of Traffic Control at Lancaster Avenue and Shoreland Avenue	• Install yield signs on north- and southbound approaches[b]	Village of Whitefish Bay	$ 200
Lack of Traffic Control at Lancaster Avenue and Hollywood Avenue	• Install yield signs on north- and southbound approaches[b]	Village of Whitefish Bay	$ 200
Lack of Traffic Control at Lancaster Avenue and Woodruff Avenue	• Install stop signs on east- and westbound approaches[b]	Village of Whitefish Bay	$ 200
No Parking for Residents on Colfax Place Between Woodruff Avenue and Marlborough Drive Owing to Use of Parking by High School Students and Staff	• Restrict parking to two-hour duration on eastern half of each block on north side of Colfax Place	Village of Whitefish Bay	$ 800
Inadequate Traffic Control at Fairmount Avenue and Lydell Avenue	• Replace yield sign with stop sign on westbound approach[b]	Village of Whitefish Bay	$ 50
Inadequate Traffic Control at Birch Avenue and Santa Monica Boulevard	• Install larger stop signs on east- and westbound approaches • Install advance warning signs on east- and westbound approaches	Village of Whitefish Bay	$ 100 $ 200

Table 17 (continued)

Medium Priority for Implementation			
Problem Disruption and Location	Description of Recommended Action	Implementing Unit of Government/Agency	Estimated Cost
Lack of Traffic Control at Fairmount Avenue and Bay Ridge Avenue	• Install yield sign on southbound approach[b]	Village of Whitefish Bay	$ 100
Lack of Traffic Control at Fairmount Avenue and Kent Avenue	• Install yield sign on southbound approach[b]	Village of Whitefish Bay	$ 100
Lack of Traffic Control at Fairmount Avenue and Shoreland Avenue	• Install yield sign on southbound approach[b]	Village of Whitefish Bay	$ 100
Inadequate Traffic Control on Chateau Place and Lydell Avenue	• Replace yield sign with stop sign on westbound approach[b]	Village of Whitefish Bay	$ 50
Lack of Traffic Control on Chateau Place and Shorewood Avenue	• Install yield sign on northbound approach[b]	Village of Whitefish Bay	$ 100
Lack of Traffic Control at Chateau Place and Berkeley Boulevard	• Install yield signs on east- and westbound approaches[b]	Village of Whitefish Bay	$ 200
Lack of Traffic Control at Chateau Place and Elkhart Avenue	• Install yield signs on north- and southbound approaches[b]	Village of Whitefish Bay	$ 200
Lack of Traffic Control on Chateau Place and Sheffield Avenue	• Install yield sign on northbound approach[b]	Village of Whitefish Bay	$ 100
Pedestrian Safety at Hampton Road and Marlborough Drive	• Remove median islands, which are too small to protect pedestrians	Village of Whitefish Bay	$ 2,200
Lack of Traffic Control and Failure to Obey Speed Limits at Courtland Place and Sheffield Avenue	• Install yield signs on north- and southbound approaches[b] • Provide occasional enforcement of speed limits	Village of Whitefish Bay	$ 200 $ 300
Lack of Traffic Control at Cumberland Boulevard and Cramer Street	• Install stop signs on east- and westbound approaches[b]	Village of Whitefish Bay	$ 200

Table 17 (continued)

Problem Disruption and Location	Lowest Priority for Implementation		
	Description of Recommended Action	Implementing Unit of Government/Agency	Estimated Cost
Improper Traffic Control on Montclaire Avenue at Berkeley Boulevard	• Remove stop signs on east- and westbound approaches and install stop signs on north- and southbound approaches[d]	Village of Whitefish Bay	$ 350
Unnecessary Traffic Control on Monrovia Avenue and Shoreland Avenue	• Remove stop signs on north- and southbound approaches[c]	Village of Whitefish Bay	$ 150
Unnecessary Traffic Control on Montclaire Avenue Between Bay Ridge Avenue and Santa Monica Boulevard	• Remove all stop signs at Bay Ridge Avenue intersection; east- and westbound stop signs at Kent Avenue intersection; and east- and westbound stop signs at Shoreland Avenue[c]	Village of Whitefish Bay	$ 600
Unnecessary Traffic Control on Day Avenue and Shore Drive	• Remove stop sign on southbound approach[c]	Village of Whitefish Bay	$ 75
Excessive Speed in Alleys Bounded by Birch Avenue, Idlewild Avenue, Lexington Boulevard, and Santa Monica Boulevard	• Install "Speed Limit 10 MPH" signs	Village of Whitefish Bay	$ 1,000
Unnecessary Traffic Control at Lexington Boulevard and Kent Avenue	• Remove stop signs on north- and southbound approaches[c]	Village of Whitefish Bay	$ 150
Unnecessary Traffic Control at Lexington Boulevard and Diversey Avenue	• Remove stop signs on east- and westbound approaches[c]	Village of Whitefish Bay	$ 150
Unnecessary Traffic Control at Lexington Boulevard and Idlewild Avenue	• Remove stop signs on north- and southbound approaches[c]	Village of Whitefish Bay	$ 150
Improper Traffic Control at Chateau Place and Woodburn Street	• Replace stop signs on north- and southbound approaches with yield signs	Village of Whitefish Bay	$ 100

[a] *One action recommended under the study has been implemented by the Village during the course of the study. This action involved measures to improve pedestrian crossing safety along Lake Drive between Day Avenue and Belle Avenue. The measures recommended and implemented included variable message warning signs, median islands, and pavement markings.*

[b] *It is recommended that upon implementation of this action, for a period of at least three months, warning signs indicating "Stop Ahead" or "Yield Ahead" be installed 100 and 200 feet back from the appropriate intersection approaches. In addition, it is recommended that a sign indicating "Cross Traffic Does Not Stop" be installed for a period of three months with each new stop sign, where appropriate.*

[c] *It is recommended that upon implementation of this action, for a period of at least three months, warning signs be installed at each intersection approach and 100 and 200 feet back from each intersection approach, as appropriate, indicating "Cross Traffic Does Not Stop."*

[d] *It is recommended that upon implementation of this action, for a period of at least three months, warning signs indicating "Stop Ahead" be installed 100 and 200 feet back from the north- and southbound intersection approaches; and that signs indicating "Cross Traffic Does Not Stop" be installed along with the stop signs.*

It was also recommended that the Village pursue implementation of the alternative that would improve the intersection of W. Greenfield Avenue and W. Beloit Road to encourage through traffic to utilize arterial streets. This alternative would provide a free-flowing northeastbound-to-eastbound right-turn lane at the intersection, as well as an exclusive westbound-to-southwestbound left-turn lane and left-turn signalization arrow. Also, parking would be prohibited in the peak direction and peak period on W. Greenfield Avenue between W. Beloit Road and S. 43rd Street. The estimated cost of this alternative is $160,000.

Freeway Traffic Management Plan for Milwaukee Area

A plan for freeway traffic management in the Milwaukee area was completed during 1988 by the Commission in cooperation with the Wisconsin Department of Transportation. The findings and recommendations of the plan are documented in SEWRPC Planning Report No. 39, A Freeway Traffic Management System Plan for the Milwaukee Area. Implementation of the plan may be expected to provide for the more efficient movement of traffic on the freeway and related arterial street and highway system of the greater Milwaukee area through the reduction of traffic congestion.

Freeway traffic congestion entails reduced travel speed and increased and unpredictable travel times, which result in increased operating costs, accidents, energy consumption, and air pollutant emissions, as well as personal aggravation and stress. Freeway congestion can be classified into recurrent congestion and nonrecurrent congestion. Recurrent freeway congestion occurs regularly as a result of freeway traffic demand exceeding the traffic-carrying capacity of the freeway, principally during weekday morning and afternoon peak traffic periods. Nonrecurrent freeway congestion occurs as a result of a freeway incident, such as an accident, or a disabled vehicle either in freeway lanes or on the freeway shoulder. Nonrecurrent traffic congestion can occur during weekday peak periods and exacerbate typical recurrent weekday peak-period congestion, or it can occur on weekday nonpeak periods or weekends. It is estimated by the Federal Highway Administration that 50 percent of the traffic congestion that occurs on freeway systems is due to incidents, and would be considered nonrecurrent congestion, while the other 50 percent is due to recurrent freeway traffic congestion.

The study area for the freeway traffic management system plan generally encompassed the Milwaukee urbanized area. Extensive inventories were conducted of peak-period freeway traffic volumes and congestion, and peak-period freeway traffic patterns—that is, the number of vehicles entering at each freeway on-ramp and exiting at each freeway off-ramp, and thereby the path taken by those vehicles on the freeway system from on-ramp to off-ramp.

For example, Map 14 identifies the percentage of the total morning peak-hour traffic entering from each on-ramp in the Milwaukee area that travels through on the East-West Freeway between 92nd Street and 84th Street and contributes to the congestion on this freeway segment. The data presented on Map 15 show the estimated percentage of total morning peak-hour traffic volume on eastbound IH 94 at 92nd Street entering at each freeway on-ramp.

Inventories were also conducted of existing freeway traffic management systems in operation in other major urban areas of North America.

Alternative plans were developed and evaluated for each of the following seven elements of a total freeway traffic management system:

1. Incident management—or the identification and removal of freeway incidents, such as accidents, which restrict traffic flow—in order to minimize the effects of incidents.

2. Motorist advisory information, or the provision of information to motorists about current traffic conditions, including incidents.

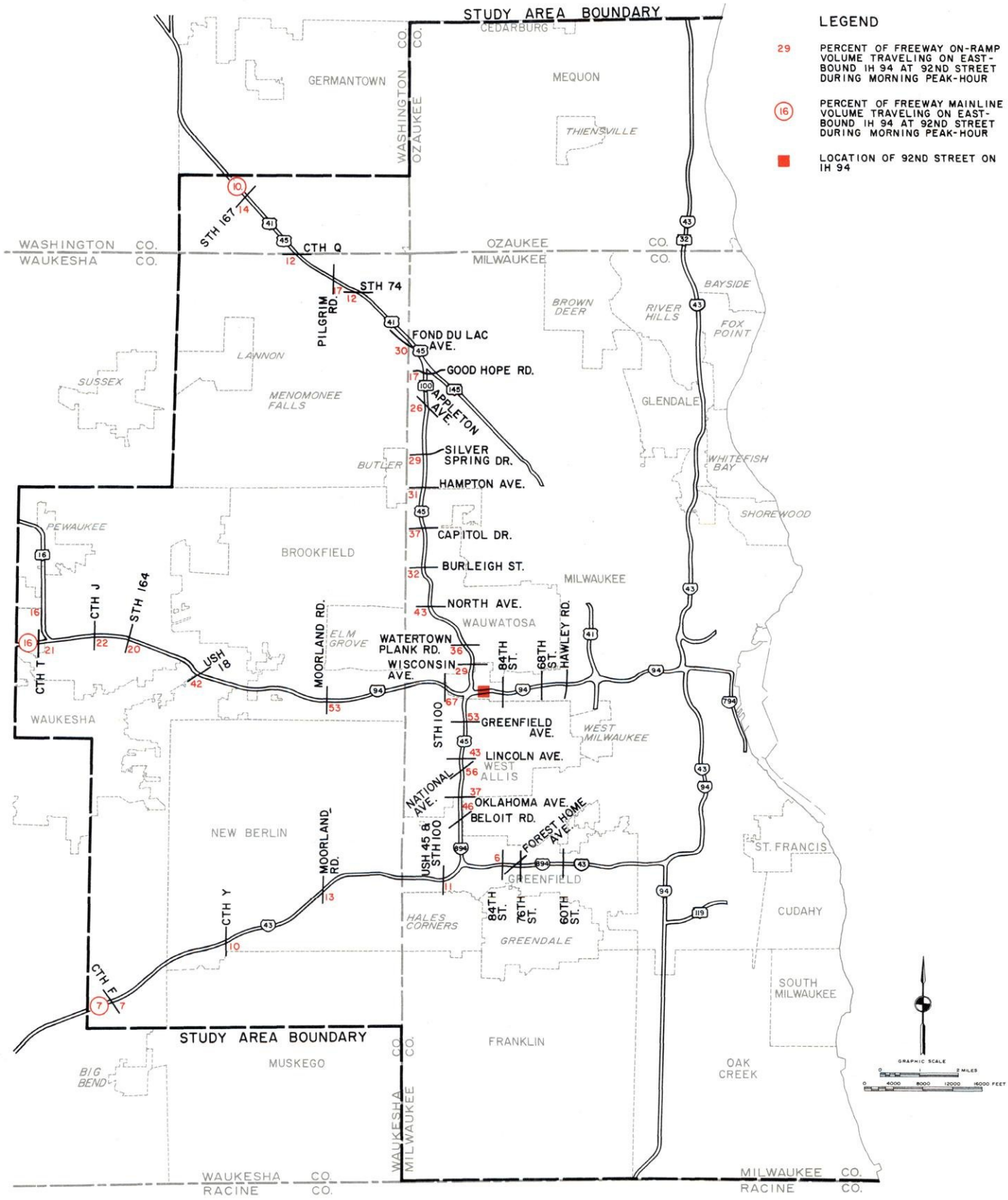
3. System management, or monitoring and control—the collection and analysis of the freeway operational data essential to the direction of the other elements of the freeway management system.

4. Determination of the number and location of freeway on-ramp meters and related control signalization.

5. A freeway operational control strategy, which defines the desired level of operation to be maintained on the freeway system, including the desired operating speeds.

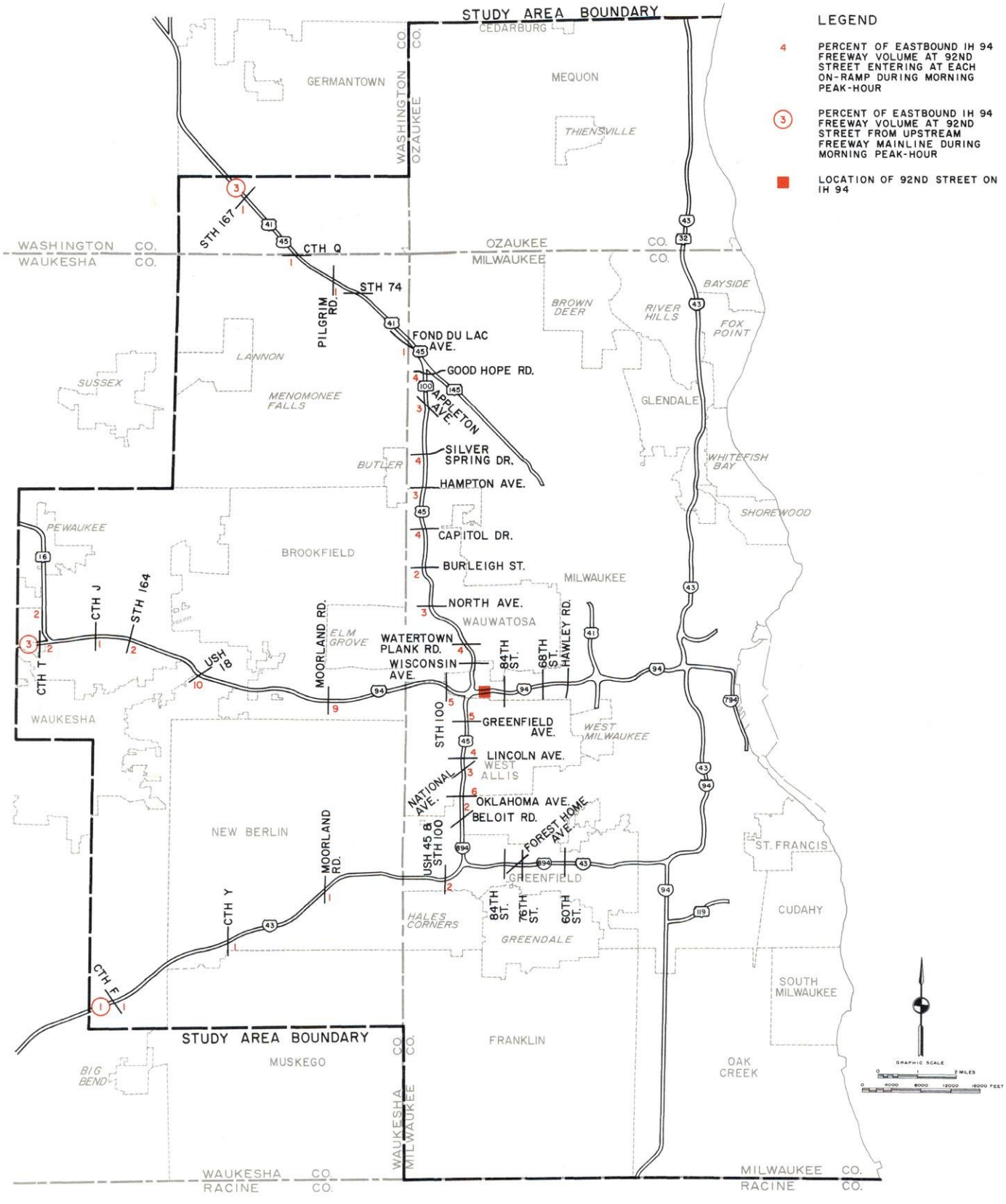
Map 14

ESTIMATED PERCENT OF EXISTING TOTAL MORNING PEAK-HOUR TRAFFIC VOLUME AT EACH FREEWAY ON-RAMP TRAVELING ON EASTBOUND IH 94 AT 92ND STREET



Map 15

ESTIMATED PERCENT OF EXISTING TOTAL MORNING PEAK-HOUR TRAFFIC VOLUME ON EASTBOUND IH 94 AT 92ND STREET ENTERING AT EACH FREEWAY ON-RAMP



6. A freeway on-ramp meter control strategy, which defines the rate of entry at the various metered freeway on-ramps, distributing the required metering of freeway volume over the contributing on-ramps.

7. High-occupancy-vehicle preferential access, or determination of the number and location of exclusive bypasses of the metered on-ramps for use by buses and carpool and vanpool vehicles.

Freeway incident management actions are intended principally to address the abatement of nonrecurrent traffic congestion by providing for the detection, confirmation, and removal of freeway incidents. The Expressway Patrol of the Milwaukee County Sheriff's Department currently provides all freeway incident management on the Milwaukee County freeway system, including identification and confirmation of incidents; assessment of the nature and severity of incidents; and management and control of the removal of incidents. In other counties in the greater Milwaukee area, incident detection is provided by both the State Patrol and the sheriff's departments; however, unlike Milwaukee County, there is no regularly scheduled expressway patrol.

The recommended freeway incident management system for the greater Milwaukee area consists of an electronic freeway traffic data gathering and analysis system; a citizen band radio monitoring system; a closed circuit television monitoring system; a telephone contact line; an emergency service patrol; a major incident response team; and continued expressway patrol. To provide for the efficient application of these measures, a central freeway traffic management center and staff will be required.

Motorist advisory information assists in abating both recurrent and nonrecurrent traffic congestion and in making more efficient use of the freeway system and total transportation system by providing information about alternative freeway and nonfreeway routes during the peak weekday traffic periods, and providing information about incidents.

Motorist advisory information in the Milwaukee area is currently limited to information provided by commercial radio broadcasting stations principally during weekday peak traffic periods, and six portable changeable message signs which are used primarily for freeway construction and maintenance projects. The commercial radio broadcasting stations obtain their information on traffic conditions from their own surveillance and from the Milwaukee County Sheriff's Department. Also, highway advisory radio transmissions on an exclusive radio channel are provided at Milwaukee County Stadium to guide motorists to Stadium Freeway exits and parking areas, and to warn motorists of freeway traffic conditions.

The recommended motorist advisory information for the greater Milwaukee area consists of truck-mounted transportable changeable message signs, a system of fixed changeable message signs, and timely provision of information to commercial radio broadcasting stations.

As already noted, proper implementation of the recommended incident management and advisory information actions will require a central traffic management center for system monitoring and control. Such a center would also be required for the recommended freeway operational control and ramp meter elements of the total freeway traffic management system.

At the traffic management center, all traffic information would be received, analyzed, and evaluated, and decisions made as to what incident management, advisory information, and ramp metering strategies should be implemented. The control center equipment would include a high-speed, high-capacity computer and peripheral equipment; a console for providing direction to the computer and for instantaneous review of computer reports; display devices such as closed circuit television (CCTV) screens; and communications equipment such as radio receivers and transmitters and direct telephone line connections.

The remaining elements of the freeway traffic management system may be considered a freeway operational control subsystem. These remaining elements include the number and location of ramp meters, a freeway operational control strategy, a ramp meter control strategy, and a high-occupancy-vehicle preferential access policy.

A freeway operational control subsystem is in place and currently operating on the Milwaukee area freeway system. Twenty-one freeway on-ramps in central Milwaukee County are metered.

The ramp meters are located at freeway on-ramps adjacent to segments of freeway that experience the most severe congestion during morning and evening peak traffic periods. The meters exercise control of freeway traffic volume by restricting freeway on-ramp traffic. The principal objective of the existing freeway operational control subsystem is to reduce the severity and duration of freeway traffic congestion by preventing entire platoons of vehicles from attempting to merge into congested freeway segments. Freeway traffic demand is also reduced at areas of freeway congestion. Preferential access is provided for buses at six locations. Ramp meter entrance rates are responsive to the traffic volumes on immediately adjacent "upstream" freeway lanes.

The recommended plan proposes a major expansion of the freeway operational control subsystem in the East-West Freeway (IH 94) corridor, including connecting segments of the Stadium Freeway (USH 41), the Zoo Freeway (USH 45), and the Airport Freeway (IH 894); and the modest expansion of the freeway operational control subsystem in the North-South Freeway (IH 43 and IH 94) corridor.

Under the major expansion of the freeway operational control recommended for the East-West Freeway corridor, all East-West Freeway and connecting freeway on-ramps that carry substantial traffic volumes and contribute to freeway traffic congestion would be metered, including two on-ramps in Waukesha County. This subsystem would have a broader objective than the existing freeway operational control system and than the system recommended for the North-South Freeway—namely, to minimize freeway congestion, particularly stop-and-go traffic upstream of freeway capacity bottlenecks, and to provide average operating speeds of 35 to 40 miles per hour (mph) on all segments of the freeway during peak traffic periods. Also under this alternative, all high-occupancy vehicles—buses, carpools, and vanpools—would be provided with exclusive on-ramps at all metered ramps so that they would experience no delay.

Modest expansion of freeway operational control is recommended in the North-South Freeway (IH 43 and IH 94), with the number of ramp meters in this corridor recommended to be increased from the seven that are presently used during the morning peak hour to 16. As freeway traffic continues to increase during the peak hours on the area freeway system, the major expansion of freeway operational control in the North-South Freeway corridor may become warranted, and the operational control system recommended could be readily expanded as needed into a system similar to that recommended for the East-West Freeway.

The expansion of freeway operational control—particularly, the major expansion in the East-West Freeway corridor—may be expected to reduce recurrent freeway traffic congestion and improve freeway traffic flow in a number of ways. The expanded freeway operational control subsystem should improve freeway travel for public transit, and thereby encourage greater use of buses, carpools, and vanpools. Freeway travel times for public transit, carpools, and vanpools should be improved, not only because freeway traffic congestion will be minimized during peak traffic periods, but because buses and other high-occupancy vehicles will not be delayed at the ramp meters, being provided preferential freeway access. As some of the freeway traffic shifts to more efficient bus and carpool and vanpool use, improvement of other automobile and truck peak-period travel may be expected. The freeway operational control subsystem may also be expected to encourage some very short trips now using the freeway to utilize surface arterial streets. The resultant modest reduction in freeway traffic demand may be expected to contribute to a reduction in freeway traffic congestion, while not significantly affecting surface arterial streets. A freeway operational control subsystem may also be expected to reduce freeway traffic congestion by reducing the peaks in freeway traffic demand through control of such demand with ramp metering. Thus, freeway operational control may be expected to reduce freeway travel time even for single-occupant automobiles and trucks, as the delay these vehicles experience at freeway on-ramps may be expected to be offset by reductions in travel time along the freeway.

The actions recommended under the proposed freeway traffic management system plan are summarized in Table 18 and on Map 16, along with the estimated capital costs and annual operating costs. The estimated total capital cost of the recommended freeway traffic management system is $15,060,000, and the estimated total annual operating cost is $1,200,000.[8] It is

[8] *In addition, continuation of expressway patrol in Milwaukee County would have an estimated cost of $4.0 million annually, including vehicle acquisition and replacement.*

recommended that the Wisconsin Department of Transportation assume responsibility for implementation of the freeway traffic management system and its operation. This would include full funding by the State of Wisconsin of the existing Milwaukee County Expressway Patrol provided by the Milwaukee County Sheriff's Department.[9]

The benefit-cost ratio of the recommended freeway traffic management system is conservatively estimated to be 1.27. This benefit-cost ratio was calculated over a 20-year period, using a 6 percent rate of interest. The present worth of the costs of the freeway traffic management system was estimated to be $30.7 million, of which $16.9 million is capital costs and $13.8 million is operating costs. These costs do not include the capital and operating costs attendant to the Expressway Patrol. It is recommended that expressway patrol continue to be provided within Milwaukee County. The estimated annual cost of the Expressway Patrol is $4.0 million. The present worth of the benefits of the freeway traffic management system was estimated to be $39 million.

The benefits incorporated in the calculation of the benefit-cost ratio include only those which are direct and readily quantifiable. Specifically, the benefits include the savings, valued at about $1.4 million annually, of 175,000 passenger hours of travel annually during weekday peak traffic periods attributable to the reduction of recurrent congestion through the major expansion of freeway operational control in the East-West Freeway (IH 94) corridor.

The other benefit included in the benefit-cost ratio is the savings attributable to a reduction in nonrecurrent congestion on the freeway system. It is estimated that on the Milwaukee area freeway system over an average year, there are 500,000 passenger hours of delay that may be attributable to nonrecurrent congestion, principally as a result of freeway incidents.

It should be noted that the recommended freeway traffic management system would have many other benefits, including a reduction in accidents owing to the reduction of recurrent and nonrecurrent congestion, reduced motor vehicle operating costs as a result of reduced recurrent and nonrecurrent congestion, and reduced parking costs and surface arterial maintenance costs as a result of increased use of buses and carpools.

The preparation of the freeway traffic management plan was guided by a 13-member advisory committee composed of appointed officials from concerned and affected local governments and from the state and federal governments. The membership of the Advisory Committee is set forth in Appendix B.

Viewed as a vehicle to improve operation of congested urban freeway and surface street systems at modest cost, to promote areawide traffic management studies, and to provide a closer working relationship between the planning and traffic engineering disciplines, the freeway traffic management report has been widely circulated by the U. S. Department of Transportation's Federal Highway Administration. The report has been distributed to each of its regional offices and 40 divisional offices, and to state highway administrations in states with urban areas having a population of over 500,000. The Federal Highway Administration also lauds the report for "being exceptionally thorough," specifically citing both the range of alternative techniques considered and the level of detail at which individual elements were evaluated.

Ridesharing Programs

One of the recommendations of the regional transportation systems management plan is the continued promotion of ridesharing. A formal Milwaukee area carpooling program was conducted by Milwaukee County from April 1975 to April 1976. The Commission assisted in that effort, conducting an evaluation of the effectiveness of the carpooling project and determining the extent of carpooling in the Milwaukee metropolitan area. The results of that initial effort are presented in SEWRPC Technical

[9] *Of the estimated $4.0 million annual cost of the Milwaukee County Expressway Patrol, approximately 30 percent, or $1.2 million, is funded by state transportation operations and maintenance aids to Milwaukee County; 12 percent, or $0.5 million, is funded by the State pursuant to specific action of the Wisconsin State Legislature; 25 percent, or $1.0 million, is funded by fines collected by the Expressway Patrol; and the remaining 33 percent, or $1.3 million, is funded by Milwaukee County. It is recommended that this remaining $1.3 million be financed by the Wisconsin Department of Transportation.*

Table 18

SUMMARY OF MILWAUKEE AREA FREEWAY TRAFFIC MANAGEMENT RECOMMENDATIONS

Recommended Freeway Traffic Management Action	Capital Cost[a]
Incident Management	
• Electronic Freeway Traffic Data Gathering and Analysis	$ 6,100,000
• Remote Base CB Radio Stations	50,000
• Emergency Telephone Number Signing	20,000
• Closed Circuit Television	850,000
• Emergency Service Patrol	290,000[b]
• Expressway Patrol	--[c]
• Major Incident Response Team	--
Advisory Information	
• Trucks with Portable Message Signs	$ 100,000
• Permanent Changeable Message Signs	3,000,000
• Teleprinter Equipment for Information Provision to Commercial Radio	110,000
Monitoring and Control	
• Traffic Management Center	$ 1,650,000
Freeway Operational Control	
• Ramp Meters	$ 1,120,000
• Preferential Access Treatment for High-Occupancy Vehicles	1,770,000
Total	$15,060,000

[a]*The estimated annual operating and maintenance cost of the freeway traffic management system, including monitoring and control, traffic management center, system operation, and enforcement, is $800,000. This cost includes the costs of operation and maintenance for all freeway traffic management system elements except expressway patrol and emergency service patrol.*

[b]*The emergency service patrol has an estimated operating cost of $400,000 annually.*

[c]*The continuation of the Expressway Patrol would entail an annual cost of about $4.0 million for all capital and operating costs, including patrol vehicle acquisition and replacement.*

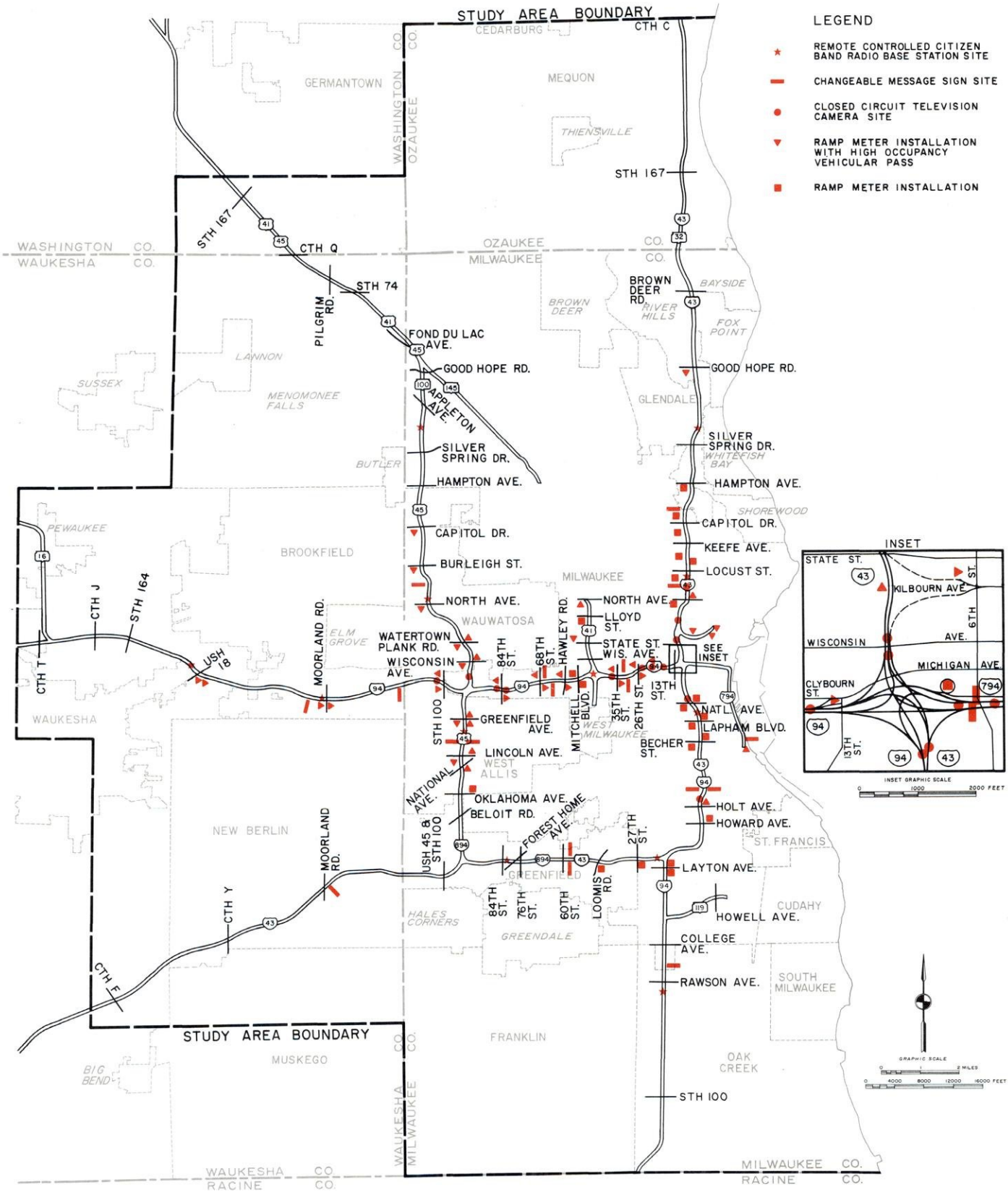
Report No. 20, Carpooling in the Metropolitan Milwaukee Area. That initial carpooling effort indicated a sufficient latent demand for carpooling programs and concluded that a continued carpool promotional program would be effective in reducing motor fuel consumption and automobile traffic.

Late in 1979 Milwaukee County received approval of a funding request for federal urban aid funds to conduct a three-year continuing carpool promotional program. This program included media promotion of ridesharing activities, direct contact with major employers to encourage carpooling on an industry-by-industry basis, and a computerized matching program for potential carpoolers. The Commission assisted in that effort by providing the computer facilities necessary to conduct the matching program. In addition, near the end of the third year of the program, the Commission conducted an assessment of the program to determine the changes in the extent of ridesharing over the duration of the three-year program; the characteristics of rideshare participants; factors influencing the decision not to rideshare; the impact of ridesharing on traffic user costs and energy conservation; the latent demand for ridesharing; and the awareness of the Milwaukee Area Rideshare Program by commuters.

Based on the survey findings it was recommended that the program be continued, since the benefits derived by the program substantially

Map 16

RECOMMENDED FREEWAY TRAFFIC MANAGEMENT SYSTEM FOR THE MILWAUKEE AREA



outweighed its modest cost. It was further recommended that the program be extended to residents of Kenosha, Racine, and Walworth Counties; techniques be employed to improve the timeliness of response to rideshare requests; the use of public park-ride and park-and-pool lots be promoted for ridesharing purposes; the promotion of the use of vanpools, buspools, and taxipools be expanded; and a diversified marketing program be developed to reach a broader spectrum of employed persons. The findings and recommendations of the survey are documented in SEWRPC Technical Report No. 28, Evaluation of the Milwaukee Area Rideshare Program: 1979-1982.

Early in 1983, Milwaukee County received approval of a funding request for federal urban aid funds to conduct a two-year ridesharing promotional program. This program includes media promotion of ridesharing activities, continuation of a computerized matching program for potential carpoolers with the additional feature of staff contact to follow up persons who have requested services, development of a marketing program to focus on employers and employees in the Milwaukee central business district, promotion of park-ride lots for carpool use, and erection of 35 additional rideshare information signs. Late in 1984, federal funding was provided to extend the promotional program through 1989. In April 1987, administrative responsibilities for the conduct of the rideshare program were transferred from Milwaukee County to the Wisconsin Department of Transportation, District 2. The Commission has continued to assist in this effort by providing the computer facilities necessary to conduct the matching program.

Transit System Plans

In 1987, the Commission began preparation of new transit service plans for the public transit systems serving Waukesha County and the City of Waukesha. The new plans are intended to provide direction in the operation and development of the Waukesha County and City of Waukesha transit systems for the remainder of the 1980's and into the early 1990's, in much the same way previous plans and programs provided direction to the County and the City during the early 1980's, when the City of Waukesha was establishing a new fixed-route bus system and Waukesha County was expanding the number of commuter bus routes it operated. The original transit plans for both the County and the City were completed by the Commission in the early 1980's. The majority of the recommendations for each of those plans have been successfully implemented.

The Waukesha County transit plan was prepared under the direction of the Waukesha County Mass Transit Advisory Committee. Work on the City of Waukesha transit plan was conducted under the guidance of the City of Waukesha Transit Development Program Advisory Committee.

The public transit service plan for Waukesha County was completed during 1988 and the recommendations published in SEWRPC Community Assistance Planning Report No. 105, Waukesha County Transit Plan: 1988-1992. As the initial step in preparing the new transit plan, information on the basic characteristics of the Waukesha County transit system and the Waukesha County transit service area was assembled. This information included data describing the current operation of the existing Waukesha County transit system and the current population, land use, and employment characteristics of Waukesha County. After assembling this information, analyses were conducted to assess the current performance of the Waukesha County transit system and identify the current and potential short-range—five-year—transit travel markets within Waukesha County.

The performance of the Waukesha County transit system was analyzed to determine the extent to which the existing system met the transit service objectives and standards adopted by the Advisory Committee. The performance evaluation was conducted at two levels. At the first level, an assessment of performance was made on a systemwide basis which examined the extent to which the county transit system served the population and major land uses within Waukesha County. The second part of this assessment evaluated the performance of each route in the transit system based upon its ridership, productivity, and financial performance. Further analyses of each route were then conducted to identify productive and nonproductive route segments. This performance evaluation of the existing transit system indicated that two of the six bus routes currently operated as part of the Waukesha County transit system—Route No. 10, the Brookfield Square local route

extension, and Route No. 79, the Menomonee Falls freeway flyer—performed well and could continue to be operated with no route or schedule changes. However, for the remaining four routes, the consolidation or elimination of some service was recommended to improve the ridership, performance, and cost-effectiveness of the total transit system.

The analysis of the current and potential transit travel markets in Waukesha County was based on information related to county population, land use, and employment characteristics. The population data reviewed included the location and density of existing population concentrations; transit-dependent population characteristics, including household income, automobile availability, and vehicle availability per licensed driver; and certain travel characteristics, including the number of county residents commuting to the Milwaukee central business district. The land use data identified the types of land use within the County and the areas within the County which were fully developed and which were developed at medium or greater densities. Such land use densities are necessary to support effective and efficient fixed-route transit services. Employment data were also reviewed which identified both the location and density of employment within the County.

Based upon this information, the analysis of current and potential transit travel markets in Waukesha County concluded that no expansion of rapid transit service to the Milwaukee central business district should be considered, as the potential for effective rapid transit services was limited to the City of Waukesha, the Village of Menomonee Falls, the City of Brookfield, and the City of New Berlin—all of which were served by transit services. The analyses also concluded that no expansion of county local/express transit services to other parts of Waukesha County not currently served should be considered, as only the City of Waukesha and the Blue Mound Road corridor between the City of Waukesha and Milwaukee County could be expected to support effective local/express transit service. Local transit service within the City of Waukesha is currently provided by the City's fixed-route transit system, and local/express transit services within the Blue Mound Road corridor were believed to be best provided as an extension of the transit services currently provided within the City of Waukesha and Milwaukee County. With respect to reverse commuter transit service, the travel market analysis concluded that there did not appear to be any potential at this time for providing traditional fixed-route bus service solely to serve reverse commuter travel between Waukesha and Milwaukee Counties. The developing eastern portion of Waukesha County still had many undeveloped areas, with the density of most existing development within the County generally not sufficient to permit efficient and effective fixed-route transit services. Employment centers within the County were also found to be widely scattered, with no employment concentration approaching the amount and density of employment found in the Milwaukee central business district, which is the principal focus of the successful Waukesha County rapid and express bus services. Based upon these characteristics, it was believed that potential reverse commuter travel could best be served with nontraditional transit services such as carpooling, vanpooling, or subscription bus and van services.

The data gathered from the inventories and analyses were then used as the basis for the development and evaluation of alternative transit service changes. Two sets of transit service options were considered for the Waukesha County transit system, with the first set being for the 1988 transit system operating budget. Preliminary projections of the 1988 operating budget for the transit system prepared by Waukesha County staff and the Commission staff indicated that a county tax levy of $120,000 would have been required to support the 1987 transit system in 1988. Because these projections of the county tax levy for the transit system significantly exceeded the limit of $41,200 for transit service set by the County Board for calendar year 1988, alternative service options were considered to reduce the county tax levy by $78,800. Several alternative service options were considered and analyzed by the Commission staff.

The final recommended actions for 1988 were that the County pursue competitive procurement of transit services for five of the six county bus routes, and that bus service between the City of Oconomowoc and the Goerke's Corners public transit station be reduced. Following this decision, the Commission staff assisted the Waukesha County Transportation Department in preparing and distributing a Request for Pro-

posal (RFP) document to solicit competitive bids from interested transit operators and, following this, in evaluating the competitive bids submitted to the County. The proposals offered by each potential operator were to identify the quality of services that the operator would provide and the subsidy from Waukesha County that would be required. The County ultimately determined that the service contracts for the five bus routes for which service proposals had been requested should be awarded to the same contract operators that operated the routes during 1987—that is, Wisconsin Coach Lines, Inc., and Milwaukee Transport Services, Inc. This enabled the County to reduce its projected 1988 funding needs for the transit system from $120,000 to about $16,000.

A second set of alternative service options was also developed and evaluated, with this set being for the period 1989 through 1992. The five alternative service options for the Waukesha County transit system during this period included:

1. The status quo alternative, which proposed that Waukesha County continue to operate during the entire period without changing the transit services operated by the County in 1988.

2. An alternative which proposed that Waukesha County implement substantial reductions in transit service, including all service identified as being currently ineffective and marginally effective—specifically, all Oconomowoc to Milwaukee service west of Goerke's Corners; some service between Goerke's Corners and downtown Milwaukee; and weekend and holiday and late evening service between the City of Waukesha and downtown Milwaukee.

3. An alternative suggested by Wisconsin Coach Lines, Inc., which proposed that Waukesha County use federal formula capital assistance funds to purchase a fleet of buses and lease them back to the private transit operator for use in providing county transit services to enable the private transit operator to eliminate its charges for depreciation of its operating equipment and thereby reduce the costs charged to Waukesha County.

4. An alternative suggested by Wisconsin Coach Lines, Inc., which proposed that Waukesha County replace the existing bus service provided through the extension of Milwaukee County Transit System Route No. 10 between the Milwaukee-Waukesha County line and the Brookfield Square Shopping Center with bus service provided through modification and expansion of the Milwaukee-to-Waukesha bus service currently provided by Wisconsin Coach Lines, Inc., under contract to the County.

5. An alternative which proposed that Waukesha County eliminate its most ineffective bus services, including all Oconomowoc-to-Milwaukee bus service west of the Goerke's Corners transit station, along with all weekend and holiday bus service between the City of Waukesha and downtown Milwaukee; plus restructure the weekday bus service operated between the City of Waukesha and downtown Milwaukee, including the portion operated between the City of Waukesha and the Blue Mound Road corridor, so that most of the bus runs between the City of Waukesha and downtown Milwaukee would be operated over the freeway to reduce travel times, and more frequent bus service would be operated between downtown Waukesha and the Brookfield Square Shopping Center.

A comparative evaluation of these alternative service options was conducted to identify differences among the alternatives in terms of their projected impacts on transit system ridership and service levels, the overall effectiveness and efficiencies of the transit system, and county funding requirements. Based upon this comparative evaluation, the Advisory Committee for the Waukesha County transit study ultimately recommended implementation of the transit service modifications proposed under Alternative No. 5.

The recommended plan for Waukesha County's fixed-route transit system consequently calls for a number of changes in the routes currently subsidized by the County. Foremost among the proposed changes would be the elimination of the most ineffective of the existing county transit services, including all bus service provided west of the Goerke's Corners public transit

station over two Oconomowoc-to-Milwaukee bus routes, and all weekend and holiday bus service provided over two Waukesha-to-Milwaukee bus routes. In addition, the recommended plan calls for modifying the existing weekday bus service provided between Waukesha and downtown Milwaukee by restructuring this service so that most of the bus runs are operated over freeway facilities to reduce travel times. To facilitate this service improvement, the plan calls for the existing county bus service provided between Waukesha and the Brookfield Square Shopping Center over Blue Mound Road and Greenfield Avenue, and the existing City of Waukesha bus service operated between downtown Waukesha and the Goerke's Corners public transit station to be combined into one bus service provided using a single bus route. The extent of fixed-route bus service that would be provided within the County, assuming implementation of all of these service changes, is shown on Map 17.

The Advisory Committee also recommended that, although the analyses of alternative service options had been based upon the assumed implementation of all service changes in 1989, the implementation of the proposed service changes under the recommended plan be staged to occur over the planning period as conditions warranting their implementation develop. In this respect, as long as existing transit services can continue to be provided at no county subsidy, or for a county subsidy within the future county budget limits, the plan recommends that the transit services proposed for elimination continue to be provided. Regarding the proposed modifications to county and city transit services operated between downtown Waukesha and the Milwaukee central business district, and between downtown Waukesha and the Brookfield Square Shopping Center, the plan recognizes that these service modifications cannot be implemented until agreement is reached between the City and the County as to who should be responsible for overseeing the recommended revised service between the City and the Brookfield Square Shopping Center, and how the service will be jointly funded by these parties. In addition, the issue of which transit operator or contractor will provide the transit service between the City and the Brookfield Square Shopping Center will need to be resolved, and consideration will need to be given to the contracts that the County has with the existing private operator and the City has with its private management firm, both of which run through 1990. It was therefore recommended that efforts by the County and City be made to reach agreement on, and resolve difficulties associated with, the recommended transit service changes, and that, upon reaching agreement, the recommended service modifications be implemented.

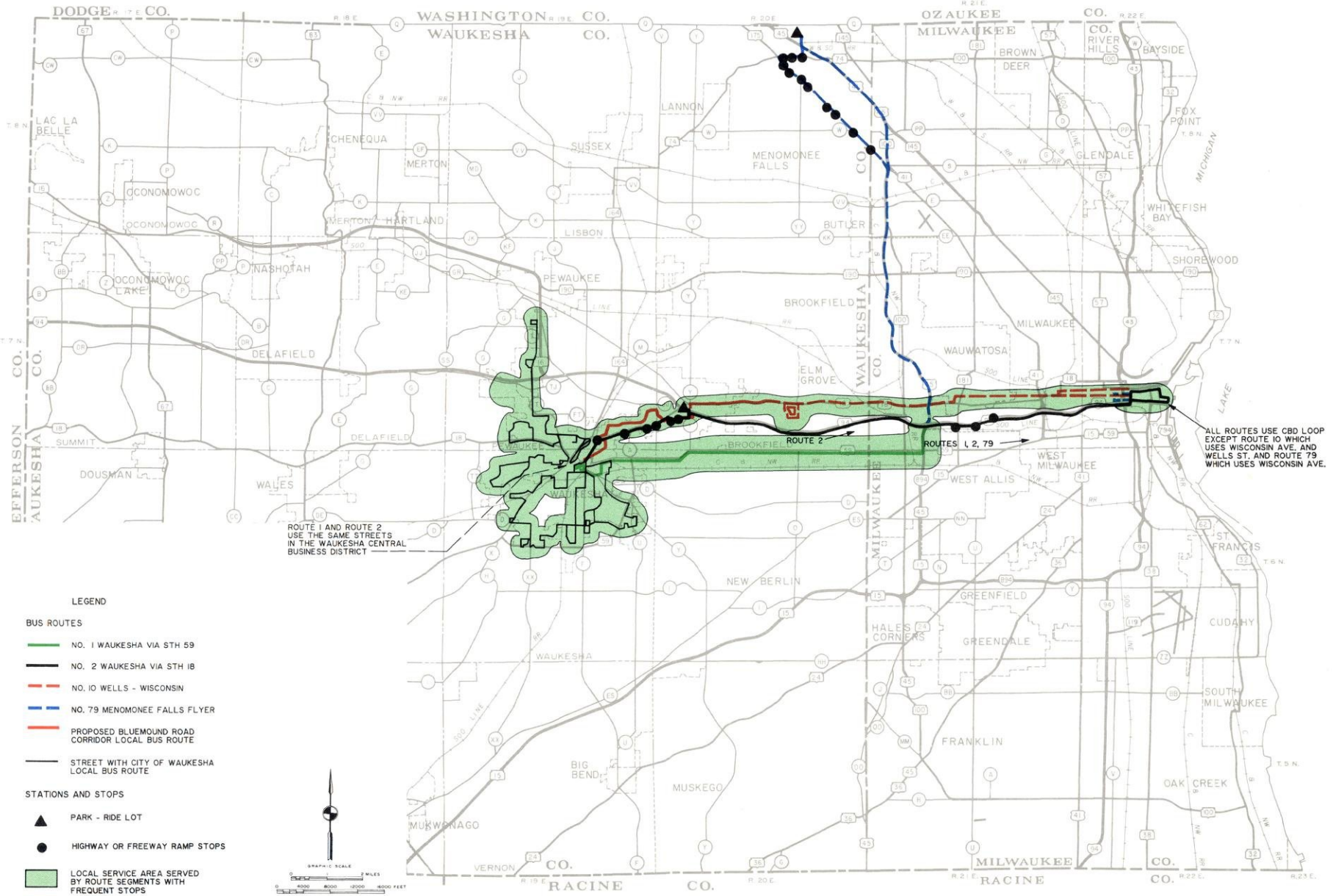
In preparing the plan recommendations, an analysis was also undertaken of alternative operating agencies and institutions which could be used to oversee the operation of both the contract transit services provided by Waukesha County and the local transit services provided by the City of Waukesha. These alternatives included operation of all transit services in the County by Waukesha County; operation of all transit services in the County by the City of Waukesha; operation of all transit services in the County by a transit authority; and separate but coordinated operation of city and county transit services. Based upon problems associated with the first three alternative strategies, it was recommended that both Waukesha County and the City of Waukesha continue the separate operation of their respective public transit programs, but coordinate those programs in the area of staff resources and with respect to the private firms contracted with to operate or manage the transit services.

At year's end, the report documenting the Waukesha County transit plan and program had been forwarded to the Waukesha County Highway and Transportation Committee for adoption.

A substantial portion of the work required to prepare the new transit plan for the City of Waukesha was also completed during 1988. By year's end, information on the basic characteristics of the city transit system and its service area had been assembled; an assessment of the performance of the existing transit system had been completed; and a set of public transit service alternatives had been presented to the Advisory Committee. The Advisory Committee subsequently requested that the Commission complete an analysis of issues related to the transportation of students within the City prior to the Committee making a final recommendation concerning transit service improvements for the City of Waukesha. It is anticipated that this study will be completed in 1989.

Map 17

RECOMMENDED FIXED-ROUTE TRANSIT SERVICES FOR WAUKESHA COUNTY



Private Sector Involvement in Public Transit

In 1988 the Commission continued a study of private sector involvement in the provision of public transit services. One of the primary functions of this work effort was to provide assistance to transit operators in the Region, upon request, with competitively obtaining services from private transit operators, and with meeting guidelines concerning private sector involvement as set forth by the Urban Mass Transportation Administration (UMTA). Extensive assistance was provided to the Waukesha County staff in efforts to competitively procure transit services for the Waukesha County transit system. The Commission staff worked with, and assisted, the Waukesha County staff in understanding and complying with the federally mandated Section 13(c) labor and protection agreements as they apply to transit services provided by the County. During 1988, the Commission staff completed the Waukesha County transit plan, which recommended that the County continue to contract principally with private firms through a competitive bidding process for transit services. The assistance provided by the Commission to Waukesha County was a major factor leading to a decision by Waukesha County to competitively award service contracts for five of the six bus routes which the County operated during 1988.

Also during 1988, work was completed on much of the memorandum report describing the existing private sector involvement in southeastern Wisconsin transit systems, as well as the potential for increased private sector involvement. The report will describe the fully allocated cost modeling procedures which can be utilized by local transit operators, and potential private sector contracting opportunities and barriers to those opportunities.

Milwaukee County Short-Range Transit Planning

During 1988, short-range transit planning activities for the Milwaukee County transit system were conducted by the staff of that system and the Milwaukee County Department of Public Works. Through this planning effort, the following major activities were carried out during the year: preparation and conditional approval of a transportation plan for the transportation handicapped, preparation of a transit maintenance plan, and development of the annual element of the regional transportation improvement program. In addition, this work effort included the preparation of such federally required reports as a Title VI assessment evaluating the provision of transit service to special population groups, and updated programs for the inclusion of business enterprises operated by the disadvantaged, minorities, and women in the provision of transit service.

ELDERLY AND HANDICAPPED TRANSPORTATION PLANNING

In 1978 the Commission adopted a transportation plan for transportation-handicapped people in the Region. The plan is documented in SEWRPC Planning Report No. 31, A Regional Transportation Plan for the Transportation Handicapped in Southeastern Wisconsin: 1978-1982. The plan is designed to reduce, and sometimes to eliminate, the existing physical and/or economic barriers to independent travel by transportation-handicapped individuals. In accordance with the thrust of the federal rules then in effect, the plan recommended that the local bus systems serving the Milwaukee, Kenosha, and Racine urbanized areas be equipped with wheelchair lifts and ramps or other conveniences to the extent that the nonpeak-hour bus fleets would be fully accessible to wheelchair users and semiambulatory persons. For those transportation-handicapped persons in the three urbanized areas who would continue to be unable to use public bus systems, the institution of a user-side subsidy program was recommended. Such a program would enable eligible transportation-handicapped persons to arrange for their own transportation by taxi or private chair car carrier, with the local transit operator subsidizing the cost of the trip. For transportation-handicapped persons living outside the three major urban areas, the plan recommended that each county implement a demand-responsive transportation service administered through the county and operated by either an interested privately owned transportation service provider or a social service transportation provider. The plan also recommended that the transportation services provided by existing social service agencies in each county be coordinated to make more efficient use of their transportation-related facilities and services, with the county board in each county given the responsibility of effecting such coordination.

Section 504 Public Transit Programs for Handicapped Persons

The adopted transportation plan for the transportation handicapped was amended during 1987 following the completion of public transit plans for handicapped persons for each of the urban public transit operators within the Region. These planning efforts were designed to identify actions necessary to ensure that the planning and provision of public transit service in the Region is fully in accordance with Section 504 of the federal Rehabilitation Act of 1972. That act prohibits discrimination on the basis of handicap in all programs and activities receiving federal financial assistance. These planning efforts were conducted in accordance with new rules promulgated by the Secretary of the U. S. Department of Transportation and issued in 1986. The recommended public transit programs for each transit operator are documented in SEWRPC Memorandum Reports No. 17, A Public Transit Program for Handicapped Persons—City of Waukesha Transit System Utility; No. 21, A Public Transit Program for Handicapped Persons—Milwaukee County Transit System; No. 22, A Public Transit Program for Handicapped Persons—Waukesha County Transit System; No. 23, A Public Transit Program for Handicapped Persons—City of Kenosha Transit System; and No. 24, A Public Transit Program for Handicapped Persons—City of Racine Transit System.

The new—or "final"—regulations are more explicit than previous regulations in that they mandate that each recipient's public transportation program must make services available to handicapped persons through one of three service options: 1) providing some form of demand-responsive and specialized transportation service which is accessible to wheelchair-bound and semiambulatory persons; 2) providing fixed-route bus service which is accessible to wheelchair-bound and semiambulatory persons over the regular routes operated by the recipient; or 3) providing a mix of accessible specialized transportation and accessible bus services.

For four of the five major transit operators—Milwaukee County and the Cities of Kenosha, Racine, and Waukesha—the plans recommend essentially a continuation of the specialized transportation services currently being provided. The plan for the Waukesha County transit system recommends certain modifications to the current special efforts strategy in order for the system's program to meet the new regulations. A summary of the recommended programs for each of the five operators is provided below.

Milwaukee County

The handicapped transit program for Milwaukee County recommended that the County continue to subsidize the trips made by handicapped persons using the door-to-door specialized transportation services provided in the County by private taxicab companies and wheelchair van carriers. Two private taxicab companies and 14 private van carriers were under contract to participate in the program during 1988. The service area for the program is all of Milwaukee County and, under the program, eligible users request service from a participating provider in accordance with the methods being used by the provider. Generally, taxicab service is available seven days a week, 24 hours a day. Wheelchair van carrier service is generally available seven days a week between 7:00 a.m. and midnight. To become eligible for the program, handicapped persons must register for the program, pay an annual registration fee of $7.00, and obtain a certification form from the Milwaukee County Department of Public Works. The completed form is then submitted by the Department to the handicapped person's doctor or licensed health professional for certification, and, upon such certification, the person is registered in the program.

The handicapped transit program for Milwaukee County was approved by the federal Urban Mass Transportation Administration—UMTA—in June 1988. By the end of 1988, four minor modifications to the Milwaukee County program that were recommended under the plan had been implemented. The first modification called for was the development of a computerized trip management system for the program that would establish a computer link with participating carriers to allow the County to coordinate trips in various ways. The second modification called for was the utilization of a competitive bid process in selecting private carriers. The third modification called for was the replacement of the paper identification cards currently used with plastic cards that include a picture of the user. The final modification called for was the development and implementation of standard-

ized routes for users who are located in the same general area and who make trips on a regular and frequent basis to the same destination at the same time of day. During 1988, about 355,100 trips were made on the accessible transit services offered under the user-side subsidy program.

Waukesha County

The handicapped transit program for Waukesha County recommended that the County continue its present strategy of providing door-to-door, lift-equipped bus service to handicapped persons through its "parallel commuter bus transportation project." Under this program, the County offers door-to-door, lift-equipped van service to handicapped individuals on an advance-reservation basis for trips with origins and destinations within one mile of both sides of any of the six bus routes subsidized by the County during 1987. Four of these routes were operated by a private transit operator, Wisconsin Coach Lines, Inc., and the remaining two routes were operated by the private management firm for the Milwaukee County Transit System.

Under the recommended program, the service characteristics of the existing program would be modified to allow all handicapped county residents to use the program. Only handicapped residents 18 years of age and older are eligible for the current program. Also, origin-to-destination van service for the handicapped would be offered an additional 46 hours a week along three of the six existing mass transit bus routes which operate in the corridor between the City of Waukesha in Waukesha County and downtown Milwaukee. These three bus routes provide regular local transit service and are operated throughout the entire day. With this expanded service, the hours and days of specialized service would be virtually the same as those of the regular bus services. In addition, the County would provide transportation to handicapped persons for trips made between the terminals, park-ride lots, and bus stops served by the remaining three bus routes subsidized by the County, which provide peak-hour, commuter-oriented service between outlying Waukesha County communities and downtown Milwaukee.

Currently, the parallel commuter bus transportation project is provided and administered by the Waukesha County Department of Aging in combination with two other projects—the Ride Line transportation project and the PM Ride Line transportation project. The Ride Line project offers an advance-reservation, door-to-door transportation service to all persons 60 years of age and older and to handicapped persons over the age of 18. The service is available weekdays between 8:00 a.m. and 4:30 p.m. The PM Ride Line project provides similar services on Wednesday and Friday evenings and Saturday afternoons and evenings. Under the recommended program, all requests for rides under the Ride Line and PM Ride Line projects would be reviewed to determine if they could be filled by the County's parallel commuter bus transportation project. This action would enable the County to estimate the cost of providing specialized transportation service at the full performance level. It is further recommended that the fares charged for parallel commuter bus transportation be changed to be similar to those charged under the current Ride Line and PM projects for trips made within Waukesha County. Fares for trips made between Waukesha and Milwaukee Counties would be slightly higher.

Waukesha County had delayed taking action toward implementing the proposed changes to the parallel commuter bus tranportation project until it was certain that its proposed handicapped transit program would be accepted by UMTA. Formal UMTA approval of the County's proposed program was received in August 1988. The County will now give consideration as to how the proposed changes can best be implemented. During 1988, an estimated 1,100 trips were made on the Ride Line and PM Ride Line service offered under the parallel commuter bus transportation project.

City of Kenosha

The handicapped transit program for the City of Kenosha recommended that the City continue to provide the dual special efforts strategy currently in effect. Under this program, the City provides on-call accessible bus service on the regular fixed routes, and participates in the provision of a specialized door-to-door transportation service that operates throughout the service area of the City's transit system. The service currently provided as part of the accessible fixed-route bus service is available to all residents in the City who require the use of a

wheelchair. The door-to-door—Care-A-Van—service is available to persons 60 years of age and older and to all handicapped persons who do not have access to the City's regular public transportation system. Both services are available on an advance-reservation basis. The accessible fixed-route service would continue to be provided between 6:00 a.m. and 6:00 p.m. Monday through Saturday. The Care-A-Van program would continue to be provided generally from 7:30 a.m. to 7:00 p.m. weekdays, and from 9:00 a.m. to 7:00 p.m. Saturdays. The hours and days of operation for the specialized services are virtually the same as those of the fixed-route service operated by the City.

The handicapped transit program for the City of Kenosha was approved by UMTA in October 1987. During 1988, about 13,600 trips were made on the specialized transportation services supported by the City.

City of Racine

The handicapped transit program for the City of Racine recommended that the City continue to provide specialized transportation service through a project administered by the Racine County Human Services Department in eastern Racine County, which is partially funded by the City of Racine's public transportation program. Under this program, an accessible door-to-door transportation service is available to all handicapped persons in the service area of any of the regular bus routes operated by the City who are unable to use the City's regular public transportation system.

The service provided under the current program is available on an advance-reservation basis. Service is provided between 7:00 a.m. and 6:30 p.m. weekdays, and between 10:00 a.m. and 4:00 p.m. Saturdays. These hours are somewhat more restrictive than the regular hours of operation for the fixed-route service. The area served includes that portion of Racine County east of USH 45, which encompasses all of the Racine urbanized area as defined by the U. S. Bureau of the Census, and includes the entire area served by the City's regular fixed-route bus service.

UMTA approval of the City of Racine's handicapped transit program was received in October 1987. About 21,000 trips were made during 1988 on the Racine County specialized transportation service used by the City for its handicapped transit program.

City of Waukesha

The handicapped transit program for the City of Waukesha recommended that the Waukesha Transit System Utility continue to provide the Metrolift program operated by the Utility. Under this program, which serves all areas within one-quarter mile of the City's regular bus routes, accessible, door-to-door transportation service is provided to handicapped persons on an advance-reservation basis. The service is available to all handicapped persons who are unable to use the regular bus service provided by the Utility. Service under the Metrolift program is available between 6:15 a.m. and 6:00 p.m. weekdays, and between 9:00 a.m. and 6:00 p.m. Saturdays. These hours and days of operation are virtually the same as those of the regular fixed-route bus service.

The City was notified that its handicapped transit program had been approved by UMTA in May 1988. Ridership on the City's Metrolift program during 1988 was about 4,100 trips.

TRANSPORTATION IMPROVEMENT PROGRAM

In December 1988, the Commission completed an updated five-year transportation improvement program (TIP) for the Kenosha, Milwaukee, and Racine urbanized areas of the Region, as required by the U. S. Department of Transportation. This program is set forth in a document entitled, A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1989-1993. The program was developed with the assistance of the Wisconsin Department of Transportation staff and through the cooperation of various local units and agencies of government in the three urbanized areas of the Region, and of the Cities of Kenosha, Milwaukee, and Racine and the Counties of Milwaukee and Waukesha as the operators of special mass transportation systems in these areas.

The 1989-1993 TIP document identifies all highway and mass transportation projects in the three urbanized areas programmed for implementation during this five-year period with the aid of U. S. Department of Transportation funds administered through the Federal Highway

Table 19

COST SUMMARY OF PROJECTS WITHIN ANNUAL ELEMENT OF TRANSPORTATION IMPROVEMENT PROGRAM BY URBANIZED AREA

Funding	Kenosha	Milwaukee	Racine	Total
Federal	$3,955,300	$175,607,550	$6,418,500	$185,981,350
State	2,136,800	94,111,550	4,521,900	100,770,250
Local	2,395,000	94,122,300	2,022,700	98,540,000
Total	$8,487,100	$363,841,400	$12,963,100	$385,291,600

Administration (FHwA) and the Urban Mass Transportation Administration (UMTA). Following approval of the 1989-1993 TIP by the Intergovernmental Coordinating and Advisory Committees on Transportation System Planning and Programming for the Kenosha, Milwaukee, and Racine Urbanized Areas, the Regional Planning Commission formally adopted the program on December 5, 1988.

The 1989-1993 TIP authorizes funding for many important projects essential to maintaining the existing highway system, including the reconstruction and resurfacing of the North-South Freeway (IH 94) from the Mitchell Interchange to the Marquette Interchange (including the reconstruction of the high-rise bridge over the Menomonee Valley); the resurfacing of Ryan Road from S. 27th Street to Loomis Road; and reconstruction of the W. Lincoln Avenue bridge over the Kinnickinnic River. The TIP also authorizes funding for key transit maintenance projects, including the construction of a new fleet maintenance facility and the purchase of new buses for the Milwaukee County Transit System. In addition, the TIP authorizes projects essential to the improvement of the Region's highway and transit systems. For example, included in the TIP are the reconstruction of the Silver Spring Interchange on IH 43 and the construction of the Hoan Bridge arterial connection.

Within the three urbanized areas of the Region, the program contains 467 projects for the five-year programming period, representing a total potential investment in transportation improvement and services of about $956 million. Of this total, $413 million, or about 43 percent, is proposed to be provided in federal funds; $304 million, or about 32 percent, in state funds; and $239 million, or about 25 percent, in local funds.

While the entire five-year program is an important planning tool, it is the annual element which is of primary interest, for it represents those projects that are intended to be implemented over the 12- to 24-month period beginning January 1, 1989. The annual element for the federal aid highway funding support is a 21-month element to match the federal fiscal year funding allocation, and is broken into the first nine months of calendar year 1989 and the federal 1990 fiscal year beginning October 1, 1989 and extending through September 30, 1990. For federally funded transit projects involving transit system operating assistance, the annual element consists of a 24-month period, calendar years 1989 and 1990. All other federally assisted transit projects within the transportation improvement program have an annual element consisting of a 12-month period of calendar year 1989.

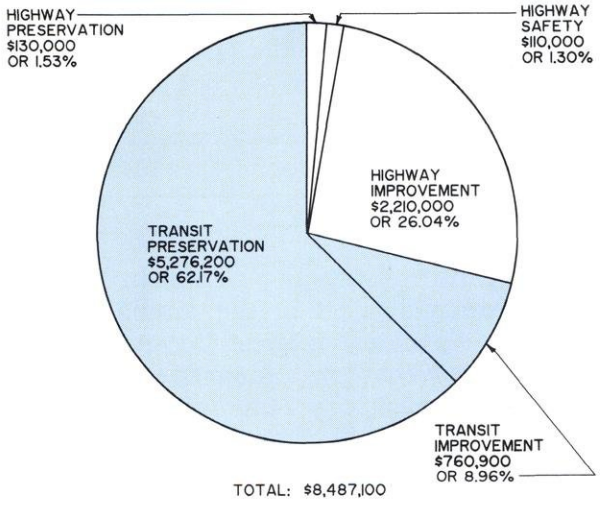
A cost summary for these projects is shown in Table 19. The cost data in this table represent the proposed annual element expenditures for a total of 321 projects.

In order to provide a basis for a better understanding of the types of transportation improvements proposed to be undertaken in the three urbanized areas, projects have been grouped into nine categories: 1) highway preservation—that is, reconstruction of existing facilities to maintain present capacities; 2) highway improvement—that is, reconstruction of existing facilities to expand present capacities; 3) highway expansion—that is, the construction of new facilities; 4) highway safety; 5) highway-related environmental enhancement projects; 6) off-federal aid system highway improvement; 7) transit preservation; 8) transit improvement; and 9) transit expansion projects. Figure 64 graphically

Figure 64

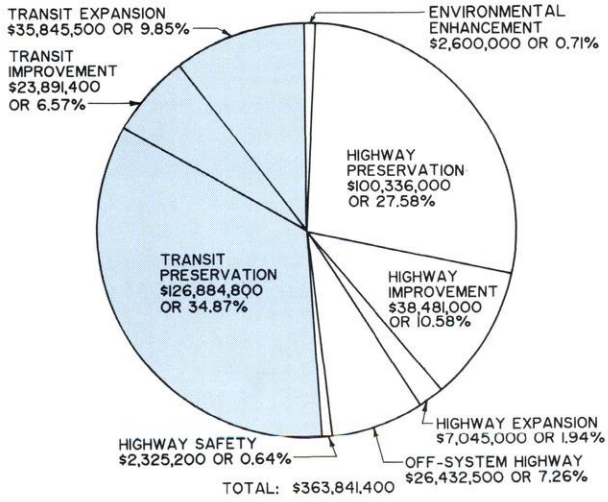
DISTRIBUTION OF EXPENDITURES IN THE ANNUAL ELEMENT OF THE 1989-1993 TRANSPORTATION IMPROVEMENT PROGRAM BY PROJECT CATEGORY

KENOSHA URBANIZED AREA



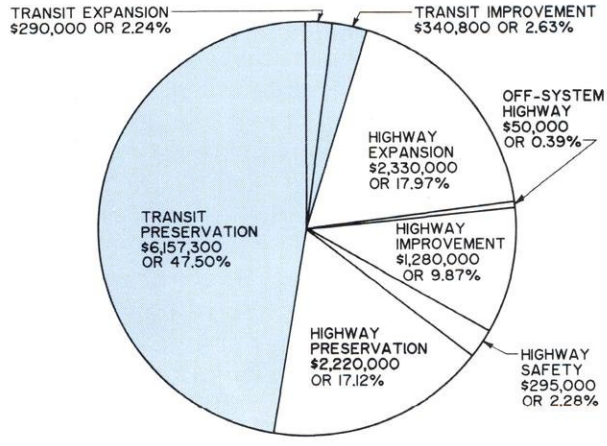
TOTAL: $8,487,100

MILWAUKEE URBANIZED AREA



TOTAL: $363,841,400

RACINE URBANIZED AREA



TOTAL: $12,963,100

reflects the proposed expenditures in the annual element of these nine project categories for each of the three urbanized areas. At least three of the expenditure patterns apparent in the figures deserve some comment:

- A significant proportion of financial resources is to be devoted to the preservation of the existing transportation facilities and services in the 1989 annual element—about 62 percent in the Milwaukee urbanized area, about 65 percent in the Racine urbanized area, and about 64 percent in the Kenosha urbanized area. This allocation of resources is especially notable when it is realized that virtually none of the funding for routine highway maintenance activities—snowplowing, ice control, grass cutting, power for street lighting, and litter pickup—is included in the TIP.

- The expenditure of funds for highway expansion is a small portion of the total expenditures in the urbanized areas of the Region—no expenditures for this purpose are proposed in the Kenosha urbanized area, and about 2 percent of the total expenditures is proposed for this purpose in the Milwaukee urbanized area, and about 18 percent in the Racine urbanized area.

- A significant proportion of financial resources is devoted to public transit projects, which account for about 51 percent of the resources in the Milwaukee urbanized area annual element, about 52 percent of the resources in the Racine urbanized area annual element, and about 71 percent of the resources in the Kenosha urbanized area annual element.

A comparison of the 1989 annual element of the TIP with the 1988 annual element of the 1988-1992 TIP as reported in the Commission's 1987 Annual Report indicated the following:

- In the Kenosha urbanized area, total expenditures are proposed to decrease by about 18 percent—from $10.4 million to about $8.5 million. Expenditures for highways, which constituted about 49 percent of total expenditures in 1988, are proposed to equal about 29 percent of total expenditures in 1989. Expenditures for transit were about 51 percent of total expenditures in 1988, and are

proposed to account for about 71 percent of expenditures in 1989.

- In the Milwaukee urbanized area, total expenditures are proposed to increase by about 20 percent—from about $302.4 million to about $363.8 million. Expenditures for highways, which made up about 51 percent of total expenditures in 1988, are proposed to constitute about 48 percent of expenditures in 1989.

- In the Racine urbanized area, total expenditures are proposed to increase by about 12 percent—from $11.6 million to $13.0 million. Expenditures for highways, which made up about 37 percent of total expenditures in 1988, are proposed to account for about 48 percent of total expenditures in 1989. Expenditures for transit were about 63 percent of total expenditures in 1988, and are proposed to account for about 52 percent of expenditures in 1989.

RAIL TRANSPORTATION PLANNING

The Regional Planning Commission participates in railway planning by monitoring the status of, and changes to, railway service within the Southeastern Wisconsin Region, proposals for service abandonments, and related issues that may affect the Region, and by providing technical assistance to local communities as requested on these and other railway matters. During 1988, Commission activities included review and monitoring of the regional railway system, facilities, and services; railway line ownership changes; shortline railway activities; and railway line abandonment activities.

Regional Railway System

As of December 31, 1988, railway freight service was being provided within southeastern Wisconsin over a total of 473 active miles of railway line by seven railroads. Three of the six carriers operated about 80 percent of the total railway miles in the Region: the Soo Line Railroad Company, which operated 96 miles, or 20 percent of the railway mileage in the Region; the Chicago & North Western Transportation Company, which operated 176 miles, or 37 percent of the railway miles in the Region; and Wisconsin Central, Ltd., which operated 109 miles, or 23 percent of the railway mileage in the Region. Operation of the remaining 20 percent of the railway mileage in the Region was divided among four other carriers: the Wisconsin & Southern Railroad Company—34 miles; the Wisconsin & Calumet Railroad Company, Inc.—25 miles; the Fox River Valley Railroad Company—27 miles; and the Municipality of East Troy Wisconsin Railroad—6 miles. In addition, there were about 48 miles of inactive railway main line in the Region, with track and structures intact.

The locations of the common-carrier railway lines in southeastern Wisconsin are shown on Map 18. The extent of railway mileage in each of the seven counties is set forth in Table 20.

Intercity passenger service is provided by the National Railroad Passenger Corporation (Amtrak) between Chicago and Minneapolis-St. Paul over Soo Line Railroad Company trackage, with trains stopping within southeastern Wisconsin at Milwaukee and Sturtevant. Commuter rail service is provided between Kenosha and Chicago, with intermediate stops throughout the north shore suburbs of Chicago. This service is operated by the Chicago & North Western Transportation Company under an agreement with the Northeast Illinois Railroad Corporation (Metra), the commuter rail division of the Regional Transportation Authority in northeastern Illinois.

Start-Up of Fox River Valley Railroad

The Fox River Valley Railroad Company commenced operations in December 1988 over about 200 miles of railway line purchased from the Chicago & North Western Transportation Company (CNW). This sale by the CNW, which includes the former CNW main line from Milwaukee to Green Bay via Fond du Lac, is part of the CNW's continuing effort to reduce its system throughout the Upper Midwest to only the most heavily used railway lines. The Fox River Valley Railroad has about 27 miles of railway line in the Southeastern Wisconsin Region, and operates over the CNW between Granville and the CNW's major Milwaukee area yard at Butler. The new railroad is headquartered in Green Bay, and is a subsidiary of the Itel Corporation.

Railroad Abandonment Activity

Another railway planning issue of concern in southeastern Wisconsin is the status of railway

Map 18

COMMON-CARRIER RAILWAY FREIGHT LINES IN SOUTHEASTERN WISCONSIN DECEMBER 31, 1988

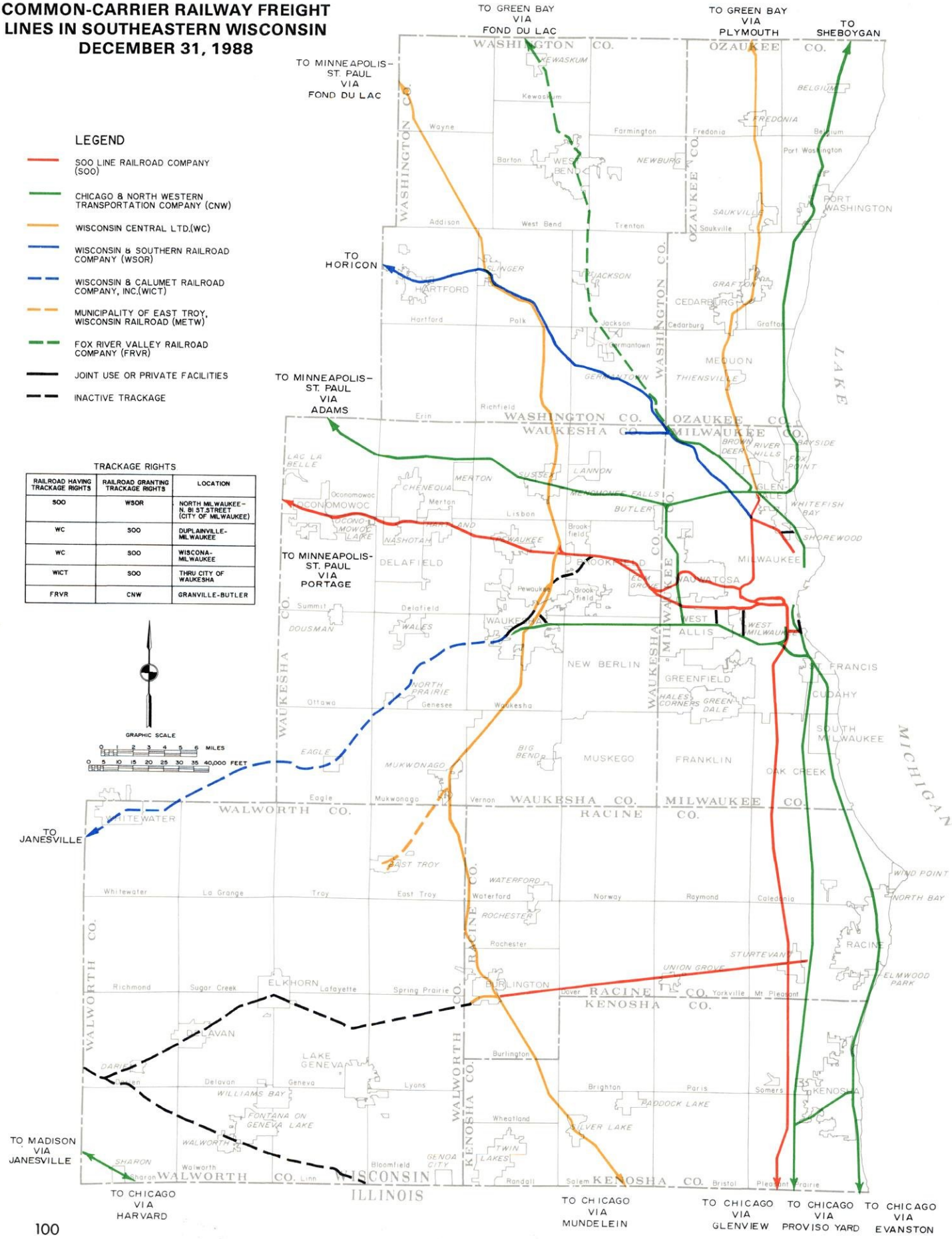


Table 20

ACTIVE COMMON-CARRIER RAILWAY MAINLINE MILEAGE IN SOUTHEASTERN WISCONSIN: DECEMBER 31, 1988

County	Chicago & North Western Transportation Company		Wisconsin Central Limited		Soo Line Railroad Company		Wisconsin & Calumet Railroad Company, Inc.		Fox River Valley Railroad Company		Wisconsin & Southern Railroad Company		Municipality of East Troy Wisconsin Railroad		Total	
	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region
Kenosha	28.5	6.0	10.2	2.2	12.2	2.6	--	--	--	--	--	--	--	--	50.9	10.7
Milwaukee	61.2	12.9	4.7	1.0	32.5	6.9	--	--	--	--	9.1	1.9	--	--	107.5	22.7
Ozaukee	25.8	5.4	25.1	5.3	--	--	--	--	--	--	--	--	--	--	50.9	10.7
Racine	24.5	5.2	13.5	2.9	25.2	5.3	--	--	--	--	--	--	--	--	63.2	13.4
Walworth	3.8	0.8	4.0	0.8	--	--	6.5	1.4	--	--	--	--	5.0	1.0	19.3	4.1
Washington	--	--	25.3	5.3	--	--	--	--	27.3	5.8	22.5	4.8	--	--	75.1	15.9
Waukesha	32.0	6.8	26.5	5.6	25.6	5.4	18.6	3.9	0.1	0.0	2.4	0.5	1.3	0.3	106.5	22.5
Total	175.8	37.1	109.3	23.1	95.5	20.2	25.1	5.3	27.4	5.8	34.0	7.2	6.3	1.3	473.4	100.0

NOTE: This table constitutes an inventory of only first track mainline mileage within the seven-county Southeastern Wisconsin Region. Other trackage such as exists in switching, terminal, industrial, and classification yard areas, as well as trackage considered by the railroad companies to be of a secondary nature, and thus not published in operating timetables, is not included. Trackage owned by private carriers is also not included. These mileages are based upon trackage which is owned or leased by the particular railroad and do not include trackage rights over trackage owned by another railroad company.

lines that are being abandoned by railroad companies. During 1987, three railway line segments were under some type of actual or proposed abandonment action. These are summarized below.

Burlington to Union Grove

In 1987, the Soo Line Railroad Company identified a 10.2-mile railway segment between the City of Burlington and the Village of Union Grove as a potential candidate for abandonment within three years since this railway segment no longer serves any customers. At the end of 1988, the status of this railway line remained unchanged.

Brookfield to P.D.C. Junction

In February 1987, the Soo Line Railroad Company received permission from the Interstate Commerce Commission (ICC) to abandon a 3.25-mile railway segment between the City of Brookfield and P.D.C. Junction located in the Town of Pewaukee near the interchange of IH 94 and STH 164. In May 1987, the Wisconsin Department of Transportation exercised its first right to acquire this railway line, acting on a request from the Wisconsin River Rail Transit Commission. The Transit Commission has indicated that retention of this railway line is necessary in order to preserve a direct connection between railway lines in the south-central portion of Wisconsin and the Port of Milwaukee for the Wisconsin & Calumet Railroad Company, Inc. In September 1988, the Department of Transportation acquired this segment to preserve it for possible restoration of railway service. At the end of 1988, this segment remained inactive.

City of Waukesha

As discussed in the 1987 Annual Report, efforts were underway to abandon a 1.88-mile railway segment in the downtown area of the City of Waukesha. In recent years, the railway segment has seen only negligible use by the Soo Line, but, beginning in April 1987, was used regularly by the Wisconsin & Calumet Railroad as part of a route through the City of Waukesha. The City of Waukesha and local business interests have been anxious to see this railway segment abandoned so its right-of-way could be used for various development projects.

In September 1988, agreement among the City, various state and local units of government and public agencies, several railroad companies, and local developers was reached. The agreement will allow the Wisconsin & Calumet Railroad Company to continue running through the City of Waukesha, but over an alternate route, once appropriate track connections are constructed. Immediately following this agreement, the Soo Line Railroad Company officially abandoned this segment. The track connection project was expected to be undertaken during the 1989 construction season. As of the end of 1988, Wisconsin & Calumet trains were still using the downtown track. However, once the track connection project is completed in 1989, the former Soo Line track through downtown Waukesha will be dismantled.

Graduate Research Center
Dept. of Urban & Regional Planning
The University of Wisconsin-Madison

AIRPORT TRANSPORTATION PLANNING

During 1988, Commission activities in air transportation and airport planning included the continued monitoring of aviation activities within the Region through secondary data sources, the continued monitoring of and provision of technical assistance to airport master planning activities, and the provision of technical assistance to the Chicago airport capacity study. Airport master plans are prepared as the next step toward implementation of the regional airport system plan adopted by the Commission in 1987. This plan is documented in SEWRPC Planning Report No. 38, A Regional Airport System Plan for Southeastern Wisconsin: 2010, and is shown on Map 19.

Aviation Activity

The Commission staff continued to monitor aviation activity within the Region during 1988. General trends in the level of aviation activity within southeastern Wisconsin are indicated by the number of aircraft operations at, and passengers using, General Mitchell International Airport. General Mitchell International Airport is the largest and busiest airport in the Region, and the only airport within the Region with scheduled air carrier service. As shown in Figure 65, in 1988 aircraft operations of all types at Mitchell International totaled about 192,600, an increase of about 7,000, or about 4 percent, over the 191,700 operations that occurred during 1987. This total is about 2 percent above the 189,700 operations forecast to occur at Mitchell International during 1988 in the second generation regional airport system plan.

Total aircraft operations at Mitchell International can be divided into three categories: air carrier, general aviation, and military. Air carrier operations during 1988 totaled about 92,100, about a 21 percent increase over the 1987 level of 76,100 operations. General aviation operations at Mitchell International Airport totaled about 94,200 during 1988, a decrease of about 9 percent from the 1987 level of 103,400 operations. Military aircraft operations at Mitchell International Airport during 1988 totaled about 6,500, an increase of about 7 percent over the 1987 level of 6,000 operations.

From 1987 to 1988, air carrier enplaning and deplaning passengers at General Mitchell International Airport increased by about 460,000 to about 4,030,000 passengers per year, about 13 percent above the 1987 level. The 1988 level was about 710,000, or about 21 percent, greater than the 3,319,500 passengers forecast for 1988 under the second generation regional airport system plan, as shown in Figure 66. The increase in the actual 1988 passenger level is the result of very aggressive competition among air carries for traffic originating in the Milwaukee area, including long-established carriers such as Northwest Airlines, new carriers catering to the business market such as Midwest Express Airlines, and large carriers that are relatively new to the Milwaukee market such as US Air and American Airlines.

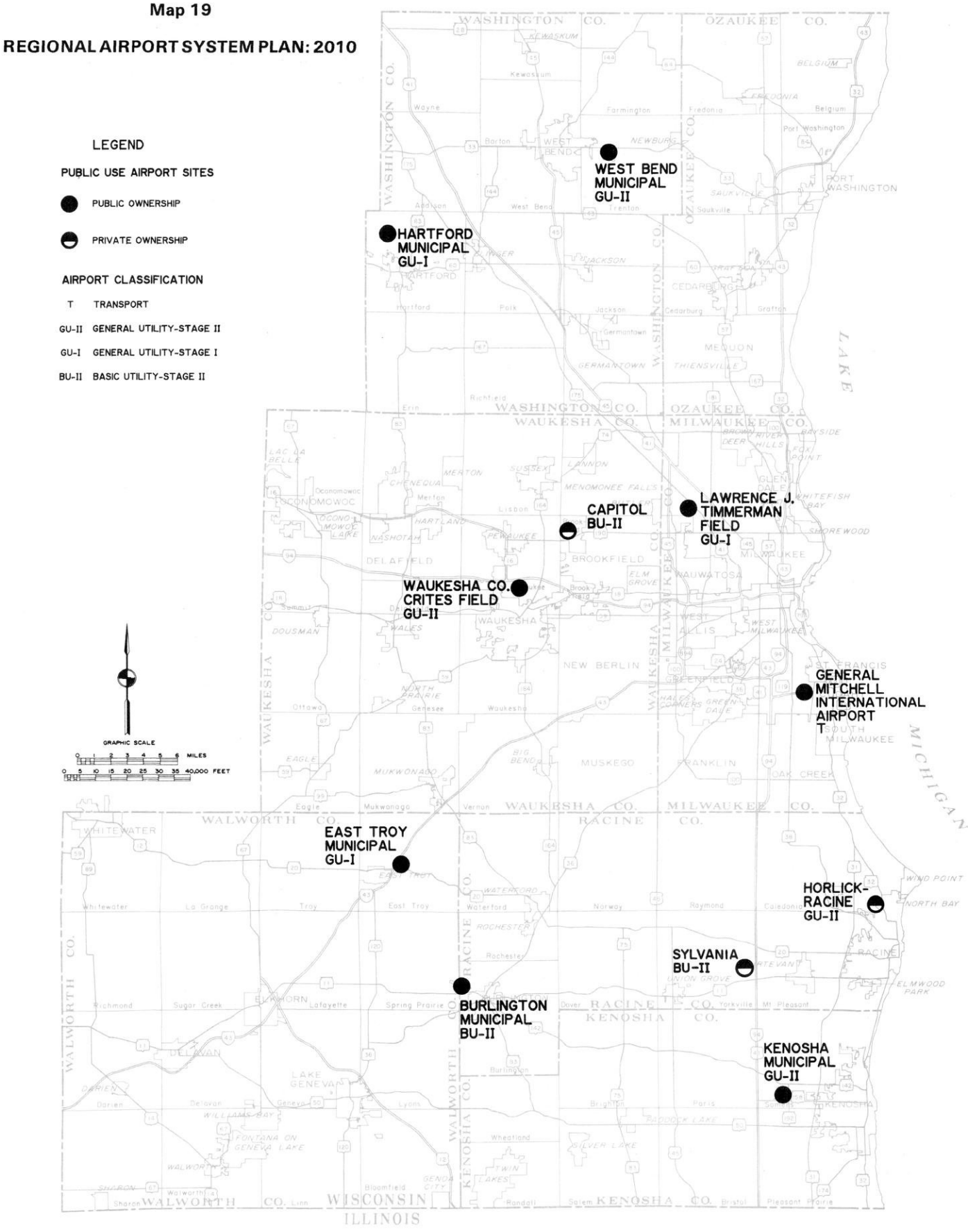
General aviation activity can also be measured in terms of the number of aircraft based within southeastern Wisconsin. A total of 1,382 aircraft were based in the Region during 1988, representing a decrease of 20 aircraft, or about 1 percent, from the number of aircraft based in the Region during 1987, as shown in Figure 67 and Table 21. The number of aircraft based in the Region during 1988 was about 20 percent lower than the total of 1,720 forecast for 1988 under the second generation regional airport system plan.

Chicago Airport Capacity Study

During 1988, the Regional Planning Commission staff continued to serve as a member of the technical committee for the Chicago airport capacity study. This study, which is part of the Illinois state airport and heliport system plan update work effort, was begun in 1986 and was completed in 1988. A final study report was published in August 1988. The study was directed by a policy committee consisting of members from Illinois, Indiana, and Wisconsin. The objective of this study was to determine if there will be a need for additional air carrier capacity in the greater Chicago metropolitan area, in addition to that provided by O'Hare International and Midway Airports, and, if so, to define at what point in time and for what type of activity additional or new facilities would be required. If such a need were found to exist in the Chicago area, the study was to determine one or more sites, including existing airports, at which additional air carrier capacity could be provided. Milwaukee County's General Mitchell

Map 19

REGIONAL AIRPORT SYSTEM PLAN: 2010



International Airport was identified as one of the existing airports to be examined under this study.

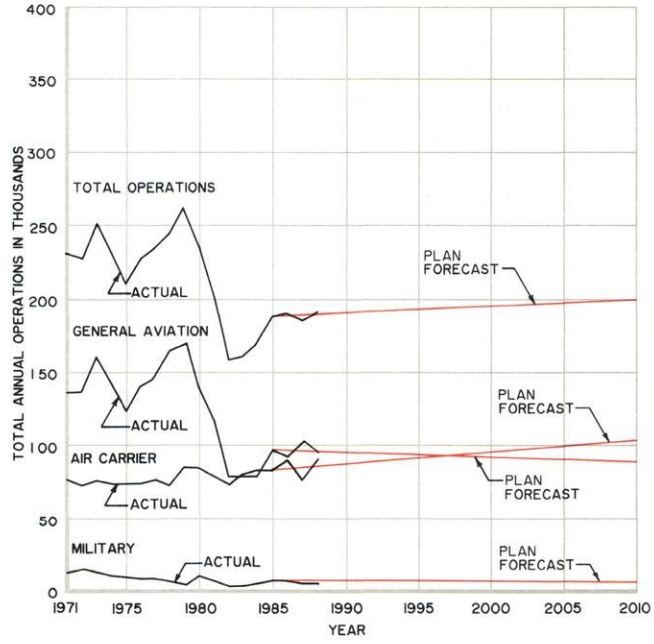
As a member of the study technical committee, the Commission staff was requested by the Wisconsin Department of Transportation and Milwaukee County to closely monitor the progress of the study. This work included the provision of transportation-related and socioeconomic data and information to the study consultant, and detailed review of draft materials concerning various phases of the study. Also, in cooperation with the Wisconsin Department of Transportation and Milwaukee County officials, the Commission staff provided comments on the draft materials, as well as comments at meetings of the technical advisory committee for the study.

With respect to southeastern Wisconsin, the study concluded that General Mitchell International Airport already exists as a supplemental airport to the Chicago area, serving not only the Milwaukee metropolitan area, but also much of northeastern Illinois. This role was expected to continue, and would be enhanced if air carriers increased their hubbing activity at Mitchell International. Furthermore, Mitchell International was found to offer the only possibility for capacity relief of Chicago's O'Hare and Midway Airport traffic until additional capacity was provided elsewhere in the Chicago region. The study noted that construction of a new airport in the Chicago region could take a minimum of 15 years.

The study further concluded that there will be a need for a supplemental airport in addition to O'Hare, Midway, and Mitchell Airports to accommodate the forecast level of passengers in the year 2020, and especially to serve the southern part of the Chicago region. It should be noted that two members of the study policy committee—the City of Chicago, which owns and operates both O'Hare and Midway Airports, and the Air Transport Association of America, which represents the major and national scheduled air carriers—did not concur with the need for a new supplemental airport. Thus, the study recommended that both short-term and long-term options for sufficient airport capacity continue to be considered. These options include: support for Mitchell International's role as a supplemental airport; preparation of a master plan for a new supplemental airport to the south of Chicago—including an analysis of alternative sites and an environmental assessment; appropriate and detailed airspace evaluation with respect to the alternative sites; and the possibility of land banking. At the end of 1988, efforts were underway to begin some of this work—namely, the master plan for a new supplemental airport to the south of Chicago.

Figure 65

ANNUAL AIRCRAFT OPERATIONS AT GENERAL MITCHELL INTERNATIONAL AIRPORT, MILWAUKEE



Airport Master Plans

Airport master plans are intended to refine the recommendations of the adopted regional airport system plan. Specifically, an airport master plan is intended to specify precise land-area requirements for acquisition and protection; provide a detailed airport layout plan; provide an analysis of financial feasibility and set forth a capital improvement budget; provide environmental impact information; and provide for local citizen participation in the work effort. The preparation of airport master plans is primarily the responsibility of the local implementing governmental agency, and such plans establish eligibility for federal financial aid under the Airport and Airway Improvement Act of 1982 as amended by the Airport and Airway Safety and Capacity Expansion Act of 1987.

Table 21

GENERAL AVIATION AIRCRAFT BASED IN THE REGION

County	1960	1965	1970	1975	1980	1985	1988
Kenosha	28	60	76	148	123	112	120
Milwaukee	338	362	356	371	388	373	360
Ozaukee	19	13	32	28	29	27	29
Racine	65	89	108	151	179	207	228
Walworth	23	31	48	82	98	121	114
Washington	45	63	118	136	158	165	190
Waukesha	118	163	243	255	304	350	341
Total	636	781	981	1,171	1,279	1,355	1,382

Figure 66

ANNUAL AIR CARRIER ENPLANING AND DEPLANING PASSENGERS AT GENERAL MITCHELL INTERNATIONAL AIRPORT, MILWAUKEE

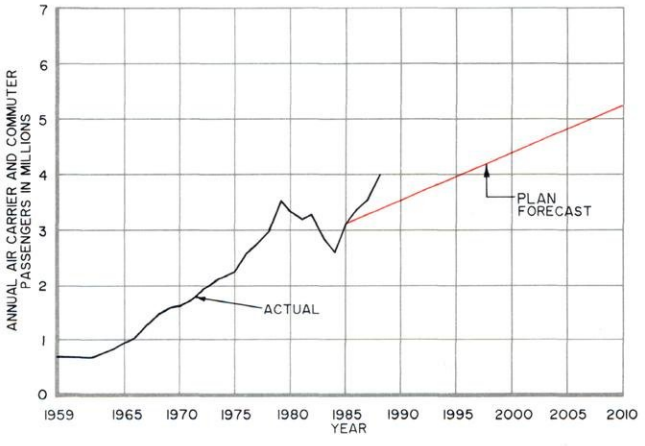
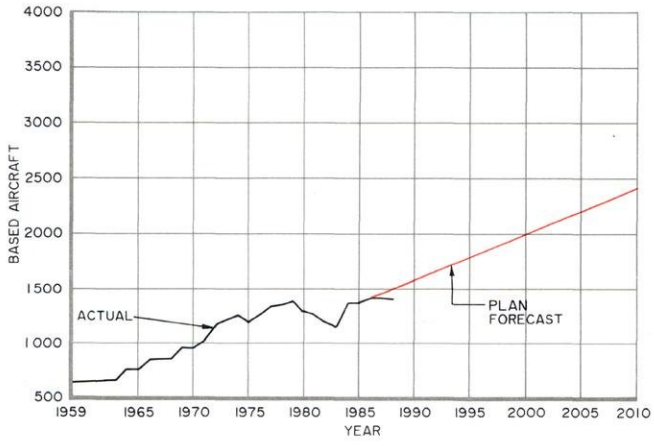


Figure 67

GENERAL AVIATION AIRCRAFT BASED IN THE REGION



As discussed in previous annual reports, airport master plans have been completed for, and adopted by, the local governing bodies for the Kenosha, West Bend, and Hartford Municipal Airports and Waukesha County-Crites Field. All technical work was completed on an airport master plan for General Mitchell International Airport in Milwaukee, but the plan has yet to be adopted by the Milwaukee County Board of Supervisors. During 1987, Milwaukee County began an update of the master plan for Mitchell International. This work continued during 1988. In addition, airport layout plans—an important element of the airport master planning process—have been completed for Horlick-Racine and East Troy Municipal Airports.

DATA PROVISION AND TECHNICAL ASSISTANCE

The Commission spends a considerable amount of time and effort each year in responding to requests for transportation data and technical assistance. Many transportation data requests involve obtaining existing or forecast traffic volumes on selected arterial facilities. Other requests are usually for data necessary for the support of special studies. These special requests are typically made by local units of government, the Wisconsin Department of Transportation, and private businesses and developers.

The following is a sample listing of the assistance provided by the Division in 1988:

- At the request of the staff of the Milwaukee County Transit System, the Commission provided socioeconomic data for Milwaukee County, including data on retail and other employment, average household income, total households, and auto availability; and data for the Milwaukee County arterial highway network, including for each link in the highway network travel time and speed, distance, intersection turn penalties, and capacity. This information was to be used in the travel simulation work performed as part of the update to the short-range transit service plan for the Milwaukee County Transit System.

- At the request of the Village of Lac La Belle, the Commission prepared a staff memorandum entitled, Traffic Impact Study of the Proposed Quad/Graphics, Inc., Research and Office Park in the Village of Lac La Belle. The report analyzes and documents the traffic impacts of the development of the proposed office park, under alternative local street access alternatives, on the existing street and highway system in the Village.

- At the request of the Village of Brown Deer, the Commission analyzed student-vehicular safety problems at the Brown Deer Middle School and provided Brown Deer Middle School officials with the staff findings and recommendations in a letter report.

- At the request of the Town of Merton, the Commission reviewed and commented in a letter report on the traffic impacts which could be anticipated to result from the construction of a varsity soccer field on Arrowhead High School property.

- At the request of the Wisconsin Department of Transportation, the Division of Transit Assistance was provided with socioeconomic characteristics data for transit riders using service provided by the five urban system operators in southeastern Wisconsin.

- At the request of the City of West Bend, traffic forecasts were prepared for the proposed extension of River Road across the Milwaukee River and the intersection of River Road and STH 33.

- At the request of Milwaukee County, traffic counts were conducted—manual as well as machine—and forecasts prepared for the intersections of W. Bradley Road, W. Calumet Road, W. Mill Road, W. Green Tree Road, and W. Good Hope Road with N. 43rd Street. These forecasts included future year—2010—average weekday traffic volumes as well as peak-hour traffic volumes with anticipated turning movements.

- The Commission provided Village of Kewaskum and Town of Kewaskum officials with an analysis of the potential traffic impacts of the proposed Kewaskum industrial park. As part of this analysis, the staff analyzed two key intersections on the principal access route to and from the industrial park. Staff findings and recommendations were set forth in a memorandum report to village and town officials.

- The City of Racine was provided with socioeconomic and travel characteristics of patrons of the City's urban transit system. These data were collected during the September 1984 on-board transit rider survey.

- At the request of the Village of West Milwaukee, the intersection of S. 41st Street and W. Greenfield Avenue was analyzed to assess the impact of a proposed food store on the operation of the intersection and the need for the installation of a traffic signal at this location.

- At the request of the City of Brookfield, cost estimates for, and preliminary sketches of, proposed roadways to access Mitchell Park from W. Capitol Drive and Brookfield Road were prepared.

- At the request of Waukesha Hospital Systems, current and future travel time data were provided for selected hospital facilities in the Milwaukee Area.

- At the request of the Village of Hartland, an analysis of the existing and proposed development for Aspen Village was conducted, and documented in a memorandum report. The analysis included the collection of traffic count data for North Avenue between Hill Street and STH 16; and estimates of

current tripmaking and use of the village street and highway system, as well as estimates of future tripmaking and its impact on village streets.

- At the request of the Village of Hartland, alternative alignments for a potential new collector street to service traffic to and from the east from the Hartridge Subdivision were analyzed and evaluated.

- The City of Milwaukee was provided with typical light rail unit costs for various types of alignment as developed under the Milwaukee northwest corridor rapid transit study.

- Chicago Metropolitan Rail was provided with 1970, 1980, 1985, and forecast 2010 estimates of population, occupied housing units, and employment for townships in Kenosha County.

- At the request of the Town of Norway, special traffic counts were conducted and analyzed in support of requests for the addition of selected highways within the Town to the Federal Aid Urban system.

- The Commission provided Village of Bayside officials with an analysis of the traffic impacts which may be expected as a result of additional traffic generated by proposed commercial, service, and residential development within the Village at the intersection of W. Brown Deer Road and N. Port Washington Road. The staff findings and recommendations were set forth in a letter report to village officials.

- At the request of the Town of Mt. Pleasant, the Commission prepared a traffic engineering study of the intersection of STH 11 and Willow Road, and the intersection of STH 20 and CTH H. The study investigated the need for improvements at the intersection of STH 11 and Willow Road principally to provide for safer truck turning movement; and the need for improvements at the intersection of STH 20 and CTH 11 to improve safety. The traffic engineering actions recommended to alleviate the identified problems at the intersection of STH 11 and Willow Road included: 1) minor widening on the northeast corner to accommodate eastbound left-turning trucks and westbound right-turning trucks; 2) skidproofing the eastbound approach; and 3) reducing the posted speed limit. The traffic engineering actions recommended to alleviate the perceived safety problems at the intersection of STH 20 and CTH H included installing flashing beacons and increasing law enforcement activity to ensure compliance with the posted speed limit.

- At the request of the Village of Hartland, the Commission prepared a traffic impact analysis of the proposed development of a 200-single-family-lot subdivision located north of STH 16 and east of the Village of Hartland corporate limits. The staff memorandum identified existing traffic volumes in the Village, particularly in the area surrounding the proposed subdivision; estimated average weekday vehicle traffic which may be anticipated to be generated by the proposed subdivision; and distributed that traffic over streets in the Hilger Farms-Davis Heights Subdivision which is located immediately west of the proposed subdivision, as well as over adjacent arterial streets. It was found that local streets and arterial streets should experience no significant traffic problems following the development.

ENVIRONMENTAL PLANNING DIVISION

DIVISION FUNCTIONS

The Commission's Environmental Planning Division conducts studies related to and provides recommendations for the protection and enhancement of the Region's environment. The kinds of basic questions addressed by this Division include:

- What is the existing quality of the lakes, streams, and groundwaters of the Region? Is water quality getting better or worse over time?
- What are the sources of water pollution? How can these sources best be controlled to abate water pollution and meet water quality objectives?
- What is the extent of the natural floodlands along lakes and streams?
- What are the best ways to resolve existing flooding problems and to ensure that new flooding problems are not created?
- What are the best ways to resolve existing stormwater drainage, as opposed to flooding, problems and to provide adequate drainage facilities for existing and probable future rural and urban development? How can improved stormwater drainage systems best be integrated with needed nonpoint source water pollution abatement measures?
- What areas of the Region should be provided with sanitary sewer service, and what are the most cost-effective ways of providing such service?
- What needs to be done to ensure a continued ample supply of safe drinking water?
- How can solid wastes best be managed for recycling and disposal in an environmentally safe and energy-efficient manner?
- How can the Lake Michigan shoreline best be protected and used?

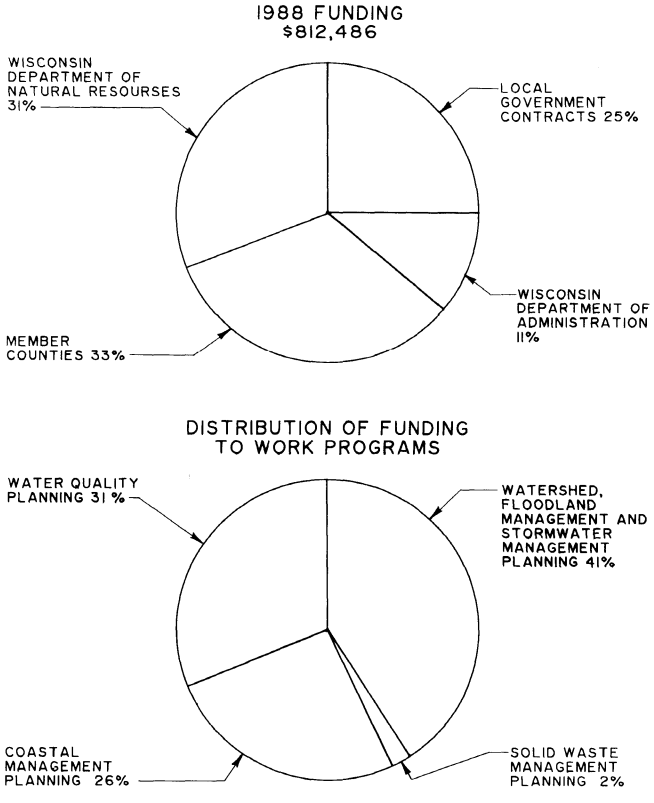
In attempting to find sound answers to these and related questions, develop recommendations concerning environmental protection and enhancement, monitor levels of environmental quality in the Region, and respond to requests for data and technical assistance, activities were conducted in 1988 in four identifiable program areas: water quality management planning; watershed, floodland, and stormwater management planning; coastal management planning; and solid waste management planning.

WATER QUALITY MANAGEMENT PLANNING

During 1988, Commission water quality planning efforts continued to be focused primarily on activities relating to implementation of the adopted regional water quality management plan. Such activities included providing assistance and coordination in the preparation of more detailed and refined nonpoint source pollution abatement plans, providing assistance in the preparation of inland lake water quality

Figure 68

ENVIRONMENTAL PLANNING DIVISION



management plans, and preparing local sanitary sewer service area plans. In addition, the Commission continued to assist local units of government in completing detailed sewerage facilities plans in preparation for the construction of point source pollution abatement facilities identified as needed in the adopted regional plan. The Commission also continued to assist the Wisconsin Departments of Natural Resources and of Industry, Labor and Human Relations in the review of proposed public sanitary sewer extensions and proposed private main sewers and building sewers, and of large onsite sewage disposal systems and holding tanks.

Regional Water Quality Management Plan

In 1979, the Commission completed and adopted a regional water quality management plan. The plan, designed in part to meet the Congressional mandate that the waters of the United States be made to the extent practicable "fishable and swimmable," is set forth in SEWRPC Planning Report No. 30, A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000, Volume One, Inventory Findings; Volume Two, Alternative Plans; and Volume Three, Recommended Plan. The plan provides recommendations for the control of water pollution from point sources—such as sewage treatment plants, points of separate and combined sewer overflow, and industrial waste outfalls—and from nonpoint sources—such as urban and rural stormwater runoff. This regional plan element is one of the more important plan elements adopted by the Commission for, in addition to providing clear and concise recommendations for the control of water pollution, it provides the basis for the continued eligibility of local units of government for federal and state grants in partial support of sewerage system development and redevelopment; for the issuance of waste discharge permits by the Wisconsin Department of Natural Resources (DNR); for the review and approval of public sanitary sewer extensions by the DNR; for the review and approval of private sanitary sewer extensions and large onsite sewage disposal systems and holding tanks by the Wisconsin Department of Industry, Labor and Human Relations; and for federal and state financial assistance in support of local nonpoint source water pollution control projects.

The adopted regional water quality management plan for southeastern Wisconsin consists of five major elements: a land use plan element, a point source pollution abatement element, a nonpoint source pollution abatement element, a sludge management element, and a water quality monitoring element. A descriptive summary of the regional water quality management plan is provided in the Commission's 1979 Annual Report.

Nonpoint Source Pollution Abatement Planning

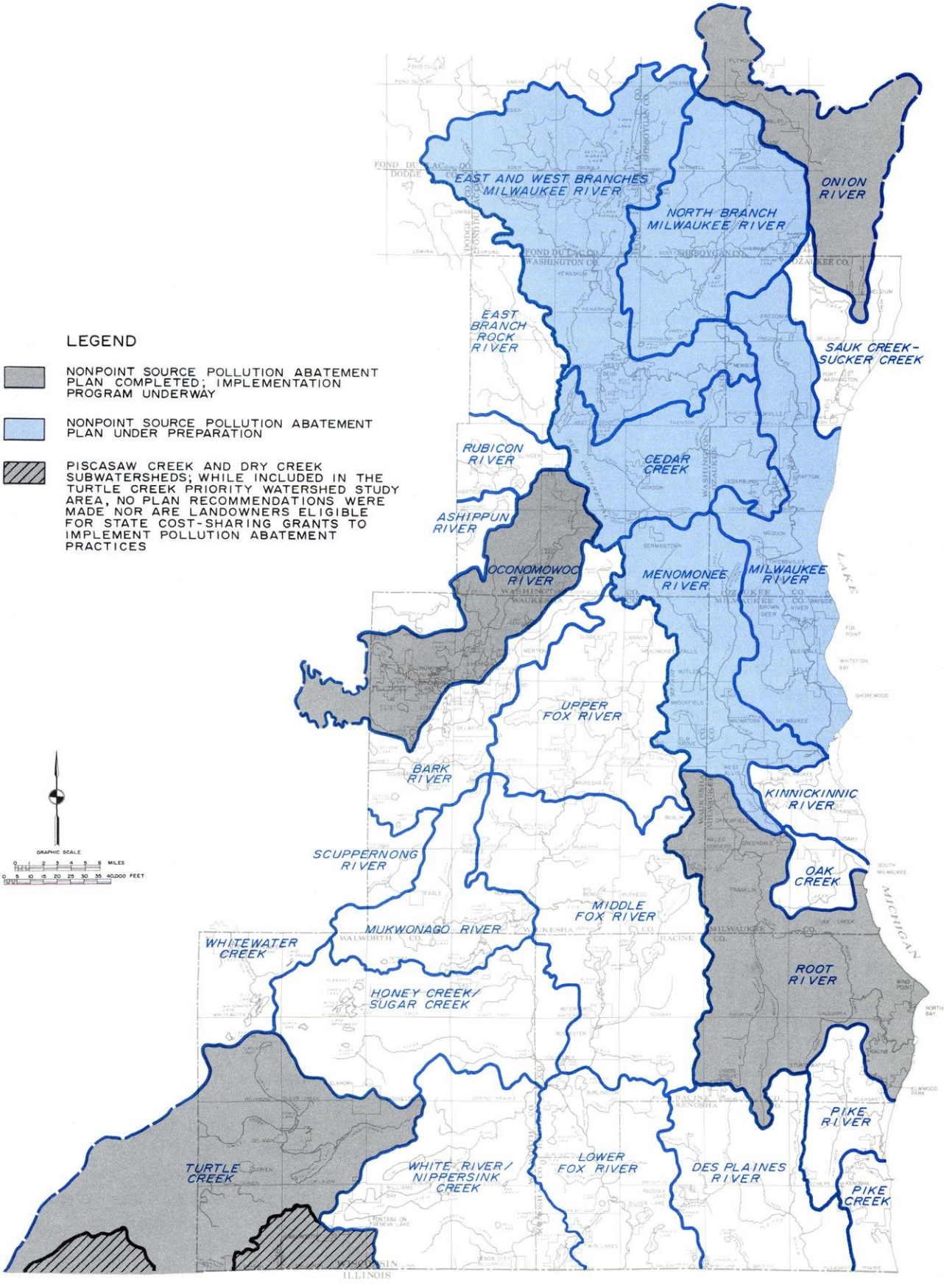
The adopted regional water quality management plan recommends that local agencies charged with responsibility for nonpoint source pollution control prepare refined and detailed, local level, nonpoint source pollution control plans. Such plans are to identify the nonpoint source pollution control practices that should be applied to specific lands. This more detailed level of planning was recommended because the design of nonpoint source pollution abatement practices should be a highly localized, detailed, and individualized effort, an effort that is based on highly specific knowledge of the physical, managerial, social, and fiscal considerations that affect the landowners concerned.

Working with the individual county land conservation committees and the Commission, the Wisconsin Department of Natural Resources is carrying out the recommended detailed planning for nonpoint source water pollution abatement on a watershed-by-watershed basis. This detailed planning and subsequent plan implementation program, known as the Wisconsin Nonpoint Source Priority Watershed Pollution Abatement Program, provides matching funds of up to 80 percent of the cost of an individual project or land management practice to local governments and private landowners upon completion of the detailed plans.

For nonpoint source detailed planning and plan implementation purposes, the DNR has divided the Southeastern Wisconsin Region into 27 "priority" watersheds, as shown on Map 20. Prior to 1988, priority watershed nonpoint source pollution abatement plans had been completed for the Root River watershed, lying primarily in Racine and Milwaukee Counties; for the Onion River watershed, a small portion of which lies in Ozaukee County and which drains north out of the Region through Sheboygan County; for the Turtle Creek watershed, a major portion of which lies in Walworth County and which drains west out of the Region through Rock County; and for the Oconomowoc River water-

Map 20

STATUS OF PRIORITY WATERSHEDS IN SOUTHEASTERN WISCONSIN: 1988



shed, major portions of which lie within Washington and Waukesha Counties and which drains west out of the Region through Jefferson County.

Each of these detailed plans includes specific recommendations for nonpoint source water pollution abatement in urban areas, including construction site erosion control, improved street sweeping and vegetative debris collection and disposal, roadside and stream bank erosion control, landfill site runoff control, and the installation of spent oil disposal stations; and in rural areas, including improved cropping practices, better livestock waste management, stream bank erosion control, and stormwater runoff control. Each of the priority watershed projects includes a detailed planning phase which lasts from 18 to 24 months; a project "sign-up" phase which begins at the completion of the plan and ends from three to five years later; and a project completion phase which ends from three to five years after the end of the project sign-up phase.

The Root River priority watershed plan was completed in 1980. The project sign-up phase ended on December 31, 1984. The projects and practices completed through the end of 1988 in the Root River watershed are summarized in Table 22. Local governments and landowners in the Root River watershed have through the end of December 1989 to complete all of the projects and practices which had been approved by the DNR at the end of the sign-up phase.

The Onion River priority watershed plan was completed in 1981. The project sign-up phase concluded on June 30, 1984. The projects and practices completed within the portion of the watershed in the Region through the end of 1988 are summarized in Table 23. Local governments and landowners in the Onion River watershed will have through the end of June 1989 to complete all projects and practices that are approved by the DNR during the sign-up phase.

The Turtle Creek priority watershed plan was completed in 1984. The project sign-up phase concluded on April 12, 1987. The projects and practices completed within the portion of the watershed in the Region through the end of 1988 are summarized in Table 24. Local governments and landowners in the Turtle Creek watershed will have through the end of April 1992 to complete all projects and practices that are approved by the DNR during the sign-up phase.

The Oconomowoc River priority watershed plan was completed in 1986. The project sign-up phase will conclude on April 15, 1989. The projects and practices completed within that portion of the Oconomowoc River watershed in the Region through the end of 1988 are summarized in Table 25. Local governments and landowners in the Oconomowoc River watershed will have through the end of April 1994 to complete all projects and practices that are approved by the Department of Natural Resources during the sign-up phase.

In May 1984, the Wisconsin Legislature and Governor, through special legislation, designated five additional priority watersheds in the Region and directed the DNR to begin the priority watershed planning process for those watersheds. These five watersheds are all tributary to the Milwaukee Harbor estuary and include the Menomonee River, Cedar Creek, the North Branch of the Milwaukee River, the East and West Branches of the Milwaukee River, and the Milwaukee River-South main stem. The Wisconsin Department of Natural Resources is accordingly proceeding with the preparation of individual priority watershed plans for each of the five subwatersheds to be studied over a multi-year period. It is anticipated that plans for the East and West Branches of the Milwaukee River, the North Branch of the Milwaukee River, the Milwaukee River-South main stem, and the Menomonee River will be completed during 1989. The Cedar Creek watershed plan is expected to be completed early in 1990.

During 1988, the Commission assisted the Department of Natural Resources in its data collection efforts for the Milwaukee River priority watersheds. The Commission staff attended five interagency coordinating meetings with the Department and completed a preliminary draft of a study design for the preparation of a report on the cost of construction site erosion control and stormwater management practices. The Commission completed a land use inventory of the urban portions of the East and West Branches of the Milwaukee River watershed. This work included the preparation and provision to the Department of a base map of the watershed; maps and tabular data on historical urban development patterns and on 1985 land use; and maps and tabular data on lands planned for urban development. The Commission completed and provided to the Department

Table 22

ROOT RIVER PRIORITY WATERSHED PROJECTS AND PRACTICES COMPLETED IN THE REGION AS OF DECEMBER 31, 1988

Projects and Practices	Extent Recommended	Extent Implemented	Cost of Implemented Projects and Practices		
			Wisconsin Fund	Local Government or Landowner	Total
Contour Farming	--[a]	70 acres	$ 820	$ 1,640	$ 2,460
Contour Strip-cropping	490 acres	58 acres	477	955	1,432
Diversions	50,000 feet	11,446 feet	38,099	54,463	92,562
Terraces	1,225,200 feet	29,650 feet	104,415	73,090	177,505
Waterways	182 acres	75 acres	421,364	603,062	1,024,426
Conservation Tillage	11,500 acres	897 acres	22,167	44,335	66,502
Barnyard Runoff Systems	23 systems	6 systems	37,980	54,257	92,237
Manure Storage Facilities	44 facilities	2 facilities	18,571	12,000	30,571
Stream Cattle Crossing	10 crossings	1 crossing	591	844	1,435
Stream Bank Fencing	3,350 feet	3,300 feet	1,750	2,500	4,250
Stream Bank Rip-rap	13,650 feet	10,920 feet	462,711	661,017	1,123,728
Stream Bank Shaping and Seeding	26,370 feet	41,120 feet	762,525	991,781	1,754,306
Critical Area Stabilization	18 acres	313 acres	141,490	192,521	334,011
Grade Stabilization Structures	111 structures	78 structures	259,037	376,595	635,632
Street Sweeping	4 new programs	1 new program	2,326	4,653	6,979
Infiltration Systems	--[a]	2 systems	300	429	729
Oil Disposal Storage Units	20 units	2 units	314	314	628
Concrete Lined Waterway	--[a]	1,264 feet	10,910	4,675	15,585
Total	--	--	$2,285,847	$3,079,131	$5,364,978

[a] *Not specified in priority watershed plan recommendations.*

Table 23

ONION RIVER PRIORITY WATERSHED PROJECTS AND PRACTICES COMPLETED IN THE REGION AS OF DECEMBER 31, 1988

Projects and Practices	Extent Recommended	Extent Implemented	Cost of Implemented Projects and Practices		
			Wisconsin Fund	Local Government or Landowner	Total
Strip-cropping	585 acres	13 acres	$ 156	$ 156	$ 312
Diversions	22,500 feet	400 feet	700	300	1,000
Waterways	41 acres	15 acres	12,995	18,564	31,559
Conservation Tillage	975 acres	131 acres	2,528	5,046	7,574
Barnyard Runoff Systems	12 systems	1 system	140	200	340
Manure Storage Facilities	5 facilities	2 facilities	12,000	40,000	52,000
Fencing Livestock from Woods	--[a]	1 fence	50	50	100
Stream Bank Fencing	450 feet	2,500 feet	190	110	300
Stream Bank Shaping and Seeding	5,550 feet	1,800 feet	2,450	1,050	3,500
Grade Stabilization Structures	1 structure	1 structure	350	500	850
Total	--	--	$31,559	$65,976	$97,535

[a] *Not specified in priority watershed plan recommendations.*

Table 24

TURTLE CREEK PRIORITY WATERSHED PROJECTS AND PRACTICES COMPLETED IN THE REGION AS OF DECEMBER 31, 1988

Projects and Practices	Extent Recommended	Extent Implemented	Cost of Implemented Projects and Practices		
			Wisconsin Fund	Local Government or Landowner	Total
Contour Farming	499 acres	208 acres	$ 2,373	$ 4,746	$ 7,119
Contour Strip-cropping	560 acres	250 acres	7,366	3,683	11,049
Diversions	5,456 feet	4,430 feet	5,989	8,555	14,544
Terraces	96,873 feet	27,500 feet	28,490	40,700	69,190
Conservation Tillage	3,930 acres	2,718 acres	93,317	186,635	279,952
Grassed Waterways	182 acres	77 acres	86,332	123,332	209,664
Barnyard Runoff Systems	22 systems	14 systems	125,210	178,872	304,082
Manure Storage Facilities	15 facilities	2 facilities	12,000	55,500	67,500
Stream Bank Fencing	15,000 feet	9,050 feet	9,820	12,950	22,770
Stream Bank Rip-rap	3,750 feet	14,874 feet	252,979	374,899	627,878
Stream Bank Shaping and Seeding	10,125 feet	500 feet	2,800	4,000	6,800
Critical Area Stabilization	7 acres	4 acres	11,499	16,413	27,912
Grade Stabilization Structures	8 structures	4 structures	9,660	13,800	23,460
Cover Crop for Wind Erosion	--[a]	150 acres	1,604	2,292	3,896
Wind Break	--[a]	22,152 acres	2,332	1,632	3,964
Total	--	--	$651,771	$1,028,009	$1,679,780

[a]*Not specified in priority watershed plan recommendations.*

Table 25

OCONOMOWOC RIVER PRIORITY WATERSHED PROJECTS AND PRACTICES COMPLETED IN THE REGION AS OF DECEMBER 31, 1988

Projects and Practices	Extent Recommended	Extent Implemented	Cost of Implemented Projects and Practices		
			Wisconsin Fund	Local Government or Landowner	Total
Contour Strip-cropping	700 acres	18 acres	$ 216	$ 432	$ 648
Conservation Tillage	4,020 acres	249 acres	7,608	15,216	22,824
Grassed Waterways	90 acres	3 acres	6,850	2,695	9,545
Barnyard Runoff Systems	30 systems	2 systems	19,760	9,717	29,477
Stream Bank Shaping and Seeding	19,000 feet	160 feet	5,870	8,386	14,256
Other Stream Bank Best Management Practices	--[a]	550 feet	77,197	96,497	173,694
Critical Area Stabilization	350 acres	13 acres	6,819	8,759	15,578
Grade Stabilization Structures	10 structures	2 structures	6,644	5,315	11,959
Total	--	--	$130,964	$147,017	$277,981

[a]*Not specified in priority watershed plan recommendations.*

a base map of the North Branch of the Milwaukee River watershed. The Commission also began a land use inventory of the urban portions of the Milwaukee River-South watershed. This work included the delineation of subbasins within the watershed; the identification and mapping of 1985 land use; and the mapping of lands planned for urban development. These inventories are scheduled to be conducted for the remaining two Milwaukee River priority watersheds subsequent to 1988. In addition, the Commission completed editing and verifying upland soil erosion inventory data in the Ozaukee and Washington County portions of the priority watershed, which are used to calculate soil loss using the universal soil loss equation.

Lake Water Quality Management Planning

The adopted regional water quality management plan recommended that detailed, comprehensive lake water quality management plans be prepared for the drainage areas directly tributary to each of the 101 major lakes in southeastern Wisconsin. The Commission and the DNR have been working with lake community organizations and agencies, including formal lake protection and rehabilitation districts, to complete over time the preparation of such comprehensive plans. Where budget and work program conditions permit, these lake studies are being documented in SEWRPC community assistance planning reports. These reports describe the existing chemical, biological, and physical water quality conditions of the lake; the existing and proposed uses of the lake and attendant water quality objectives and standards; the land management and land use measures required in each lake watershed; and required point and nonpoint source pollution abatement measures.

By the end of 1988, comprehensive lake water quality management plans had been completed for seven lakes—Ashippun, La Belle, Pewaukee, North, and Okauchee in Waukesha County; Geneva Lake in Walworth County; and Friess Lake in Washington County. These plans were adopted by the Commission as amendments to the regional water quality management plan.

At the end of 1988, the Commission had lake studies underway for Oconomowoc Lake and Fowler Lake in Waukesha County and Pike Lake in Washington County. Special field surveys were conducted in Fowler Lake in 1988 to examine the existing aquatic plant problems and control efforts, to delineate sensitive and valuable ecological resources within the lake, and to evaluate existing and potential recreational use opportunities. The Fowler Lake study is expected to be completed in 1989, and the studies for Oconomowoc Lake and Pike Lake are proposed to be completed over the next several years as funding permits.

In addition to these comprehensive lake water quality management plans, the Commission continued to provide assistance to certain lake districts and associations. The Commission reviewed, and made recommendations to abate, construction site erosion problems which were affecting Waubeesee Lake and Wind Lake in Racine County. For Powers Lake in Kenosha County, the Commission reviewed water quality data collected by the U. S. Geological Survey, and provided information to assist the lake district in conducting a septic system evaluation survey. The Commission also surveyed shoreline erosion problems in Whitewater Lake, Walworth County. For Pike Lake in Washington County, the Commission helped the lake district, the Town of Hartford, and the City of Hartford to cooperatively evaluate alternative means of extending centralized sanitary sewer service to the lake area. The Commission staff attended and participated in lake association or district meetings for Powers, Waubeesee, and Whitewater Lakes.

Local Sewerage Facilities Planning

During 1988, the Commission continued to work with local engineering staffs and consultants in the preparation of detailed local sewerage facilities plans designed to meet the requirements of Section 201 of the federal Clean Water Act, the requirements of the Wisconsin Fund established by the State Legislature in 1978 and administered by the Wisconsin Department of Natural Resources, and good engineering practice. Work activities during 1988 included the provision of basic economic, demographic, land use, and natural resource base data for use in the preparation of the facilities plans; the extension of the findings and recommendations of the regional water quality management plan, in particular those regarding sanitary sewer service areas, trunk sewer configurations, and treatment plant locations, capacities, and levels of treatment; and the review of, and comment on, the preliminary plans.

During 1988, the Commission was directly involved in the following local sewerage facility planning efforts:

- The preparation of a facilities plan for the City of Burlington in Racine County. This plan recommends that the Burlington sewage treatment plant, which is nearing capacity and the end of its useful life, be rebuilt with greater capacity on a new site downstream on the Fox River, and that the new plant provide capacity to permit the abandonment of a private sewage treatment plant now serving local the Packaging Corporation of America container plant as recommended in the regional water quality management plan.

- The preparation of a facilities plan for the Raymond Heights Sanitary District in the Town of Raymond, Racine County. This plan pertains to a small urban area not specifically recommended for centralized sanitary sewer service in the regional water quality management plan. After evaluating a number of alternatives, including connection of the area to the Milwaukee and Racine metropolitan sewerage systems, the plan recommended that, as an interim measure, the Raymond Heights Subdivision be provided with sanitary sewers that would drain to a common holding tank, and that wastes from the holding tank be conveyed by truck to the Racine sewage treatment facility. This recommendation would make it possible to resolve severe septic tank failures in the subdivision while ensuring that a connection could readily be made to the Racine sewerage system at such time as a sufficient mass of new urban development in the IH 94 corridor would provide the basis for a cost-efficient extension of sanitary sewers to the area.

- The preparation of a facilities plan for the Village of Darien in Walworth County. The Darien treatment facility is nearing capacity and the end of its useful life. The facilities plan evaluated two basic alternatives, one which would rebuild and enlarge the Darien treatment plant and another which would abandon the plant and connect the Village of Darien to the Walworth County Metropolitan District (WalCoMet) system. Based upon cost-effectiveness and fiscal analyses over a 20-year period, the plan recommended abandonment of the plant and connection to WalCoMet. At year's end, the Village Board had that plan recommendation under consideration. Acceptance of the plan recommendation would result in a change to the regional water quality management plan, since that plan does not presently call for abandonment of the Darien treatment facility.

- The preparation of a facilities plan for a major new trunk sewer to serve the City of Oconomowoc and its northern environs. This facilities plan refined and detailed, with respect to sizing and alignment, an intercommunity trunk sewer facility recommended in the regional water quality management plan.

- The preparation of a facilities plan for a special-purpose trunk sewer that would convey leachate from the Greidanus Landfill site in the Town of Darien, Walworth County, to the Walworth County Metropolitan Sewerage District for treatment and disposal. This plan was approved by the local governments concerned, as well as by the Commission as an amendment to the regional water quality management plan.

- The preparation of two facility plans for major intercommunity trunk sewers extending both west and east from the City of Hartford sewerage system. With respect to the westerly trunk sewer, the plan recommends a new trunk sewer that not only would provide service to a new major industrial park being developed by the City of Hartford at the Washington-Dodge County line north of STH 60, but also would permit service to be extended to the unincorporated Village of Rubicon in the Town of Rubicon, Dodge County. With respect to the easterly trunk sewer, the plan provides the basis for sanitary sewer service along STH 60 east of the present limits of the City of Hartford, including service to urban development along the shoreline of Pike Lake and to Pike Lake State Park in the Town of Hartford, Washington County. In both cases, the facility plans were approved locally by all parties concerned and adopted by the Commission as amendments to the regional water quality management plan.

- The preparation of a facilities plan for a trunk sewer that would connect the Cedar Lake Home institutional and retirement complex on the shoreline of Big Cedar Lake in the Town of West Bend, Washington County, to the City of West Bend sanitary sewerage system. The trunk sewer would permit abandonment of the private groundwater discharge sewage treatment facility serving the Cedar Lake Home complex. This facilities plan was approved by the City and Town of West Bend and adopted by the Commission as an amendment to the regional water quality management plan.

- The extension of technical assistance to several local units of government that have begun to consider the provision of centralized sanitary sewer service to existing urban development in areas surrounding inland lakes. The Commission collated available information and prepared detailed grant application materials seeking sewerage facilities planning grants that would enable the Towns of Randall and Wheatland, Kenosha County, for the Powers Lake area; the Town of Wheatland, Kenosha County, for the Lilly Lake area and other areas of existing development in the Town; the Town of Bloomfield, Walworth County, for the Pell Lake area; the Town of Burlington, Racine County, for the Bohners Lake area; and the Silver Lake Sanitary District, Town of West Bend, Washington County, to conduct preliminary engineering studies to ascertain the need for sewerage facilities and the probable costs of obtaining such facilities. At year's end, the Wisconsin Department of Natural Resources had these grant applications under consideration.

- The conduct of a study jointly by the Villages of Sussex, Lannon, and Menomonee Falls and the Town of Lisbon directed at reevaluating the current recommendations in the regional water quality management plan with respect to the provision of sewage treatment facilities in the Upper Fox River watershed. At present, the plan calls for the Village of Sussex sewage treatment plant to be abandoned at the end of its useful life and for the tributary service area and for certain areas in the Village of Lannon, the Town of Lisbon, and the Village of Menomonee Falls to be connected to the City of Brookfield sewage treatment plant. At year's end the engineering consultant assisting the four communities in conducting the study had completed a draft of the report, which included a recommendation to revise the regional plan to provide for a permanent new areawide plant at the the Village of Sussex to be operated in addition to the Brookfield plant. At year's end, the study report was under consideration not only by the local governments sponsoring the study, but by the other units of government in the Upper Fox River watershed, the Commission, and the Wisconsin Department of Natural Resources.

- The conduct of a study effort to reevaluate the current recommendation in the regional water quality management plan that the sewage treatment facility serving the Southern Wisconsin Center, and operated by the Wisconsin Department of Health and Social Services, be abandoned and the center connected to the Village of Union Grove sanitary sewerage system. That reevaluation resulted in findings that confirmed the current plan recommendation. These findings were presented during the year to all parties concerned at a series of meetings and through a staff memorandum. At year's end, the Village of Union Grove and the Department of Health and Social Services were in the process of negotiating a service contract that would permit implementation of the plan to proceed.

- Work was concluded during the year on intergovernmental efforts to secure centralized sanitary sewer service for the Bark Lake Sanitary District in the Town of Richfield, Washington County. Analyses completed by the Commission prior to 1988 indicated that it would be more cost-effective and environmentally sound to connect the Bark Lake Sanitary District to the Milwaukee Metropolitan Sewerage District (MMSD) system than to build a new sewage treatment plant that would discharge effluent to the Bark River above the lakes in Waukesha County, through which the Bark River flows. During 1988 the MMSD formally rejected a proposed agreement that would have provided the basis for carrying out the Commission's recommendation. The Secretary of the Wisconsin

Department of Natural Resources indicated that the Department would not approve the construction of a sewage treatment plant on the Upper Bark River as originally sought by the Sanitary District. The Bark Lake Sanitary District rejected a Commission suggestion that a sanitary sewerage system be constructed discharging to a large holding tank operated by the sanitary district, with the wastes being trucked to Germantown for discharge into the Milwaukee Metropolitan Sewerage System, the MMSD indicating it would accept such trucked wastes. Based upon these decisions, an intergovernmental consensus was reached that the Bark Lake Sanitary District would have to rely upon rebuilding individual onsite septic tank sewage disposal systems as may be practicable, or in the alternative, replacing individual septic systems with sewage holding tanks.

- At the request of the Kenosha Water Utility, the Commission prepared during the year a prospectus that would result in the preparation of coordinated sanitary sewerage and water supply system plans for the greater Kenosha area. The study outlined in the prospectus would also address the intergovernmental, administrative, legal, and fiscal problems inherent in the development of the required utility systems. Particular emphasis would be placed upon identifying the most cost-effective and environmentally sound utility systems to serve the rapidly developing IH 94 freeway corridor in Kenosha County, taking into account the water resources and legal issues that would be attendant to the potential diversion of Lake Michigan water across the subcontinental divide traversing Kenosha County. The prospectus was prepared under the guidance of a technical advisory and intergovernmental coordinating committee. At year's end, the prospectus had been approved by all parties concerned, funding had been secured in accordance with the prospectus recommendation, and a consultant selected to carry out the preparation of the coordinated set of plans. The Regional Planning Commission agreed to administer the program for the local units of government in eastern Kenosha County.

Sanitary Sewer Extensions and Sewer Service Area Refinement Process

The adoption during 1979 of a regional water quality management plan for southeastern Wisconsin set into motion a process whereby, under rules promulgated by the Wisconsin Department of Natural Resources, the Commission must review and comment on all proposed public sanitary sewer extensions. Such review and comment must relate a proposed public sewer extension to the sanitary sewer service areas identified in the adopted plan. Under Section NR 110.08(4) of the Wisconsin Administrative Code, the Wisconsin Department of Natural Resources may not approve public sanitary sewer extensions unless such extensions are found to be in conformance with an adopted areawide water quality management plan. In addition, rule changes promulgated by the Wisconsin Department of Industry, Labor and Human Relations during 1985 require the Commission to comment on certain private sanitary sewer extensions and large onsite sewage disposal systems and holding tanks relative to the Commission's adopted areawide water quality management plan. Under Section ILHR 82.20(4) of the Wisconsin Administrative Code, the Wisconsin Department of Industry, Labor and Human Relations may not approve private main sewer or building sewer extensions unless such extensions are found to be in conformance with an adopted areawide water quality management plan.

When the regional water quality management plan was adopted in 1979, that plan included preliminary recommended sanitary sewer service areas tributary to each recommended public sewage treatment facility in the Region. A total of 85 such sanitary sewer service areas were delineated and named in the adopted plan. These initially recommended sanitary sewer service areas were based upon the adopted regional land use plan for the year 2000. As such, the preliminary delineations were necessarily general in nature and did not reflect detailed local planning considerations. Accordingly, the Commission determined that upon adoption of the regional water quality management plan, steps would be taken to refine and detail each of the sewer service areas in cooperation with the local units of government concerned. A process for refining and detailing the

areas was set forth in the plan, consisting of intergovernmental meetings with the affected units of government and culminating in the holding of a public hearing on the refined and detailed sewer service area map. Such a map would identify not only the planned perimeter of the sewer service area, but also the location and extent of the primary environmental corridors within that service area, such corridors containing the best and most important elements of the natural resource base. Preserving the environmental corridor lands in essentially natural, open uses is important to the maintenance of the overall quality of the environment, and helps avoid the creation of serious and costly developmental problems. Accordingly, urban development should be discouraged from occurring within the corridors identified in the sewer service area plans, an important factor to be considered in the extension of sanitary sewer service.

The Commission determined that each refined and detailed sanitary sewer service area plan, including detailed delineations of primary environmental corridors, would be documented in a Commission community assistance planning report. That report would be formally adopted by the appropriate local sewerage agency and by the Commission, and forwarded to the Wisconsin Department of Natural Resources and the U. S. Environmental Protection Agency as an amendment to the adopted regional water quality management plan.

By the end of 1988, the recommended plan refinement process had been completed for 50 of the 85 initially identified sanitary sewer service areas. Forty-eight of these refinements had been completed and adopted both by the local governments concerned and by the Commission prior to 1988. During 1988, such detailed planning efforts were completed for two additional areas: the Kewaskum area in Washington County and the Darien area in Walworth County. The plans for both of these areas were adopted locally and by the Commission during 1988. The refinement process has resulted in a redefinition and combination of certain areas such that, upon completion of the refinement of the 50 areas, there remained only 43 such areas.

In addition to the refinement of previously delineated sanitary sewer service areas, the planning process followed since adoption of the regional water quality management plan in 1979 has resulted in the creation of six new sanitary sewer service areas. The refined sewer service area plans for these service areas—Army Lake, the Country Estates Sanitary District in the Town of Lyons, and the Town of Walworth Utility District No. 1, all located in Walworth County; Eagle Spring Lake Sanitary District and Mukwonago County Park in Waukesha County; and Rainbow Springs lying in both Waukesha and Walworth Counties—were completed prior to 1988.

The existing status of all planned sanitary sewer service areas is summarized in Table 26 and on Map 21. This table identifies the originally defined 85 sewer service areas and the relationship of those areas to the 50 refined and detailed sewer service areas and the six new sewer service areas referenced above. The table also identifies the documents setting forth each refined and detailed sewer service area, and the date on which the Commission adopted that document as an amendment to the regional water quality management plan.

Additional sewer service area refinement plans were underway at the end of 1988. These included plans for the Franklin portion of the Milwaukee Metropolitan Sewerage District in Milwaukee County; the Mequon and Thiensville areas in Ozaukee County; and the Brookfield, Elm Grove, Delafield-Nashotah, and Oconomowoc areas in Waukesha County.

Pending the completion of such plan refinement studies in cooperation with the local units of government concerned, the Commission must use the more general sewer service area recommendations set forth in the adopted regional water quality management plan as a basis for reviewing and commenting on individual proposed sanitary sewer extensions. During 1988, such review comments were provided on 202 public sanitary sewer extensions and 301 private main sewers or building sewers, distributed by county as shown in Table 27.

WATERSHED, FLOODLAND, AND STORMWATER MANAGEMENT PLANNING

During 1988, Commission efforts in watershed, floodland, and stormwater management consisted of the continuation of a stormwater drainage and flood control policy and system planning program for the Milwaukee Metropolitan Sewerage District; the provision of technical assistance to local governmental units in the

Table 26

PLANNED SANITARY SEWER SERVICE AREAS IN THE REGION: 1988

County	Name of Initially Defined Sanitary Sewer Service Area(s)	Name of Refined and Detailed Sanitary Sewer Service Area	Date of SEWRPC Adoption of Plan Amendment	Plan Amendment Document
Kenosha	Bristol-George Lake	Bristol	December 1, 1986	SEWRPC Community Assistance Planning Report No. 145, Sanitary Sewer Service Area for the Town of Salem Utility District No. 1, Village of Paddock Lake, and Town of Bristol Utility District Nos. 1 and 1B, Kenosha County, Wisconsin
	Bristol IH 94	Bristol/Pleasant Prairie	December 2, 1985	SEWRPC Community Assistance Planning Report No. 106, Sanitary Sewer Service Areas for the City of Kenosha and Environs, Kenosha County, Wisconsin
	Camp-Center Lakes Cross Lake Rock Lake Wilmot	Salem South	March 3, 1986	SEWRPC Community Assistance Planning Report No. 143, Sanitary Sewer Service Area for the Town of Salem Utility District No. 2, Kenosha County, Wisconsin
	Hooker-Montgomery Lakes	Salem North	December 1, 1986	SEWRPC Community Assistance Planning Report No. 145, Sanitary Sewer Service Area for the Town of Salem Utility District No. 1, Village of Paddock Lake, and Town of Bristol Utility District Nos. 1 and 1B, Kenosha County, Wisconsin
	Kenosha Pleasant Park Somers	Kenosha	December 2, 1985	SEWRPC Community Assistance Planning Report No. 106, Sanitary Sewer Service Areas for the City of Kenosha and Environs, Kenosha County, Wisconsin
	Pleasant Prairie South	Pleasant Prairie South	December 2, 1985	SEWRPC Community Assistance Planning Report No. 106, Sanitary Sewer Service Areas for the City of Kenosha and Environs, Kenosha County, Wisconsin
	Paddock Lake	Paddock Lake	December 1, 1986	SEWRPC Community Assistance Planning Report No. 145, Sanitary Sewer Service Area for the Town of Salem Utility District No. 1, Village of Paddock Lake, and Town of Bristol Utility District Nos. 1 and 1B, Kenosha County, Wisconsin

Table 26 (continued)

County	Name of Initially Defined Sanitary Sewer Service Area(s)	Name of Refined and Detailed Sanitary Sewer Service Area	Date of SEWRPC Adoption of Plan Amendment	Plan Amendment Document
Kenosha (continued)	Silver Lake	Silver Lake	June 15, 1987	SEWRPC Community Assistance Planning Report No. 119, Sanitary Sewer Service Area for the Village of Silver Lake, Kenosha County, Wisconsin
	Twin Lakes	Twin Lakes	June 15, 1987	SEWRPC Community Assistance Planning Report No. 149, Sanitary Sewer Service Area for the Village of Twin Lakes, Kenosha County, Wisconsin
Milwaukee	Milwaukee Metropolitan Sewerage District	--	--	--
	South Milwaukee	--	--	--
Ozaukee	Belgium	Belgium	March 11, 1985	SEWRPC Community Assistance Planning Report No. 97, Sanitary Sewer Service Area for the Village of Belgium, Ozaukee County, Wisconsin
	Cedarburg Grafton	Cedarburg Grafton	June 15, 1987	SEWRPC Community Assistance Planning Report No. 91, Sanitary Sewer Service Area for the City of Cedarburg, Village of Grafton, Ozaukee County, Wisconsin
	Fredonia Waubeka	Fredonia Waubeka	September 13, 1984	SEWRPC Community Assistance Planning Report No. 96, Sanitary Sewer Service Area for the Village of Fredonia, Ozaukee County, Wisconsin
	Lake Church	--	--	--
	Mequon	--	--	--
	Port Washington	Port Washington	December 1, 1983	SEWRPC Community Assistance Planning Report No. 95, Sanitary Sewer Service Area for the City of Port Washington, Ozaukee County, Wisconsin
	Saukville	Saukville	December 1, 1983	SEWRPC Community Assistance Planning Report No. 90, Sanitary Sewer Service Area for the Village of Saukville, Ozaukee County, Wisconsin
	Thiensville	--	--	--
Racine	Burlington	Burlington	June 16, 1986	SEWRPC Community Assistance Planning Report No. 78, Sanitary Sewer Service Area for the City of Burlington, Racine County, Wisconsin

Table 26 (continued)

County	Name of Initially Defined Sanitary Sewer Service Area(s)	Name of Refined and Detailed Sanitary Sewer Service Area	Date of SEWRPC Adoption of Plan Amendment	Plan Amendment Document
Racine (continued)	Southern Wisconsin Center	--	--	--
	Eagle Lake	--	--	--
	Racine Caddy Vista	Racine Caddy Vista	December 1, 1986	SEWRPC Community Assistance Planning Report No. 147, Sanitary Sewer Service Area for the City of Racine and Environs, Racine County, Wisconsin
	Union Grove	--	--	--
	Waterford/Rochester Tichigan Lake	Waterford/Rochester	June 16, 1986	SEWRPC Community Assistance Planning Report No. 141, Sanitary Sewer Service Area for the Waterford/Rochester Area, Racine County, Wisconsin
	Wind Lake	--	--	--
	Yorkville	--	--	--
Walworth	--	Country Estates Sanitary District	March 3, 1987	Amendment to the Regional Water Quality Management Plan—2000, Country Estates Sanitary District, Town of Lyons
	Darien	Darien	June 20, 1988	SEWRPC Community Assistance Planning Report No. 123, Sanitary Sewer Service Area for the Village of Darien, Walworth County, Wisconsin
	Delavan Delavan Lake Elkhorn Walworth County Institutions	Delavan Delavan Lake Elkhorn Walworth County Institutions	December 3, 1981	SEWRPC Community Assistance Planning Report No. 56, Sanitary Sewer Service Areas for the Walworth County Metropolitan Sewerage District
	East Troy Potter Lake	East Troy Potter Lake Army Lake	September 13, 1984	SEWRPC Community Assistance Planning Report No. 112, Sanitary Sewer Service Area for the Village of East Troy and Environs, Walworth County, Wisconsin
	Fontana	--	--	--
	Genoa City	--	--	--
	Lake Como	--	--	--
	Lake Geneva	--	--	--
	Lyons	Lyons	September 14, 1987	SEWRPC Community Assistance Planning Report No. 158, Sanitary Sewer Service Area for the Town of Lyons Sanitary District No. 2, Walworth County, Wisconsin
	Sharon	--	--	--
	Walworth	--	--	--

Table 26 (continued)

County	Name of Initially Defined Sanitary Sewer Service Area(s)	Name of Refined and Detailed Sanitary Sewer Service Area	Date of SEWRPC Adoption of Plan Amendment	Plan Amendment Document
Walworth (continued)	--	Town of Walworth Utility District No. 1	June 15, 1987	Amendment to the Regional Water Quality Management Plan—2000, Town of Walworth Utility District No. 1/Walworth County Metropolitan Sewerage District
	Whitewater	Whitewater	September 14, 1987	SEWRPC Community Assistance Planning Report No. 94, Sanitary Sewer Service Area for the City of Whitewater, Walworth County, Wisconsin
	Williams Bay	--	--	--
Washington	Allenton	Allenton	March 11, 1985	SEWRPC Community Assistance Planning Report No. 103, Sanitary Sewer Service Area for the Allenton Area, Washington County, Wisconsin
	Germantown	Germantown	September 8, 1983	SEWRPC Community Assistance Planning Report No. 70, Sanitary Sewer Service Area for the Village of Germantown, Washington County, Wisconsin
	Hartford	Hartford	June 21, 1984	SEWRPC Community Assistance Planning Report No. 92, Sanitary Sewer Service Area for the City of Hartford, Washington County, Wisconsin
	Jackson	Jackson	June 17, 1984	SEWRPC Community Assistance Planning Report No. 124, Sanitary Sewer Service Area for the Village of Jackson, Washington County, Wisconsin
	Kewaskum	Kewaskum	December, 1988	SEWRPC Community Assistance Planning Report No. 161, Sanitary Sewer Service Area for the Village of Kewaskum, Washington County, Wisconsin
	Newburg	--	--	--
	Slinger	Slinger	December 2, 1985	SEWRPC Community Assistance Planning Report No. 128, Sanitary Sewer Service Area for the Village of Slinger, Washington County, Wisconsin
	West Bend	West Bend	December 2, 1982	SEWRPC Community Assistance Planning Report No. 35, Sanitary Sewer Service Area for the City of West Bend, Washington County, Wisconsin
Waukesha	Beaver Lake	--	--	--
	Brookfield East	--	--	--

Table 26 (continued)

County	Name of Initially Defined Sanitary Sewer Service Area(s)	Name of Refined and Detailed Sanitary Sewer Service Area	Date of SEWRPC Adoption of Plan Amendment	Plan Amendment Document
Waukesha (continued)	Brookfield West	--	--	--
	Butler	Butler	March 1, 1984	SEWRPC Community Assistance Planning Report No. 99, Sanitary Sewer Service Area for the Village of Butler, Waukesha County, Wisconsin
	Delafield-Nashotah	--	--	--
	Dousman --	-- Eagle Spring Lake	-- December 2, 1985	-- Amendment to the Regional Water Quality Management Plan—2000, Eagle Spring Lake Sanitary District
	Elm Grove	--	--	--
	Hartland	Hartland	June 17, 1985	SEWRPC Community Assistance Planning Report No. 93, Sanitary Sewer Service Area for the Village of Hartland, Waukesha County, Wisconsin
	Menomonee Falls	--	--	--
	Mukwonago --	-- Mukwonago County Park	-- June 21, 1984	-- Amendment to the Regional Water Quality Management Plan—2000, Village of Mukwonago, Towns of East Troy and Mukwonago
	Muskego	Muskego	June 17, 1982	SEWRPC Community Assistance Planning Report No. 64, Sanitary Sewer Service Area for the City of Muskego, Waukesha County, Wisconsin
	Nashotah-Nemahbin Lakes	--	--	--
	New Berlin	New Berlin	December 7, 1987	SEWRPC Community Assistance Planning Report No. 157, Sanitary Sewer Service Area for the City of New Berlin, Waukesha County, Wisconsin
	North Lake	--	--	--
	North Prairie	--	--	--
	Oconomowoc-Lac La Belle	--	--	--
	Oconomowoc Lake	--	--	--
	Okauchee Lake	--	--	--

Table 26 (continued)

County	Name of Initially Defined Sanitary Sewer Service Area(s)	Name of Refined and Detailed Sanitary Sewer Service Area	Date of SEWRPC Adoption of Plan Amendment	Plan Amendment Document
Waukesha (continued)	Pewaukee	Pewaukee	June 17, 1985	SEWRPC Community Assistance Planning Report No. 113, Sanitary Sewer Service Area for the Town of Pewaukee Sanitary District No. 3, Lake Pewaukee Sanitary District, and Village of Pewaukee, Waukesha County, Wisconsin
	Pine Lake	--	--	--
	--	Rainbow Springs	June 21, 1984	Amendment to the Regional Water Quality Management Plan—2000, Village of Mukwonago, Towns of East Troy and Mukwonago
	Silver Lake	--	--	--
	Sussex-Lannon	Sussex	June 16, 1983	SEWRPC Community Assistance Planning Report No. 84, Sanitary Sewer Service Area for the Village of Sussex, Waukesha County, Wisconsin
	Wales	--	--	--
	Waukesha	Waukesha	December 2, 1985	SEWRPC Community Assistance Planning Report No. 100, Sanitary Sewer Service Area for the City of Waukesha and Environs, Waukesha County, Wisconsin

development and implementation of floodland and stormwater management plans, policies, and practices; the provision of hydrologic and hydraulic data—including flood-flow and stage data—to consulting engineers and governmental agencies; and the conduct of a cooperative stream gaging program. Map 22 indicates the coverage of the watershed studies conducted by the Commission through 1988.

Stormwater Drainage and Flood Control Planning Program for the Milwaukee Metropolitan Sewerage District

During 1988, the Commission continued work on the preparation of a stormwater drainage and flood control plan at the request of the Milwaukee Metropolitan Sewerage District. That District is charged by Section 66.89 of the Wisconsin Statutes with the function and duty of planning, designing, constructing, maintaining, and operating a system of facilities for the collection, transmission, and disposal of stormwater. In carrying out its responsibilities in this respect, the District recognized that a plan was needed that could be used to guide the development, over time, of drainage and flood control facilities within the greater Milwaukee area.

The program being carried out by the Commission for the District is being conducted in accordance with a prospectus published by the Commission in March 1985. In preparing the prospectus, it was recognized that sound public administration, as well as good planning and engineering practice, would dictate that the broad District responsibilities for stormwater management be carried out within explicit policy guidelines set forth by the governing body of the District, as well as within the context of a comprehensive stormwater drainage and flood control system plan consistent with the policy

Map 21

RECOMMENDED SANITARY SEWER SERVICE AREAS IN THE REGION: 1988

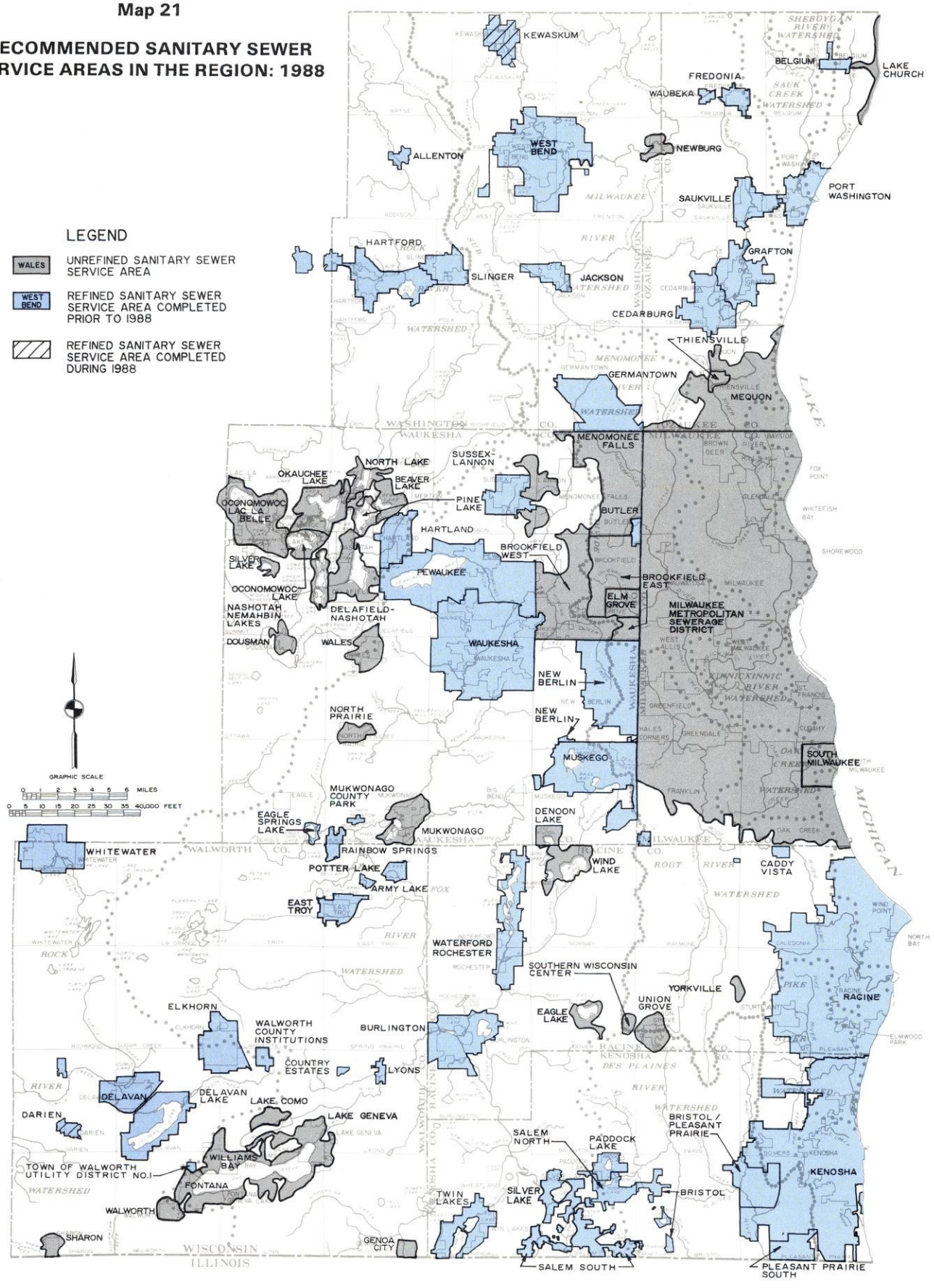


Table 27

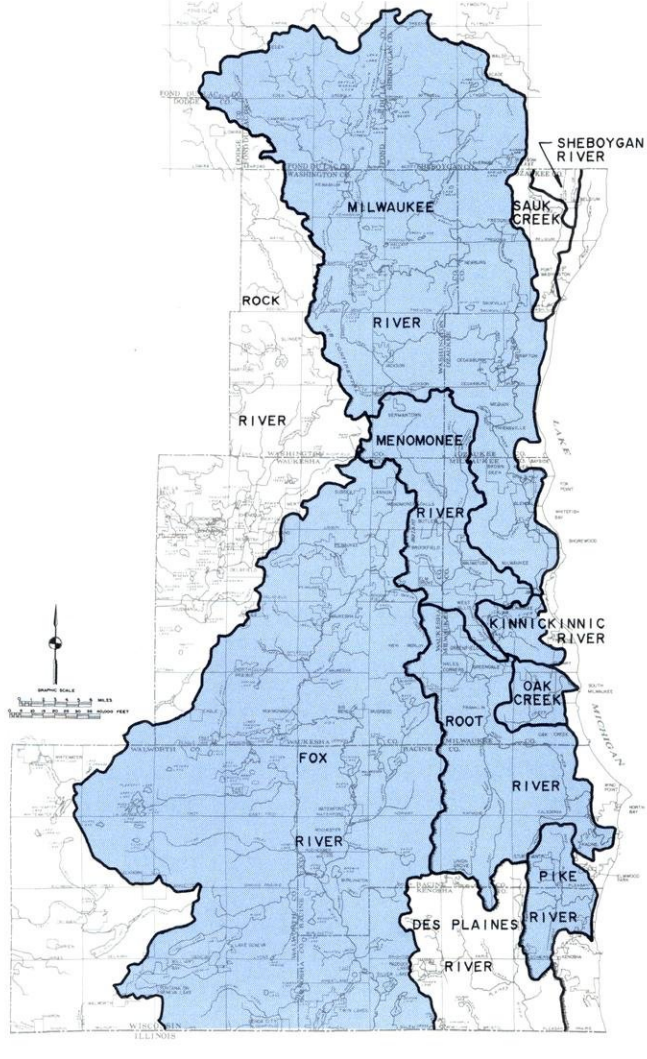
SANITARY SEWER EXTENSION REVIEWS: 1988

County	Public Sanitary Sewer Extensions	Private Main Sewer or Building Sewer Extensions	Total
Kenosha	23	11	34
Milwaukee . . .	34	60[a]	94
Ozaukee	19	23	42
Racine	20	29	49
Walworth . . .	16	19	35
Washington . .	16	53	69
Waukesha . . .	74	106	180
Total	202	301	503

[a]*The Commission has delegated the responsibility for the review of building sewer extensions within the City of Milwaukee to the City. During 1988, 386 reviews of building sewer extensions were conducted by the City.*

Map 22

SEWRPC WATERSHED STUDIES COMPLETED: 1988



plan. Accordingly, the prospectus proposed that the District stormwater drainage and flood control plan consist of two elements—a policy plan and a system plan. The policy plan is intended to identify those streams and watercourses for which it is recommended that the MMSD assume jurisdictional responsibility for drainage and flood control purposes; to identify the type of watercourse improvements for which it is recommended that the MMSD assume responsibility; to set forth a recommended manner in which watercourse improvement costs should be shared between the MMSD and benefited municipalities; and to set forth a procedure for prioritizing MMSD drainage and flood control projects. The policy plan was completed in 1986, and was summarized in the Commission's 1986 Annual Report.

The MMSD system plan—to be prepared within the framework of the policy plan—will identify the type, capacity, location, and horizontal and vertical alignment of needed drainage and flood control facilities. To this end, the system plan will recommend the appropriate elevation, size, grade, and capacity of channels and appurtenant bridge waterway openings, major storm sewers, detention and retention basins, pumping stations, and other appurtenances of areawide significance. The system plan will also include such data on flood stages under existing and planned conditions as may be required for sound public decision-making concerning flood protection elevations. The system plan will be in sufficient depth and detail to provide a sound basis for local flood control planning and design, as well as for proceeding with final engineering of the recommended watercourse and other major drainage projects proposed to be constructed by the District. The system plan will identify the benefits and costs of the recommended improvements, and an order of priority and schedule for their construction over time. In effect, then, the system plan culminates in the preparation of a capital improvements program for areawide drainage and flood control works within the existing and planned District service area.

During 1988 the Commission, working under the guidance of a technical advisory committee created for this purpose, completed preparation of flood control and related stormwater drainage system plans for streams in the Root River watershed and Fish Creek in the Lake Michigan direct drainage area watershed. The Root River

watershed streams included the North Branch of the Root River, East Branch of the Root River, Hale Creek, Tess Corners Creek, Whitnall Park Creek, the North Branch of Whitnall Park Creek, the Northwest Branch of Whitnall Park Creek, Crayfish Creek, and the Caledonia Branch of Crayfish Creek. Previous system plans had been completed for streams in the Kinnickinnic River, Milwaukee River, and Oak Creek watersheds. These streams included: the Kinnickinnic River, Lyons Park Creek, Whitnall Park Creek, the Edgerton Ditch, the S. 43rd Street Ditch, Villa Mann Creek, and an unnamed tributary to Villa Mann Creek, all in the Kinnickinnic River watershed; Indian Creek, Lincoln Creek, Beaver Creek, Brown Deer Park Creek, and Southbranch Creek, all in the Milwaukee River watershed; and Oak Creek, the North Branch of Oak Creek, and the Mitchell Field Drainage Ditch, all in the Oak Creek watershed. At year's end, the Commission staff had begun the preparation of flood control and related drainage system plans for streams in the Menomonee River watershed.

Stormwater and Floodland Management Planning

During 1988, the Commission staff provided technical assistance to state and local governmental agencies in resolving stormwater and floodland management problems. Both stormwater drainage and flood control deal with problems of disposal of unwanted water, and the distinction between these two concepts is not always clear-cut. The Commission defines flood control as the prevention of damage from the overflow of natural streams and watercourses. In contrast, drainage is defined by the Commission as the disposal of excess stormwater on the land surface before such water has entered defined stream channels. While the Commission continues to be extensively involved in flood control planning, in recent years the Commission's work efforts have been increasingly directed toward stormwater management planning.

In 1988 the Commission undertook a number of stormwater and floodland management planning activities at the request of local units of government. The following are examples of such work:

- Work was completed on the preparation of a stormwater management plan for the Crayfish Creek subwatershed. This work was conducted at the request of the City of Oak Creek. Crayfish Creek is a tributary of the Root River and flows through the City of Oak Creek in Milwaukee County and the Town of Caledonia in Racine County. The plan was reviewed by the City's Root River Drainage Task Force, which conducted an informational meeting on the plan findings. The recommended stormwater management system plan is documented in SEWRPC Memorandum Report No. 35, A Stormwater Management Plan for the Crayfish Creek Subwatershed, City of Oak Creek, Milwaukee County, Wisconsin. The plan recommendations include provisions for the discharge of flood flows to the Root River at a location about 0.9 mile downstream of the present location; the provision of backwater control facilities to prevent flood flows on the Root River and Oak Creek from backing up into Crayfish Creek; and the provision of stormwater detention facilities for both flood-flow reduction and water quality management purposes. The recommended drainage system components consist of two storage facilities; over five miles of new or improved open channels; almost 5.7 miles of storm sewers; the preservation and maintenance of the existing environmental corridor/wetland complex in the subwatershed; and the continued use of the Crayfish Creek main channel in its present condition.

- Work continued on the preparation of a stormwater management plan for the City of West Bend. At year's end, the Commission staff, working cooperatively with the City's planning and engineering staff, had completed a draft of SEWRPC Community Assistance Planning Report No. 173, A Stormwater Management Plan for the City of West Bend, Washington County, Wisconsin, Volume One, Inventory Findings, Forecasts, Plan Objectives, and Design Criteria. Work was also nearing completion on Volume Two, which documents the evaluation of alternative plans, as well as a recommended plan, for the Silver Creek subwatershed.

- At the request of Kenosha County and the Town of Somers, hydrologic and hydraulic analyses were conducted to determine the downstream impacts of proposed filling of an industrial site along Pike Creek. Alternative means of abating downstream drainage and flooding impacts of the proposed fill,

taking into account previously completed riverine changes in the upstream drainage area, were evaluated. A stormwater detention basin was recommended as the best means of minimizing downstream impacts.

- At the request of the Village of Pewaukee, hydraulic analyses were conducted of the potential upstream flood stage impacts of a proposed condominium structure on the Pewaukee Lake shoreline. The analyses were used to properly locate the structure in a manner consistent with Village of Pewaukee zoning regulations.
- At the request of Kenosha County, hydrologic and hydraulic analyses were completed of alternative replacement structures for the CTH JB crossing of Brighton Creek in the Town of Brighton. These analyses were used by the County Highway Department in selecting a final replacement bridge design.
- At the request of Racine County, an analysis was conducted of a proposed regrading of a parcel located in the floodplain of Eagle Lake in the Eagle Lake Manor Subdivision, platted many years ago. Recommendations concerning the extent and placement of the fill were made so as to accommodate the construction of a residence on the parcel while not causing adverse impacts on adjoining properties.
- At the request of Racine County, hydrologic and hydraulic analyses were completed and stormwater drainage plans were reviewed for a proposed subdivision along Nelson Creek in the Town of Mt. Pleasant. Recommendations were made to revise the plans to be consistent with the county zoning ordinances and the Pike River watershed plan.
- At the request of the City of Waukesha, hydraulic analyses were conducted of alternative footbridge designs for a crossing of the Fox River. The analyses assisted the City in selecting a final bridge design.
- At the request of Milwaukee County, hydraulic analyses were completed for the proposed S. 13th Street bridge over the Root River. The analyses were used by the County in bridge design and selection.

In 1989 the Commission will continue its involvement in stormwater management and floodland management activities, maintaining a staff capability to respond to requests for assistance from local governmental units and state agencies.

Floodplain Data Availability

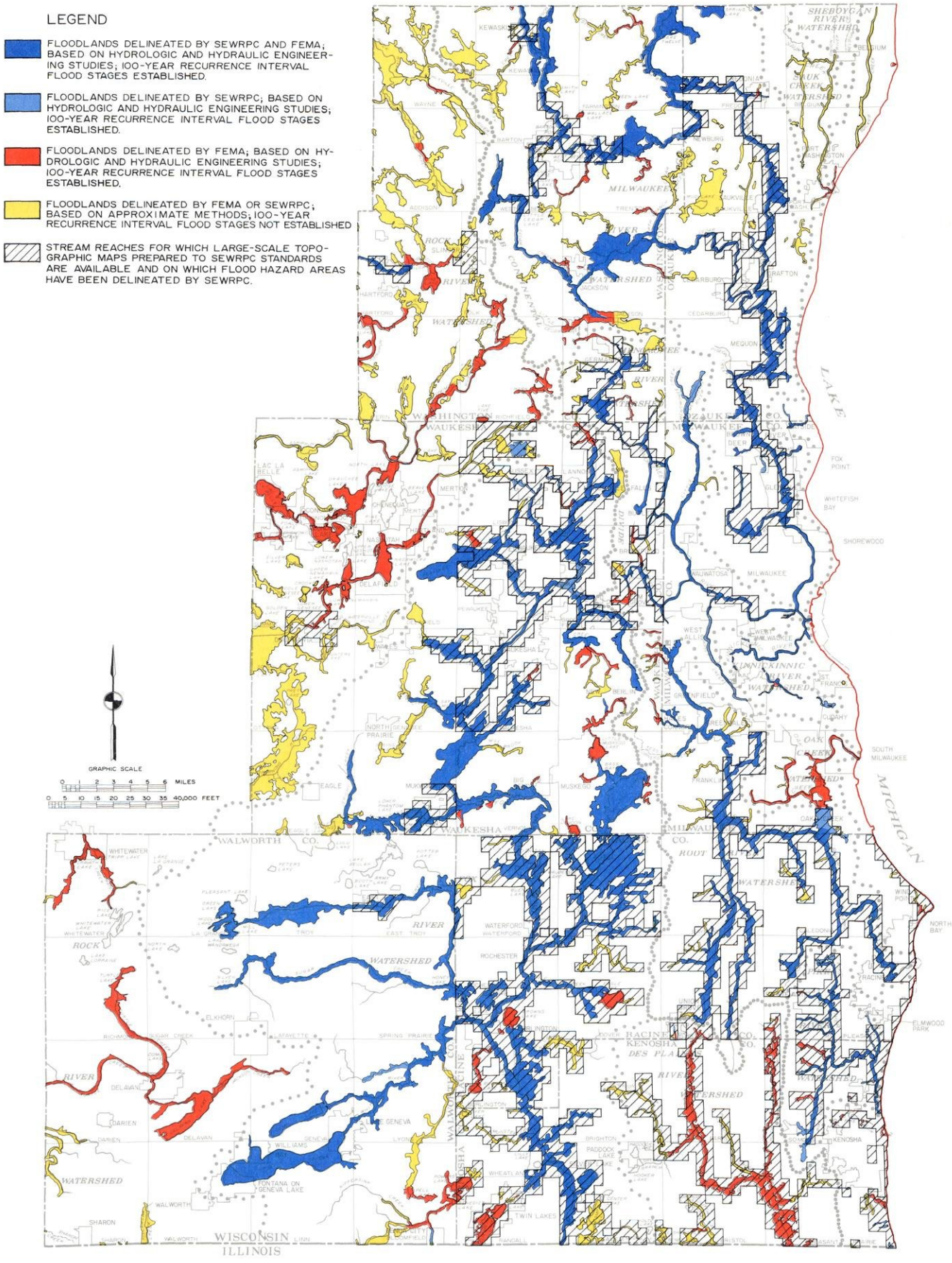
The status of existing flood hazard data in the Region is shown on Map 23. The Commission has completed comprehensive watershed studies for the Fox, Kinnickinnic, Menomonee, Milwaukee, Root, and Pike River watersheds, and for the Oak Creek watershed, resulting in the development of flood hazard data for about 699 miles of stream channel, not including stream channels in the Milwaukee River watershed lying outside the Region in Sheboygan and Fond du Lac Counties. In addition, special Commission floodland management studies have resulted in the development of flood hazard data for about 44 additional miles of stream channel. Large-scale flood hazard maps prepared to Commission specifications are available for the riverine areas along about 404 miles of stream channel for which the Commission and the Federal Emergency Management Agency have developed flood hazard data.

Flood Insurance Rate Studies

Under the National Flood Insurance Act of 1968, the Federal Emergency Management Agency (FEMA) was given authority to conduct studies to determine the location and extent of floodlands and the monetary damage risks related to the insurance of urban development in floodland areas. FEMA is proceeding with the conduct of such studies on a community-by-community basis throughout the United States. While the Commission has not directly contracted with FEMA for the conduct of such studies, the Commission does cooperate with all of the engineering firms and agencies involved in the conduct of such studies, particularly in the provision of basic floodland data already developed by the Commission in a more comprehensive and cost-effective manner through its series of watershed studies. The Commission provides to the contractors all of the detailed hydrologic and hydraulic data developed under the watershed studies for the various streams in the Region, and shares with the contractors the results of the analytical phases of such studies. Development by the Commission of such data makes it possible for FEMA to carry out the flood insurance rate studies more efficiently and at considerably less cost than if such data had

Map 23

DELINEATION OF FLOODLANDS: 1988



to be developed on a community-by-community basis. Commission participation in, and review of, the study findings, moreover, assures consistency between studies for communities located along a given river or stream.

Federal flood insurance studies are carried out individually for incorporated cities and villages and for the remaining unincorporated areas of counties. The status of flood insurance rate studies in the Region at the end of 1988 is shown on Map 24. During 1988, no new studies were underway for communities within the Region. However, the federal government had contracted for updated studies which were underway for the Cities of Cedarburg and Mequon, the Villages of Grafton and Saukville, and the unincorporated area of Ozaukee County to reflect new information and development since completion of the initial studies. It is the intent of FEMA to update older studies depending upon need and funding availability.

As shown on Map 24, as of 1988 there were a total of 24 cities or villages in the Region for which FEMA had not conducted a flood insurance rate study. In eight cases, FEMA has instead published a "flood hazard boundary map," which shows an approximate location of floodlands without the support of detailed engineering studies. The remaining 16 cities or villages in the Region are not considered by FEMA to contain flood hazard areas. In one of those 16—the Village of Newburg in Washington and Ozaukee Counties—a flood hazard area was identified and delineated by the Commission in the Milwaukee River watershed study. Although FEMA has not yet undertaken a flood insurance study for the Village of Newburg—the newest incorporated community in the Region—the Village has enacted appropriate floodland zoning regulations.

Besides providing available data from the Commission files to the contractors conducting such studies for FEMA, the Commission helps to delineate regulatory floodways and attends meetings with local officials and citizens to discuss the results of flood insurance rate studies. Under its community assistance program, the Commission also assists local communities in enacting sound floodland regulations as required for participation in the Federal Flood Insurance Program.

Stream Gaging Program

Streamflow data are essential to the sound management of the water resources of the Region. When the Commission began its regional planning program in 1960, only two continuous recording streamflow gages were in operation on the entire regional stream network. Since that time, the Commission has been instrumental in establishing, through cooperative, voluntary, intergovernmental action, a more comprehensive streamflow gaging program (see Map 25). In 1988, there were a total of 17 continuous recording streamflow gages in operation in the Region. Of that total, 14 were financially supported by the Waukesha County Board of Supervisors, the Milwaukee Metropolitan Sewerage District, the City of Racine and the Racine Water and Wastewater Utilities, and the Kenosha Water Utility under the Commission's cooperative program. In addition, one gage was supported by the U. S. Army Corps of Engineers; one was supported by the Illinois Department of Transportation; and one was supported by the Illinois Environmental Protection Agency, Division of Water Resources. The U. S. Geological Survey annually publishes the data collected under this streamflow monitoring program.

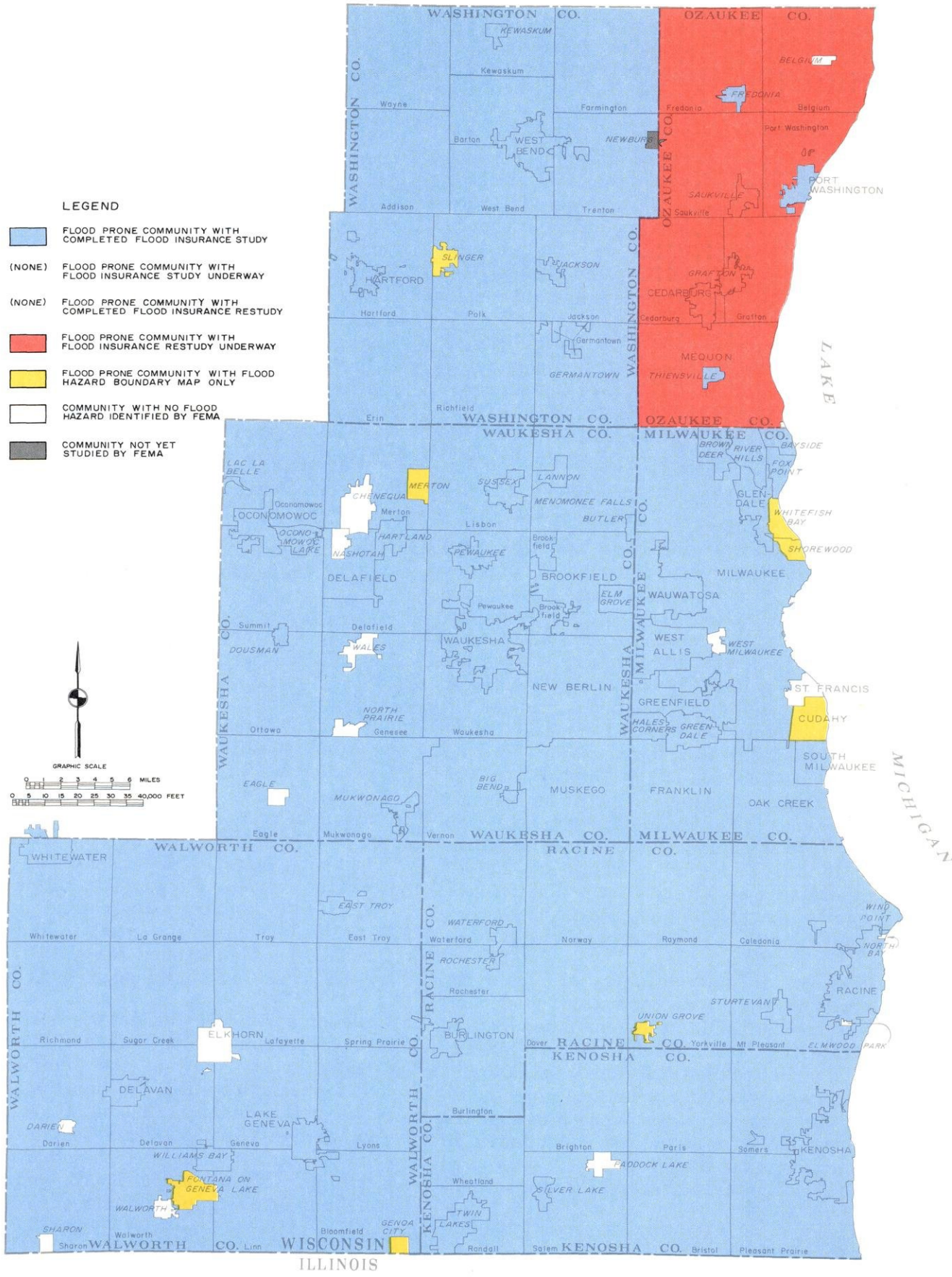
COASTAL MANAGEMENT PLANNING

During 1988, the Commission continued to provide assistance to the Wisconsin Department of Administration's Bureau of Energy and Coastal Policy Analysis in the conduct of the Wisconsin coastal management program. This program is intended to coordinate governmental activities toward achieving the objective of better management of the resources of the Lake Michigan and Lake Superior coastal zones of the State. The program is being carried out by the State of Wisconsin pursuant to the federal Coastal Zone Management Act of 1972 through the Wisconsin Coastal Management Council.

Under an agreement with the Wisconsin Department of Administration, Bureau of Energy and Coastal Policy Analysis, the Commission in 1975 formed and staffed a Technical and Citizen Advisory Committee on Coastal Management in Southeastern Wisconsin. This Committee represents a variety of interests, including local elected officials, the university community, and recreational, navigational, and environmental

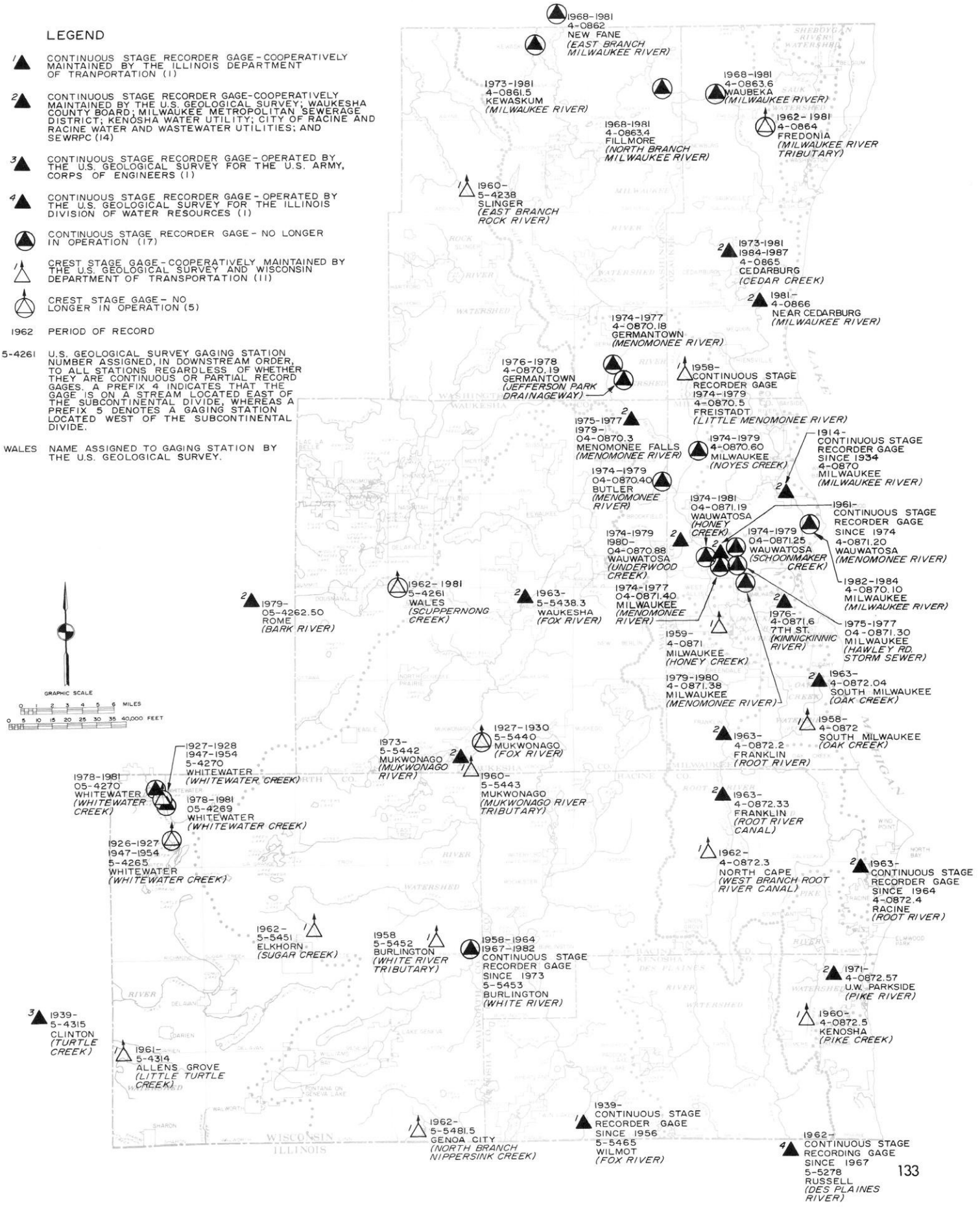
Map 24

STATUS OF FLOOD INSURANCE RATE STUDIES: 1988



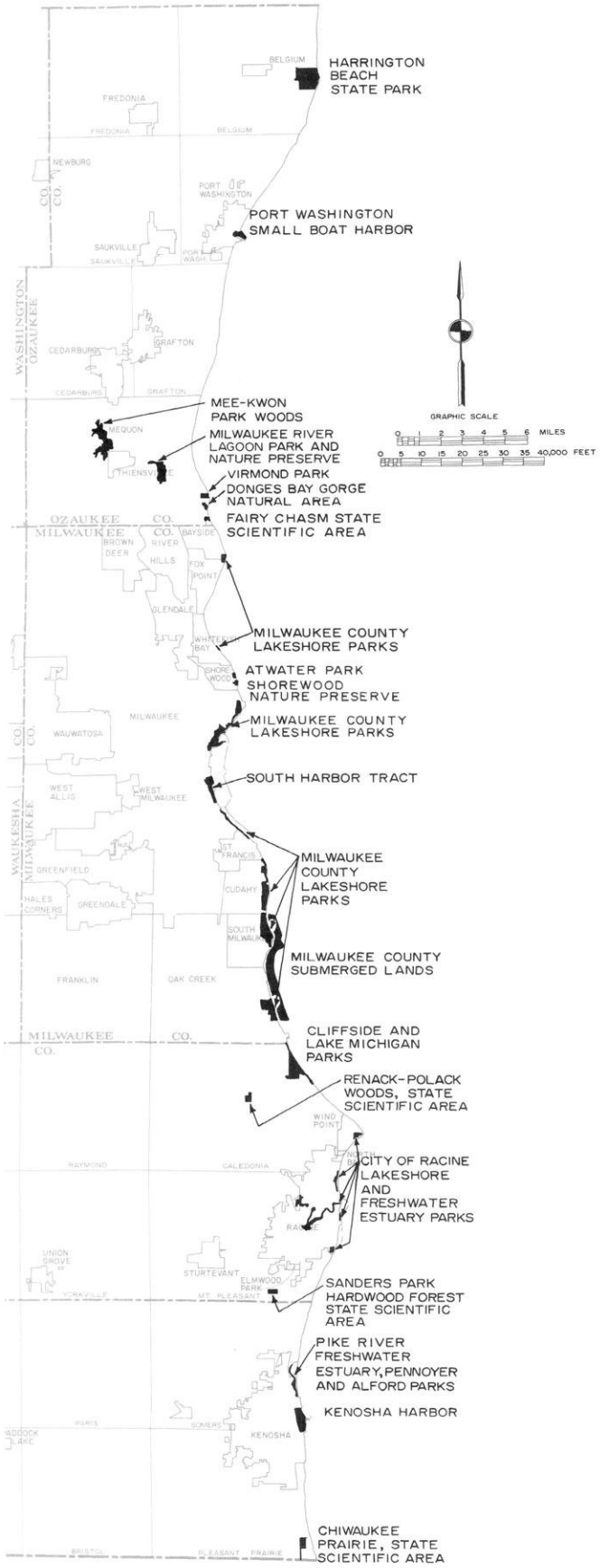
Map 25

LOCATION OF U. S. GEOLOGICAL SURVEY STREAM GAGING STATIONS



Map 26

DESIGNATED COASTAL AREAS IN SOUTHEASTERN WISCONSIN: 1988



interest groups. The primary function of this Committee is the review of state coastal studies and reports as they are proposed and produced.

One of the continuing functions of the Commission under the coastal management program is the designation of special coastal areas. In 1988, no additional areas in the Region were formally designated as special coastal areas. The existing Lake Michigan shoreline special coastal areas are shown on Map 26. These special areas have natural, scientific, economic, cultural, or historic importance. Designation by the Wisconsin Coastal Management Council as a special coastal area ensures eligibility for financial or technical assistance for special coastal area management activities through the Wisconsin coastal management program, and focuses attention on a valuable coastal resource.

During 1988, a Lake Michigan shoreline erosion control plan was completed for northern Milwaukee County, and work continued on a similar plan to encompass the remaining shoreline of Milwaukee County. The Commission conducted a coastal hazard information inventory, which cataloged 163 reports and other sources of information in the Commission files regarding Great Lakes shoreline conditions and coastal flooding and erosion hazards. A waterfront development needs inventory, which describes planned and potential shore development projects within each Lake Michigan shoreline community, also was conducted in 1988. Finally, the Commission provided assistance to the City of Milwaukee in the inspection of 1,344 properties along the Milwaukee Harbor estuary to identify the risks and causes of flooding problems, and in the preparation of a high-lake-level early warning system.

Lake Michigan Shoreline Erosion Management Plan for Northern Milwaukee County

The shoreline erosion management plan for northern Milwaukee County was completed in 1988 and published in SEWRPC Community Assistance Planning Report No. 155, A Lake Michigan Shoreline Erosion Management Plan for Northern Milwaukee County, Wisconsin. The study addresses both bluff slope failure and shoreline erosion along the 7.3-mile reach of Lake Michigan shoreline extending from the City of Milwaukee Linnwood Avenue water treatment plant northward to Doctors Park in the Village of Fox Point. Shoreline erosion and bluff recession rates in northern Milwaukee County range up to 1.6 feet per year, averaging

about 0.5 foot per year. This recession results in an average annual loss of nearly 8,000 square feet of land surface and nearly 600,000 cubic feet of shore material. Responding to a need for information and for proper guidelines and procedures to help lakefront property owners protect their shoreline property, the local communities in northern Milwaukee County in 1986 asked the Regional Planning Commission to conduct a shoreline erosion and bluff recession study. The study defines the risk of erosion and bluff recession damage along the Lake Michigan shoreline; explores alternative and recommends effective, economically feasible, and environmentally acceptable measures for erosion control; and identifies implementation mechanisms needed to carry out the recommended plan. The study was carried out under the guidance of an advisory committee created by the Commission and composed of representatives of the Villages of Shorewood, Whitefish Bay, and Fox Point; the City of Milwaukee; Milwaukee County; the Wisconsin Department of Natural Resources; the University of Wisconsin Sea Grant Institute; the University of Wisconsin-Milwaukee; and concerned and knowledgeable citizens.

Those elements of the natural resource base within the study area pertinent to an understanding of coastal erosion and bluff recession processes were inventoried, including the bedrock geology and glacial deposits; soils; height, slope, vegetative cover, stratigraphy, and stability of bluffs; beaches; groundwater conditions; and climate. The bluffs along the northern Milwaukee County shoreline range up to nearly 130 feet in height above beach levels, with about one-half the length of shoreline within the study area having bluffs ranging from 80 to 120 feet high. Numerous types of shore protection structures exist along the northern Milwaukee County shoreline. The effectiveness of these structures has varied. A field inspection of all 80 shore protection structures in the study area conducted in 1986 indicated that 76 percent exhibited some type of damage and required repair. Very little maintenance is performed on most structures. The most serious Lake Michigan coastal problem in northern Milwaukee County is recession of the bluffs.

Analytical procedures and geotechnical engineering techniques were used to evaluate the existing and potential coastal erosion and bluff stability problems within the study area. Map 27 illustrates the existing shoreline erosion problems in northern Milwaukee County. With respect to deep rotational bluff sliding, 38 percent of the study area shoreline was determined to have stable bluff slopes, 21 percent marginal bluff slopes, and 18 percent unstable bluff slopes. With respect to shallow translational bluff sliding, 40 percent of the shoreline was determined to have stable bluff slopes, 23 percent marginal bluff slopes, and 14 percent unstable bluff slopes. With respect to bluff toe erosion, only 20 percent of the shoreline was observed to exhibit little or no erosion in 1986. The remaining 80 percent of the shoreline was experiencing moderate to severe shoreline erosion.

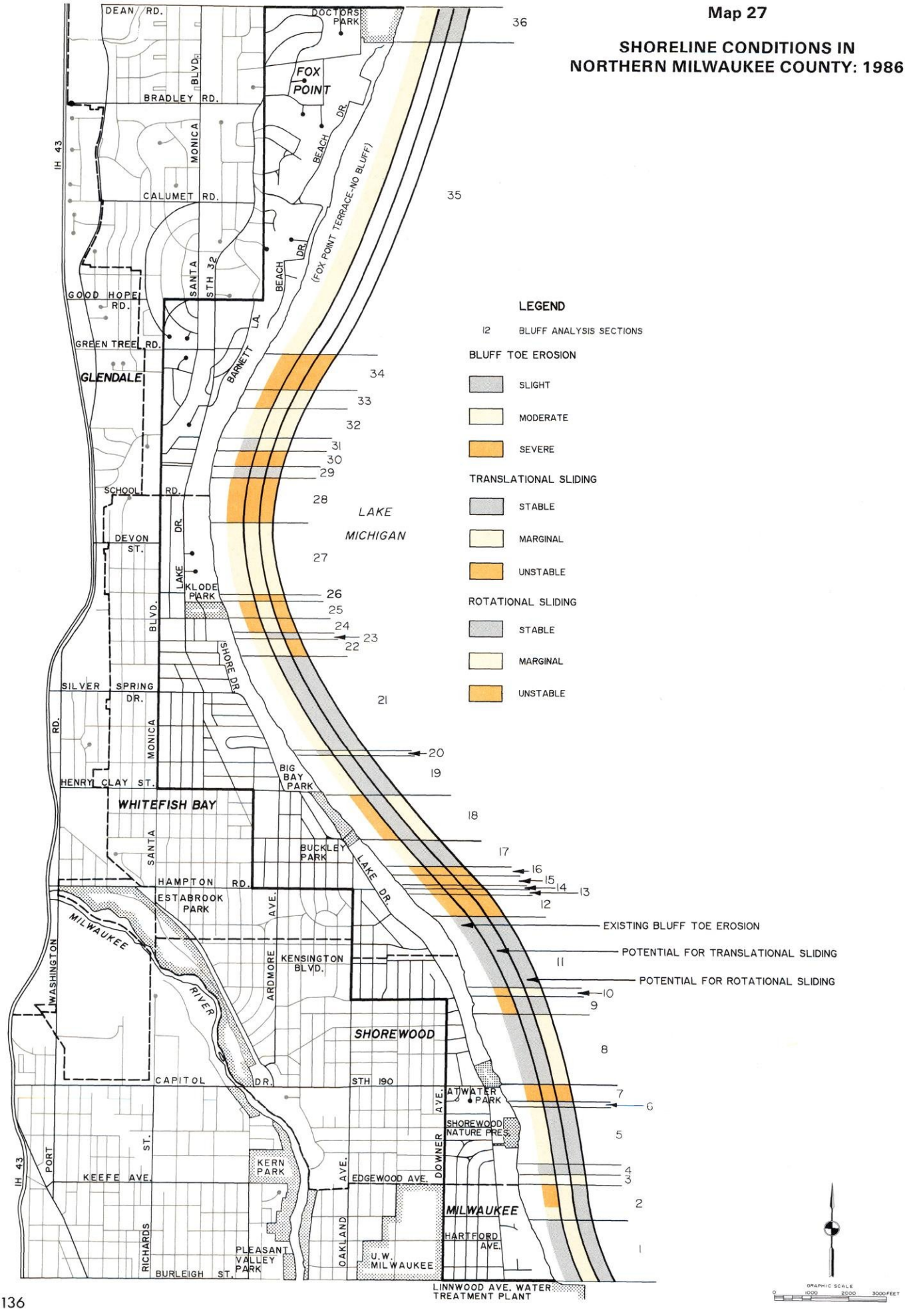
The study determined that approximately five acres of land and 23 residential buildings were within 10 feet of the edge of marginal or unstable bluff slopes in 1986, with that land and those facilities having an economic value of about $3.8 million in 1986. About 13 acres of land and 40 residential buildings, having an economic value of about $6.9 million in 1986, were within 25 feet of the edge of marginal or unstable bluff slopes.

Alternative shoreline protection and bluff recession control plans presented in the study report consisted of two elements: a bluff slope stabilization plan element and a bluff toe protection plan element. The bluff slope stabilization plan specifies those measures needed to regrade or revegetate the slope and control groundwater or surface water runoff. Three alternative bluff toe protection plans were considered: a revetment plan, a beach plan, and an offshore plan. From these alternatives, a recommended shoreline erosion management plan was selected by the advisory committee. The recommended plan includes about 2,100 lineal feet of large public sand beaches contained by offshore breakwaters at Atwater Park, Klode Park, and Doctors Park; about 19,000 feet of nourished gravel beaches contained by quarry stone groins; about 16,600 feet of riprap revetments; and bluff slope stabilization measures. About 1,000 lineal feet of shoreline would not require any bluff toe protection. The total capital cost of the recommended plan approximates $17.8 million, with an average annual maintenance cost of about $1.0 million. The recommended plan is shown on Map 28.

The recommended shore protection measures would be best constructed and maintained within specified reaches of shoreline referred to as implementation segments. Eighteen implementation segments were delineated, as shown on Map 29. Nine permanent access sites to the shoreline to be used for construction and continued maintenance of the recommended measures were also identified.

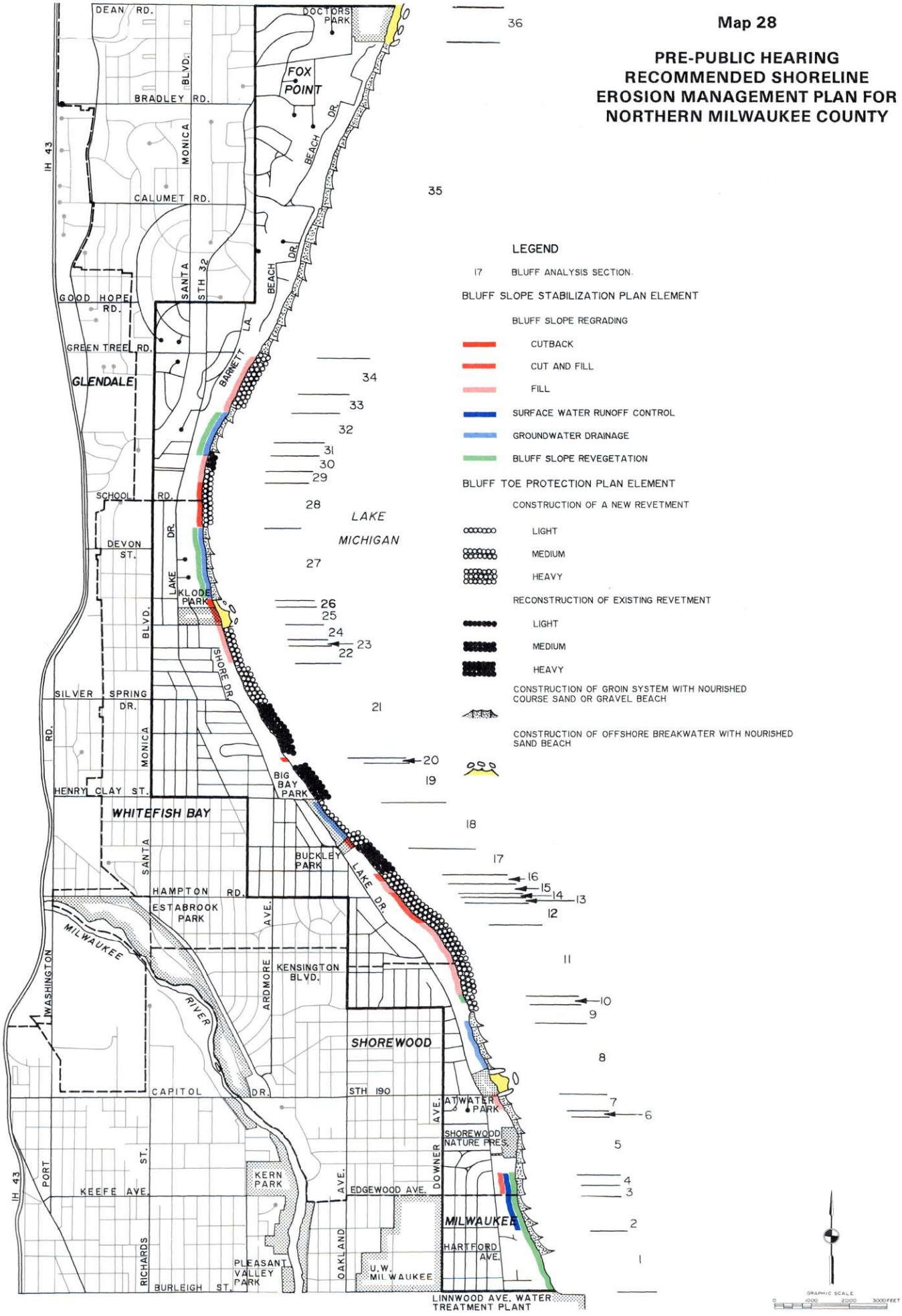
Map 27

SHORELINE CONDITIONS IN NORTHERN MILWAUKEE COUNTY: 1986



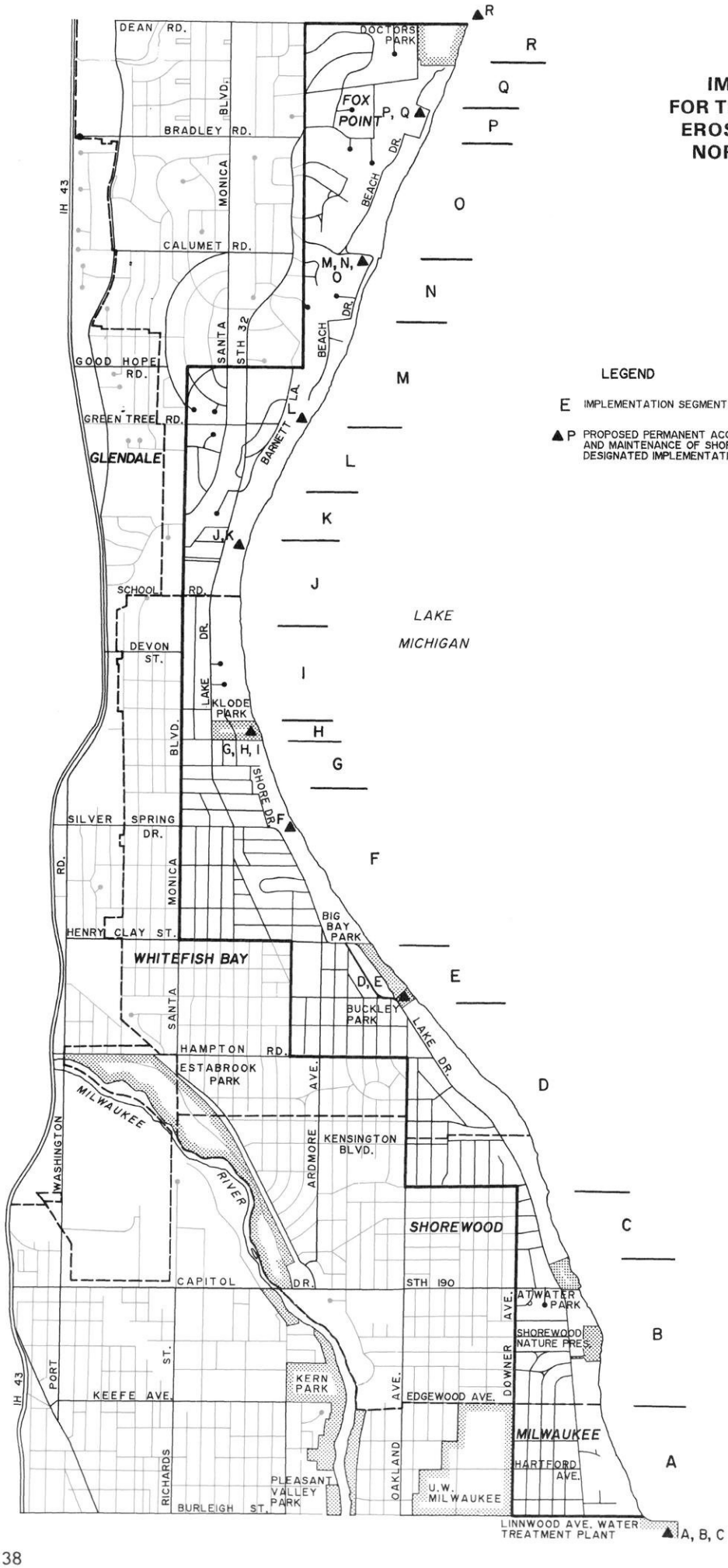
Map 28

PRE-PUBLIC HEARING RECOMMENDED SHORELINE EROSION MANAGEMENT PLAN FOR NORTHERN MILWAUKEE COUNTY



Map 29

IMPLEMENTATION SEGMENTS FOR THE RECOMMENDED SHORELINE EROSION MANAGEMENT PLAN FOR NORTHERN MILWAUKEE COUNTY



LEGEND

E IMPLEMENTATION SEGMENTS

▲P PROPOSED PERMANENT ACCESS AREAS FOR CONSTRUCTION AND MAINTENANCE OF SHORE PROTECTION MEASURES IN DESIGNATED IMPLEMENTATION SEGMENTS

GRAPHIC SCALE
0 1000 2000 3000 FEET

Three plan implementation alternatives were considered. The first implementation alternative would use the existing institutional structure and have Milwaukee County coordinate the implementation activities. Such implementation would rely upon the voluntary cooperation of all the property owners within an implementation segment. Individual property owners would be able to effectively thwart proper plan implementation, and therefore this alternative method was not recommended.

A second alternative approach to implementation was the creation of a new lakeshore management district, whose specific purpose would be to stabilize the bluff slopes and protect the shoreline. State legislation would be sought to enable the County and the local units of government to cooperatively create a lakeshore management district. The district would construct and maintain the recommended bluff stabilization and shore protection measures. In order to finance the improvements, the district's governing body would have to be empowered to levy a tax upon all real property within the district, to make special assessments to the benefitting properties for specific projects, and to contract and discharge debt. This approach would not have to rely upon the voluntary cooperation of all property owners within a segment. This approach was not recommended because of anticipated opposition to the creation of a new taxing body, and because local elected officials desired a more active role in the plan implementation process.

The third approach to implementing the plan would place primary responsibility with the municipalities. The municipalities could issue permits for new shore protection measures; enter into contracts; levy taxes or special assessments; condemn property if necessary; and monitor compliance with the plan. To enhance the efficiency of these functions, the municipalities could, under Section 66.30 of the Wisconsin Statutes, form a cooperative contract commission. This third approach to plan implementation, including the formation of a cooperative contract commission by the municipalities under Section 66.30, was recommended by the Advisory Committee.

Three formal public hearings on the recommended shoreline erosion management plan were held over the period March 29 to May 16, 1988. The purpose of the hearings was to present the preliminary findings and recommendations of the study for review and consideration by lakefront property owners, public officials, and interested citizens. Three major issues were raised at the public hearings. First, several residents were concerned that property owners would be required to install shoreline protection measures along areas that do not need protection, or along areas that are already protected. Second, residents of the Village of Fox Point along N. Beach Drive generally opposed the recommended development of nourished gravel beaches in that area. Third, many residents requested that the recommended plan implementation program be more clearly defined. The Advisory Committee carefully considered these three issues in light of the testimony given at the public hearings.

Three major changes were made to the recommended plan in response to the comments received at the public hearings. First, rather than the construction of new gravel beaches, private property owners along N. Beach Drive in the Village of Fox Point would continue to maintain the existing shore protection structures. The Village of Fox Point would reconstruct the existing revetments on village property that adjoins two portions of N. Beach Drive.

Second, a long-term continuing coastal monitoring program was recommended to be implemented by the Village of Fox Point along the coast adjacent to N. Beach Drive. This monitoring program is intended to detect any adverse effects caused by existing or new structures along the terraced area.

Third, the plan implementation recommendations were expanded to suggest the duties of each implementation agency concerned. The recommended implementation program calls for the creation of a municipal cooperative contract commission and for shared implementation responsibilities between the commission and the local municipalities. The contract commission, which would be created jointly by the municipalities, would have authority to provide information and administer projects. The commission would also share responsibility with the municipalities for reviewing project proposals, issuing permits, providing contracts for construction and maintenance of structures, and monitoring plan compliance and the maintenance of shore protection measures. The commission would have no tax levying powers.

The final recommended plan is shown on Map 30. The total capital cost of the final recommended shoreline erosion management plan for northern Milwaukee County is approximately $14.8 million. The annual maintenance cost is about $950,000. Of the total equivalent annual cost of the plan of about $1.7 million, about $1.3 million, or 77 percent, would be financed by the private sector, and about $0.4 million, or 23 percent, would be financed by the public sector.

The successful implementation of the final recommended shoreline erosion management plan will require not only a substantial capital investment, but a stable long-term commitment to carrying out the recommended capital improvement projects and related maintenance programs. Adoption and implementation of the plan should, however, ensure the provision of a high-quality, well-managed coastal environment for northern Milwaukee County.

Lake Michigan Shoreline Erosion Management for Milwaukee County

In 1988, an erosion management study was underway for the remaining portion of the Milwaukee County shoreline. The northern Milwaukee County study described above is being incorporated into the entire Milwaukee County study. The new study, requested by Milwaukee County in 1986, is being carried out under the guidance of an Intergovernmental Coordinating and Technical Advisory Committee created by the Regional Planning Commission and composed of representatives of each of the nine municipalities concerned, Milwaukee County, the Milwaukee Metropolitan Sewerage District, the Wisconsin Department of Natural Resources, the University of Wisconsin Sea Grant Institute, the University of Wisconsin-Milwaukee, the Milwaukee Audubon Society, and concerned and knowledgeable citizens.

By the end of 1988, Lake Michigan water levels had dropped about three feet from the record highs of 1986 and 1987 to near normal levels. As a result, there was declining public interest in shoreline erosion problems and a growing reluctance to make the necessary public and private investments in capital improvements and maintenance programs. However, as historic experience indicates, the lake levels may be expected to again rise, and it is hoped that public officials and private lakefront property owners will view this period of average water levels as an opportunity to begin what necessarily will be a long-term program of lakeshore improvements. Given the long lead times necessary for designing, funding, and constructing shoreline improvements, Milwaukee County residents would be best served by steady progress toward protecting the shoreline.

During 1988, the inventory and evaluation of shoreline conditions in Milwaukee County was completed. The bluffs along the Milwaukee County shoreline range up to 130 feet in height above beach levels, with about one-half of the length of shoreline having bluffs greater than 70 feet in height. Bluff characteristics and the stability of the bluff slopes were evaluated at 104 profile locations along the shoreline. About 32 percent of the county shoreline was found to have stable bluff slopes, while 25 percent of the county shoreline was found to have unstable bluff slopes. Bluff slopes along 11 percent of the shoreline were classified as marginal—that is, unstable under certain conditions. The remaining 32 percent of the shoreline does not contain a bluff. About 50 percent of the Milwaukee County shoreline was observed to be eroding by wave action in 1986 and 1987.

An inspection of all 128 shore protection structures in the County conducted in 1986 and 1987 indicated that 75 percent exhibited some type of damage and required repair. The performance of 35 major shore protection structures and beaches was evaluated under six different Lake Michigan maximum water level and storm wave conditions. For each structure or beach, the potential for wave overtopping damage was classified as insignificant, low, moderate, or high.

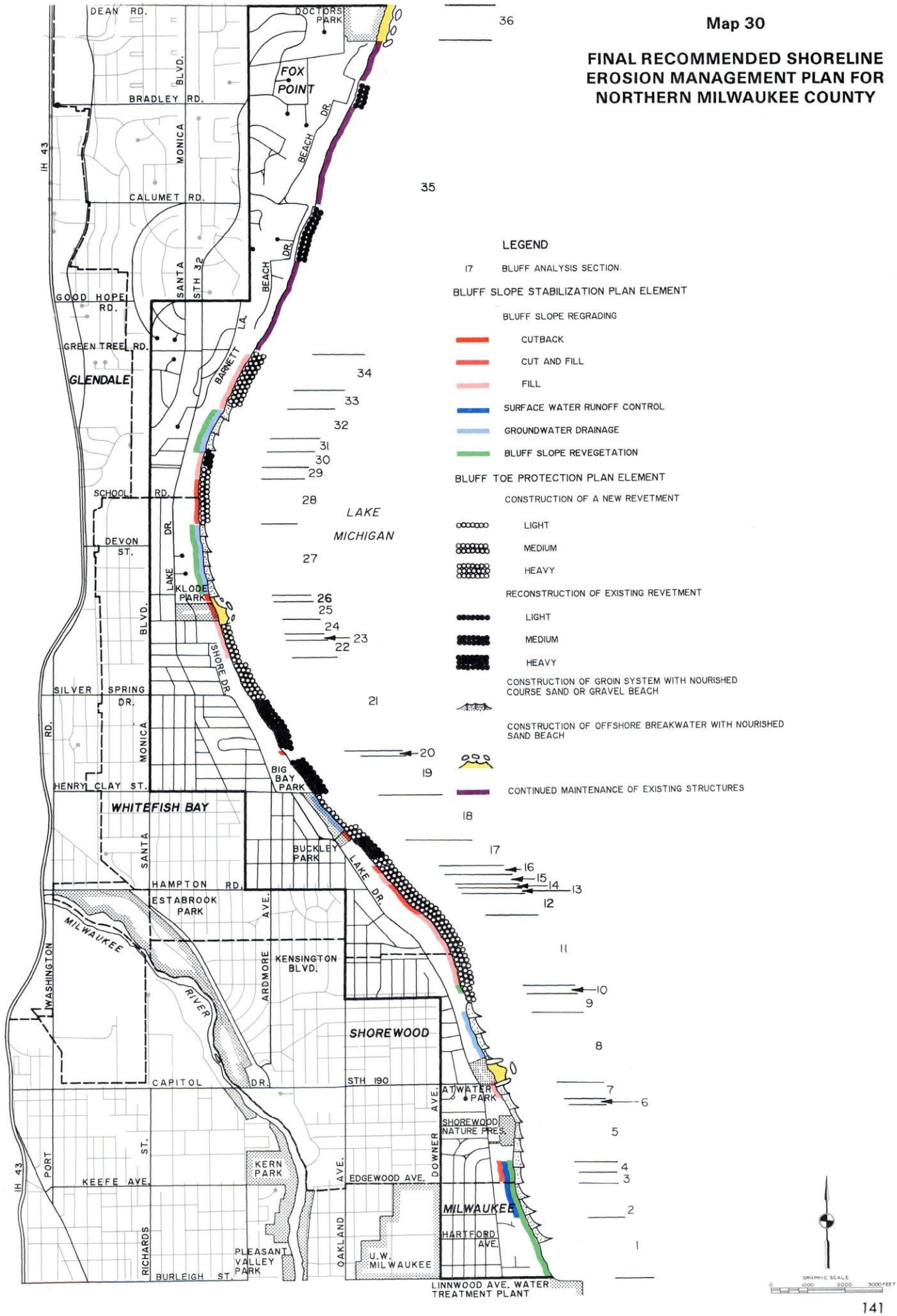
In late 1988, work began on the preparation of alternative shoreline erosion management plans for the County. The study is expected to be completed in 1989.

Waterfront Development Needs Inventory

At the request of the Wisconsin Department of Administration, the Commission in 1988 prepared a waterfront redevelopment needs inventory for 15 selected Lake Michigan shoreline communities within the Region. The inventory included information on development and redevelopment strategies, project engineering, and

Map 30

FINAL RECOMMENDED SHORELINE EROSION MANAGEMENT PLAN FOR NORTHERN MILWAUKEE COUNTY



construction needs; a probable timetable for redevelopment activities; and approximate costs for project elements. It is anticipated that the inventory will assist the Wisconsin Coastal Management Council, as well as state agencies and local governments, in planning and budgeting for waterfront development. Furthermore, the inventory will allow the Coastal Council to provide potential cost-share funds to selected communities. The inventory was conducted for the Villages of Bayside, Fox Point, North Bay, Shorewood, Whitefish Bay, and Wind Point; and for the Cities of Cudahy, Kenosha, Mequon, Milwaukee, Oak Creek, Port Washington, Racine, St. Francis, and South Milwaukee.

Coastal Hazard Information Inventory

At the request of the Wisconsin Department of Administration, the Commission in 1988 cataloged 163 reports and other sources of information in the Commission files regarding Great Lakes shoreline conditions. The information, available in hard copy and electronic form, is intended to assist local units of government and private citizens in acquiring data related to coastal maps and photographs, bathymetry and topography, shoreline erosion and bluff recession, and hydrologic and hydraulic conditions—including storm wave data, coastal wetland and unique natural features, and coastal planning and educational materials. It is expected that the inventory will be periodically updated. The Wisconsin Coastal Management Program is compiling the inventory information obtained from the Commission and other participating agencies and will prepare a guide for using, maintaining, and updating the statewide inventory.

SOLID WASTE MANAGEMENT

During 1988, the Commission continued to assist counties in the Region in the preparation and implementation of locally developed, county-oriented, solid waste management plans. An amendment was prepared for the comprehensive solid waste management plan for Milwaukee County which had been completed during 1987. A preliminary plan for Kenosha County was completed, reviewed by the Technical Advisory and Intergovernmental Coordinating Committee, and presented at two public hearings—one in the City of Kenosha and one in the Town of Wheatland. The preliminary plan recommendations provide for a combination of several components carefully designed to meet the needs of the County. The recommended plan envisions the use of source separation and the recycling of the separated material; composting of separated yard waste materials; the separate collection and special disposal of household toxic and hazardous materials; and landfilling of the remainder of the solid waste at existing landfills. The recommended plan also includes the use of a combination of landfilling and landspreading for the disposal of sewage treatment plant sludge. The selection of the recommended plan and the means to implement the plan followed an extensive review by the Advisory Committee of the technical feasibility, economic feasibility, environmental impacts, potential public acceptance, and practicality of the various alternative solid waste management plans considered, as well as of the degree to which the various alternatives met the adopted solid waste management objectives. The Kenosha County plan is scheduled for completion in 1989.

ECONOMIC DEVELOPMENT ASSISTANCE DIVISION

DIVISION FUNCTIONS

The Economic Development Assistance Division assists county and local units of government in the Region in pursuing economic development activities and promotes the coordination of county and local economic development plans and programs. The Division provides four basic types of services: economic development program planning; data and information provision; grant application preparation and grant award administration; and project planning.

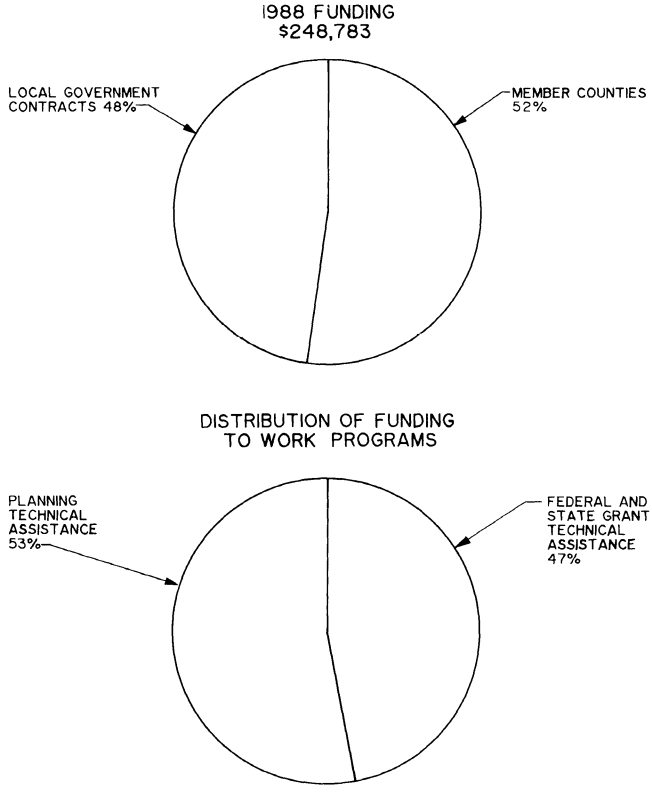
LOCAL ECONOMIC DEVELOPMENT PROGRAM PLANNING

Increasingly, communities within the Southeastern Wisconsin Region have identified a need for ongoing local economic development activities. This need has often been evidenced by a variety of local and regional economic development problems, including: 1) structural changes in the regional and national economies as evidenced by a declining proportion of manufacturing employment and an increasing proportion of retail trade and service employment; 2) the growing importance to employers of international trade and government sales; 3) the availability of workers for the full range of employment opportunities in the Region; and 4) decisions by local businesses and industries to relocate to, or expand in, areas outside the community.

There has been an increasing interest in carefully planning local economic development programs because of the rising costs of promoting economic development. In order to attract new employers and retain existing employers, some communities have chosen to purchase land for industrial parks and to provide the necessary infrastructure for development—roadway, sanitary sewer, water supply, and stormwater drainage improvements. Other communities have improved central commercial business districts through street resurfacing; improvements to curbs and gutters, sidewalks, public parking lots, and utilities; and the provision of streetscape amenities such as trees and curbside benches. However, because the costs of these improvements have continued to escalate, and because business establishments have become less attached to existing geographic locations, many communities have begun to reevaluate previous decisions to promote economic development. While some have decided not to promote the growth of existing business and industry, or the location of new firms within their communities, others have decided to continue to pursue a range of local economic development measures. These include identifying the types of economic development compatible with overall community development goals and objectives, and promoting compatible economic development activities. In response to the increased interest in furthering economic development at the county and local level, the Commission has developed a staff capability to assist public agencies and private organizations in such efforts.

Figure 69

ECONOMIC DEVELOPMENT ASSISTANCE DIVISION



During 1988, the Commission engaged in the following overall economic development program planning efforts:

- Initiated the preparation of local economic development program plans for the City of Brookfield in Waukesha County and the Village of Slinger in Washington County.

- Provided demographic, socioeconomic, traffic, and land use data to enable updated countywide economic development program plans to be prepared for Kenosha, Milwaukee, Racine, and Washington Counties. These plans serve to maintain county eligibility for federal public works grants and business loan guarantees to further economic development.

PROVISION OF ECONOMIC DEVELOPMENT DATA AND INFORMATION

Considerable Commission staff effort is directed at answering requests for economic development-related data. This function also includes the provision of short-term technical assistance to local units of government, public agencies, and local development corporations in the analysis of economic development data. During 1988, the Division prepared letter responses to 35 requests for economic development-related data from the Commission files. In addition, approximately 200 requests were responded to by telephone and through personal visits to the Commission offices. These requests came from local units of government, federal and state agencies, local development organizations, and private firms and individual citizens. The following are some examples of Division activity in performing this function during 1988:

- Provision of employer-related information to: the Kenosha Area Development Corporation; Gateway Technical Institute in Kenosha County; City of Whitewater Community Development Authority; Racine County Economic Development Corporation; Waukesha County Technical College, Enterprise Assistance Center; Walworth County Office of Planning, Zoning and Sanitation; Vrakas/Blum and Company; and the American National Bank. The information was used in identifying the number of industries by industry type in the service areas of these organizations.

- Provision to the Wisconsin Business Development Finance Corporation of data on the potential economic impact of five proposed business loans. The Corporation provides business loans that are guaranteed by the U. S. Department of the Treasury.

- Provision of assistance to the Racine County Division of Planning and Development in the updating of the County's citizen participation plan. The plan is required of communities with an interest in submitting applications for grants to the Wisconsin Development Fund. The grants are, in turn, loaned to businesses for expansion projects.

- Preparation of a summary report of recent changes in economic conditions in the Milwaukee metropolitan area for Milwaukee County. The report was utilized by the Milwaukee County Executive at an economic development summit attended by elected public officials and business leaders.

- Provision of assistance to the Wisconsin Electric Power Company regarding the availability of demographic and socioeconomic data frequently requested by businesses interested in locating in the Southeastern Wisconsin Region. The assistance was provided in an attempt to standardize a response format for the requests.

- Provision of onsite assistance to local community staff and representatives of businesses interested in locating in, or expanding in, the community and utilizing state and/or federal business loan programs to do so. This assistance was provided on 33 separate occasions at locations in each of the Region's seven counties.

PREPARATION AND ADMINISTRATION OF ECONOMIC DEVELOPMENT GRANT APPLICATIONS

The Commission staff provides assistance to local units of government in the preparation of economic development grant applications to state and federal agencies and in the administration of programs following grant awards. In most cases, the grant applications seek to acquire state or federal funding to improve community facilities and services in order to meet the needs of business and industry, and to provide below-market interest rate loans to businesses in an

effort to expand employment opportunities and to increase the community tax base.

The following applications for grants filed during 1988 resulted in grant awards:

- An application prepared at the request of Kenosha County for an economic development program grant from the Wisconsin Development Fund in the amount of $344,500. This grant was approved and used to provide a business loan to Radigan's Taste of Wisconsin, Inc., a new restaurant in the Town of Bristol. The loan is expected to result in 38 new jobs and $1.2 million in private capital investment.

- An application prepared at the request of the Town of Pleasant Prairie for an economic development program grant from the Wisconsin Development Fund in the amount of $750,000. This grant was approved and used to provide a business loan to Manu-Tronics, Inc., an assembler of electronic components. The loan is expected to result in 55 new jobs and $1.7 million in private capital investment.

- An application prepared at the request of the Village of Twin Lakes for an economic development program grant from the Wisconsin Development Fund in the amount of $169,970. This grant was approved and used to provide a business loan to Des Automotive, Inc., a re-manufacturer of automotive brake shoes. The loan is expected to result in 10 new jobs and $325,000 in private capital investment.

- An application prepared at the request of the Village of Saukville for an economic development program grant from the Wisconsin Development Fund in the amount of $146,000. The grant monies were approved and used to provide a business loan to Rod's & Walers, Inc., a manufacturer of structural steel components for the marine construction industry. The loan is expected to result in nine new jobs and $240,700 in private capital investment.

- An application prepared at the request of the City of Mequon for an economic development program grant from the Wisconsin Development Fund in the amount of $395,000. The grant was approved and used to provide a business loan to Sales Guides, Inc., a sales promotions company. The loan is expected to retain about 40 jobs and to create 10 new jobs, and to result in $600,000 in private capital investment.

- An application prepared at the request of Kenosha County for a public facilities and housing rehabilitation program grant from the Wisconsin Development Fund in the amount of $688,000. The grant was approved, and the monies are being used to provide low- or no-interest loans to low- and moderate-income families to rehabilitate 63 owner-occupied housing units and seven vacant renter-occupied housing units; to provide handicapped person accessibility improvements to six housing units; to defray the cost of installing sanitary sewer laterals to 12 housing units; and to defray the cost of removing two blighted properties owned by Kenosha County.

- An application prepared at the request of the City of Hartford for a public facilities program grant from the Wisconsin Development Fund in the amount of $481,500. The grant was approved and used to help pay the cost of extending centralized sanitary sewer service from the Hartford sewage treatment facility to the Rubicon Sanitary District, an urban enclave located west of the City of Hartford in the Town of Rubicon, Dodge County.

- An application prepared at the request of the Village of Slinger for a public facilities program grant from the Wisconsin Development Fund in the amount of $177,880. The grant was approved and used to help pay the cost of extending centralized sanitary sewer service to the Wheel Estates Mobile Home Park in the Village.

In addition to helping local counties and communities apply for available federal and state funds, the Commission will, upon request, contract with successful applicants for the administration of the grant monies. A number of activities are involved in administering the grant monies, including, importantly, ensuring that the terms of the grant award are met. During 1988, the Commission provided contract services to administer the following projects that were aided by federal and state grant awards:

- A Wisconsin Development Fund grant in the amount of $750,000 obtained by the City of Oconomowoc in 1988. The grant monies were used to provide a business loan to Musebeck Shoe Company. The project is expected to help create about 50 new jobs and result in $1.3 million in private capital investment.

- A Wisconsin Development Fund grant in the amount of $420,000 obtained by the Village of East Troy in 1988. The grant monies were used to provide a business loan to Plastronics Plus, Inc. The project is expected to help create about 20 new jobs and result in $420,000 in private capital investment.

- A Wisconsin Development Fund grant in the amount of $300,000 obtained by Kenosha County with the assistance of the Commission in 1987. The grant monies were used to provide a business loan to Bristol Container Corporation, Town of Bristol. The loan is expected to help create 15 new jobs and result in $300,000 in private capital investment.

- Two federal Urban Development Action grants totaling $859,000 obtained by the City of Whitewater with the assistance of the Commission in 1985. The grant monies were used to make business development loans to Moksnes Manufacturing Company and Hawthorn Mellody Company. These two firms have undertaken expansion programs that, when completed, are expected to create about 40 new jobs in the City, and result in $2,349,000 in private capital investment.

- A Wisconsin Development Fund grant in the amount of $720,000 obtained by the City of Whitewater with the assistance of the Commission in 1985. The grant monies were used to establish a revolving low-interest business loan fund to help five local firms create about 100 new jobs in the Whitewater area over a three-year period, and resulted in $1 million in private capital investment.

- A Wisconsin Development Fund grant in the amount of $270,300 obtained by the City of West Bend with the assistance of the Commission in 1986. The grant monies were used to provide a business loan to Elite Plastic Services, Inc. The loan is expected to help create about 40 new jobs, and result in $758,340 in private capital investment.

- A Wisconsin Development Fund grant in the amount of $400,000 obtained by Kenosha County with the assistance of the Commission in 1986. The grant monies were used to provide a business loan to I.T.O. Industries, Inc., in the Town of Bristol. The loan is expected to help retain about 60 jobs at the Bristol plant, and result in $981,000 in private capital investment.

ECONOMIC DEVELOPMENT PROJECT PLANNING SERVICES

Economic development project planning services involve the conduct of detailed economic development planning studies for local units of government, development corporations, and other organizations concerned with economic development and seeking Commission assistance. During 1988, the following representative project planning services were conducted:

- At the request of the Sherman Park Community Association, the Commission assisted with the conduct of, and data processing attendant to, an exterior survey of housing conditions in the Sherman Park area of the City of Milwaukee. The results of the surveys provide important information for a number of the Association's neighborhood improvement projects.

- At the request of the City of West Bend, the Commission staff completed a study of the labor force in Washington County. The City's request resulted from a concern by local economic development officials that, owing to declining unemployment rates in the City, the City's economic development organizations will need to develop strategies to increase the supply of workers to area businesses.

- At the request of Forward Wisconsin, Inc., the Commission staff participated in the Economic Conditions Subcommittee of the Southeast Wisconsin Regional Marketing Group. The Subcommittee identifies significant economic conditions in the Region and their effect on future economic development initiatives for Forward Wisconsin and other economic development organizations.

- In 1988, the Commission, in cooperation with the Wisconsin Electric Power Company, prepared an update to the series of

Figure 70

EXAMPLE OF COMMUNITY ECONOMIC PROFILE

ECONOMIC PROFILE

City of West Bend, WI
MARCH 1988

Population

Year	Number	Percent Change
1960	9,969	—
1970	16,555	66.1
1980	21,484	29.8
1987	22,523	4.8

Source: U.S. Bureau of the Census and Wisconsin Department of Administration.

Housing

TOTAL UNITS

Year	Occupied Units	Percent Change	Persons per Unit
1960	3,061	—	3.3
1970	4,913	60.5	3.4
1980	7,483	52.3	2.9
1985	7,790	4.1	2.9

UNIT INFORMATION: 1980

Total Units	7,483
Owner Occupied	4,753
Median Value	$60,800
Vacancy Rate	1.9
Renter Occupied	2,540
Median Rent	$213
Vacancy Rate	2.0

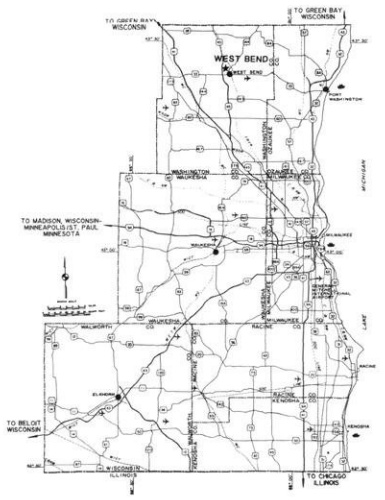
Source: U.S. Bureau of the Census, 1960, 1970, 1980; and SEWRPC.

Income

1986 Adjusted Gross Income Per Capita

City of West Bend	$11,840
Washington County	11,413
Southeastern Wisconsin Region	11,127
Wisconsin	9,546

Source: Wisconsin Department of Revenue.



Transportation

Highways

IH 43 is located 12 miles to the east and USH 41 five miles to the west of the City of West Bend. USH 45 and STH's 33 and 144 also serve the City.

Trucking

There are 66 trucking and warehousing establishments located in Washington County.

Railway Service

The City of West Bend is served by the Chicago & North Western Transportation Company (C&NW).

Water Transportation Facilities

The City is located 17 miles from the Port of Port Washington, 37 miles from the Port of Milwaukee, and 74 miles from the Port of Kenosha.

Air Service

The City of West Bend is served by West Bend Municipal Airport, located two miles east of the City. This public-use airport is capable of handling a wide variety of business aircraft, up to and including some corporate jets. Its airfield lighting and navigation aids permit all-weather operation. General Mitchell International Airport, the nearest scheduled air carrier airport, is located 45 miles to the southeast in the City of Milwaukee. Chicago's O'Hare International Airport is located 110 miles to the southeast.

Public Transit

The City is served by local taxicab service, by Hartford's Red Flyer Bus Service, and by specialized transportation for elderly and handicapped persons provided by the Washington County Office on Aging.

Health

The City of West Bend is served by St. Joseph's Community Hospital (109 beds), as well as the Cedar Lake Home Campus, the General Clinic of West Bend, Oakbrook Family Physicians, S. C., and the Washington County Mental Health Center. Further, Hartford Municipal Hospital, City of Hartford, and the 11 other clinics located in Washington County are all readily accessible to city residents.

Taxes

Local Property Taxes, 1987
--Assessment Ratio: 1.0058
--Net Rate/$1,000: $27.16
--Total Equalized Value: $547,989,300

Source: Statistical Report of Property Valuations, 1987; and the City of West Bend.

1

Labor and Wages

WASHINGTON COUNTY EMPLOYMENT: 1986*

Employment by Industry	Number of Persons Employed	Percent of Persons Employed
Agriculture, Forestry, and Fishing	300	1.1
Construction	1,400	5.3
Manufacturing	9,400	35.2
Transportation, Communications	1,000	3.7
Wholesale Trade	800	3.0
Retail Trade	5,400	20.2
Finance, Insurance, Real Estate	1,300	4.9
Services	4,000	15.0
Government	3,100	11.6
Total	26,700	100.0

*Not included: Self-employed, unpaid family workers, and private household workers.

Source: Wisconsin Department of Industry, Labor and Human Relations, June 1986; and SEWRPC.

MILWAUKEE SMSA CIVILIAN LABOR FORCE

Total Labor Force	729,100
Employed Labor Force	688,750
Unemployed Labor Force	40,350

Source: Wisconsin Department of Industry, Labor and Human Relations—Average for the first seven months of 1987.

MEDIAN HOURLY WAGES FOR SELECTED OCCUPATIONS: 1986

Occupational Category	Service Delivery Area 12*
Executive, Administrative, and Managerial	$13.50
Professional	11.49
Technical	9.35
Sales	5.28
Administrative Support (including clerical)	6.64
Service Occupations	5.00
Mechanics and Repair Workers	10.08
Construction	8.83
Precision Production	10.48
Production Workers	8.55
Transportation and Material Workers	8.60
Handlers, Equipment Cleaners, and Laborers	7.36

*Wage rates are for Service Delivery Area 12 (which includes Ozaukee, Washington, and Waukesha Counties), and may vary in specific locations within the three-county area.

Source: Wisconsin Department of Industry, Labor and Human Relations, 1986; and SEWRPC.

Manufacturing

MAJOR MANUFACTURING EMPLOYERS IN THE CITY OF WEST BEND

Machinery Except Electrical
ACD, Inc.
Arm Tool and Metal Products, Inc.
Gehl Company
Gruber Tool & Die, Inc.
Midcities Tool & Die, Inc.
Mies Products, Inc.
Pick Heaters, Inc.
Ward Tool & Die, Inc.
Weasler Engineering, Inc.
West Bend Equipment Corporation

Stone, Clay, and Glass Products
The Western Lime & Cement Company

Leather and Leather Products
Alko Manufacturing, Inc.
Amity Leather Products Company
Enger Kress Company

Transportation Equipment
EIS, Division of Parker Hannifin Corporation

Fabricated Metal Products
Jos. E. Matenaer Company, Inc.
Screw Machine Products, Inc.
Westbar Corporation

Food and Kindred Products
Seven-Up Bottling Company

Printing and Publishing
Kruepke Printing
Post Printing
Serigraph Sales and Manufacturing Company, Inc.

Primary Metals Industries
The West Bend Company

Instruments and Related Products
United Services Imaging, Inc.

Apparel and Other Textile Products
Broy Company Manufacturing & Sales, Inc.

Source: 1987 Classified Directory of Wis. Manufacturers, City of West Bend, and SEWRPC.

Financial

Banks
M & I First National Bank
321 N. Main Street
West Bend, Wisconsin 53095
Telephone: (414) 338-6666

Bank1One
801 W. Washington Avenue
West Bend, Wisconsin 53095
Telephone: (414) 338-2111

F & M Bank
P. O. Box 675
West Bend, Wisconsin 53095
Telephone: (414) 334-9457

Credit Unions
State Central Credit Union
1811 W. Washington Street
West Bend, Wisconsin 53095
Telephone: (414) 338-0011

West Bend Employees Credit Union
18 E. Washington Street
West Bend, Wisconsin 53095
Telephone: (414) 338-1888

Savings and Loan Associations
Federated Financial Savings
2165 W. Washington Street
West Bend, Wisconsin 53095
Telephone: (414) 334-4500

Guaranty Savings
876 S. Main Street
West Bend, Wisconsin 53095
Telephone: (414) 338-6611

West Bend Savings & Loan Association (main office)
201 5th Avenue
West Bend, Wisconsin 53095
Telephone: (414) 334-5563

Utilities

Electric Power
Wisconsin Electric Power Company
920 Indiana Avenue
West Bend, Wisconsin 53095
Service Information: (414) 338-7600

Telephone
Wisconsin Bell
A Division of Ameritech, Inc.
Business Service Information:
In State—1-393-2000
Out of State—Call collect (414) 678-3368

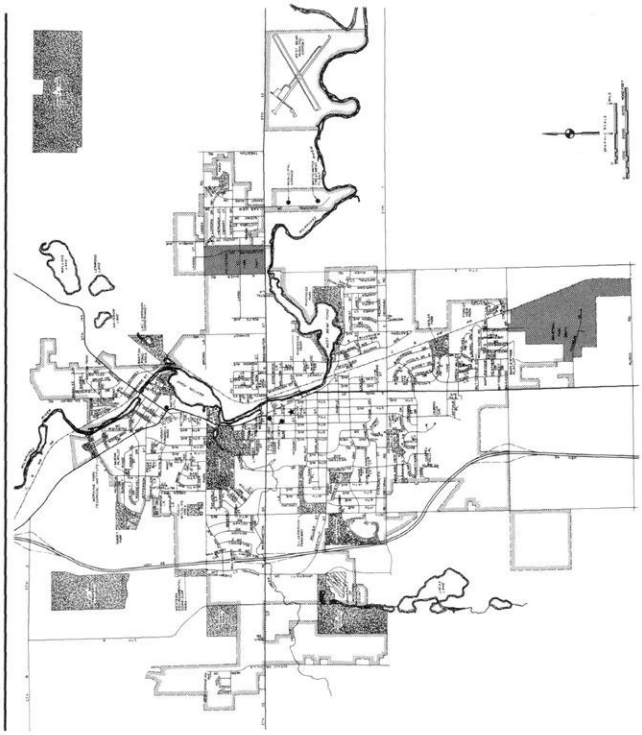
Natural Gas
Wisconsin Gas Company
206 N. 6th Avenue
West Bend, Wisconsin 53095
Service Information: (414) 338-6141

Water
City of West Bend Water Department
Source: Wells
Pumping Capacity:
12,132 million gallons per day
Average Daily Consumption:
3.2 million gallons
Adequate Capacity for New Industry
Rate Information:
City Clerk—(414) 338-5040

Solid Waste
The City provides residential refuse collection services. Commercial and industrial solid waste is collected by private collection services.

Sanitary Sewerage
City of West Bend Wastewater Treatment Plant
Average Annual Hydraulic Loading:
3.749 million gallons per day
Average Hydraulic Design Capacity:
9 million gallons per day
Adequate Capacity for New Industry
Rate Information:
City Clerk—(414) 334-3925

2



Education

Number of Schools in the District*

High Schools	2
Junior High	2
Elementary	7
Private Elementary and Secondary Schools	12

Public and Private School Enrollment in the District

PK-8	5,462
9-12	2,573
Total Enrollment 1986-1987 School Year	8,035

*The City of West Bend is served by the West Bend School District.

Source: Wisconsin Public and Nonpublic School Directories, 1986-1987; and SEWRPC.

Standardized Test Results
Based upon the mean scores reported in the nation, Wisconsin students ranked first on the Scholastic Aptitude Test (SAT) and second on the American College Test (ACT) during the 1985-1986 testing period.

Source: Wisconsin Department of Public Instruction and SEWRPC.

Colleges and Universities
The following post-secondary educational facilities are located within or in proximity to Washington County:

Alverno College, City of Milwaukee
Cardinal Stritch College, City of Glendale
Concordia College, City of Mequon
Marquette University, City of Milwaukee
Medical College of Wisconsin, City of Wauwatosa
Milwaukee School of Engineering, City of Milwaukee
Mount Mary College, City of Milwaukee
University of Wisconsin-Milwaukee, City of Milwaukee
University of Wisconsin-Washington County, City of West Bend

Technical and Vocational Schools
Milwaukee Area Technical College, City of Mequon campus
Moraine Park Technical Institute, City of West Bend campus
Waukesha County Technical College, Village of Pewaukee campus
Village of Menomonee Falls campus
City of Waukesha campus

Library
West Bend Public Library

Media

Newspapers
West Bend News, Inc., Daily
100 S. 6th Avenue
West Bend, Wisconsin 53095

Milwaukee Journal-Sentinel, Daily
1605 S. Main Street
West Bend, Wisconsin 53095

USA Today, Weekdays
730 Larry Court
Waukesha, Wisconsin 53186

Broadcasting Stations

Milwaukee Television Stations	Channel
WCGV (Independent)	24
WISN (ABC)	12
WITI (CBS)	6
WTMJ (NBC)	4
WVTV (Independent)	18
WMVS (PBS)	10
WMVT (PBS)	39

Cable TV: Star Cablevision Group

Radio Stations — Washington County
WBKV (AM & FM), WTKM (AM & FM) and WYLO (AM) are located in Washington County. In addition, 35 radio stations are located in the Milwaukee County area that broadcast into Washington County.

Industrial Sites/Incubator Buildings

Industrial Parks (June 1987)

Name	Acres Total	Acres Sold	Contact Person
West Bend Industrial Park-South	181	34	For both sites: Mr. John Capelle Director of Community Development City of West Bend Telephone: (414) 338-5122
West Bend Industrial Park-East	73	69	

Source: The Business Journal, the City of West Bend, and SEWRPC.

Incubator Buildings

Name	Square Footage Total	Square Footage Avail.	Contact Person
West Bend Incubator-Ventures I	43,548	23,548 under lease	Ms. Betty Pearson West Bend Area Economic Development Corporation Telephone: (414) 338-2666

Source: The City of West Bend and SEWRPC

Contacts

For industrial, commercial, or business information about the City of West Bend contact:

Local Contacts

•City Administrator or Community Development Director
City Hall
100 N. 6th Avenue
West Bend, Wisconsin 53095
Telephone: (414) 338-5103

•Executive Vice-President
West Bend Area Chamber of Commerce, Inc.
West Bend Economic Development Corporation
120 N. Main Street
West Bend, Wisconsin 53095
Telephone: (414) 338-2666

•Manager-Economic Development
Wisconsin Electric Power Company
231 W. Michigan Street
Milwaukee, Wisconsin 53201
Telephone: (414) 221-3842

State Contacts

•Forward Wisconsin, Inc.
11270 W. Park Place, Suite 550
Milwaukee, Wisconsin 53224
Telephone: (414) 359-2359

•Wisconsin Department of Development
Business Development Service
P.O. Box 7970
Madison, Wisconsin 53707
Telephone: (608) 266-1018

P.O. Box 1607
Old Courthouse
Waukesha, Wisconsin
53187-1607
(414) 547-6721

This profile is one in a series of regional, county, and community profiles prepared by the Southeastern Wisconsin Regional Planning Commission in cooperation with the Wisconsin Electric Power Company as a community service.

Government Services

The City of West Bend has a mayor/council form of government and a city administrator.

Police, Fire, and Ambulance
Police Department: 36 full-time officers
Fire Department: 23 full-time and 30 part-time fire fighters
Fire Underwriters' Rating: 4

Other
The City provides street maintenance, snow removal, mercury vapor street lighting, and a public library. The City also has a planning commission, a land use plan, and a zoning ordinance. For more information on city development regulations and procedures contact John Capelle, Community Development Director (414) 338-5122.

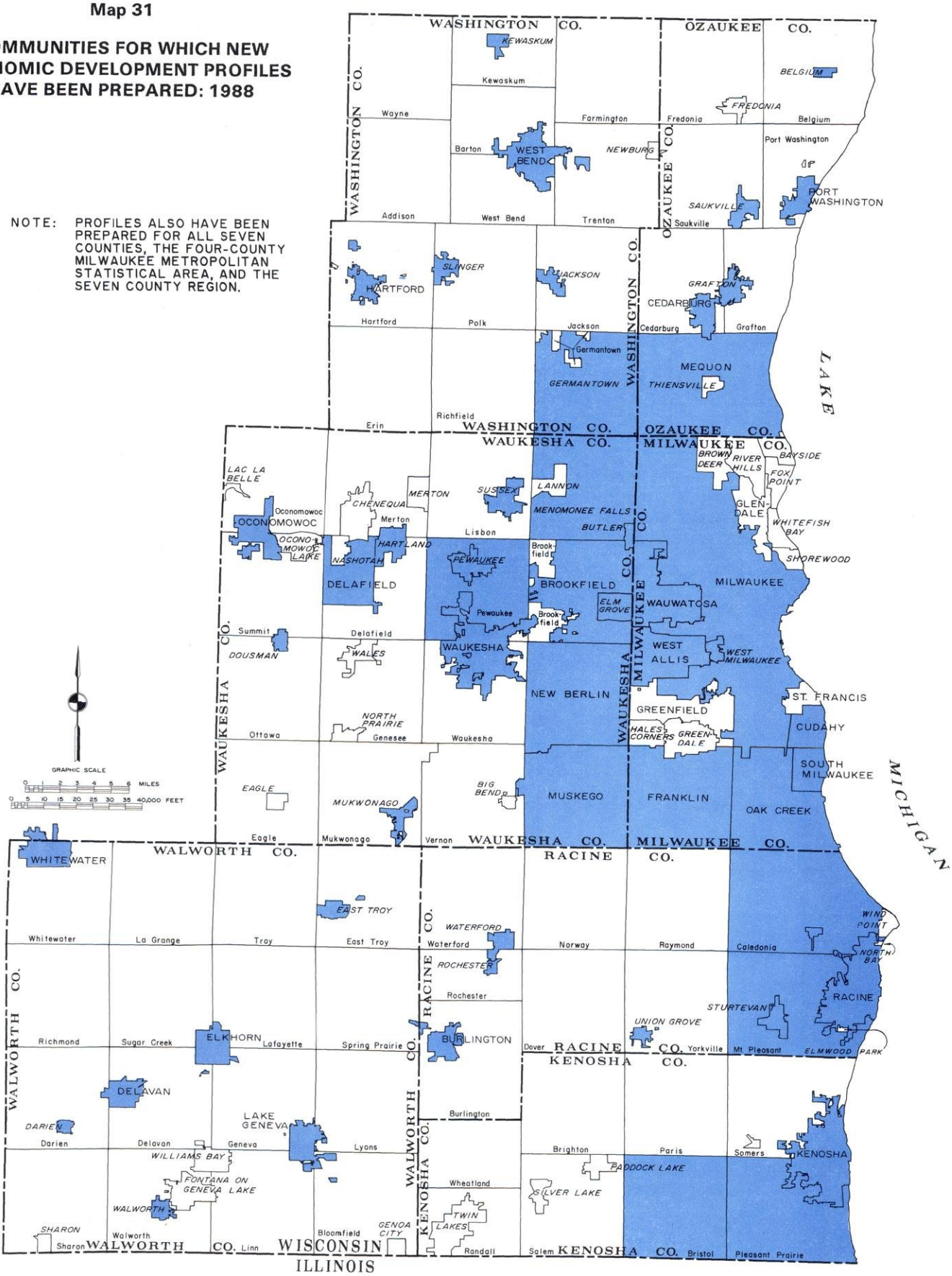
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Map 31

COMMUNITIES FOR WHICH NEW ECONOMIC DEVELOPMENT PROFILES HAVE BEEN PREPARED: 1988

NOTE: PROFILES ALSO HAVE BEEN PREPARED FOR ALL SEVEN COUNTIES, THE FOUR-COUNTY MILWAUKEE METROPOLITAN STATISTICAL AREA, AND THE SEVEN COUNTY REGION.



economic development profiles for communities in southeastern Wisconsin that were originally prepared in 1984. The profiles are intended to be used by county and local units of government, and by private development organizations, in efforts to attract and retain industrial and commercial development. The profiles, prepared in a succinct, easy-to-read format, provide information on resident population, personal income, employment and labor force, financial and educational institutions, public and private utilities and public services, transportation facilities, housing stock, and health facilities and services. In addition, each profile is illustrated with a map of the community, as well as of the Southeastern Wisconsin Region. In 1988, the Commission completed community profiles for the Region, the Milwaukee metropolitan area, each of the constituent seven counties, and 55 selected cities, villages, and towns within the Region. Figure 70 shows an example of an economic development profile, reduced for the purpose of reproduction herein. The communities for which new profiles have been prepared are shown on Map 31, and are listed in Appendix D.

- At the request of the Village of Mukwonago, the Commission staff prepared a development plan and attendant promotional materials for the village industrial park. The effort included analysis of the characterstics of the industrial park site; establishment of an organizational entity for marketing the industrial park; preparation of alternative site development plans; identification of appropriate land use development controls; and preparation of a marketing brochure.

- At the request of the City of South Milwaukee, the Commission staff completed a consumer market survey. The purpose of the survey was to identify city residents' perception of retail goods and services available in the City. A total of 196 households participated in the survey, or 51 percent of the households contacted.

COMMUNITY ASSISTANCE PLANNING DIVISION

DIVISION FUNCTIONS

The Community Assistance Planning Division has primary responsibility for assisting local units of government in the Region in the conduct of local planning efforts, thereby promoting coordination of local and regional plans and plan implementation actions, and generally promoting good public administration as well as sound physical development within the Region. The Division provides five basic types of services: educational, advisory, review, project planning, and resident planning.

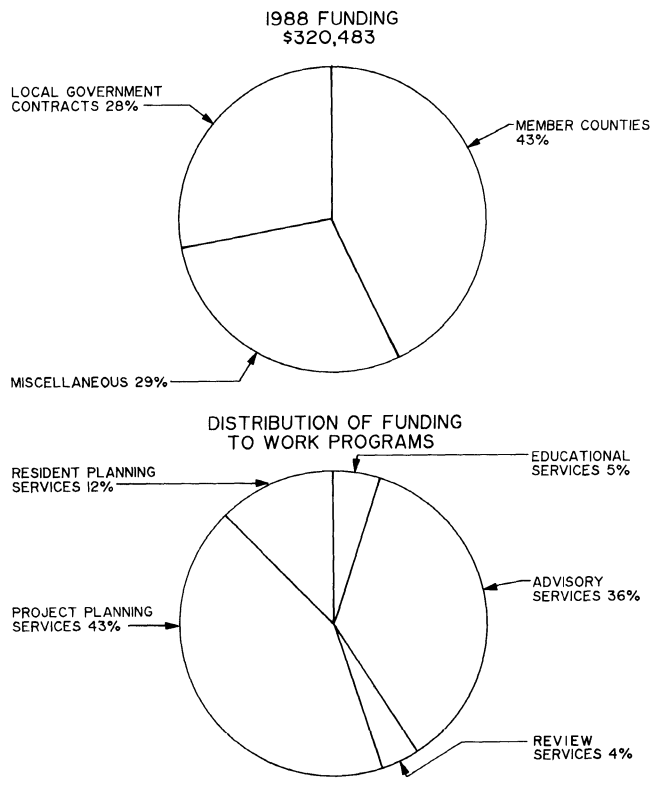
EDUCATIONAL SERVICES

Educational services are provided by the Division staff to local units of government and citizen groups on request, and are directed at explaining the need for, and purposes of, continuing local, regional, and state planning programs, and the relationships that should exist between these different levels of planning. In addition, these efforts are directed at encouraging the creation, organization, staffing, and financing of local planning programs. During 1988, educational efforts included the following:

- Presentations regarding the work of the Commission to local governmental, civic, and professional groups, such as the Village Board of the Village of Newburg, the Town Board of the Town of LaGrange, the Town Board of the Town of Lyons, the Village of Big Bend Plan Commission, the Town of Salem Plan Commission, the Walworth County Towns Association, the Mid-Moraine Municipal Association, the Waukesha North Side Businessmen's Association, the Waukesha City Futures Committee, the Finer Waukesha Committee, the Waukesha County Economic Summit, the Waukesha School Board, the St. Joseph's Hospital Planning Committee, the North Shore League of Women Voters, the Oconomowoc League of Women Voters, the East Troy Kiwanis Club, the Menomonee Falls Kiwanis Club, the Mukwonago Kiwanis Club, the Oconomowoc Kiwanis Club, the Racine-Wednesday Kiwanis Club, the Racine-Thursday Kiwanis Club, the West Bend Kiwanis Club, the Milwaukee-Central Lions Club, the Brookfield Rotary Club, the Brookfield-Sunset Rotary Club, the Lake Country Rotary Club, the Milwaukee-Northwest Rotary Club, the Racine-Downtown Rotary Club, the Waukesha Rotary Club, the Whitnall Rotary Club, the Wisconsin Society of Real Estate Appraisers, the Southeastern Wisconsin Assessors Association, and the Waukesha County Board of Realtors, and to classes of the University of Wisconsin-Milwaukee, Waukesha County Technical College, and Catholic Memorial High School.

Figure 71

COMMUNITY ASSISTANCE PLANNING DIVISION



- Conduct of wetland preservation presentations to classes at DePaul University, Waukesha-North High School, the Kettle Moraine Audubon Society, the Waukesha County Environmental Action League, and Washington County University of Wisconsin-Extension.

- Conduct of wetland and wildlife habitat tours of the Horicon Marsh, Lulu Lake, and the Retzer Nature Center.

- Participation in the Globescope International Conference in Oshkosh concerning environmental regulation and wetland regulation.

- Conduct of presentations on automated land records management systems to classes at Milwaukee Area Technical College and the University of Wisconsin-Madison, and to the staff of the Wisconsin Department of Development.

- Conduct of the SEWRPC 15th Regional Planning Conference, Clean Water Through Land Management.

- Participation in a conference commemorating the 50th anniversary of the Village of Greendale as one of the nation's model federally planned and developed "green belt" communities.

- Preparation of six Commission newsletters describing Commission planning programs and related activities. The newsletters are distributed to about 1,500 public officials and interested citizens.

- Preparation and distribution to newspapers and to radio and television stations of six news releases concerning the creation of an advisory committee to help guide the preparation of a plan for the IH 94 South Corridor in Kenosha, Milwaukee, and Racine Counties; the appointment of Mr. David B. Falstad to the Regional Planning Commission; the conduct of an automobile and truck origin-destination survey in the Burlington area; the conduct of a future governance study in the Delavan Lake area; the receipt of a Wisconsin Development Fund grant for economic development by Kenosha County; and the scheduling of the SEWRPC 15th Regional Planning Conference.

- Preparation of the Commission's 1987 Annual Report.

ADVISORY SERVICES

Advisory services consist of the provision of basic planning and engineering data available in the Commission's files to local units of government and private interests, and the provision on an ad hoc basis of technical planning and engineering assistance to local communities. Representative advisory services performed during 1988 include:

- Provision of data and advice concerning the location of floodway and floodplain boundaries to the City of Glendale and the Towns of Caledonia and Dover.

- Conduct of hydraulic and hydrologic analyses of floodland-related development proposals for the Cities of Brookfield, Waukesha, and Wauwatosa; for the Village of Pewaukee; and for the Towns of Brighton, Caledonia, and Somers.

- Conduct of plant inventories on four properties in the Cities of Mequon and New Berlin, and in the Towns of Brookfield, Mt. Pleasant, and Pleasant Prairie.

- Field verification of wetland boundaries on 28 properties in the Cities of Brookfield, Muskego, New Berlin, Racine, Waukesha, and West Bend; the Villages of Germantown and Wind Point; and the Towns of Brookfield, Burlington, Caledonia, Pewaukee, Pleasant Prairie, Vernon, and Waterford.

- Preparation of 1 inch equals 400 feet scale wetland jurisdictional maps for the Cities of Cedarburg, Delavan, Delafield, and Whitewater; and the Villages of East Troy, Germantown, Hales Corners, Merton, Mukwonago, and Pewaukee to identify areas affected by Chapter NR 117 of the Wisconsin Administrative Code. Attendant wetland zoning regulations were also prepared for the Cities of Cedarburg, Delavan, and Whitewater and the Villages of East Troy and Merton.

- Provision of assistance to the City of Franklin and the Village of Elm Grove in the preparation of Request for Proposal (RFP) documents for local planning projects.

Table 28

STATE AND FEDERAL GRANT REVIEWS: 1988

Review Category	Number of Reviews	Aggregate Amount of Federal and/or State Grant, Loan, or Mortgage Insurance Requests
Air Quality	1	$ 4,926,684.00
Community Action	47	122,688,442.00
Community Development	11	10,595,200.00
Community Facilities	8	3,431,850.00
Conservation	41	18,986,380.00
Historic Programs	3	1,798,515.00
Housing	22	31,020,604.00
Law Enforcement	3	1,176,900.00
Park and Open Space	2	37,905.00
Sanitary Sewerage	2	- -
Solid Waste	2	1,839,829.00
Transportation	45	44,288,247.00
Water Supply	1	1,604,724.00
Total	188	$242,395,280.00

REVIEW SERVICES

Review services are intended to encourage the incorporation of regional studies and plans into local planning programs, plans, and plan implementation devices, such as zoning and subdivision control ordinances. In addition, review services are intended to prevent unnecessary duplication of planning efforts, and to coordinate and encourage regional plan implementation. Four basic types of review services are performed: review of local plans, plan implementation devices, and development proposals; review of federal and state grant applications; review of environmental impact statements, reports, and assessments; and review of flood hazards affecting individual properties. The following is a representative sample of review services provided by the Division staff in 1988 in the first review category:

- Review of and comment on 33 preliminary land subdivision plats at the request of the Cities of Delafield, Hartford, and Muskego; the Villages of Fredonia, Germantown, and Sussex; and the Towns of Darien, East Troy, LaGrange, Lyons, Mt. Pleasant, Norway, Pleasant Prairie, Pewaukee, Somers, and Waterford.
- Review of and comment on four certified survey maps at the request of the City of Burlington and the Town of Somers.
- Review of and comment on 28 petitions to rezone lands and 11 proposed zoning text amendments at the request of the Cities of Burlington, Cedarburg, Franklin, and New Berlin; the Villages of Menomonee Falls and Sussex; and the Town of Somers.
- Review of and comment on the construction of a wildlife pond in the Village of Germantown.
- Review of and comment on proposed private airport sites in the Towns of Erin and Sharon.
- Review of and comment on two drainage plans for commercial properties in the Town of Raymond.

Commission activities regarding the review of federal and state grant applications are summarized in Table 28. In total, review comments were provided for 188 applications for federal and state grants, loans, or mortgage insurance guarantees, requesting in the aggregate more

Table 29

ENVIRONMENTAL IMPACT STATEMENTS REVIEWED: 1988

Document Reviewed	Requesting Agency
Environmental Impact Statement for the construction of a correctional institution in the Village of Sturtevant	Wisconsin Department of Health and Social Services

Table 30

FLOOD HAZARD REVIEWS: 1988

County	Number of Reviews
Kenosha	4
Milwaukee	111
Ozaukee	42
Racine	12
Walworth	11
Washington	25
Waukesha	173
Total	378

than $242 million in federal and state financial assistance. Of the 188 requests, 21 were found to be in conformance with and serve to implement the adopted regional plan elements, and 167 were found to be not in conflict with the adopted regional plan elements. None were found to be in conflict with the adopted regional plan elements.

Division activities regarding the review of environmental impact statements, reports, and assessments are summarized in Table 29. Comments are provided, when required, relating the proposed projects and the data contained in the environmental impact statements to the adopted regional plans.

Flood hazard reviews relating to residential properties are requested by realtors and lending institutions. During 1988, the Division conducted a total of 378 flood hazard reviews distributed by county, as shown in Table 30.

PROJECT PLANNING SERVICES

Project planning services involve the conduct for local member units of government, at cost, of detailed planning studies resulting in the preparation of local plans and plan implementation devices. During 1988, the following representative project planning efforts were conducted:

- Completion of an industrial park neighborhood unit plan for the City of Franklin. Such plans are viewed by the Commission as an important means of guiding and shaping urban land use development and redevelopment at the local level. This plan is set forth in SEWRPC Community Assistance Planning Report No. 138, A Development Plan for the Franklin Industrial Park Neighborhood. The plan sets forth design criteria for developing an industrial park and provides for a broad range of industrial sites to meet the needs of a variety of industrial establishments in the southeast portion of the City. The plan design is meant to be flexible and foster, where appropriate, the combining of industrial lots to form larger lots for establishments with greater space needs. Guidelines are also provided for the establishment of a nonprofit development corporation to implement the plan. Model deed restrictions and protective covenants and a guide to park landscaping are also provided. Map 32 shows the suggested neighborhood plan.

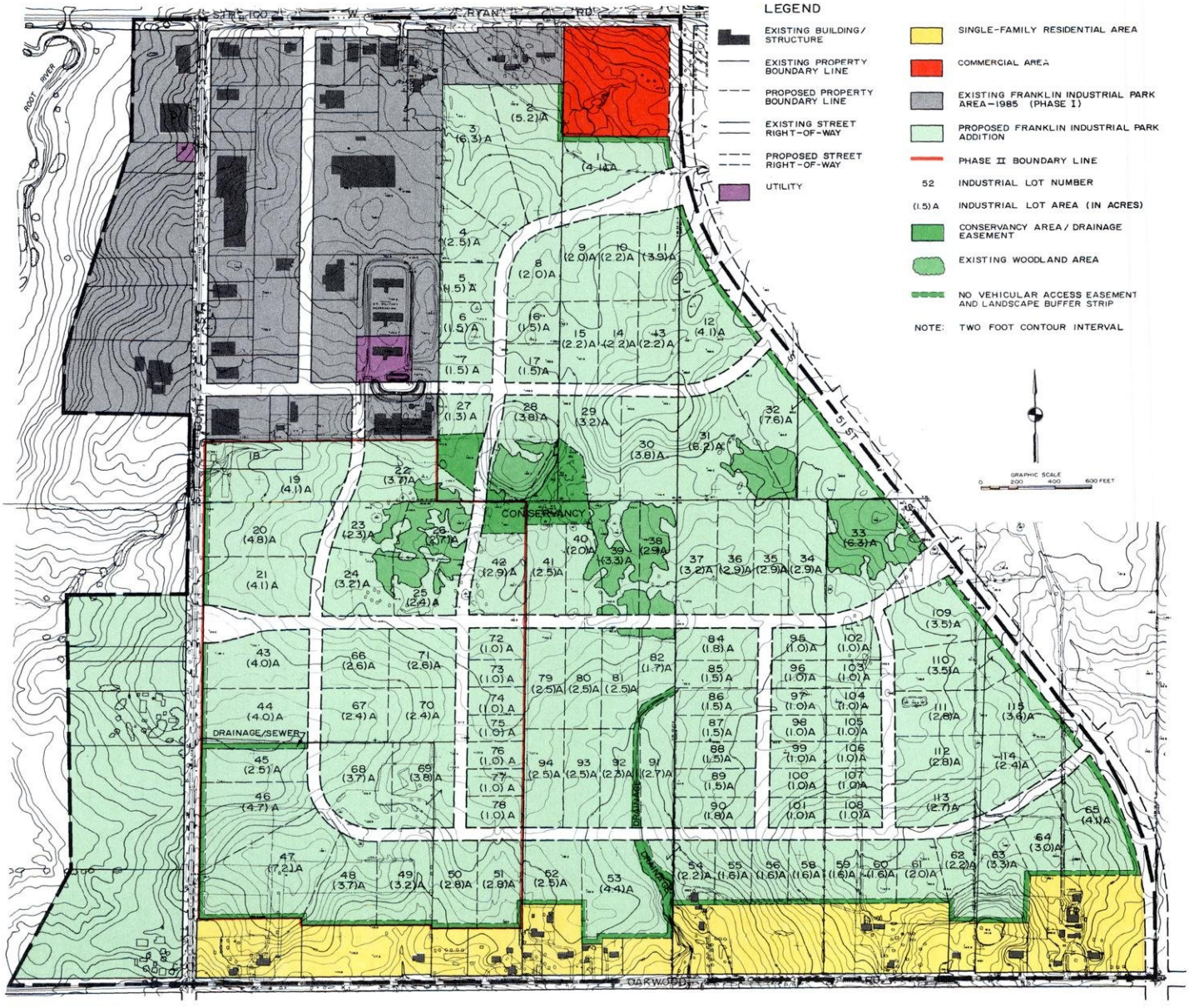
- Completion of new zoning ordinances and attendant zoning maps for the Villages of Saukville and Walworth and the Towns of Brookfield and Polk. These ordinances are intended to address contemporary land development issues, and serve to implement the land use objectives set forth in the adopted regional land use plan.

- Completion of a land subdivision control ordinance for the Town of West Bend. This ordinance regulates the creation of plats and certified survey maps within the subject town.

- Completion of an official map ordinance for the City of Burlington. The ordinance and attendant map, together with a description of the purpose of the official map, the

Map 32

THE RECOMMENDED FRANKLIN INDUSTRIAL PARK NEIGHBORHOOD PLAN

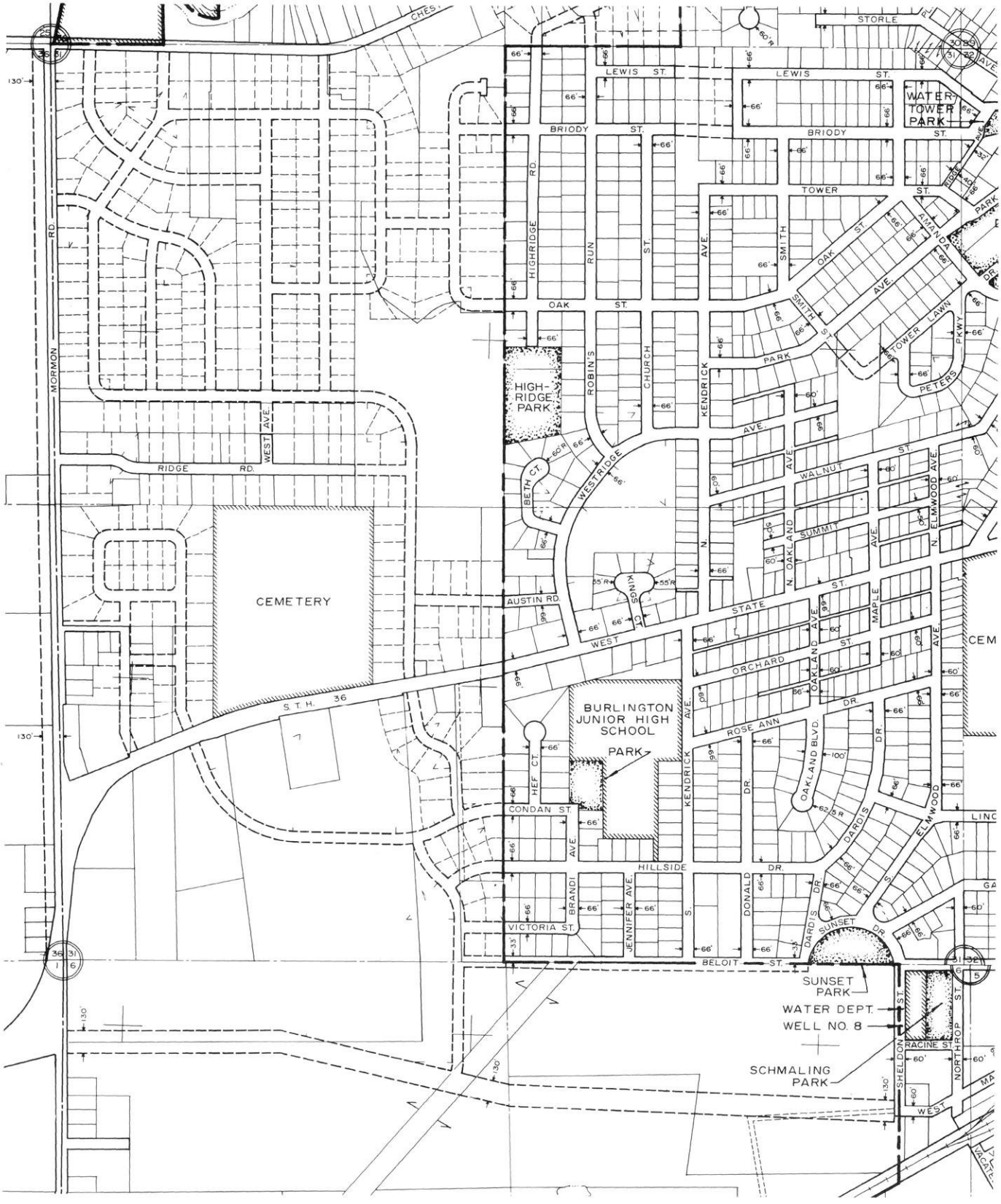


official map preparation process, and the administration of an official map ordinance, are set forth in SEWRPC Memorandum Report No. 26, Official Map, City of Burlington, Racine County, Wisconsin. The official map is intended to assure that future street locations and their ultimate widths, and future parks and playgrounds will be protected from encroachment by urban development. A portion of the completed official map is illustrated on Map 33.

- Preparation of an ad hoc planning study to analyze alternative industrial park sites in the Village of Grafton. The study evaluated two sites, looking at existing land use; the

Map 33

A PORTION OF THE CITY OF BURLINGTON OFFICIAL MAP



size and shape of the sites; limitations on development of the sites as a result of soils, wetlands and floodplains, drainage, and site topography; and the availability of public utilities and transportation services. The report further set forth industrial park design criteria and presented model deed restrictions and protective covenants for a municipal industrial park.

RESIDENT PLANNING SERVICES

The Commission provides part-time resident staff assistance, on request, to local units of government. This type of assistance involves a commitment by the Commission staff to attend all local plan commission meetings and to provide such local planning recommendations as may be requested from time to time. The Commission views such assistance as an interim step to the eventual attainment of local full-time staffs.

During 1988, resident planning assistance was provided on a contractual basis to the Cities of Burlington, Cedarburg, Franklin, and New Berlin; to the Villages of Menomonee Falls and Sussex; and to the Town of Somers. Collectively these services required Division staff attendance and participation in 83 plan commission, town board, village board, and city council meetings.

CARTOGRAPHIC AND GRAPHIC ARTS DIVISION

DIVISION FUNCTIONS

The Commission's Cartographic and Graphic Arts Division provides basic services to the other Commission divisions in a number of areas. The Division is responsible for creating and maintaining current a series of regional planning base maps that not only are used by the Commission, but are extensively used by other units of government and private interests. In addition, the Division is responsible for securing aerial photography of the Region at five-year intervals selected to coincide with U. S. Bureau of the Census decade census years and related mid-census periods. The Division also provides all necessary in-house reproduction services, as well as those reproduction services needed to provide copies of aerial photos, soil maps, and base maps for use by other units of government and private interests.

The Division also serves as a regional coordinating center for the conduct of large-scale topographic and cadastral mapping efforts and the collation of horizontal and vertical survey control data. This function includes the preparation on request of contracts and specifications for large-scale mapping efforts by local units of government. Another Division function, begun in 1984, is the indexing and filing of records of all land surveys completed in Milwaukee County. Finally, a major Division function involves final report production, including editing, type composition, proofreading, illustration preparation, offset printing, and binding.

BASE MAPPING

During 1988, work continued on the updating of the Commission 1 inch equals 2,000 feet scale county planning base maps using ratioed and rectified aerial photography and Wisconsin Department of Transportation state aid mileage summary maps. In 1988, the updating effort included updating of planimetric features and changing civil division corporate limit lines to reflect recent annexations and incorporations. As of the end of 1988, about two-thirds of the Commission base maps had been updated to 1985.

TOPOGRAPHIC MAPPING AND SURVEY CONTROL

The Commission prepares and encourages local units of government in the Region to prepare 1 inch equals 100 feet scale and 1 inch equals 200 feet scale, two-foot contour interval topographic maps based on a Commission-recommended monumented control survey network, relating the U. S. Public Land Survey System to the State Plane Coordinate System. The Division assists local communities in the preparation of contracts and specifications for these programs. All of the horizontal and vertical control survey data obtained as a part of these mapping efforts are compiled by the Division. The Commission thus serves as a center for the collection, collation, and coordination of control survey data throughout the Region.

In 1976, Racine County completed a pioneering program which resulted in the completion of large-scale topographic maps and the attendant relocation, monumentation, and coordination of all of the U. S. Public Land Survey corners within the County. That work was done in accordance with specifications prepared by the Regional Planning Commission. In 1988 Kenosha County completed a similar program. The County Board assigned the responsibility for the preparation of the necessary contract documents and specifications and for the supervision of the work to the Executive Director of the Commission, a responsibility which includes the field inspection of the completed control survey monumentation and the quality control of the land survey, control survey, and topographic mapping work, as well as assistance in obtaining available state grants in partial support of the work. In 1981 Waukesha County undertook a similar countywide program and asked that the Commission staff provide the necessary supervision and assistance. These three county-level surveying and mapping programs represent model programs of national interest.

Map 34 shows those areas of the Region for which large-scale topographic maps have been or are being prepared to Commission-recommended standards. As shown in Figure 72 and

Table 31, this area totals 1,340 square miles, or almost 50 percent of the total area of the Region. A total of 6,897 U. S. Public Land Survey corners in the Region have been or are being relocated, monumented, and coordinated, representing about 59 percent of all such corners in the Region. The utility of the control survey data developed and collated by the Commission is indicated by the fact that the Commission received over 500 inquiries for such data during 1988 alone.

PROVISION OF OTHER SURVEY-RELATED DATA

The Commission provides on request information on the latitude and longitude of specific sites. Such requests come primarily from industrial and institutional establishments. In 1988, requests for such information were fulfilled for 27 sites, bringing to 115 the total number of sites for which information has been provided since 1980. This kind of information has been required in the past primarily for the location of radio transmitters. The need for this kind of information may be expected to greatly increase in the future as the U. S. Environmental Protection Agency requires the submittal of industrial hazardous and toxic waste data for integration into a national data bank.

MILWAUKEE COUNTY LAND SURVEY RECORDS

In 1984, legislation was enacted which in part requires that in a county having a population of 500,000 or more where there is no county surveyor, a copy of each land survey plat prepared by a land surveyor be filed in the office of the regional planning commission, the Executive Director of which is to act in the capacity of county surveyor for the county. Under this act, the commission is also made responsible for perpetuating corners of the U. S. Public Land Survey which may be subject to destruction, removal, or cover-up due to construction or other activities, and for maintaining a record of the surveys required for such perpetuation. This act became effective on May 28, 1984. In 1988, under the requirements of the new legislation, the Division received, indexed, and filed 2,187 records of land surveys completed within Milwaukee County—the only county within the Region which meets the statutory criteria—bringing the total number of records of land surveys completed within Milwaukee County which have been filed by the Division to 10,596.

In order to facilitate convenient use of the survey records by land surveyors, abstractors, assessors, appraisers, attorneys, engineers, and other interested parties, the survey records are filed by the Commission under five headings, and computer-generated lists of the recorded surveys can be provided upon request. The five headings are:

1. Numerically by U. S. Public Land Survey township, range, section, quarter section, and record of survey.
2. Alphabetically by minor civil division (city or village).
3. Alphabetically by the property owner or client for whom the survey was completed.
4. Alphabetically by the name of the land surveyor employed by the property owner or client.
5. Chronologically by the date of the survey.

Updated copies of the five lists are prepared quarterly and transmitted to the Wisconsin Department of Transportation District Director, the Milwaukee County Transportation Director, all City and Village Engineers within the County, and all land surveyors who have submitted records of surveys to the Commission for indexing and filing.

Since 1961, the Commission has maintained records on U. S. Public Land Survey corners within the entire Region. However as already noted, since 1984 the Commission has been responsible for the perpetuation of the U. S. Public Land Survey System in Milwaukee County. In 1988, 43 corners of that system were perpetuated by remonumentation and referencing carried out by, or under the direction of, the Commission staff to replace damaged or substandard monumentation. This brings to 77 the total number of such corners so perpetuated in Milwaukee County since 1984. Also in 1988, dossier sheets were prepared for the 43 remonumented corners as well as for 160 corners which were referenced by the Commission staff subsequent to perpetuation by the Wisconsin Department of Transportation, the Milwaukee County Department of Public Works, and City Engineers. This brings to 232 the total number of such corners so referenced in Milwaukee County since 1984.

Map 34

LARGE-SCALE TOPOGRAPHIC MAPPING AND RELOCATION, MONUMENTATION, AND COORDINATION OF U. S. PUBLIC LAND SURVEY CORNERS: 1988

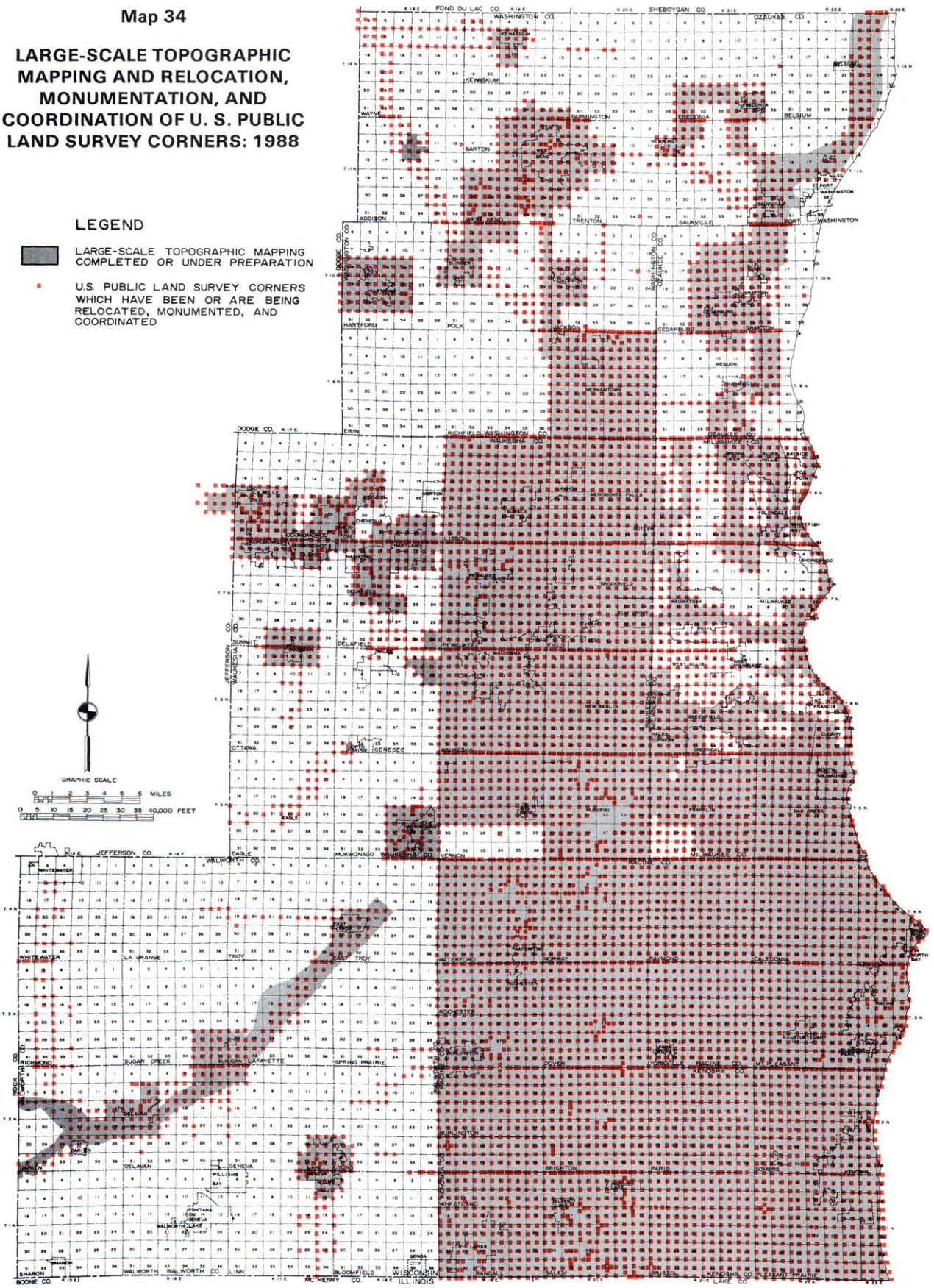
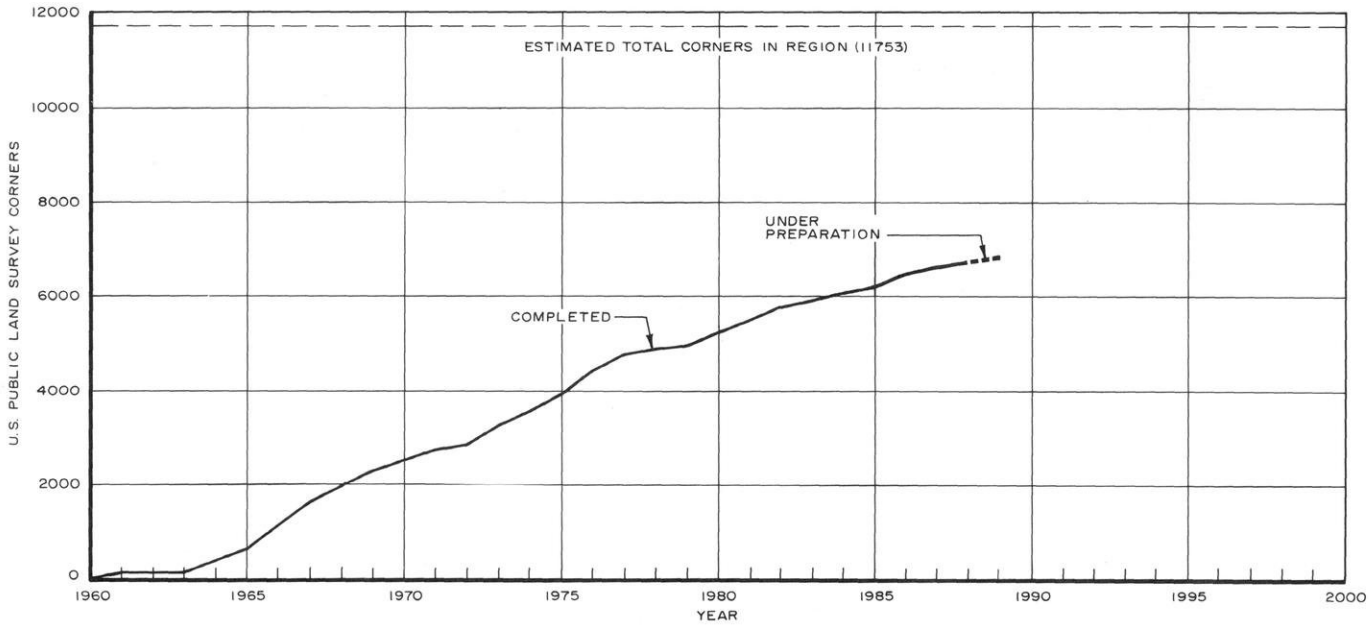
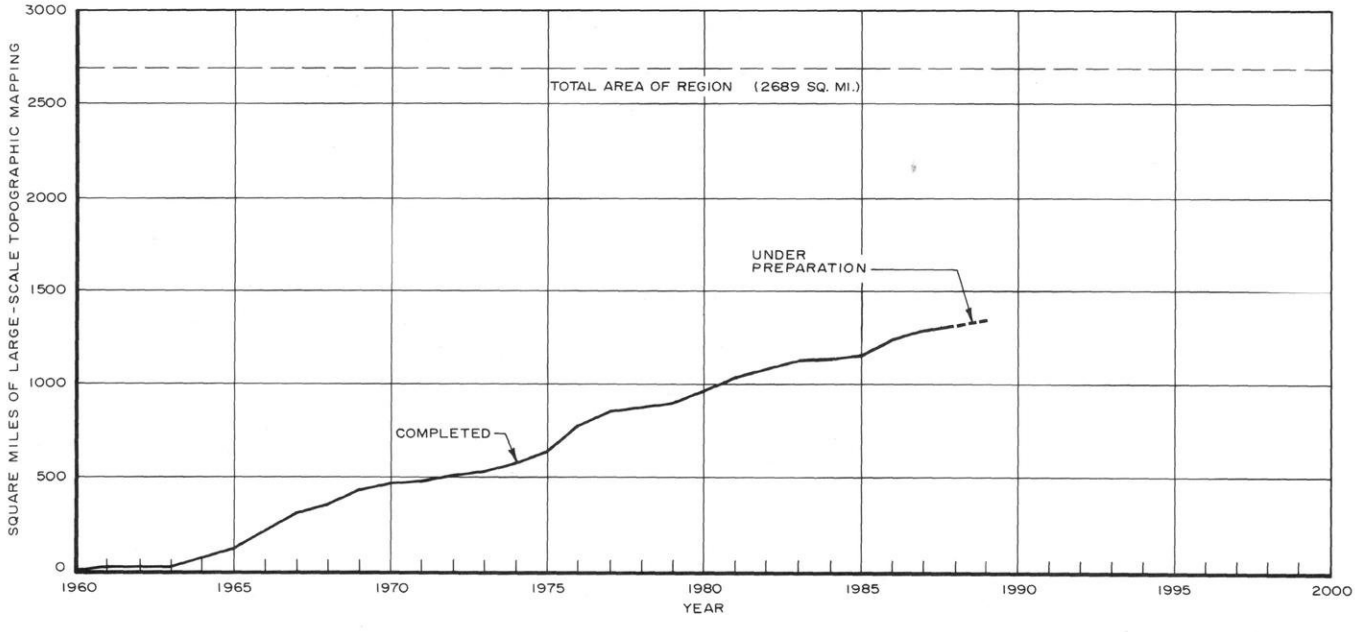


Figure 72

STATUS OF U. S. PUBLIC LAND SURVEY SECTION AND QUARTER SECTION CORNER RELOCATION, MONUMENTATION, AND COORDINATION AND LARGE-SCALE TOPOGRAPHIC MAPPING OF THE REGION: 1988





REPRODUCTION SERVICES

In addition to serving all other Commission divisions through in-house reproduction of reports, the Division provided reproduction services for local units of government and private interests. A total of 5,040 prints of aerial photographs of portions of the Region were reproduced, along with 126 soil map prints and 514 prints of maps in the Commission base map series. Aerial photographs were purchased

TYPICAL SEWRPC MONUMENT



Table 31

LARGE-SCALE TOPOGRAPHIC MAPPING AND RELOCATION, MONUMENTATION, AND COORDINATION OF U. S. PUBLIC LAND SURVEY CORNERS: 1988

County	Total Area (square miles)	Area (square Miles) of Large-Scale Topographic Mapping Completed or Under Preparation							
		Wisconsin Department of Transportation	SEWRPC	County	Milwaukee Metropolitan Sewerage District	Local[a]	Multi-Agency	Total	Percent
Kenosha	278	--	27.75	236.25	--	14.00	--	278.00	100.00
Milwaukee	242	--	11.00	6.50	49.50	77.00	2.50	146.50	60.54
Ozaukee	234	26.75	24.25	12.75	--	12.00	--	75.75	32.37
Racine	340	--	25.50	314.11	--	--	--	339.61	100.00
Walworth	578	30.25	--	--	--	24.00	--	54.25	9.39
Washington	436	1.50	22.75	--	--	83.75	--	108.00	24.77
Waukesha	581	1.25	78.75	128.50	--	129.50	--	338.00	58.18
Region	2,689	59.75	190.00	698.11	49.50	340.25	2.50	1,340.11	49.84

NOTE: Includes only those areas of the Region for which large-scale topographic maps have been or are being prepared and throughout which U. S. Public Land Survey corners have been or are being relocated, monumented, and coordinated utilizing SEWRPC-recommended procedures. Area shown indicates original large-scale topographic mapping programs. Of the 59.75 square miles originally mapped under WisDOT programs, 6.75 square miles have been updated by other agencies. Of the 190 square miles originally mapped under SEWRPC programs, 40.25 square miles have been updated by other agencies. Of the 698.11 square miles originally mapped under county programs, 2.00 square miles have been updated by other agencies. Of the 340.25 square miles originally mapped under local programs, 99.50 square miles have been updated by other agencies.

[a]*Includes 19 cities, 18 villages, and 3 towns.*

County	Estimated Total Corners	Number of U. S. Public Land Survey Corners Which Have Been or are Being Relocated, Monumented, and Coordinated							
		Wisconsin Department of Transportation	SEWRPC	County	Milwaukee Metropolitan Sewerage District	Local[a]	Multi-Agency	Total	Percent
Kenosha	1,203	58	168	914	--	63	--	1,203	100.00
Milwaukee	1,065	72	167	45	159	492	26	961	90.23
Ozaukee	1,064	133	179	69	3	63	--	447	42.01
Racine	1,478	--	172	1,306	--	--	--	1,478	100.00
Walworth	2,503	282	--	--	--	121	6	409	16.34
Washington	1,905	139	145	23	--	405	6	718	37.69
Waukesha	2,535	73	463	550	--	595	--	1,681	66.31
Region	11,753	757	1,294	2,907	162	1,739	38	6,897[b]	58.68

[a]*Includes 19 cities, 18 villages, and 3 towns.*

[b]*Because of the need to set witness corners these 6,897 U. S. Public Land Survey corners, including the centers of the sections, are marked by 6,994 monuments.*

primarily by local units of government, utilities, realtors, retail businesses, and service and manufacturing companies. Soil photo prints and base maps were purchased primarily by realtors, utilities, surveyors, engineers, and individual property owners.

FINAL REPORT PRODUCTION

During 1988 the Division was responsible for the production of the following Commission publications:

PROSPECTUSES

- Prospectus for the Preparation of Coordinated Sanitary Sewer and Water Supply System Plans for the Kenosha Area, June 1988, 31 pages

- Overall Work Program—1989 Southeastern Wisconsin Regional Planning Commission, November 1988, 225 pages

ANNUAL REPORTS

- 1987 Annual Report, July 1988, 212 pages

PLANNING REPORTS

- No. 39, A Freeway Traffic Management System Plan for the Milwaukee Area, November 1988, 198 pages

COMMUNITY ASSISTANCE PLANNING REPORTS

- No. 105, Waukesha County Transit Plan: 1988-1992, September 1988, 276 pages
- No. 123, Sanitary Sewer Service Area for the Village of Darien, Walworth County, Wisconsin, May 1988, 31 pages
- No. 134, A Park and Open Space Plan for Racine County, September 1988, 95 pages
- No. 138, A Development Plan for the Franklin Industrial Park Neighborhood, City of Franklin, Milwaukee County, Wisconsin, July 1988, 124 pages
- No. 150, A Rapid Transit Facility Plan for the Milwaukee Northwest Corridor, January 1988, 113 pages
- No. 153, Traffic Management and Control Plan for the Village of Whitefish Bay, July 1988, 98 pages
- No. 155, A Lake Michigan Shoreline Erosion Management Plan for Northern Milwaukee County, Wisconsin, December 1988, 326 pages
- No. 159, Waukesha County Agricultural Soil Erosion Control Plan, June 1988, 88 pages
- No. 160, Racine County Agricultural Soil Erosion Control Plan, July 1988, 81 pages
- No. 161, Sanitary Sewer Service Area for the Village of Kewaskum, Washington County, Wisconsin, December 1988
- No. 166, A Park and Open Space Plan for the Village of Sussex, Waukesha County, Wisconsin, September 1988, 50 pages

MEMORANDUM REPORTS

- No. 19, Overall Economic Development Program Plan, City of Burlington, Racine County, Wisconsin, March 1988, 69 pages
- No. 27, Village of Mukwonago Industrial Park Development Plan, Waukesha County, Wisconsin, March 1988, 81 pages
- No. 29, A Plan for the Abatement of Through Traffic Problems in the Village of West Milwaukee, March 1988, 24 pages
- No. 30, Overall Economic Development Program Plan, City of South Milwaukee, Milwaukee County, Wisconsin, March 1988, 132 pages
- No. 31, Analysis of the Conversion from One-Way to Two-Way Operation of Pine Street from State Street to Jefferson Street, City of Burlington, Racine County, Wisconsin, January 1988, 12 pages
- No. 34, Overall Economic Development Program Plan, City of West Allis, Milwaukee County, Wisconsin, September 1988, 152 pages
- No. 35, A Stormwater Management Plan for the Crayfish Creek Subwatershed, City of Oak Creek, Milwaukee County, Wisconsin, June 1988, 126 pages
- No. 36, Traffic Engineering Study of Milwaukee Avenue (STH 36) Between the Central Business District and the Northern Corporate Limits of the City of Burlington, Racine County, Wisconsin, August 1988, 19 pages
- No. 37, Economic Development Fact Book, City of South Milwaukee, Milwaukee County, Wisconsin, May 1988, 137 pages

NEWSLETTERS

- Volume 28, Nos. 1-6, 146 pages

OTHER

- Amendment to the Regional Transportation Plan—2000, Waukesha County, June 1988, 1 page

- Amendment to the Regional Water Quality Management Plan—2000, Town of Darien/ Walworth County Metropolitan Sewerage District, June 1988, 1 page
- Amendment to the Regional Water Quality Management Plan—2000, Village of Sussex, June 1988, 1 page
- Amendment to the Regional Water Quality Management Plan—2000, City of Hartford, September 1988, 9 pages
- Amendment to the Regional Water Quality Management Plan—2000, City of West Bend/Town of West Bend, September 1988, 1 page
- Amendment to the Regional Water Quality Management Plan—2000, Western Racine County Sewerage District, September 1988, 7 pages
- Amendment to the Regional Water Quality Management Plan—2000, City of Hartford, December 1988, 42 pages
- Amendment to the Regional Water Quality Management Plan—2000, City of Waukesha, December 1988, 1 page
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1989-1993, December 1988, 310 pages

INFORMATION SYSTEMS DIVISION

DIVISION FUNCTIONS

The Commission's Information Systems Division provides basic support to all other Commission divisions. The Division is responsible for maintaining a regional planning data bank that has been developed over a 27-year period. The Division is responsible for processing requests for retrieval of these data, with such requests coming not only internally from other divisions but externally from local units of government, state and federal agencies, and private interests. The Division also provides support to the Commission divisions in the development and application of simulation models. Finally, under a separate program the Division provides data processing services to local units of government.

REGIONAL PLANNING DATA BANK

The Division maintains a master file of regional planning information on more than 9,000 reels of magnetic tape, representing approximately 3,600 active data files. This permits the efficient filing, conversion, and retrieval of planning and engineering data essential to the execution of areawide comprehensive planning. The file's basic unit of geographic reference is the U. S. Public Land Survey quarter section. This file is, however, also organized to permit retrieval of data for various other geographic units, such as civil divisions, census tracts, traffic analysis zones, special planning analysis areas, and watersheds.

During 1988, the Commission maintained an IBM 4381-P13 main frame central processing unit. The unit has 16 million bytes of main memory storage and 32 billion characters of high-speed magnetic disk storage. Peripheral equipment includes three high-speed line printers, six high-speed magnetic tape units, and local and remote teleprocessing control units.

Attached to the main frame computer are 40 IBM CRT units and 10 IBM personal computers through which staff engineers, planners, and computer programmers can enter and receive data and use computer programs. During 1988, the Commission added 15 personal computer engineering work stations not connected to the main frame computer for use by engineers and planners. In addition, two IBM 3742 data entry stations were phased out in 1988 and replaced by terminals using state-of-the-art online data entry software.

In addition to the "inhouse" terminal equipment, the main frame computer supports about 300 remote terminal devices located at three counties and 11 communities. Also attached to the main frame computer system are seven IBM System 36 computer systems, one IBM AS/400 computer system, and one IBM System 38 computer system. The remote computer systems are used for local data and text processing and as control units for access to the Commission's teleprocessing network. During 1988, the work load averaged about 75,000 teleprocessing tasks and 500 batch runs daily.

The Commission has maintained a computer-assisted mapping capability since 1976. Two general types of computer software are currently available for computer-assisted mapping applications. These are computer-assisted drafting (CAD) software and geographic information systems (GIS) software. To the casual observer, these software products appear to operate in a similar fashion and to produce similar map products, but they are, in fact, quite different in design, operation, and function. As a simplistic way of distinguishing between these two products, it can be stated that CAD software treats maps as "pictures," whereas GIS software treats maps as "information."

CAD software functions quite well in situations where the only need is for the creation, maintenance, and replication of maps, but in situations where there is the additional need to extract, analyze, and report the information content of maps, or to synthesize map and map-related information, GIS software is a more appropriate tool. In addition, GIS software possesses the capability to simultaneously extract information from more than one map, synthesize and analyze that information, and produce "new" information and "new" maps from the process. The ability to perform these types of operations is especially valuable within the context of areawide planning.

The computer software necessary to establish and operate geographic information systems is complex and evolving. True GIS software has been commercially available only within the past several years, and prior to 1987 the Commission utilized CAD-type software for its computer-assisted mapping applications. In 1986, the Commission staff evaluated a number of the GIS software products then commercially available to identify a software system for purchase. Also evaluated were several products in advanced stages of development, but not yet ready for commercial release. This evaluation led in 1987 to the acquisition by the Commission of the DELTAMAP software system. DELTAMAP is a true GIS software product capable of supporting a wide variety of map digitizing, map production, and map data element analysis functions, including network- and land parcel-based functions.

The computer graphics hardware configuration upon which DELTAMAP operates is based around two networked Hewlett-Packard series 9000, Model 350, engineering work stations, each having a 19-inch, 16-color monitor and a 571 mb disk. These work stations share a Hewlett-Packard 1600/6250 dual-density tape drive and a Hewlett-Packard high-resolution, eight-color pen plotter capable of handling A-size through E-size cut sheet media or 36-inch roll feed media. One of the work stations is configured to handle remote-site support over telephone modems, and the two work stations jointly serve as the support devices for seven Hewlett-Packard 12-inch, eight-color terminals, six of which are attached to Calcomp 44-inch by 60-inch, high-precision digitizing tables for interactive map data capture and editing. A Calcomp color electrostatic plotter is also available for off-line color map production. This device is capable of handling 44-inch roll feed media, and can produce monochrome and color line and solid color fill finished drawings at a resolution of 400 parts per inch.

SYSTEMS ENGINEERING

The Division provides support to other Commission divisions in systems analysis and engineering, particularly in the development and application of simulation models. Commission simulation modeling efforts at the present time are centered in the Transportation Planning and Environmental Planning Divisions, and personnel from these divisions work closely with personnel in the Information Systems Division.

Transportation-related simulation models currently being used by the Commission include the U. S. Department of Transportation, Federal Highway Administration, battery of highway system simulation models; the U. S. Department of Transportation, Urban Mass Transportation Administration, battery of transit system simulation models; and a series of models developed over the years by the Commission staff, including trip generation and modal split models and an air quality emissions model. In the water resources planning field, the Commission uses a water surface profile model developed by the U. S. Army Corps of Engineers; a hydrologic, hydraulic, and water simulation model developed by Hydrocomp, Inc.; and a flood economics model developed by the Commission staff. During 1988 the Commission began to evaluate converting simulation modeling applications from the main frame computer to microcomputers.

DATA PROCESSING SERVICES TO LOCAL GOVERNMENTS

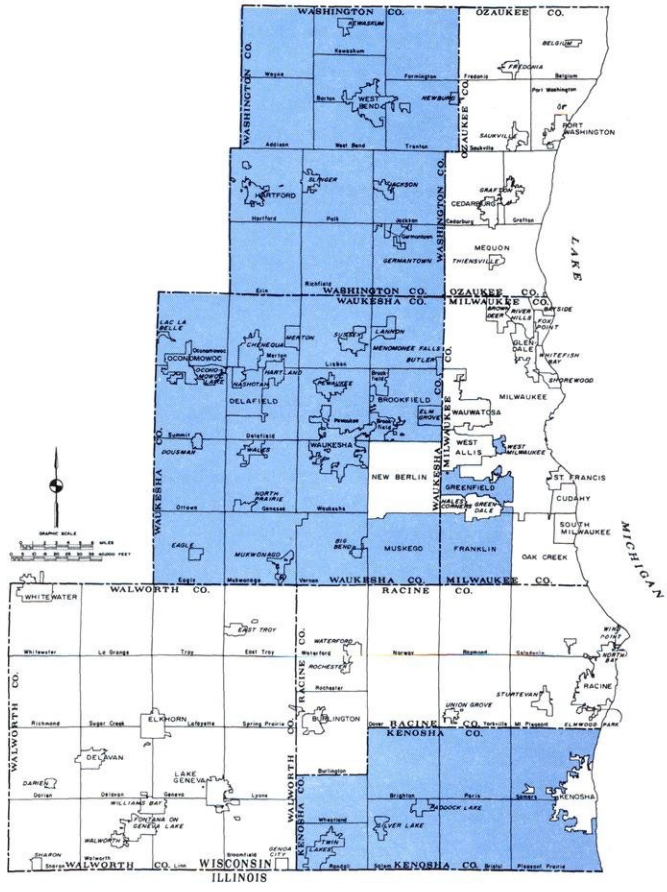
Since its inception, the Commission has offered to its member units of government special services, including professional advice on the selection of computer systems and the provision of special data processing services. Direct data processing services have been provided in the traditional "batch" mode of processing whereby the community delivers data to the Commission to process and the Commission returns appropriate reports and materials to the community. In 1988 the Commission continued to offer interested communities the opportunity to control and process their own data through the "on-line" use of small computer terminals attached to the Commission's Model 4381 computer via telephone lines. These terminals give the community the power of a large computer system at the price of a small computer.

During 1988, services were provided to communities utilizing both methods of processing. Some communities used both methods, doing some data processing in the "batch" mode and some data processing in the "on-line" mode.

One of the services provided in the "batch" mode is the tax bill processing system, which provides communities with property tax assessment rolls

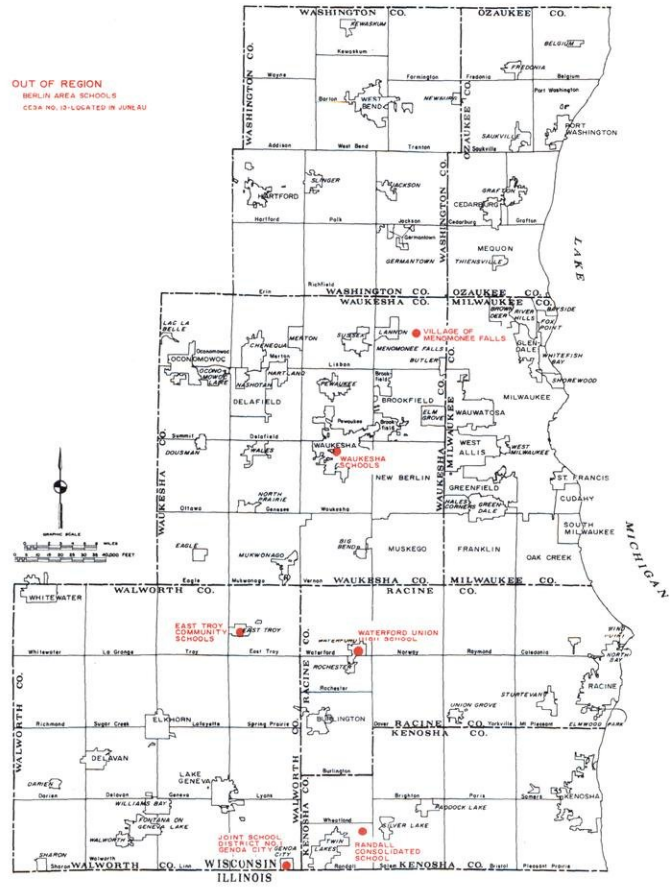
Map 35

LOCAL COMMUNITIES USING SEWRPC FOR PROPERTY TAX DATA PROCESSING: 1988



Map 36

SCHOOL DISTRICTS AND LOCAL COMMUNITIES USING SEWRPC FOR PAYROLL DATA PROCESSING: 1988



and tax bills. Throughout 1988 these property tax-related services were provided at cost to 73 communities, as shown on Map 35. Another service provided in the "batch" mode is the payroll processing system, which was provided to five school districts and one village in the Region, as shown on Map 36. In addition, payroll services were provided to two school districts outside the Region. Map 37 shows those communities to which the Commission provided voter registration and poll list production services in the "batch" mode.

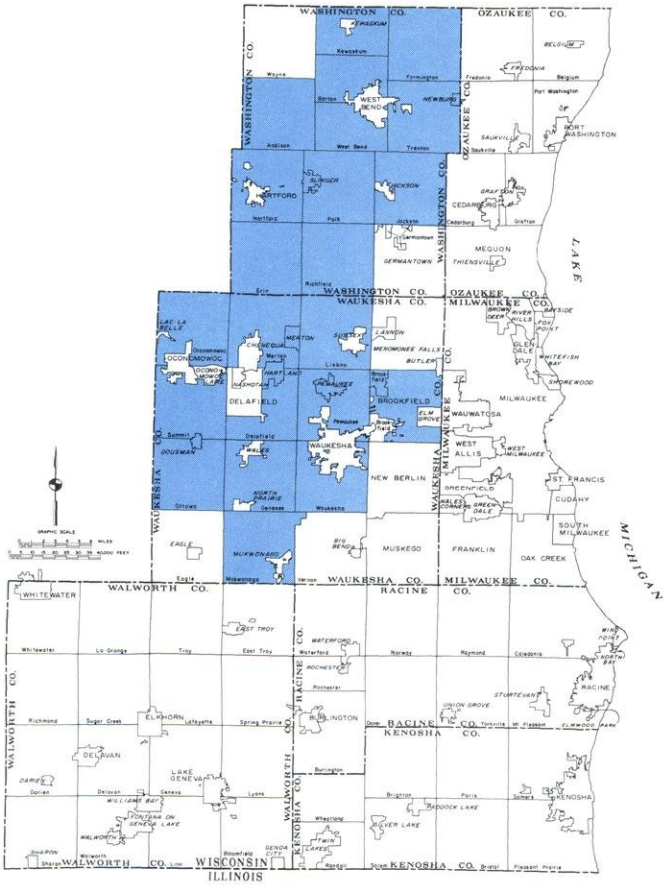
In addition to the above services, the Commission provided "batch" services to the Allenton Sanitary District in the area of utility billing and to the Brown Deer School District in the area of school census.

In the "on-line" processing mode, the Commission has installed computer terminals in three counties, 10 cities, and one village, and at the Wisconsin Correctional Service, a government-funded nonprofit service agency. Map 38 shows the locations of the terminals and the applications which were processed from those terminals during 1988.

In June 1988, the Commission strategically examined both the internal needs of the Commission to maintain a main frame computer and the actions of users of the Commission Data Center toward establishing local computer centers. With respect to its internal data processing needs, the results of that strategic analysis indicated that the Commission no longer needed a large main frame computer. Rather, it was

Map 37

LOCAL COMMUNITIES USING SEWRPC FOR VOTER REGISTRATION AND POLL DATA PROCESSING: 1988



determined that Commission planning and engineering work could be cost efficiently conducted using micro and mini computers with perhaps some reliance for periodic special needs on an outside service bureau for limited main frame applications.

In reviewing the direction being taken by those county and local governments to which the Commission was providing data processing services, it was determined that the direction being taken was largely in favor of the establishment of individual computer centers to serve local individual needs. Indeed, the analysis indicated that several of the county and local governments that had heavily relied on the Commission's Data Center would no longer need Commission assistance within a relatively short period of time.

Based upon this analysis, the Commission determined to terminate its main frame computer operations and its traditional data processing services program as of December 31, 1990. All local government users of the Data Center were given formal notice of this decision on June 20, 1988, thus providing those governments with a 30-month period within which to make an orderly transition to some other way in which to obtain the data processing services now being provided by the Commission. In making this determination, the Commission directed that its Data Center be reconfigured as of January 1, 1991, to serve internal Commission needs.

GEOGRAPHIC INFORMATION SYSTEM

During 1988, the Commission also continued to help Kenosha County build a multi-purpose automated land information system. This system, which utilizes the state-of-the-art geographic information systems (GIS) computer hardware and software technology described earlier in this section, was described in the Commission's 1986 Annual Report. The system is built upon a demonstration project completed in 1986 for that portion of Kenosha County comprised of the Town of Randall and the Village of Twin Lakes. The findings of that demonstration project were reported in SEWRPC Technical Report No. 30, The Development of an Automated Mapping and Land Information System: A Demonstration Project for the Town of Randall, Kenosha County.

The automated land information system being developed for Kenosha County is intended to ultimately provide continuous, readily available, and comprehensive land-related information at the parcel level. The system utilizes the computer equipment and software for the conversion, storage, retrieval, and analysis of land-related information which has traditionally been represented on paper maps. A portion of a computer-generated real property boundary map—which represents one type of land-related information contained in the system—is shown as Figure 73. Under contract to Kenosha County, the Commission during 1988 continued preparing computer map files for the Towns of Salem and Wheatland. Thus, by the end of 1988, the basic land information system had been made computer-accessible for the Town of Randall and the Village of Twin Lakes, and was under extension to the Towns of Salem and Wheatland. Together these areas—shown on Map 39—

Map 38

LOCAL GOVERNMENT—SEWRPC TELEPROCESSING CONFIGURATION AND APPLICATIONS

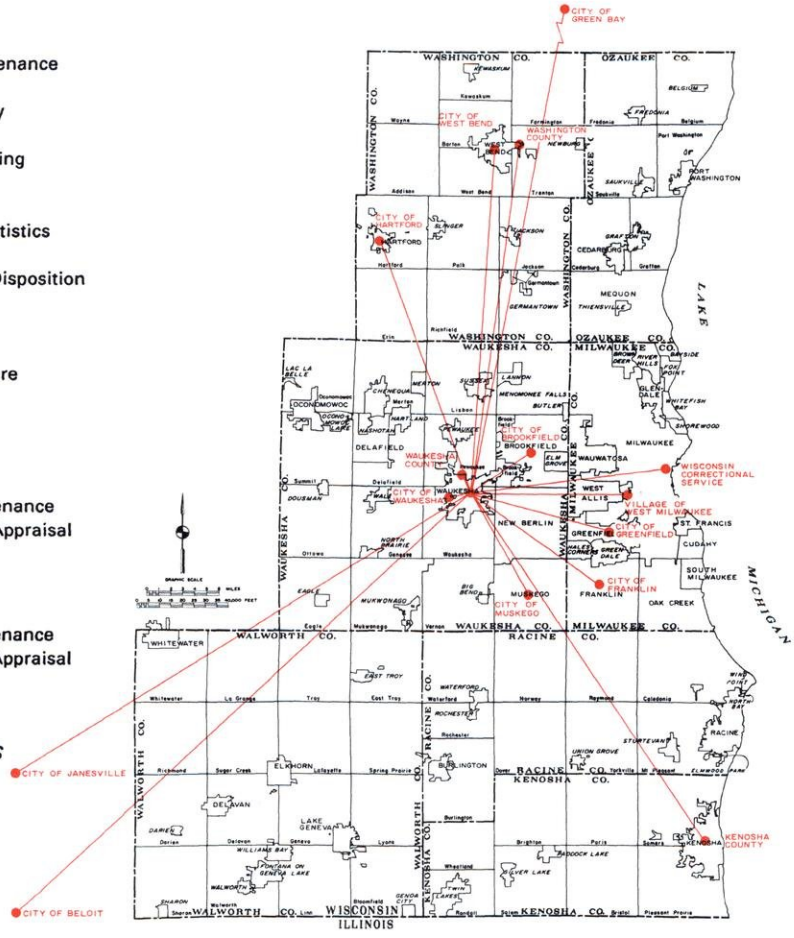
WASHINGTON COUNTY
- *TAX LISTER*
  - Property Tax File Maintenance
- *TREASURER*
  - Property Tax File Inquiry
  - Receipts
  - Delinquent Tax Processing
- *AUDITOR*
  - Nursing Home Billing
  - Nursing Home Staff Statistics
  - Mental Health Billing
  - District Attorney Case Disposition
- *CLERK OF COURTS*
  - Alimony and Support
  - Paternity
  - Traffic Fine and Forfeiture
  - Receipts

CITY OF HARTFORD
- *ASSESSOR*
  - Property Tax File Maintenance
  - Computer-Aided Mass Appraisal

CITY OF JANESVILLE
- *ASSESSOR*
  - Property Tax File Maintenance
  - Computer-Aided Mass Appraisal
- *TREASURER*
  - Cash Receipts
- *FIRE DEPARTMENT*
  - *STATISTICAL ANALYSIS*

CITY OF BELOIT
- *ASSESSOR*
  - Property Tax File Maintenance
  - Computer-Aided Mass Appraisal
  - Mobile Home Billing
  - Delinquent Personal Property
  - Special Assessments
- *TREASURER*
  - Utility Billing
  - Tax Payment Inquiry
  - Dog/Cat Licensing
  - Cash Collection
- *BUILDING INSPECTOR*
  - Dwelling Description Inquiry

CITY OF WAUKESHA
- *COMPTROLLER*
  - Accounts Payable
  - Receipts
  - General Ledger
  - Special Assessments
  - Payroll
  - Municipal Invoices
- *MUNICIPAL COURT*
  - Case Processing
- *ASSESSOR*
  - Property Tax File Maintenance
  - Computer-Aided Mass Appraisal
- *CLERK*
  - Bartender License
  - Voter Registration
- *POLICE DEPARTMENT*
  - Parking Tickets
  - Bicycle Registration
- *PARK/RECREATION DEPARTMENT*
  - Reservation/Registration System



CITY OF MUSKEGO
- *ASSESSOR*
  - Property Tax File Maintenance
  - Computer-Aided Mass Appraisal
  - Special Assessments

WAUKESHA COUNTY
- *CLERK OF COURTS*
  - Alimony and Support
  - Paternity Payments
  - Fine and Forfeiture Record Keeping
  - Cash Collection
- *TAX LISTER*
  - Property Tax File Maintenance
- *PERSONNEL DEPARTMENT*
  - Employee File Maintenance
- *PAYROLL DEPARTMENT*
  - Employee File Maintenance
- *DATA PROCESSING*
  - Accounts Payable
  - Receipts
  - Payroll
  - General Ledger
  - Personnel Management Reports
- *TREASURER*
  - Receipts
  - Property Tax File Inquiry
  - Cash Collections
  - Delinquent Tax Processing

CITY OF GREEN BAY
- *ASSESSOR*
  - Computer-Aided Mass Appraisal

CITY OF WEST BEND
- *CLERK*
  - Cash Receipts
  - Purchase Orders
  - Special Tax Assessments
  - General Ledger
  - Accounts Payable
  - Dog/Cat Licensing
- *ASSESSOR*
  - Property Tax File Maintenance

WISCONSIN CORRECTIONAL SERVICE
- Accounting System

VILLAGE OF WEST MILWAUKEE
- *ASSESSOR*
  - Property Tax File Maintenance

CITY OF GREENFIELD
- *ASSESSOR*
  - Property Tax File Maintenance
- *TREASURER*
  - Utility Billing
  - Cash Receipts
  - Special Assessments
- *BUILDING INSPECTION*

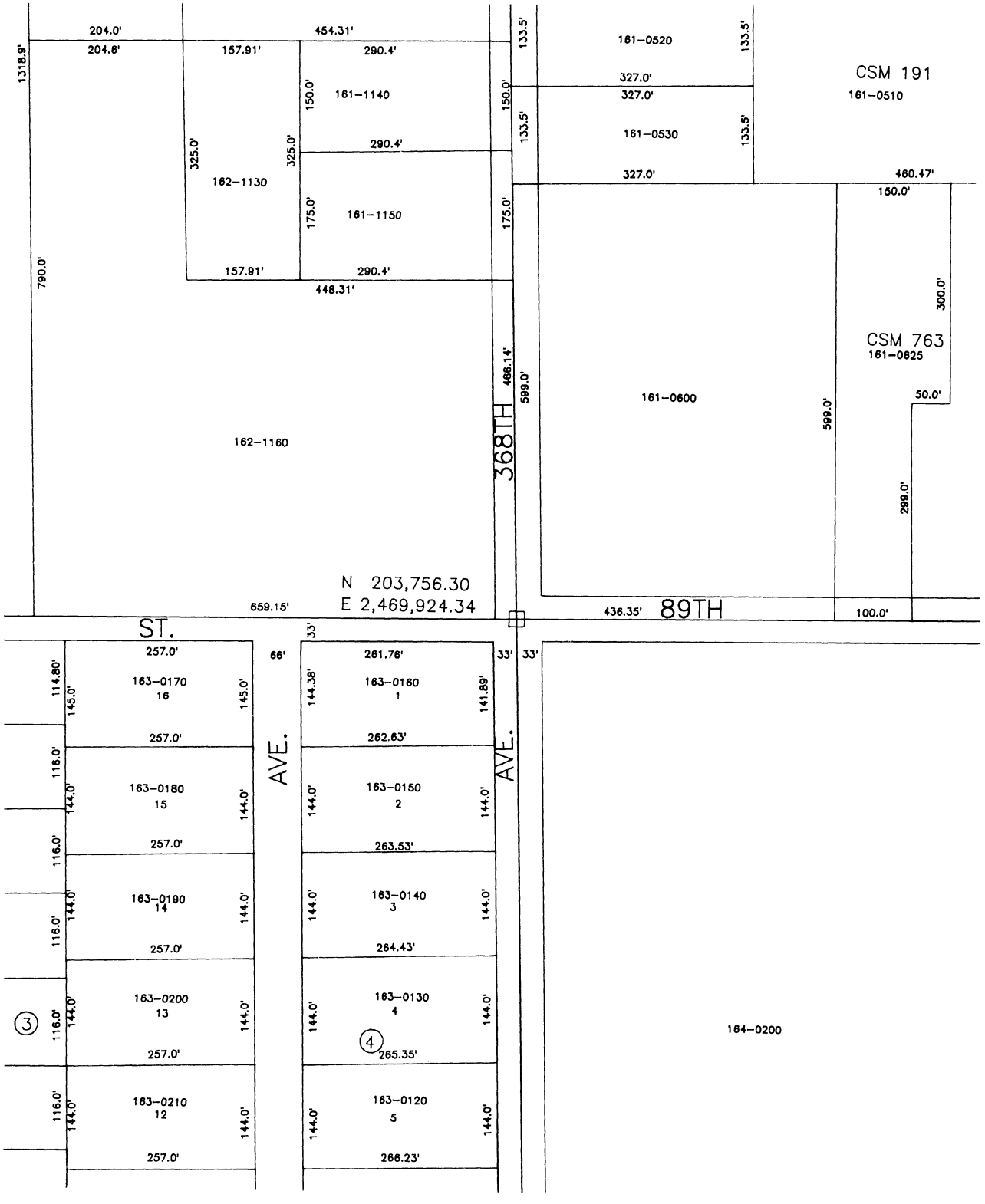
CITY OF FRANKLIN
- *CLERK*
  - Budget Processing
  - Accounts Payable
  - Receipts
  - Purchase Orders
  - Special Assessments
  - General Ledger
  - Utility Billing
- *ASSESSOR*
  - Property Tax File Maintenance

CITY OF BROOKFIELD
- *COMPTROLLER*
  - Receipts
  - Special Assessments
  - Utility Billing/Accounting
- *POLICE DEPARTMENT*
  - Uniform Crime Reporting
  - Officer Activity
- *ASSESSOR*
  - Property Tax File Maintenance
- *TREASURER*
  - Receipts
- *LIBRARY*
  - Circulation
  - Fines
  - Reference
  - Inventory System

KENOSHA COUNTY
- *COUNTYWIDE TAX PROCESSING*
- *ASSESSOR*
  - CAMA Tax System
  - Mobile Home System
- *TREASURER*
  - Delinquent System
  - Cash Collection
- *HIGHWAY DEPARTMENT*
  - Cost Accounting
- *FINANCE OFFICE*
  - County Accounting

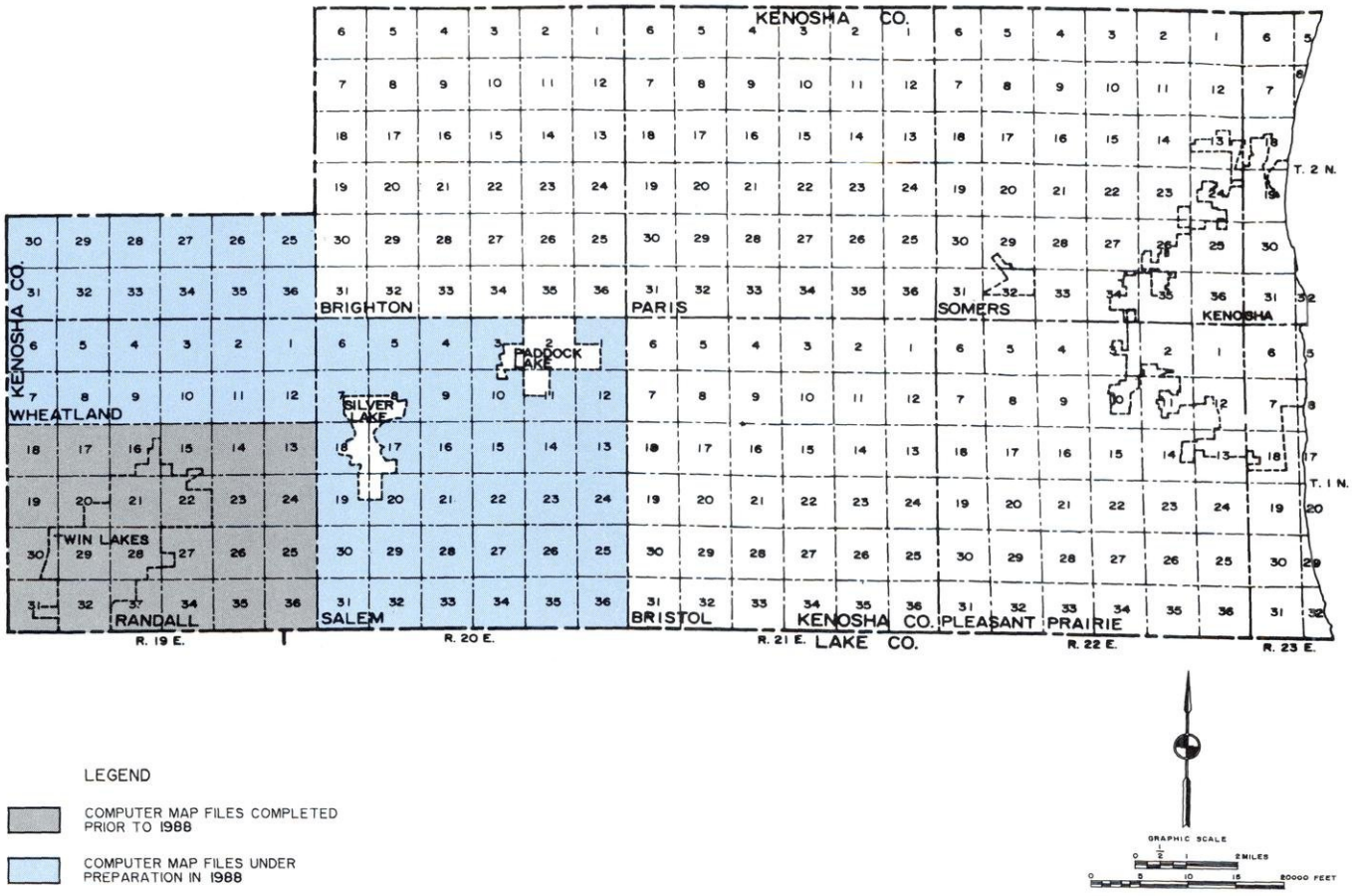
Figure 73

A PORTION OF A DIGITIZED CADASTRAL MAP FOR KENOSHA COUNTY



Map 39

STATUS OF COMPUTER MAP FILE COMPLETION IN KENOSHA COUNTY: 1988



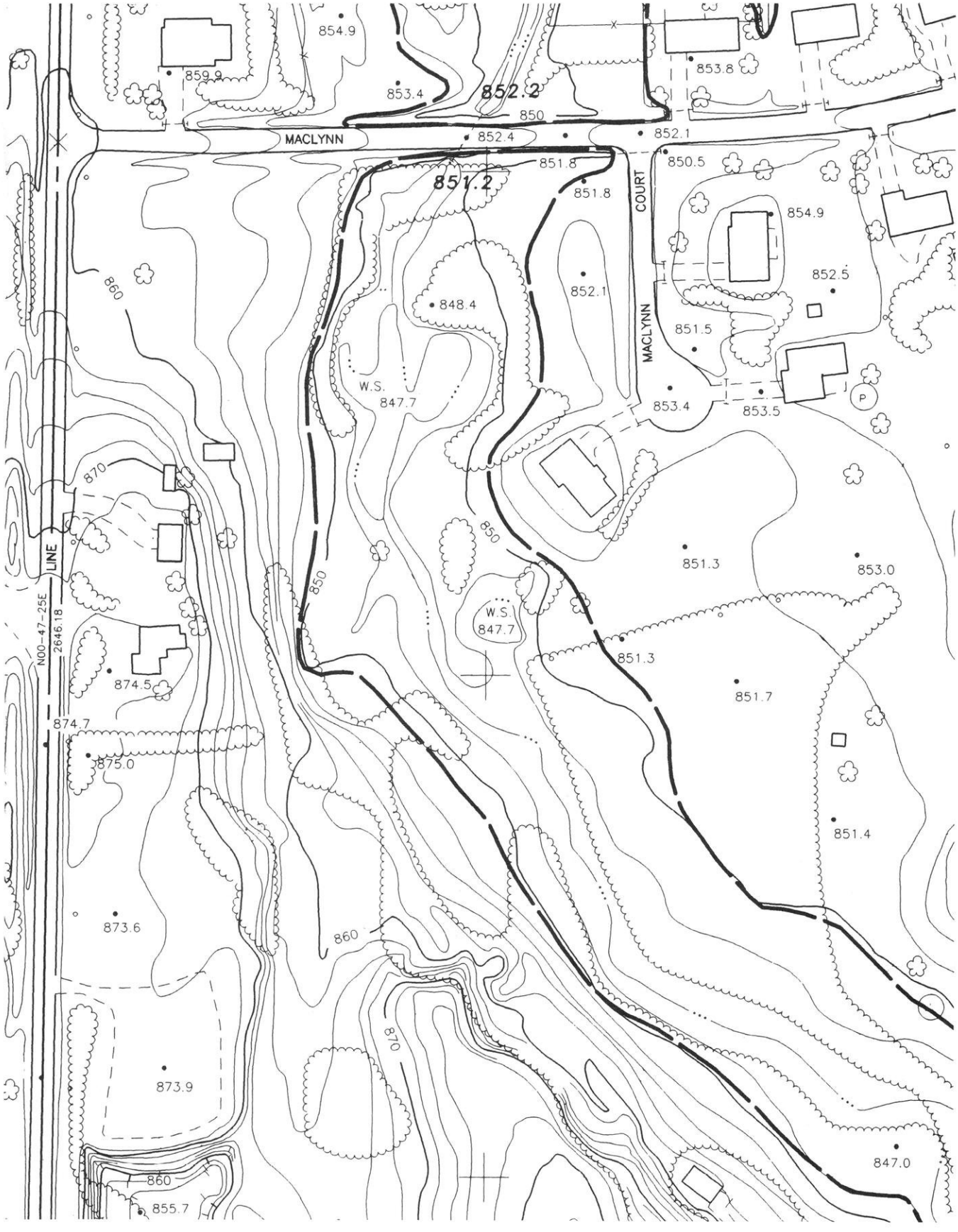
represent approximately 80 square miles, or about 29 percent of the area of Kenosha County.

The enhanced operational capability provided by the new geographic information systems computer hardware and software technology also allowed the Commission staff to begin taking steps in 1988 to provide large-scale topographic base maps in digital format prepared to Commission-recommended specifications for those counties and local units of government wishing to prepare these maps in digital rather than the traditional analog format. The first such project, involving the preparation of 144 topographic base maps at a scale of 1:1200 (one inch equals 100 feet) with contours at a vertical interval of two feet, was completed in the Menomonee Falls area of Waukesha County in 1988 and was cooperatively funded by Waukesha County, the Village of Menomonee Falls, and the Wisconsin Gas Company. At the request of the funding organizations, the Commission modified its large-scale topographic mapping specifications—in use for more than 25 years for the preparation of maps in traditional analog format—to provide for the alternative delivery of this type of mapping in digital format.

Digital map files were prepared by the photogrammetric engineer retained for the project by digitizing specified map features directly from stereoscopic models. The completed digital map files were provided to the Commission on magnetic computer tapes and were reformatted on the Commission's geographic information systems equipment, with final analog map copies being generated on the Commission's digital plotter for delivery to Waukesha County and the Village of Menomonee Falls. The Wisconsin Gas Company received its copies of the final maps as digital files on computer tape. A portion of a digitally prepared topographic map prepared as part of this project is shown as Figure 74.

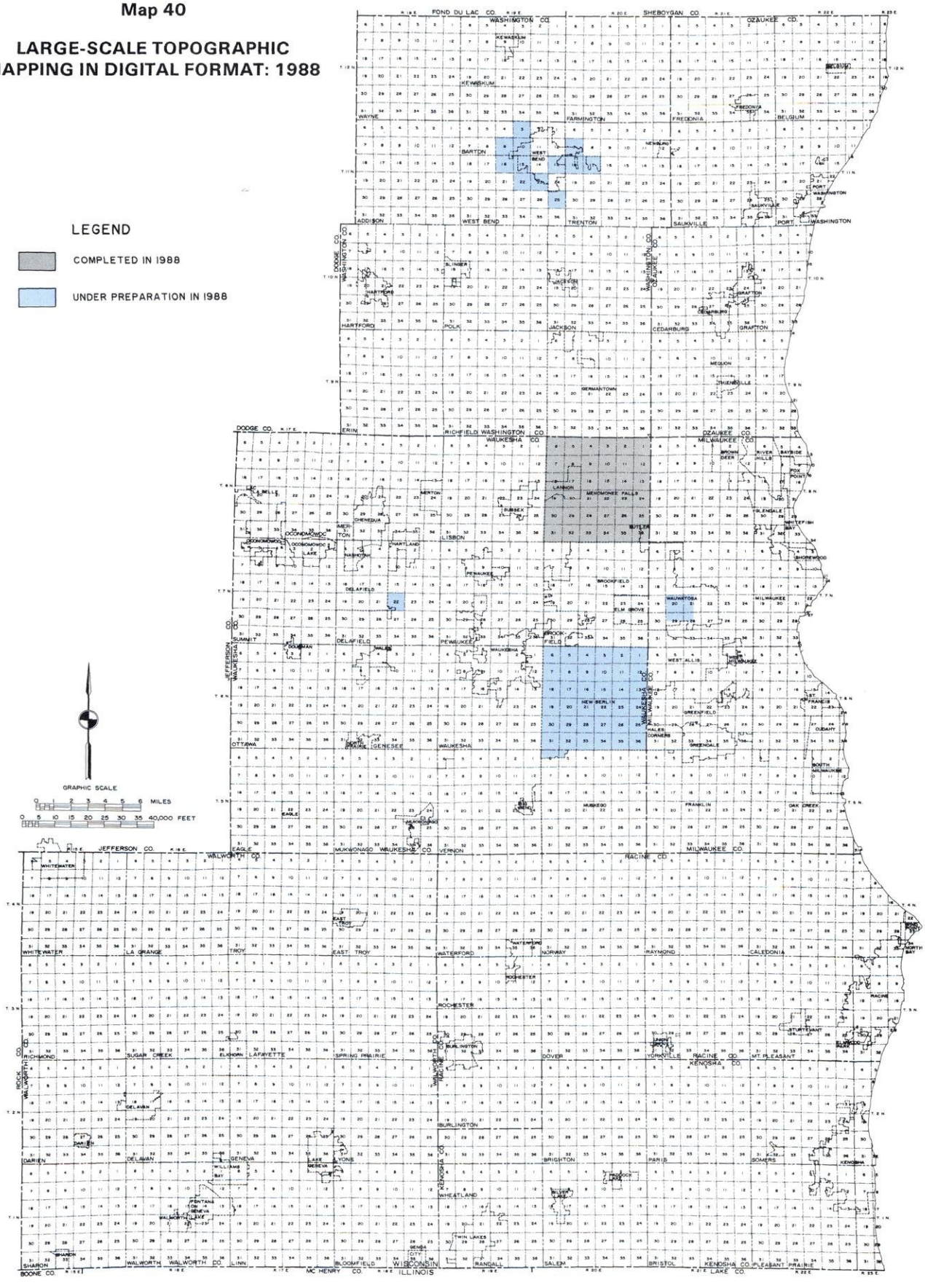
Figure 74

A PORTION OF A DIGITAL LARGE-SCALE TOPOGRAPHIC BASE MAP FOR WAUKESHA COUNTY



Map 40

LARGE-SCALE TOPOGRAPHIC MAPPING IN DIGITAL FORMAT: 1988



As the project proceeded and interim products became available for review, Waukesha County—which is currently conducting a county-wide mapping program under which new topographic mapping is prepared annually, a program administered for the County by the Commission—determined to have all future topographic mapping delivered in digital format. Milwaukee County and the City of West Bend also requested that the Commission assist them in acquiring topographic mapping in digital format during 1988, and these project areas, in addition to a new project area in Waukesha County, were begun in 1988, with delivery of the completed maps scheduled for 1989. Map 40 shows those areas of the Region for which large-scale topographic maps have been or are being prepared in digital format to Commission-recommended standards. This area totals 87 square miles, or about 3 percent of the Region.

ADMINISTRATIVE SERVICES DIVISION

DIVISION FUNCTIONS

The Commission's Administrative Services Division performs a number of functions supportive of the work of all of the other Commission divisions. These functions include financial management, consisting of accounting, bookkeeping, budget control, personnel management, and the implementation of affirmative action and equal opportunity programs; grant-in-aid procurement; purchasing and clerical support; and the sale and distribution of publications.

FINANCIAL MANAGEMENT AND PLANNING

One of the most important functions of the Division is managing the Commission financial affairs. This includes maintaining a fund accounting system, preparing an annual Commission budget, preparing Commission payrolls, and processing accounts receivable and payable. Through the computerized accounting system, monthly financial management reports are prepared, including budget control, cash flow, and quarterly Treasurer's reports. These reports are utilized by the Commission, its committees, and the Executive Director to ensure that the financial integrity of the Commission is maintained.

The Division is also responsible for ensuring that financial institutions controlled by members of minority groups receive a fair share of the Commission's business. This task was continued during 1988 by maintaining a trust account with a minority-controlled bank within the Commission's service area. In addition, the Commission has established a business enterprise program, commencing with the generation of a list of disadvantaged/women businesses which were contacted as potential Commission vendors.

The Division is also responsible for preparing the Commission annual budget. With the help of this document and an accompanying federally required overall work program, the Commission is able to plan and organize its work effort from a sound financial basis.

PERSONNEL ADMINISTRATION

Personnel recruitment, testing, and selection are centered in the Administrative Services Division. During 1988 the Commission continued to make progress in carrying out a comprehensive equal employment opportunity program in the areas of recruitment, employment, promotion, transferring, and training. Action was taken to better monitor applicant flow in order to gage progress in attracting minority applicants as required in the affirmative action program. Efforts were continued toward attracting qualified minority and women applicants during the year.

GRANT-IN-AID PROCUREMENT

Along with accounting for the federal, state, and local funds received to operate the Commission, the Division is responsible for federal and state grant application preparation. This includes completing the necessary application forms, including supporting narratives describing proposed work programs, preparing budgets to carry out the work programs, and assisting in obtaining final grant approval. These grants provide a substantial portion of the working capital required to carry out the Commission's overall work program.

The Division also processes any claims for reimbursement of expenses incurred under each grant contract, prepares detailed financial status reports as required by federal and state funding agencies, and maintains detailed financial records for audit by grantor agencies.

The Commission's annual overall work program, a document, as already noted, required by federal regulation, is also prepared with the assistance of the Division. This report is an important vehicle for securing federal and state grants-in-aid, and serves as a guide to the financial management of the Commission.

PURCHASING AND CLERICAL SUPPORT

The Administrative Services Division provides the Commission with purchasing services and

clerical staff support in the typing of reports, in addition to the typing of routine and specialized correspondence.

SALE AND DISTRIBUTION OF PUBLICATIONS

During 1988 the Division distributed a total of 17,474 copies of Commission publications. These included: 117 prospectuses, 609 planning reports, 342 amendments to planning reports, 4 planning guides, 591 technical reports, 1,827 community assistance planning reports, 992 memorandum reports, 23 technical records, 650 annual reports, 8,119 newsletters, 173 conference proceedings, 3,682 community economic development profiles, 10 lake use reports, 84 public hearing minutes, 119 transportation improvement programs, and 51 overall work programs. A total of 81 copies of the special publication entitled Twenty-five Years of Regional Planning were also distributed. In addition, the Division distributed 5,040 aerial photographs, 126 soils maps, 244 topographic maps, 640 control survey station dossiers, 200 control survey summary diagrams, and 270 maps from the Commission's base map series.

APPENDICES

Appendix A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
COMMISSIONERS AND COMMITTEES AS OF DECEMBER 31, 1988

COMMISSIONERS

	Term Expires
KENOSHA COUNTY	
***Leon T. Dreger	1994
**Sheila M. Siegler	1992
*Francis J. Pitts	1992
MILWAUKEE COUNTY	
**Irene M. Brown, Secretary	1992
*Harout O. Sanasarian, Vice-Chairman	1978
***Jean B. Tyler	1990
OZAUKEE COUNTY	
*Allen F. Bruederle	1990
**Alfred G. Raetz	1990
***Elroy J. Schreiner	1994
RACINE COUNTY	
***David B. Falstad	1992
*Jean M. Jacobson	1990
**Earl G. Skagen	1994
WALWORTH COUNTY	
**John D. Ames	1990
***Anthony F. Balestrieri, Chairman	1994
*Allen L. Morrison	1988
WASHINGTON COUNTY	
**Daniel S. Schmidt	1992
*Patricia A. Strachota	1990
***Frank F. Uttech	1994
WAUKESHA COUNTY	
***Richard A. Congdon	1992
*Robert F. Hamilton	1994
**William D. Rogan, Treasurer	1992

*County Board-appointed Commissioners.

**Appointed by the Governor from a County Board-approved list of candidates.

***Appointed by the Governor on his own motion without reference to any County Board-approved list.

COMMITTEES

EXECUTIVE COMMITTEE
Anthony F. Balestrieri, Chairman
Harout O. Sanasarian, Vice-Chairman
Irene M. Brown
Allen F. Bruederle
David B. Falstad
Robert F. Hamilton
Jean M. Jacobson
Allen L. Morrison
Francis J. Pitts
Alfred G. Raetz
William D. Rogan
Sheila M. Siegler
Frank F. Uttech

ADMINISTRATIVE COMMITTEE
Francis J. Pitts, Chairman
Frank F. Uttech, Vice-Chairman
Anthony F. Balestrieri
Irene M. Brown
Allen F. Bruederle
David B. Falstad
Jean M. Jacobson
Allen L. Morrison
Alfred G. Raetz
William D. Rogan

INTERGOVERNMENTAL AND PUBLIC RELATIONS COMMITTEE
Robert F. Hamilton, Chairman
Allen L. Morrison, Vice-Chairman
Anthony F. Balestrieri
Allen F. Bruederle
Jean M. Jacobson
Francis J. Pitts
William D. Rogan
Harout O. Sanasarian
Patricia A. Strachota

PLANNING AND RESEARCH COMMITTEE
Sheila M. Siegler, Chairman
Jean M. Jacobson, Vice-Chairman
John D. Ames
Anthony F. Balestrieri
Irene M. Brown
Richard A. Congdon
Robert F. Hamilton
Allen L. Morrison
William D. Rogan
Daniel S. Schmidt
Earl G. Skagen
Patricia A. Strachota
Jean B. Tyler

Appendix B

COMMISSION ADVISORY COMMITTEES: 1988

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL AIRPORT SYSTEM PLANNING

William D. Rogan, Chairman — Commissioner, Southeastern Wisconsin Regional Planning Commission
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
C. Barry Bateman — Airport Director, General Mitchell International Airport
Richard A. Bolte — Highway Commissioner, Waukesha County
Roger S. Chapman — Manager, Kenosha Municipal Airport
Edwin H. Daniels — Citizen Member, Darien
George Gundersen — Director, Bureau of Systems Planning, Division of Planning and Budget, Wisconsin Department of Transportation
Major Reid M. Knutson — Base Civil Engineer, Wisconsin Air National Guard
Robert W. Kunkel — Director, Bureau of Aeronautics, Wisconsin Department of Transportation
Jerome F. Mann — Director, Central Region, Air Transport Association of America
Paul E. Milewski — Director of Community Development, City of Oak Creek
Glen A. Orcutt — Airport Planner, U. S. Department of Transportation, Federal Aviation Administration
Gerald Schwerm — Director of Transportation, Milwaukee County
Sylvester N. Weyker — Highway Commissioner, Ozaukee County

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR KENOSHA COUNTY

Gene A. Scharfenorth, Chairman — Highway Commissioner, Kenosha County
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
Gary Daniels — Chairman, Town of Brighton
Ralph L. Drinkwine, Jr. — President, Village of Silver Lake
Noel Elfering — Chairman, Town of Bristol
Harvey Elmer — Director of Public Works, City of Kenosha
Thomas L. Frank — Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
Russell Hoel — Chairman, Town of Salem
Olga B. Hoffman — President, Village of Paddock Lake
Earl W. Hollister — Former Supervisor, Kenosha County
David D. Holtze — Chairman, Town of Somers
Merlin F. Jahns — Trustee, Village of Twin Lakes
Francis H. Kerkman — Chairman, Town of Wheatland
Roger E. Prange — Clerk, Town of Pleasant Prairie
Harvey Shebesta — District Director, Wisconsin Department of Transportation
Kim W. Singleton — Chairman, Town of Randall
Virginia Taylor — Citizen Member, City of Kenosha
Thomas W. Terwall — Chairman, Town of Pleasant Prairie
August Zirbel, Jr. — Chairman, Town of Paris

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR MILWAUKEE COUNTY

Gerald Schwerm, Chairman and Secretary — Director of Transportation, Milwaukee County
Kurt W. Bauer — Executive Director, Southeastern Wisconsin Regional Planning Commission
John A. Erickson — City Engineer, City of Milwaukee
Thomas L. Frank — Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
Frank M. Mayer — Division Administrator, U. S. Department of Transportation, Federal Highway Administration

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR MILWAUKEE COUNTY (continued)

Nick T. Paulos — Village Engineer, Village of Greendale
Frank Reichert — City Engineer, City of Glendale
Gordon Rozmus — City Planner, City of Wauwatosa
John E. Schumacher — City Engineer, City of West Allis
Harvey Shebesta — District Director, Wisconsin Department of Transportation

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR RACINE COUNTY

James F. Rooney, Chairman — Director of Public Works, Racine County
Cecil F. Mehring, Secretary — Highway Engineer, Racine County
Kurt W. Bauer — Executive Director, Southeastern Wisconsin Regional Planning Commission
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Thomas L. Frank — Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
Richard J. Furst — Trustee, Village of Wind Point
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Antony Rogers — Trustee, Village of Rochester
Lucille Sheahan — Chairperson, Town of Dover
Lester Wald — President, Village of Sturtevant
Michael Weber — Development Coordinator Town of Mr. Pleasant
Thomas A. Winkel — Chief District Planning Engineer, Wisconsin Department of Transportation
Thomas N. Wright — Director of Community Development, City of Racine

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR OZAUKEE COUNTY

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Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
Kevin M. Brunner — Administrator, Village of Saukville
Russell A. Dimick — City Engineer, City of Cedarburg
Thomas L. Frank — Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
Mark E. Grams — Administrator, City of Port Washington
Kristine M. Hinrichs — Administrator, Village of Thiensville
Kenneth A. Roell — Administrator and Engineer, Town of Cedarburg
Donald A. Roensch — Administrator, City of Mequon
Emory R. Sacho — Administrator, Village of Grafton
Harvey Shebesta — District Director, Wisconsin Department of Transportation

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR WALWORTH COUNTY

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Kenneth Andrews . . . President, Village of East Troy
Kurt W. Bauer . . . Executive Director, Southeastern Wisconsin Regional Planning Commission
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Schuyler W. Case . . . Citizen Member
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Frank Scott . . . Member, City of Lake Geneva Plan Commission
Harvey Shebesta . . . District Director, Wisconsin Department of Transportation
Robert Tilton . . . Chairman, Town of Bloomfield
William S. Turner . . . President, Village of Fontana
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TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR WASHINGTON COUNTY

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John B. Cappelle . . . Director of Community Development, City of West Bend
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James E. Heipp . . . Supervisor, Town of West Bend
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Vernon Kauth . . . Trustee, Village of Germantown
John B. Kohl . . . Chairman, Town of Richfield
Earl Kruepke . . . President, Village of Jackson
Frank M. Mayer . . . Division Administrator, Federal Highway Administration, U. S. Department of Transportation
Paul J. Metz . . . Chairman, Town of Germantown
Michael R. Miller . . . Mayor, City of West Bend
Paul E. Mueller . . . Administrator, Land Use and Park Department, Washington County
Dean Otte . . . Clerk, Village of Slinger
Merlin Prost . . . Chairman, Town of Barton
William Ripp . . . City Engineer, City of Hartford
Robert Roskopf . . . Chairman, Town of Erin
Franklin B. Scharrer . . . Commissioner, Washington County Highway Department
Reuben J. Schmahl . . . Chairman, Washington County Board
Daniel S. Schmidt . . . Administrator, Village of Kewaskum
John C. Spielmann . . . Economic Development Coordinator, City of Hartford
Maurice P. Strupp . . . Chairman, Town of Hartford
John Theusch . . . Chairman, Town of Farmington
Carl Vogt . . . Clerk, Town of Addison
Gary Wendorf . . . Member, Planning Commission, City of Hartford
Milton Wilkens . . . President, Village of Newburg
Thomas A. Winkel . . . District Chief Transportation Assistance and Planning Engineer, Wisconsin Department of Transportation
Arthur H. Zabel . . . Trustee, Village of Germantown

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR WAUKESHA COUNTY

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Kurt W. Bauer, Secretary . . . Executive Director, Southeastern Wisconsin Regional Planning Commission
Ralph A. Becker . . . Director of Public Works, City of New Berlin
Thomas L. Frank . . . Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
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Robert Schreiber . . . Chairman, Town of Genesee
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Harvey Shebesta . . . District Director, Wisconsin Department of Transportation
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Max A. Vogt . . . Director of Public Works, Village of Menomonee Falls

INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON TRANSPORTATION SYSTEM PLANNING AND PROGRAMMING FOR THE RACINE URBANIZED AREA

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Kurt W. Bauer, Secretary . . . Executive Director, Southeastern Wisconsin Regional Planning Commission
Marsha A. Adams . . . Environmental Protection Assistant, Region V, U. S. Environmental Protection Agency
James J. Blazek . . . City Engineer, City of Racine
Jon I. Dederich . . . Plan Commissioner, Village of Elmwood Park
Joel P. Ettinger . . . Regional Manager, U. S. Department of Transportation, Urban Mass Transportation Administration
George Gundersen . . . Director, Bureau of Systems Planning, Wisconsin Department of Transportation
John M. Hartz . . . Director, Bureau of Transit, Wisconsin Department of Transportation
Donald G. Jans . . . President, Wisconsin Coach Lines, Inc.
Clair W. Jenn . . . Traffic Engineer, City of Racine
Wolfgang H. Klassen . . . District Director, Bureau of Air Management, Wisconsin Department of Natural Resources
Frank M. Mayer . . . Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Lloyd C. Meier . . . President, Village of Wind Point
Richard Reich, Sr. . . . President, Village of North Bay
Harvey Shebesta . . . District Director, Wisconsin Department of Transportation
Robert F. White . . . Supervisor, Town of Mt. Pleasant
Lester Wald . . . President, Village of Sturtevant

INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON TRANSPORTATION SYSTEM PLANNING AND PROGRAMMING FOR THE KENOSHA URBANIZED AREA

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Kurt W. Bauer, Secretary . . . Executive Director, Southeastern Wisconsin Regional Planning Commission
Marsha A. Adams . . . Environmental Protection Assistant, Region V, U. S. Environmental Protection Agency

INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON TRANSPORTATION SYSTEM PLANNING AND PROGRAMMING FOR THE KENOSHA URBANIZED AREA (continued)

Joel P. Ettinger . . . . . .Regional Manager, U. S. Department of Transportation, Urban Mass Transportation Administration
George Gundersen . . . . . .Director, Bureau of Systems Planning, Wisconsin Department of Transportation
John M. Hartz . . . . . .Director, Bureau of Transit, Wisconsin Department of Transportation
Donald K. Holland . . . . . .City Administrator, City of Kenosha
Donald G. Jans . . . . . .President, Wisconsin Coach Lines, Inc.
Wolfgang H. Klassen . . . . . .District Director, Bureau of Air Management, Wisconsin Department of Natural Resources
Edward A. Jenkins . . . . . .Transportation Director, City of Kenosha
Frank M. Mayer . . . . . .Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Francis J. Pitts . . . . . .Commissioner, Southeastern Wisconsin Regional Planning Commission
Harvey Shebesta . . . . . .District Director, Wisconsin Department of Transportation

INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON TRANSPORTATION SYSTEM PLANNING AND PROGRAMMING FOR THE MILWAUKEE URBANIZED AREA

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John R. Bolden . . . . . .Commissioner of Public Works, City of Milwaukee
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Daniel Cupertino, Jr. . . . . .Supervisor, Milwaukee County Board
Ricardo Diaz . . . . . .Commissioner, Department of City Development, City of Milwaukee
John A. Erickson . . . . . .City Engineer, City of Milwaukee
Gary J. Hamburg . . . . . .Administrator, City of Wauwatosa
Lawrence J. Kenny . . . . . .Supervisor, Milwaukee County Board
Nick T. Paulos . . . . . .Village Engineer, Village of Greendale
John E. Schumacher . . . . . .City Engineer, City of West Allis
Gerald Schwerm . . . . . .Director of Transportation and Public Works, Milwaukee County
Paul G. Vrakas . . . . . .Mayor, City of Waukesha
Robert J. Welch . . . . . .Director, Department of Fiscal Liaison, City of Milwaukee
Udo L. Wilharm . . . . . .City Engineer, City of Oak Creek
Representative (vacant) . . . . . .Local Government, Ozaukee/Washington Counties
Representative (vacant) . . . . . .North Shore Suburbs

Ex Officio Nonvoting Members

Kurt W. Bauer, Secretary . . . . . .Executive Director, Southeastern Wisconsin Regional Planning Commission
Joel P. Ettinger . . . . . .Regional Manager, U. S. Department of Transportation, Urban Mass Transportation Administration
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Donald G. Jans . . . . . .President, Wisconsin Coach Lines, Inc.
Wolfgang H. Klassen . . . . . .Director, Bureau of Air Management, Wisconsin Department of Natural Resources
Thomas P. Kujawa . . . . . .Managing Director, Milwaukee County Transit System
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George Gundersen . . . . . .Director, Bureau of Systems Planning, Wisconsin Department of Transportation
Thomas P. Kujawa . . . . . .Managing Director, Milwaukee County Transit System
Frank M. Mayer . . . . . .Division Administrator, U. S. Department of Transportation, Federal Highway Administration
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Brian F. O'Connell . . . . . .Transportation Planner, Department of City Development, City of Milwaukee
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John E. Schumacher . . . . . .City Engineer, City of West Allis
Gerald Schwerm . . . . . .Director of Transportation, Milwaukee County
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John M. Bennett . . . . . .City Engineer, City of Franklin
James J. Blazek . . . . . .City Engineer, City of Racine
N. Owen Davies . . . . . .Mayor, City of Racine
Raymond T. Dwyer . . . . . .City Engineer, City of Greenfield
Ruth Hilfiker . . . . . .Natural Resources Agent, Racine County
Orville L. Kurth . . . . . .District Conservationist, U. S. Soil Conservation Service, Milwaukee and Waukesha Counties
Patrick Marchese . . . . . .Executive Director, Milwaukee Metropolitan Sewerage District
Neal T. O'Reilly . . . . . .Environmental Specialist, Southeast District, Wisconsin Department of Natural Resources
Nick T. Paulos . . . . . .Village Engineer, Village of Greendale
James F. Rooney . . . . . .Director of Public Works, Racine County
James R. Ryan . . . . . .President, Village of Hales Corners
Wayne G. Salentine . . . . . .Mayor, City of Muskego
John E. Schumacher . . . . . .City Engineer, City of West Allis
Udo L. Wilharm . . . . . .City Engineer, City of Oak Creek

FOX RIVER WATERSHED COMMITTEE

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Kurt W. Bauer, Secretary . . . . . .Executive Director, Southeastern Wisconsin Regional Planning Commission
Nolan Anderson . . . . . .Agricultural Agent, Walworth County
Jack A. Bierman . . . . . .President, Village of Rochester
Kathryn C. Bloomberg . . . . . .Mayor, City of Brookfield
William Burmeister . . . . . .Chairman, Norway-Dover Drainage District
Arnold L. Clement . . . . . .Planning and Development Director, Racine County
Frank H. Dobbs . . . . . .Director, Walworth County Planning, Zoning and Sanitation Department
Herbert E. Gauger . . . . . .President, Village of Waterford
Robert E. Harvey . . . . . .Citizen Member, Town of Mukwonago
Ruth Hilfiker . . . . . .Resource Agent, UW-Extension, Kenosha County and Racine County
Martin J. Itzin . . . . . .Mayor, City of Burlington
Ronald W. Kazmierczak . . . . . .Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
Francis Kerkman . . . . . .Chairman, Town of Wheatland
Edward Krueger . . . . . .Chairman, Town of Waterford
Orville L. Kurth . . . . . .District Conservationist, U. S. Soil Conservation Service
Walter B. Maas . . . . . .Commissioner, Western Racine County Sewerage District
John L. Malchine . . . . . .Chairman, Town of Norway
George E. Melcher . . . . . .Director, Office of Planning and Zoning Administration, Kenosha County

FOX RIVER WATERSHED COMMITTEE
(continued)

John H. Mielke . . . . . .Consulting Engineer, Ruekert & Mielke, Waukesha
Raymond J. Moyer, Jr. . . . . .Citizen Member, Town of Waterford
Sterling A. Peck . . . . . .Chairman, Town of Vernon
Cloyd A. Porter . . . . . .Wisconsin State Representative
Richard G. Rehberg . . . . . .Chairman, Town of Rochester
Herbert E. Ripley . . . . . .Health Officer, Waukesha County Health Department
Wayne G. Salentine . . . . . .Mayor, City of Muskego
Phil Sander . . . . . .Executive Secretary, Southeastern Wisconsin Sportsmen's Federation
Dr. Bruno E. Schiffleger . . . . . .Citizen Member, City of Elkhorn
Arthur Stratton . . . . . .Commissioner, Hoosier Creek Drainage District
Walter J. Tarmann . . . . . .Director, Waukesha County Park and Planning Commission
Rodney M. Vanden Noven . . . . . .Director of Public Works, City of Waukesha
Franklin Walsh . . . . . .Chairman, Town of Linn
Stan Wilson . . . . . .Citizen Member, City of Burlington
John R. Zillmer . . . . . .Secretary, Ice Age Park and Trail Foundation, Milwaukee

MILWAUKEE RIVER WATERSHED COMMITTEE

Richard W. Cutler . . . . . .Attorney, Quarles and Brady, Milwaukee
Chairman
Kurt W. Bauer . . . . . .Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
John R. Bolden . . . . . .Commissioner of Public Works, City of Milwaukee
Lawrence Brumm . . . . . .President, Milwaukee River Restoration Council, Inc.
Kevin M. Brunner . . . . . .Administrator, Village of Saukville
Delbert J. Cook . . . . . .Chairman, Cedar Creek Restoration Council
Arthur G. Degnitz . . . . . .Clerk, Washington County
James B. Esselman . . . . . .Chairman, Town of Trenton
Edward Frauenheim . . . . . .County Board Chairman, Sheboygan County
Lawrence W. Hillman . . . . . .Citizen Member
John Justen . . . . . .Citizen Member
Ronald W. Kazmierczak . . . . . .Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
Robert L. Konik . . . . . .Planner, Fond du Lac County
Patrick Marchese . . . . . .Executive Director, Milwaukee Metropolitan Sewerage District
Paul E. Mueller . . . . . .Land Use and Park Administrator, Washington County
Steven Narveson . . . . . .Director, Ozaukee County Department of Environmental Health
Donald A. Roensch . . . . . .Administrator/Engineer, City of Mequon
M. Brigid Sullivan . . . . . .Director of Parks, Recreation and Culture, Milwaukee County
Donald W. Webster . . . . . .Supervisor, Town of Fredonia
Richard E. Zarling . . . . . .Director of Elementary Education, Kewaskum Community Schools

MENOMONEE RIVER WATERSHED COMMITTEE

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Vice-Chairman City of Wauwatosa
Kurt W. Bauer . . . . . .Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
Glenn H. Evans . . . . . .Citizens for Menomonee River Restoration
Richard Farrenkopf . . . . . .Manager, Village of Menomonee Falls
Frank S. Hartay . . . . . .Director of Manufacturing, Falk Corporation, Milwaukee
Edmund M. Henschel . . . . . .Manager, Village of Elm Grove
Ronald W. Kazmierczak . . . . . .Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
George C. Keller . . . . . .President, Wauwatosa State Bank
Raymond J. Kipp . . . . . .Former Dean, College of Engineering, Marquette University
Patrick Marchese . . . . . .Executive Director, Milwaukee Metropolitan Sewerage District
Donald A. Roensch . . . . . .Administrator/Engineer, City of Mequon
John E. Schumacher . . . . . .City Engineer, City of West Allis
M. Brigid Sullivan . . . . . .Director of Parks, Recreation and Culture, Milwaukee County
Walter J. Tarmann . . . . . .Director, Waukesha County Park and Planning Commission
Lloyd L. Turner . . . . . .Director of Public Works, Village of Germantown
Clark E. Wangerin . . . . . .Special Projects Engineer, City of Brookfield

KINNICKINNIC RIVER WATERSHED COMMITTEE

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Chairman Milwaukee County
John A. Erickson . . . . . .City Engineer, City of Milwaukee
Vice-Chairman
Kurt W. Bauer . . . . . .Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
Raymond T. Dwyer . . . . . .City Engineer, City of Greenfield
E. Craig Faucett . . . . . .Director of Engineering, City of Cudahy
Patrick Marchese . . . . . .Executive Director, Milwaukee Metropolitan Sewerage District
Stanley Polewski . . . . . .Proprietor, Polewski Pharmacy, Milwaukee
Rudolfo N. Salcedo . . . . . .Environmental Scientist, Department of City Development, City of Milwaukee
Frank Schultz . . . . . .District Engineer, Southeast District, Wisconsin Department of Natural Resources
John E. Schumacher . . . . . .City Engineer, City of West Allis
Gerald Schwerm . . . . . .Director of Transportation and Public Works, Milwaukee County
Frank J. Wabiszewski . . . . . .Vice-President, Maynard Steel Casting Company, Milwaukee

PIKE RIVER WATERSHED COMMITTEE

George E. Melcher . . . . . .Director, Office of Planning and
Chairman Zoning Administration, Kenosha County
Richard Christensen . . . . . .Chairman, Mt. Pleasant Drainage District
Vice-Chairman
Kurt W. Bauer . . . . . .Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
Les Aspin . . . . . .Congressman, 1st District
Mary M. Carrington . . . . . .Chairman, Town of Mt. Pleasant
Arnold L. Clement . . . . . .Planning and Development Director, Racine County
Gerald L. Hebard . . . . . .District Conservationist, U. S. Soil Conservation Service, Racine County
Ruth Hilfiker . . . . . .Natural Resources Agent, Racine County
Donald K. Holland . . . . . .Director of Public Works, City of Kenosha
David D. Holtze . . . . . .Chairman, Town of Somers
Niels E. Ladine . . . . . .Director, Parks Department, Kenosha County
Leverett F. Leet . . . . . .Retired Farmer, Town of Somers
Chelvadurai Manogaran . . . . . .Associate Professor, Department of Geography, University of Wisconsin-Parkside
O. Fred Nelson . . . . . .Manager, Kenosha Water Utility
Neal T. O'Reilly . . . . . .Planning Analyst, Southeast District, Wisconsin Department of Natural Resources
Francis J. Pitts . . . . . .Commissioner, Southeastern Wisconsin Regional Planning Commission
Lester Wald . . . . . .President, Village of Sturtevant
Michael F. Weber . . . . . .Development Coordinator, Town of Mt. Pleasant

OAK CREEK WATERSHED COMMITTEE

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Chairman
Paul E. Milewski . . . . . .Director of Planning, City of Oak Creek
Vice-Chairman
Kurt W. Bauer . . . . . .Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
John M. Bennett . . . . . .City Engineer, City of Franklin
Thomas D. Borgwardt . . . . . .Airport Engineer, Milwaukee County Department of Public Works
John A. Erickson . . . . . .City Engineer, City of Milwaukee
Ronald W. Kazmierczak . . . . . .Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
Richard A. Keyes . . . . . .Environmental Engineer, Department of Public Works, Milwaukee County
Charles G. Lambert . . . . . .Secretary, Milwaukee County Conservation Alliance
Patrick Marchese . . . . . .Executive Director, Milwaukee Metropolitan Sewerage District
John D. St. John . . . . . .Supervisor, Milwaukee County
Douglas R. Sleight . . . . . .Member, South Milwaukee Yacht Club
M. Brigid Sullivan . . . . . .Director of Parks, Recreation and Culture, Milwaukee County

TECHNICAL ADVISORY COMMITTEE ON REGIONAL WATER QUALITY MANAGEMENT PLANNING

Patrick Marchese, Chairman — Executive Director, Milwaukee Metropolitan Sewerage District
Raymond J. Kipp, Vice-Chairman — Former Dean, College of Engineering, Marquette University
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
John R. Bolden — Commissioner of Public Works, City of Milwaukee
Frank R. Boucher — Director, Environmental Department, Wisconsin Electric Power Company
Arnold L. Clement — Planning and Development Director, Racine County
Norbert H. Dettmann — Supervisor, Washington County
Frank H. Dobbs — Administrator, Planning, Zoning and Sanitation Department, Walworth County
Robert J. Grigeurich — Assistant District Director, U. S. Department of Agriculture, Farmers Home Administration
Ruth Hilfiker — Natural Resources Agent, Racine County
Helen M. Jacobs — Citizen Member
Ronald W. Kazmierczak — Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
Orville L. Kurth — District Conservationist, U. S. Soil Conservation Service, Milwaukee and Waukesha Counties
Paul E. Mueller — Land Use and Park Administrator, Washington County
Dr. William G. Murphy — Former Professor, Soils Mechanics, College of Engineering, Marquette University; Engineers and Scientists of Milwaukee
O. Fred Nelson — Manager, Kenosha Water Utility
Herbert E. Ripley — Health Officer, Waukesha County Department of Health
Donald A. Roensch — Administrator, City of Mequon
Marvin E. Schroeter — Secretary-Treasurer and General Manager, United Sewer and Water, Inc., Menomonee Falls
Daniel W. Stoffel — Supervisor, Washington County
Walter J. Tarmann — Director, Waukesha County Park and Planning Commission
Rodney W. Vanden Noven — Director of Public Works, City of Waukesha
Udo L. Wilharm — City Engineer, City of Oak Creek
Thomas White — General Manager, Racine Water and Wastewater Utility

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON COASTAL MANAGEMENT IN SOUTHEASTERN WISCONSIN

Dr. Norman P. Lasca, Chairman — Professor, Department of Geological Sciences, University of Wisconsin-Milwaukee
M. Brigid Sullivan, Vice-Chairman — Director of Parks, Recreation and Culture, Milwaukee County
Donald M. Reed, Secretary — Principal Specialist-Biologist, Southeastern Wisconsin Regional Planning Commission
Hubert J. Albert — Port Washington Yacht Club
Carl W. Birks — Director, Engineering, Environment and Energy, Milwaukee County
John R. Bolden — Commissioner of Public Works, City of Milwaukee
Josephine Boucher — Member, North Shore League of Women Voters
Benjamin C. Chapla — Coastal Coordinator, Town of Caledonia
Noreen R. Cook — Manager, Village of Fox Point
E. Craig Faucett — Director of Engineering, City of Cudahy
James L. Fonk — Supervisor, Kenosha County Board
Ruth Hilfiker — Natural Resource Agent, Racine County
George O. Lampert — Mayor, City of Port Washington
Patrick Marchese — Executive Director, Milwaukee Metropolitan Sewerage District
Dr. Harold M. Mayer — Professor, Department of Geography, University of Wisconsin-Milwaukee
Gloria L. McCutcheon — District Director, Southeast District, Wisconsin Department of Natural Resources
Dr. William G. Murphy — Former Professor, Soils Mechanics, College of Engineering, Marquette University; Engineers and Scientists of Milwaukee
Mary C. Nelson — City of South Milwaukee Shoreline Property Owner

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON COASTAL MANAGEMENT IN SOUTHEASTERN WISCONSIN (continued)

C. William Nelson — Member, Great Lakes Sports Fisherman's Club
Dr. William T. Painter — President, Foundation Engineering, Inc., Milwaukee
Neil H. Palmer — Senior Legislative Representative, Wisconsin Electric Power Company
James M. Phinney — Resident, Village of Fox Point
Phil Sander — Executive Secretary, Southeastern Wisconsin Sportsmen's Federation
Kenneth J. Szallai — Port Director, Board of Harbor Commissioners, City of Milwaukee
Norbert S. Theine — Administrator, City of South Milwaukee

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON REGIONAL PARK AND OPEN SPACE PLANNING

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Loren R. Anderson — President, Geneva Lake Development Corporation, Village of Williams Bay
Delbert J. Cook — Chairman, Cedar Creek Restoration Council
Norbert H. Dettmann — Supervisor, Washington County
Charles O. Kamps — Attorney, Quarles and Brady, Milwaukee
Philip H. Lewis, Jr. — Professor, Department of Landscape Architecture, University of Wisconsin-Madison; Director, Environmental Awareness Center, Madison
Paul E. Mueller — Land Use and Park Administrator, Washington County
Kathleen Pfister — Cultural Specialist, Department of City Development, City of Milwaukee
Robert D. Ross — Vice-President, Lee Enterprises Newspapers, Racine
Phil Sander — Executive Secretary, Southeastern Wisconsin Sportsmen's Federation
Frederick G. Schmidt — Izaak Walton League; Member, Sierra Club
Mrs. John D. Squier — Member, Riveredge Nature Center, Inc.
Walter J. Tarmann — Director, Waukesha County Park and Planning Commission
Edgar W. Trecker — Supervisor of Forestry, Wildlife and Recreation, Southeast District, Wisconsin Department of Natural Resources
Elwood R. Voigt — Park Commissioner, Ozaukee County
Joseph C. Waters — President, Wisconsin Association of Campground Owners; Proprietor, Lazy Day Campground, Town of Farmington
Dr. Harry J. Wilkins — Citizen Member, City of Wauwatosa
Dr. George T. Wilson — Visiting Lecturer, Department of Continuing and Vocational Education, University of Wisconsin-Madison
Thomas N. Wright — Director of City Development, City of Racine

ADVISORY COMMITTEE ON STORMWATER DRAINAGE AND FLOOD CONTROL PLANNING FOR THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT AND DISTRICT SERVICE AREAS

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Audubon Society of America
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Wisconsin Department of Natural Resources
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Milwaukee County
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Department of City Development,
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Harout O. Sanasarian . . . . . .Supervisor, 4th District,
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Norbert S. Theine . . . . . .Administrator,
City of South Milwaukee
Ralph J. Voltner, Jr. . . . . .Administrator,
City of St. Francis
Milton Vretenar . . . . . .Mayor, City of St. Francis
Thomas F. Wolf . . . . . .Director of Engineering, Milwaukee
Metropolitan Sewerage District
T. Anthony Zielinski . . . . . .Supervisor, 12th District,
Milwaukee County

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Chairman
Kurt W. Bauer . . . . . .Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
Noel Elfering . . . . . .Chairman, Town of Bristol
Harvey D. Elmer . . . . . .Director of Public Works, City of Kenosha
Donald K. Holland . . . . . .Administrator, City of Kenosha
Ronald W. Kazmierczak . . . . . .Assistant District Director, Wisconsin
Department of Natural Resources
Wayne E. Koessl . . . . . .WEPCo/WISPARK Corporation
George E. Melcher . . . . . .Director, Kenosha County Office of
Planning and Zoning Administration
O. Fred Nelson . . . . . .Manager, Kenosha Water Utility
Michael R. Pollocoff . . . . . .Administrator, Town of Pleasant Prairie
Michael J. Serpe . . . . . .Councilman, City of Kenosha
August Zirbel, Jr. . . . . .Chairman, Town of Paris

INTERGOVERNMENTAL COORDINATING AND TECHNICAL ADVISORY COMMITTEE FOR THE IH 94 SOUTH FREEWAY CORRIDOR DEVELOPMENT PLAN

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Chairman Racine County
George E. Melcher . . . . . .Director, Office of Planning and
Vice-Chairman Development, Kenosha County
Paul E. Milewski . . . . . .Director, Department of Community
Secretary Development, City of Oak Creek
Kurt W. Bauer . . . . . .Executive Director, Southeastern Wisconsin
Recording Secretary Regional Planning Commission
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John Bechler . . . . . .Director, Kenosha Area Development Corporation
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Noel Elfering . . . . . .Chairman, Town of Bristol
Thomas L. Frank . . . . . .Planning and Research Engineer,
Federal Highway Administration
George Gunderson . . . . . .Director, Bureau of System Planning,
Wisconsin Department of Transportation
Richard L. Hebron . . . . . .Chairman, Town of Raymond
Donald K. Holland . . . . . .Administrator, City of Kenosha
David D. Holtze . . . . . .Chairman, Town of Somers
Clay Morgan . . . . . .President, Village of Sturtevant
Alvin P. Nelson . . . . . .Chairman, Town of Yorkville
Allen C. Orth . . . . . .President, IH 94 Racine
County Business Association
Michael R. Pollocoff . . . . . .Administrator, Town of Pleasant Prairie
James F. Rooney . . . . . .Director of Public Works, Racine County
Gene A. Scharfenorth . . . . . .Highway Commissioner, Kenosha County
Michael F. Weber . . . . . .Development Coordinator, Town of Mt. Pleasant
Roderick Wilhelmi . . . . . .Executive Director, Racine County
Economic Development Corporation
Robert L. Wilson . . . . . .Chairman, Town of Caledonia
Thomas A. Winkel . . . . . .District Chief Transportation Assistance
and Planning Engineer, Wisconsin
Department of Transportation
Thomas N. Wright . . . . . .Director of City Development, City of Racine
August Zirbel, Jr. . . . . .Chairman, Town of Paris

ADVISORY COMMITTEE ON THE GOVERNANCE OF THE DELAVAN LAKE AREA

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Chairperson Delavan Lake Improvement Association
Peter F. Dantone . . . . . .Mayor, City of Delavan
Co-Vice-Chairperson
Nicholas F. Marsicano . . . . . .President, Delavan Lake Sanitary District
Co-Vice-Chairperson
Kurt W. Bauer, Secretary . . . . . .Executive Director, Southeastern
Wisconsin Regional Planning Commission
Richard J. Brown . . . . . .Citizen Member, Town of Delavan
Robin Sargent . . . . . .Supervisor, Town of Delavan
James E. Sullivan . . . . . .Citizen Member and Commissioner,
Delavan Lake Sanitary District
Miller Upton . . . . . .Citizen Member and Chairman,
Greater Delavan Development Council
James L. Van Dreser . . . . . .Chairman, Town of Walworth;
Supervisor, Walworth County

Appendix C

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION STAFF: 1988

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Executive Director

Philip C. Evenson, AICP
Assistant Director

Kenneth R. Yunker, PE
Assistant Director

Margaret M. Shanley
Executive Secretary

Elaine I. Andersen
Executive Secretary

Joan M. Starr
Secretary

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Information Systems Manager

John C. Stelpflug
Assistant Information Systems Manager

Thomas D. Patterson
Graphics Systems Manager

John D. Harasha
Programming Supervisor

Paul J. Clavette
Richard A. Runte
Systems Programmers

Richard L. Henley
Victor J. Janka, Jr.
Michael J. Miller
Martin E. Staszak
Senior Systems Analysts

Donald S. Johnson
Senior Programmer/Analyst

Robert J. Burnell
Programmer/Analyst

Robert J. Baier
Lawrence D. Langowski
Community Services Representatives

Heather W. Kluth
Lead Computer Operator

Lon M. Scott
Computer Operator

Kristine M. Engelhardt
Melody M. Patrie
Communications Specialists

Damien D. Gessler
Graphics Systems Programmer/Analyst

Karen J. Goralski
Lead Digitizer Operator

INFORMATION SYSTEMS DIVISION (continued)

Debra L. Bahnub
Ann M. Radosevich
Mary E. Robertson
Digitizer Operators

Valerie A. Richardson
Cadastral Map Draftsman

Rosemary K. Wilcenski
Lead Key Entry Operator

Sylvia Carlson
Diane L. Curtiss
Key Entry Operators

COMMUNITY ASSISTANCE PLANNING DIVISION

Roland O. Tonn, AICP
Chief Community Assistance Planner

Patrick J. Meehan, AICP
Principal Planner

Jean M. Plum
Senior Planner

Robert S. McGonigal
Planner

Nancee A. Greer
Senior Planning Draftsman

ECONOMIC DEVELOPMENT PLANNING DIVISION

Gordon M. Kacala
Chief Economic Development Planner

John R. Meland
Principal Planner

Craig V. Kettleson
Margaret A. Vuicich
Senior Planners

ADMINISTRATIVE SERVICES DIVISION

Joan A. Zenk
Administrative Officer

Rita L. Rolfson
Administrative Assistant

Luella M. Fredrickson
Secretary

Gretel S. Weltmer
Receptionist

ENVIRONMENTAL PLANNING DIVISION

Robert P. Biebel, PE
Chief Environmental Engineer

Michael G. Hahn, PE
Curtis R. Hulterstrum, PE
Principal Engineers

Donald M. Reed
Principal Specialist

Ronald J. Printz, PE
Senior Engineer

David B. Kendziorski
Principal Planner

Judy K. Musich
Planner

Rachel E. Lang
Specialist

Irene A. Brown
Secretary

LAND USE PLANNING DIVISION

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Chief Land Use Planner

Gerald H. Emmerich, Jr.
William J. Stauber, AICP
Principal Planners

Donald G. Dittmar
Senior Specialist

LAND USE PLANNING DIVISION (continued)

David A. Schilling
Specialist

Joyce G. Pariseau
Research Aide

Ruth D. Jaeger
Secretary

TRANSPORTATION PLANNING DIVISION

Donald R. Martinson
Chief Transportation Engineer

Robert E. Beglinger
Principal Engineer

Albert A. Beck
Otto P. Dobnick
Principal Planners

Robert B. Humel
Senior Planner

Peter C. Daniels
David C. Dryer
Engineers

Kathryn E. Sobottke
Research Analyst

CARTOGRAPHIC AND GRAPHIC ARTS DIVISION

Leland H. Kreblin, RLS
Chief Planning Illustrator

Ronald H. Heinen
B. Lynn Nowak
Donald P. Simon
Principal Planning Draftsmen

Jean C. Johnson
Bergetta J. Ruehmer
Planning Draftsmen

Patricia M. Kokan
Word Processor

Randy T. Dvorak
Office Equipment Operator

Appendix D

PUBLICATIONS OF THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION: 1962-DECEMBER 1988

PROSPECTUSES

Regional Planning Program, April 1962*
Root River Watershed Planning Program, March 1963*
Fox River Watershed Planning Program, October 1964*
Continuing Land Use-Transportation Study, October 1965
Milwaukee River Watershed Planning Program, September 1966*
Comprehensive Library Planning Program, April 1968
Community Shelter Planning Program, August 1968
Racine Urban Planning District Comprehensive Planning Program, November 1968
Regional Sanitary Sewerage System Planning Program, December 1968
Menomonee River Watershed Planning Program, November 1969
Comprehensive Regional Airport Planning Program, December 1969*
Regional Housing Study, December 1969
Deep Sandstone Aquifer Simulation Modeling Program, October 1972
Regional Park, Outdoor Recreation, and Related Open Space Planning Program, March 1973
Preliminary Engineering Study for the Abatement of Pollution from Combined Sewer Overflow in the Milwaukee Metropolitan Area, July 1973*
Kinnickinnic River Watershed Planning Program Prospectus, November 1974*
Regional Air Quality Maintenance Planning Program Prospectus, November 1974
Preliminary Engineering Study for the Abatement of Water Pollution in the Kenosha Urban Area, December 1975
Overall Work Program and Prospectus of the Southeastern Wisconsin Regional Planning Commission: 1976-1980, December 1975
Overall Work Program of the Southeastern Wisconsin Regional Planning Commission: 1977-1981, December 1976
Overall Work Program and Prospectus of the Southeastern Wisconsin Regional Planning Commission: 1978-1982, December 1977
Lake Michigan Estuary and Direct Drainage Area Subwatersheds Planning Program Prospectus, September 1978
Milwaukee Area Primary Transit System Alternatives Analysis Prospectus, October 1978
Milwaukee Northwest Side/Ozaukee County Transportation Improvement Study Prospectus, November 1978
Milwaukee Area Work Time Rescheduling Study Prospectus, December 1978
Pike River Watershed Planning Program Prospectus, April 1979
Milwaukee Area Freeway Traffic Management System Study Prospectus, June 1979
Oak Creek Watershed Planning Program Prospectus, December 1979
Prospectus for an Energy Emergency Contingency Plan for Southeastern Wisconsin, December 1983
Milwaukee River Priority Watersheds Program Prospectus, March 1985
Stormwater Drainage and Flood Control Planning Program Prospectus for the Milwaukee Metropolitan Sewerage District, March 1985
Infrastructure Study for the Southeastern Wisconsin Region, June 1986
Milwaukee High Lake Level Impact Study Prospectus, December 1987
Prospectus for the Preparation of Coordinated Sanitary Sewer and Water Supply System Plans for the Kenosha Area, June 1988
Overall Work Program—1979 Southeastern Wisconsin Regional Planning Commission, October 1978
Overall Work Program—1980 Southeastern Wisconsin Regional Planning Commission, November 1979
Overall Work Program—1981 Southeastern Wisconsin Regional Planning Commission, November 1980
Overall Work Program—1982 Southeastern Wisconsin Regional Planning Commission, November 1981
Overall Work Program—1983 Southeastern Wisconsin Regional Planning Commission, October 1982
Overall Work Program—1984 Southeastern Wisconsin Regional Planning Commission, November 1983

PROSPECTUSES—continued

Overall Work Program—1985 Southeastern Wisconsin Regional Planning Commission, October 1984
Overall Work Program—1986 Southeastern Wisconsin Regional Planning Commission, October 1985
Overall Work Program—1987 Southeastern Wisconsin Regional Planning Commission, September 1986
Overall Work Program—1988 Southeastern Wisconsin Regional Planning Commission, November 1987
Overall Work Program—1989 Southeastern Wisconsin Regional Planning Commission, November 1988

STUDY DESIGNS

Study Design for the Continuing Regional Land Use-Transportation Study: 1970-1974*
Study Design for the Continuing Land Use-Transportation Study: 1972-1976*
Study Design for the Areawide Water Quality Planning and Management Program for Southeastern Wisconsin: 1975-1977*
Study Design for the Milwaukee Harbor Estuary Comprehensive Water Resources Planning Program, September 1981

PLANNING REPORTS

No. 1 - Regional Planning Systems Study, December 1962*
No. 2 - Regional Base Mapping Program, July 1963*
No. 3 - The Economy of Southeastern Wisconsin, June 1963*
No. 4 - The Population of Southeastern Wisconsin, June 1963*
No. 5 - The Natural Resources of Southeastern Wisconsin, June 1963*
No. 6 - The Public Utilities of Southeastern Wisconsin, July 1963*
No. 7 - The Land Use-Transportation Study
  Volume 1 - Inventory Findings: 1963, May 1965
  Volume 2 - Forecasts and Alternative Plans: 1990, June 1966
  Volume 3 - Recommended Regional Land Use and Transportation Plans: 1990, November 1966*
No. 8 - Soils of Southeastern Wisconsin, June 1966*
No. 9 - A Comprehensive Plan for the Root River Watershed, July 1966*
No. 10 - A Comprehensive Plan for the Kenosha Planning District*
  Volume 1 - Inventory Findings, Forecasts, and Recommended Plans, February 1967*
  Volume 2 - Implementation Devices, February 1967*
No. 11 - A Jurisdictional Highway System Plan for Milwaukee County, March 1969*
No. 12 - A Comprehensive Plan for the Fox River Watershed
  Volume 1 - Inventory Findings and Forecasts, April 1969*
  Volume 2 - Alternative Plans and Recommended Plan, February 1970*
No. 13 - A Comprehensive Plan for the Milwaukee River Watershed
  Volume 1 - Inventory Findings and Forecasts, December 1970
  Volume 2 - Alternative Plans and Recommended Plan, October 1971
No. 14 - A Comprehensive Plan for the Racine Urban Planning District
  Volume 1 - Inventory Findings and Forecasts, December 1970
  Volume 2 - The Recommended Comprehensive Plan, October 1972
  Volume 3 - Model Plan Implementation Ordinances, September 1972
No. 15 - A Jurisdictional Highway System Plan for Walworth County, October 1972
No. 16 - A Regional Sanitary Sewerage System Plan for Southeastern Wisconsin, February 1974
No. 17 - A Jurisdictional Highway System Plan for Ozaukee County, December 1973
No. 18 - A Jurisdictional Highway System Plan for Waukesha County, January 1974
No. 19 - A Library Facilities and Services Plan for Southeastern Wisconsin, July 1974
No. 20 - A Regional Housing Plan for Southeastern Wisconsin, February 1975
No. 21 - A Regional Airport System Plan for Southeastern Wisconsin, December 1975
No. 22 - A Jurisdictional Highway System Plan for Racine County, February 1975
No. 23 - A Jurisdictional Highway System Plan for Washington County, October 1974*
No. 24 - A Jurisdictional Highway System Plan for Kenosha County, April 1975

PLANNING REPORTS—continued

No. 25 - A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000
Volume 1 - Inventory Findings, April 1975
Volume 2 - Alternative and Recommended Plans, May 1978
No. 26 - A Comprehensive Plan for the Menomonee River Watershed
Volume 1 - Inventory Findings and Forecasts, October 1976
Volume 2 - Alternative Plans and Recommended Plan, October 1976
No. 27 - A Regional Park and Open Space Plan for Southeastern Wisconsin, November 1977
No. 28 - A Regional Air Quality Attainment and Maintenance Plan for Southeastern Wisconsin: 2000, June 1980
No. 29 - A Regional Wastewater Sludge Management Plan for Southeastern Wisconsin, July 1978*
No. 30 - A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000
Volume 1 - Inventory Findings, September 1978
Volume 2 - Alternative Plans, February 1979*
Volume 3 - Recommended Plan, June 1979*
No. 31 - A Regional Transportation Plan for the Transportation Handicapped in Southeastern Wisconsin: 1978-1982, April 1978
No. 32 - A Comprehensive Plan for the Kinnickinnic River Watershed, December 1978
No. 33 - A Primary Transit System Plan for the Milwaukee Area, June 1982
No. 34 - A Transportation System Plan for the Milwaukee Northwest Side/Ozaukee County Study Area, August 1983
No. 35 - A Comprehensive Plan for the Pike River Watershed, June 1983
No. 36 - A Comprehensive Plan for the Oak Creek Watershed, August 1986
No. 37 - A Water Resources Management Plan for the Milwaukee Harbor Estuary
Volume 1 - Inventory Findings, March 1987
Volume 2 - Alternative and Recommended Plans, December 1987
No. 38 - A Regional Airport System Plan for Southeastern Wisconsin: 2010, May 1987
No. 39 - A Freeway Traffic Management System Plan for the Milwaukee Area, November 1988

PLANNING GUIDES

No. 1 - Land Development, November 1963*
No. 2 - Official Mapping, February 1964
No. 3 - Zoning, April 1964*
No. 4 - Organization of Planning Agencies, June 1964*
No. 5 - Floodland and Shoreland Development, November 1968
No. 6 - Soils Development, August 1969*

TECHNICAL REPORTS

No. 1 - Potential Parks and Related Open Spaces, September 1965*
No. 2 - Water Law in Southeastern Wisconsin, January 1966*
No. 2 - 2nd Edition, Water Law in Southeastern Wisconsin, December 1977
No. 3 - A Mathematical Approach to Urban Design, January 1966*
No. 4 - Water Quality and Flow of Streams in Southeastern Wisconsin, November 1966
No. 5 - Regional Economic Simulation Model, October 1966*
No. 6 - Planning Law in Southeastern Wisconsin, October 1966*
No. 6 - 2nd Edition, Planning Law in Southeastern Wisconsin, April 1977
No. 7 - Horizontal and Vertical Survey Control in Southeastern Wisconsin, July 1968*
No. 8 - A Land Use Design Model
Volume 1 - Model Development, January 1968
Volume 2 - Model Test, October 1969
Volume 3 - Final Report, April 1973
No. 9 - Residential Land Subdivision in Southeastern Wisconsin, September 1971

TECHNICAL REPORTS—continued

No. 10 - The Economy of Southeastern Wisconsin, December 1972
No. 10 - 2nd Edition, The Economy of Southeastern Wisconsin, May 1984
No. 11 - The Population of Southeastern Wisconsin, December 1972
No. 11 - 2nd Edition, The Population of Southeastern Wisconsin, June 1984
No. 12 - A Short-Range Action Housing Program for Southeastern Wisconsin: 1972 and 1973, June 1972
No. 13 - A Survey of Public Opinion in Southeastern Wisconsin, September 1974
No. 14 - An Industrial Park Cost-Revenue Analysis in Southeastern Wisconsin: 1975, June 1975
No. 15 - Household Response to Motor Fuel Shortages and Higher Prices in Southeastern Wisconsin, August 1976
No. 16 - Digital Computer Model of the Sandstone Aquifer in Southeastern Wisconsin: April 1976
No. 17 - Water Quality of Lakes and Streams in Southeastern Wisconsin: 1964-1975, June 1978
No. 18 - State of the Art of Water Pollution Control in Southeastern Wisconsin
Volume 1 - Point Sources, July 1977
Volume 2 - Sludge Management, August 1977
Volume 3 - Urban Storm Water Runoff, July 1977
Volume 4 - Rural Storm Water Runoff, December 1976
No. 19 - A Regional Population Projection Model, October 1980
No. 20 - Carpooling in the Metropolitan Milwaukee Area, March 1977
No. 21 - Sources of Water Pollution in Southeastern Wisconsin: 1975, September 1978*
No. 22 - Recent Population Growth and Change in Southeastern Wisconsin: 1970-1977, September 1979
No. 23 - Transit-Related Socioeconomic, Land Use, and Transportation Conditions and Trends in the Milwaukee Area, December 1980
No. 24 - State-of-the-Art of Primary Transit System Technology, February 1981
No. 25 - Alternative Futures for Southeastern Wisconsin, December 1980
No. 26 - Milwaukee Area Alternative Primary Transit System Plan Preparation, Test, and Evaluation, March 1982
No. 27 - Milwaukee Area Work Time Rescheduling Study, August 1981
No. 28 - Evaluation of the Milwaukee Area Rideshare Program: 1972-1982, May 1983
No. 29 - Industrial Land Use in Southeastern Wisconsin, November 1984
No. 30 - The Development of an Automated Mapping and Land Information System: A Demonstration Project for the Town of Randall, Kenosha County, Wisconsin, December 1985

COMMUNITY ASSISTANCE PLANNING REPORTS

No. 1 - Residential, Commercial, and Industrial Neighborhoods, City of Burlington and Environs, February 1973
No. 2 - Alternative Land Use and Sanitary Sewerage System Plans for the Town of Raymond: 1990, January 1974
No. 3 - Racine Area Transit Development Program: 1975-1979, June 1974
No. 4 - Floodland Information Report for the Rubicon River, City of Hartford, Washington County, Wisconsin, December 1974
No. 5 - Drainage and Water Level Control Plan for the Waterford-Rochester-Wind Lake Area of the Lower Fox River Watershed, May 1975*
No. 6 - A Uniform Street Naming and Property Numbering System for Racine County, Wisconsin, November 1975*
No. 7 - Kenosha Area Transit Development Program: 1976-1980, March 1976
No. 8 - Analysis of the Deployment of Paramedic Emergency Medical Services in Milwaukee County, April 1976
No. 9 - Floodland Information Report for the Pewaukee River, Village of Pewaukee, Waukesha County, Wisconsin, October 1976
No. 9 - 2nd Edition, Floodland Information Report for the Pewaukee River, Village of Pewaukee, Waukesha County, Wisconsin, March 1985

COMMUNITY ASSISTANCE PLANNING REPORTS—continued

No. 10 - Land Use and Arterial Street System Plans, Village of Jackson, Washington County, Wisconsin, December 1976
No. 11 - Floodland Information Report for Sussex Creek and Willow Springs Creek, March 1977
No. 12 - Waukesha Area Transit Development Program: 1977-1981, January 1977
No. 13 - Flood Control Plan for Lincoln Creek, Milwaukee County, Wisconsin, September 1977
No. 13 - 2nd Edition, Flood Control Plan for Lincoln Creek, Milwaukee County, Wisconsin, September 1983
No. 14 - Floodland Management Plan for the Village of Pewaukee, February 1978*
No. 15 - Off-Airport Land Use Development Plan for General Mitchell Field and Environs: 1977, May 1977
No. 16 - A Plan for the Whittier Neighborhood, City of Kenosha and Town of Pleasant Prairie, Kenosha County, Wisconsin, June 1977
No. 17 - A Plan for the Jefferson Park Neighborhood, Village of Germantown, Washington County, Wisconsin, March 1978
No. 18 - A Land Use Plan for the Town of Erin: 2000, July 1978*
No. 19 - Storm Water Storage Alternatives for the Crossway Bridge and Port Washington-Bayfield Drainage Area in the Village of Fox Point, August 1977
No. 20 - A Rail Transportation Service Plan for the East Troy Area, September 1977
No. 21 - A Transportation Systems Management Plan for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1978, December 1977
No. 22 - Alternative and Recommended Land Use Plans for the Town of Genesee: 2000, February 1978
No. 23 - A Park and Recreation Plan for Ozaukee County, August 1978*
No. 24 - A Park and Open Space Plan for the Village of Darien, December 1978*
No. 25 - A Plan for the Delrock Neighborhood, City of Delavan, Walworth County, Wisconsin, January 1979*
No. 26 - A Transportation Systems Management Plan for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1979, December 1978
No. 27 - A Park and Open Space Plan for the Town of Eagle, April 1979
No. 28 - Oconomowoc Area Traffic Management Plan, City of Oconomowoc, Waukesha County, Wisconsin, December 1979
No. 29 - A Development Plan for the Quarry Ridge Neighborhood, City of Burlington, Racine County, Wisconsin, July 1979*
No. 30 - Whitewater Area Rail Service Plan, August 1979
No. 31 - Waukesha Area Transit Development Program: 1981-1985, February 1980
No. 32 - Recommended Electronic Data Processing and Transmittal System for Criminal Justice Agencies in Southeastern Wisconsin, September 1979
No. 33 - A Land Use Plan for the Town of Fredonia: 2000, September 1979
No. 34 - A Transportation Systems Management Plan for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1980, December 1979*
No. 35 - Sanitary Sewer Service Area for the City of West Bend, Washington County, Wisconsin, December 1982
No. 36 - A Land Use Plan for the Village of Germantown: 2000, Village of Germantown, Washington County, Wisconsin, July 1980
No. 37 - A Nonpoint Source Water Pollution Control Plan for the Root River Watershed, March 1980
No. 38 - A Land Use and Traffic Circulation Plan for the Village of Fredonia: 2000, Ozaukee County, Wisconsin, September 1980*
No. 39 - A Public Transit System Accessibility Plan
Volume 1 - Kenosha Urbanized Area, June 1980
Volume 2 - Milwaukee Urbanized Area, Milwaukee County, May 1980
Volume 3 - Racine Urbanized Area, June 1980
Volume 4 - Milwaukee Urbanized Area, Waukesha County, June 1980

COMMUNITY ASSISTANCE PLANNING REPORTS—continued

No. 40 - Recommended Locations for Motor Vehicle Inspection and Emissions Test Facilities in the Southeastern Wisconsin Region, October 1980
No. 41 - A Park and Open Space Plan for the Kenosha Planning District, December 1980*
No. 42 - A Park and Open Space Plan for the Town and Village of Pewaukee, Waukesha County, Wisconsin, October 1980
No. 43 - A Development Plan for the Woodview Neighborhood, City of Franklin, Milwaukee County, Wisconsin, September 1980
No. 44 - Proposed Public Transit Service Improvements: 1980, Waukesha County, Wisconsin, July 1980*
No. 45 - A Farmland Preservation Plan for Kenosha County, Wisconsin, June 1981*
No. 46 - A Farmland Preservation Plan for Racine County, Wisconsin, August 1981*
No. 47 - A Water Quality Management Plan for Lac La Belle, December 1980*
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No. 50 - A Transportation Systems Management Plan for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1981, June 1981
No. 51 - A Land Use Plan for the Village of Sussex: 2000, Waukesha County, Wisconsin, January 1982*
No. 52 - Housing Opportunities Guide for the Southeastern Wisconsin Region, December 1980
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No. 56 - Sanitary Sewer Service Areas for the Walworth County Metropolitan Sewerage District, August 1981
No. 57 - A Development Plan for the Forest Hills Neighborhood, City of Franklin, Milwaukee County, Wisconsin, September 1983*
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No. 63 - 2nd Edition, A Development Plan for the Echo Lake Neighborhood, City of Burlington, Racine County, Wisconsin, August 1984
No. 64 - Sanitary Sewer Service Area for the City of Muskego, Waukesha County, Wisconsin, February 1982
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No. 69 - A Land Use and Urban Design Plan for the City of Elkhorn: 2000, Walworth County, Wisconsin, January 1985
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No. 89 - A Stormwater Management Plan for the Village of Sussex, Waukesha County, Wisconsin, October 1983
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No. 97 - Sanitary Sewer Service Area for the Village of Belgium, Ozaukee County, Wisconsin, November 1984
No. 97 - 2nd Edition, Sanitary Sewer Service Area, Village of Belgium, Ozaukee County, Wisconsin, June 1987
No. 98 - A Water Quality Management Plan for Friess Lake, Washington County, Wisconsin, August 1983
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No. 111 - Land Use and Urban Design Plan for the City of New Berlin: 2010, April 1987
No. 112 - Sanitary Sewer Service Area for the Village of East Troy and Environs, Walworth County, Wisconsin, August 1984
No. 113 - Sanitary Sewer Service Area for the Town of Pewaukee Sanitary District No. 3, Lake Pewaukee Sanitary District, and Village of Pewaukee, Waukesha County, Wisconsin, June 1985
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No. 126 - A Development Plan for Kenosha County, Wisconsin, Volume One, Inventory Findings, May 1987
No. 127 - Sanitary Sewer Service Area for the City of Delafield and the Village of Nashotah and Environs, Waukesha County, Wisconsin, October 1985
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No. 146 - A Wildlife Habitat Management Plan for the Nicholson Wildlife Center, Town of Caledonia, Racine County, Wisconsin, May 1986
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No. 148 - A Park and Open Space Plan, Village of Walworth, Walworth County, Wisconsin, November 1986
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No. 5 - Capital Improvements Program: 1987-1991, Village of East Troy, Walworth County, Wisconsin, December 1986*
No. 6 - Report of the Hoan Bridge South Task Force, Milwaukee County, Wisconsin, December 1986
No. 7 - Public Transit Ridership Trends in Southeastern Wisconsin: 1975-1986, May 1987
No. 8 - Assessment of Transportation Needs of Elderly and Handicapped Residents of Ozaukee County, June 1987
No. 9 - An Arterial Highway System Plan for Eastern Racine County, April 1987
No. 10 - City of Elkhorn Fact Book, Walworth County, Wisconsin, November 1986
No. 11 - City of Elkhorn Overall Economic Development Program Plan, Walworth County, Wisconsin, December 1986*
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No. 17 - A Public Transit Program for Handicapped Persons—City of Waukesha Transit System Utility, May 1987*
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No. 26 - Official Map, City of Burlington, Racine County, Wisconsin, December 1987
No. 27 - Village of Mukwonago Industrial Park Development Plan, Waukesha County, Wisconsin, March 1988
No. 28 - Streams and Watercourses for Which the Milwaukee Metropolitan Sewerage District Has Assumed Jurisdiction for Drainage and Flood Control Purposes, August 1987
No. 29 - A Plan for the Abatement of Through Traffic Problems in the Village of West Milwaukee, March 1988
No. 30 - Overall Economic Development Program Plan, City of South Milwaukee, Milwaukee County, Wisconsin, March 1988
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No. 34 - Overall Economic Development Program Plan, City of West Allis, Milwaukee County, Wisconsin, September 1988
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No. 36 - Traffic Engineering Study of Milwaukee Avenue (STH 36) Between the Central Business District and the Northern Corporate Limits of the City of Burlington, Racine County, Wisconsin, August 1988
No. 37 - Economic Development Fact Book, City of South Milwaukee, Milwaukee County, Wisconsin, May 1988

ECONOMIC DEVELOPMENT PROFILES

Economic Development Profiles have been prepared for the Southeastern Wisconsin Region, for each of the seven counties in the Region, for the Milwaukee Metropolitan Statistical Area, and for the following communities within each of the seven counties:

Kenosha County
- City of Kenosha
- Town of Bristol
- Town of Pleasant Prairie

Milwaukee County
- City of Cudahy
- City of Franklin
- City of Milwaukee
- City of Oak Creek
- City of South Milwaukee
- City of Wauwatosa
- City of West Allis
- Village of West Milwaukee

Ozaukee County
- City of Cedarburg
- City of Mequon
- City of Port Washington
- Village of Belgium
- Village of Grafton
- Village of Saukville

Racine County
- City of Burlington
- City of Racine
- Village of Rochester
- Village of Sturtevant
- Village of Union Grove
- Village of Waterford
- Town of Caledonia
- Town of Mt. Pleasant

Walworth County
- City of Delavan
- City of Elkhorn
- City of Lake Geneva
- City of Whitewater
- Village of Darien
- Village of East Troy
- Village of Walworth

Washington County
- City of Hartford
- City of West Bend

Washington County (continued)
- Village of Germantown
- Village of Jackson
- Village of Kewaskum
- Village of Slinger

Waukesha County
- City of Brookfield
- City of Delafield
- City of Muskego
- City of New Berlin
- City of Oconomowoc
- City of Waukesha
- Village of Butler
- Village of Dousman
- Village of Elm Grove
- Village of Hartland
- Village of Menomonee Falls
- Village of Mukwonago
- Village of Pewaukee
- Village of Sussex
- Town of Pewaukee

LAKE USE REPORTS—FOX RIVER WATERSHED

Kenosha County
- No. FX-40, Benedict Lake
- No. FX-12, Camp Lake
- No. FX-27, Center Lake
- No. FX-35, Cross Lake
- No. FX-45, Dyer Lake
- No. FX-7, Elizabeth Lake
- No. FX-34, Lilly Lake
- No. FX-17, Marie Lake
- No. FX-13, Powers Lake
- No. FX-11, Silver Lake*
- No. FX-45, Voltz Lake

Racine County
- No. FX-25, Bohner Lake
- No. FX-15, Browns Lake
- No. FX-9, Eagle Lake
- No. FX-42, Echo Lake
- No. FX-32, Kee Nong Go-Mong Lake
- No. FX-29, Long Lake
- No. FX-6, Waterford-Tichigan Lakes
- No. FX-26, Waubeesee Lake
- No. FX-5, Wind Lake

Walworth County
- No. FX-41, Army Lake
- No. FX-40, Benedict Lake
- No. FX-7, Beulah Lake
- No. FX-31, Booth Lake
- No. FX-4, Como Lake
- No. FX-1, Geneva Lake
- No. FX- Lauderdale Lakes (17, Green Lake, 20, Middle Lake, 18, Mill Lake)
- No. FX-39, Lulu Lake
- No. FX-21, North Lake
- No. FX-37, Pell Lake
- No. FX-43, Peters Lake
- No. FX-25, Pleasant Lake
- No. FX-24, Potters Lake
- No. FX-38, Silver Lake
- No. FX-30, Wandawega Lake

LAKE USE REPORTS—FOX RIVER WATERSHED—continued

Waukesha County
- No. FX-3, Big Muskego Lake
- No. FX-23, Denoon Lake*
- No. FX-19, Eagle Spring Lake
- No. FX-10, Little Muskego Lake
- No. FX-14, Lower Phantom Lake
- No. FX-2, Pewaukee Lake
- No. FX-34, Spring Lake
- No. FX-33, Upper Phantom Lake

LAKE USE REPORTS—MILWAUKEE RIVER WATERSHED

Fond du Lac County
- No. ML-2, Long Lake
- No. ML-9, Auburn Lake
- No. ML-21, Forest Lake
- No. ML-12, Mauthe Lake
- No. ML-18, Mud Lake
- No. ML-5, Kettle Moraine Lake

Ozaukee County
- No. ML-4, Mud Lake
- No. ML-17, Spring Lake

Sheboygan County
- No. ML-6, Random Lake*
- No. ML-10, Crooked Lake
- No. ML-7, Lake Ellen

Washington County
- No. ML-3, Little Cedar Lake
- No. ML-14, Green Lake
- No. ML-19, Lake Twelve
- No. ML-13, Lucas Lake
- No. ML-11, Smith Lake
- No. ML-20, Wallace Lake*
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  by J. Robert Doughty, Study Director
- Home Interview Sample Selection - Part I
  by Kenneth J. Schlager, Chief Systems Engineer
- Truck and Taxi Sample Selection
  by Thomas A. Winkel, Urban Planning Supervisor
- A Backward Glance: Early Toll Roads in Southeastern Wisconsin
  by Richard E. Rehberg, Editor

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- Arterial Network and Traffic Analysis Zones
  by Richard B. Sheridan, Chief Transportation Planner
- Conducting the Household Postal Questionnaire Survey
  by Wade G. Fox, Cartography and Design Supervisor
- Conducting the Home Interview Survey
  by Sheldon W. Sullivan, Administrative Officer
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Inventory of Existing Outdoor Recreation Facilities
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Inventory of Potential Park and Related Open Space Sites
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Inventory of the Arterial Street Network
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Checking the Network Description for Arterial Highway and Transit Networks
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A Study of the Water Quality and Flow of Streams in Southeastern Wisconsin
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A Backward Glance: Greendale—Garden City in Wisconsin
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A Backward Glance: Highway Development in Southeastern Wisconsin - Part I
by Jean C. Meier, Librarian and Research Assistant

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A Modal Split Model for Southeastern Wisconsin
by Edward Weiner, Highway Engineer

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Transit System Development Standards
by Edward Weiner, Transportation Planning Engineer
Modified Rapid Transit Service in the Southeastern Wisconsin Region
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A Backward Glance: Highway Development in Southeastern Wisconsin - Part II
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Hydrogeologic Considerations in Liquid Waste Disposal,
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by Martha J. Ketelle, Department of Geology and Geophysics,
University of Wisconsin-Madison, Wisconsin

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Characteristics of Air and Ground Travel Generated by
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by Sheldon W. Sullivan, Chief of Data Collection
Shifts in Centers of Population within the Region: 1960-1970
by Wayne H. Faust, Associate Planner
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Freeway Flyer Service in Southeastern Wisconsin-A Progress Report: 1964-1971
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A Backward Glance: The American Automobile—A Brief History of the Development
of the American Automobile and the Growth of Automobile Registrations in the
United States, Wisconsin, and the Southeastern Wisconsin Region: 1896-1970
by Sheldon W. Sullivan, Chief of Data Collection

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Floodland Management: The Environmental Corridor Concept
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Characteristics of Travel in the Milwaukee Central Business District: 1963 and 1972
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The Changing Factorial Ecology of Milwaukee's Black Ghetto
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A Backward Glance: Environmental Corridors of Yesterday and Today
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Jeanne Sollen, Editor

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A Backward Glance: Milwaukee's Water Story
by Milwaukee Water Works
Is There a Groundwater Shortage in Southeastern Wisconsin?
by Douglas A. Cherkaver and Vinton W. Bacon,
University of Wisconsin-Milwaukee
An Overview of the Sources of Water Pollution in Southeastern Wisconsin
by Kurt W. Bauer, Executive Director, SEWRPC
The Effect of Sample Rate on Socioeconomic and Travel Data
Obtained through Standard Home Interview
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Refining the Delineation of the Environmental Corridors in Southeastern Wisconsin
by Bruce P. Rubin, Chief Land Use Planner, SEWRPC, and
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Water Quality and Quantity Simulation Modeling for the Areawide
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Evaluation of a Water Quality Standard for Total Phosphorus in
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Bibliography of Lake Michigan Shore Erosion and Nearshore Process Studies
by Norman P. Lasca, Professor, Department of Geological Sciences and Center for
Great Lakes Studies, University of Wisconsin-Milwaukee, and
David Baier, Warren Baumann, Patrick Curth, and Jan H. Smith, Geologists,
Department of Geological Sciences and Center for Great Lakes Studies,
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A Backward Glance: Historic Evolution of the Local Governmental
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by Eileen Hammer

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Preservation of Scientifically and Historically Important Geologic Sites
in Milwaukee County, Wisconsin
by Donald G. Mikulic, Staff Geologist, Illinois State Geological Survey; and
Joanne Kluessendorf, Geologic Research Assistant, Illinois State Geological Survey,
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Inventory of Solid Waste Management Facilities in Southeastern Wisconsin: 1980
by Robert P. Biebel, Principal Engineer, SEWRPC, and
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by Jean M. Lusk, SEWRPC Planner, and
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2nd Regional Planning Conference, November 4, 1962*
3rd Regional Planning Conference, November 20, 1963*
4th Regional Planning Conference, May 12, 1965*
5th Regional Planning Conference, October 26, 1965*
6th Regional Planning Conference, May 6, 1969
7th Regional Planning Conference, January 19, 1972
8th Regional Planning Conference, October 16, 1974
Regional Conference on Sanitary Sewerage System User and Industrial Waste Treatment Recovery Charges, July 18, 1974
9th Regional Planning Conference, April 14, 1976
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11th Regional Planning Conference, April 19, 1979
12th Regional Planning Conference, January 31, 1980
13th Regional Planning Conference, November 9, 1983
14th Regional Planning Conference, May 13, 1985
15th Regional Planning Conference, November 14, 1988

NEWSLETTERS

Volume 28, Nos. 1-6

TRANSPORTATION IMPROVEMENT PROGRAMS

A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1978-1982, December 1977*
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1979-1983, December 1978*
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1980-1984, December 1979*
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1981-1985, December 1980*
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1982-1986, December 1981*

TRANSPORTATION IMPROVEMENT PROGRAMS—continued

A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1983-1987, December 1982*
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1984-1988, December 1983*
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1985-1989, December 1984*
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1986-1990, December 1985*
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1987-1991, December 1986*
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1988-1992, December 1987*
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1989-1993, December 1988

OTHER

Twenty-Five Years of Regional Planning, December 1985

*Out of print.

Appendix E

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July 28, 1989

The Commissioners of
Southeastern Wisconsin
Regional Planning Commission
Waukesha, Wisconsin

We have examined the general purpose financial statements of the Southeastern Wisconsin Regional Planning Commission as of December 31, 1988, and for the year then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the general purpose financial statements herewith provided present fairly the financial position of Southeastern Wisconsin Regional Planning Commission at December 31, 1988, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Victor L. Young S.C.

VICTOR L. YOUNG, S.C.

Southeastern Wisconsin Regional Planning Commission

Combined Balance Sheet - All Fund Types and Account Groups

December 31, 1988

Assets	Governmental Fund Types: General	Governmental Fund Types: Special Revenue	Account Groups: General Fixed Assets	Totals (Memorandum Only): 1988	Totals (Memorandum Only): 1987
Treasurer's cash	$ 438,392.67	$	$	$ 438,392.67	$ 507,819.57
Due from service agreements	290,979.59			290,979.59	298,650.69
Grants receivable		238,986.15		238,986.15	182,109.15
Contracts receivable	73,047.57	267,121.92		340,169.49	247,093.08
Service agreements receivable	280,934.49			280,934.49	272,992.25
Fixed assets			1,853,420.83	1,853,420.83	1,558,437.47
Due from/(to) other funds	435,407.26	(435,407.26)			
Total Assets	$1,518,761.58	$ 70,700.81	$1,853,420.83	$3,442,883.22	$3,067,102.21
Liabilities					
State sales tax	$ 292.90	$	$	$ 292.90	$ 220.67
Accounts payable	293,609.07	70,700.81		364,309.88	366,468.60
Vacation accrual	107,930.23			107,930.23	107,930.23
Notes payable			740,206.21	740,206.21	859,411.82
Total Liabilities	401,832.20	70,700.81	740,206.21	1,212,739.22	1,334,031.32
Fund Equity					
Investment in fixed assets			1,113,214.62	1,113,214.62	699,025.65
Fund balances - designated	298,411.00			298,411.00	429,899.00
- undesignated	818,518.38			818,518.38	604,146.24
Total Fund Equity	1,116,929.38		1,113,214.62	2,230,144.00	1,733,070.89
Total Liabilities and Fund Equity	$1,518,761.58	$ 70,700.81	$1,853,420.83	$3,442,883.22	$3,067,102.21

The accompanying accountant's audit report and notes to financial statements are an integral part of these statements.

Southeastern Wisconsin Regional Planning Commission

Combined Statement of Revenues, Expenditures and Changes in Fund Balances - All Governmental Fund Types

For the Year Ended December 31, 1988

	Governmental Fund Types: General	Governmental Fund Types: Special Revenue	Total (Memorandum Only): 1988	Total (Memorandum Only): 1987
Revenues				
Contributions from counties	$ 884,670.00	$	$ 884,670.00	$ 875,910.00
Grant revenues		1,248,995.00	1,248,995.00	1,022,241.88
Contract revenues	363,424.54	879,066.27	1,242,490.81	1,202,173.43
Service grants	2,744,393.55		2,744,393.55	2,913,683.05
Interest on invested funds	57,409.10		57,409.10	56,923.87
Other income	60,962.83		60,962.83	36,380.86
Total Revenues	4,110,860.02	2,128,061,27	6,238,921.29	6,107,313.09
Expenditures				
Salaries and fringe benefits	2,037,773.52	1,041,049.66	3,078,823.18	2,893,597.76
Office and other expenses				
Technical consultants	104,845.86	587,237.39	692,083.25	692,936.43
Office supplies	27,896.37	20,420.64	48,317.01	43,791.33
Insurance, audit, legal fees	33,158.66	9,274.36	42,433.02	33,717.41
Library acquisition and dues	9,527.61	8,498.74	18,026.35	14,702.43
Reprographics and publication	89,420.83	74,512.76	163,933.59	127,302.46
Newsletter	3,257.74	1,435.50	4,693.24	4,150.08
Postage expense	7,407.71	7,241.39	14,649.10	12,669.40
Travel expense	31,150.45	6,403.80	37,554.25	35,012.93
Telephone expense	28,409.58	12,388.14	40,797.72	44,129.74
Rent	104,095.11	45,435.89	149,531.00	149,201.00
D.P. computer graphics/equipment supplies	1,501,611.85	213,205.83	1,714,817.68	1,652,213.54
Annual report	3,481.79	1,391.32	4,873.11	7,406.35
Other operating expenses	7,602.45	13,575.60	21,178.05	12,613.11
Unemployment compensation expense	389.58	408.25	797.83	2,555.54
Auto/office equipment maintenance	36,333.64	55,068.17	91,401.81	48,677.27
Capital outlay	32,126.96		32,126.96	34,740.74
Total Expenditures	4,058,489.71	2,097,547.44	6,156,037.15	5,809,417.52
Excess Revenues Over Expenditures	52,370.31	30,513.83	82,884.14	297,895.57
Operating Transfers in (out)	30,513.83	(30,513.83)		
Fund Balance - beginning of year	1,034,045.24		1,034,045.24	731,293.01
Add: Annuity Reserve				4,856.66
Fund Balance - End of Year	$1,116,929.38	$ -	$1,116,929.38	$1,034,045.24

The accompanying accountant's audit report and notes to financial statements are an integral part of these statements.

Southeastern Wisconsin Regional Planning Commission

Combined Statement of Revenues, Expenditures and Changes in Fund Balances - Budget and Actual - All Governmental Fund Types

For the Year Ended December 31, 1988

	Budget	Actual	Variance Favorable (Unfavorable)
Revenues			
Contributions from counties	$ 884,670.00	$ 884,670.00	$
Grant revenues	1,322,770.00	1,248,995.00	(73,775.00)
Contract revenues	167,900.00	1,242,490.81	1,074,590.81
Service grants	2,658,980.00	2,744,393.55	85,413.55
Interest on invested funds		57,409.10	57,409.10
Other income		60,962.83	60,962.83
Total Revenues	5,034,320.00	6,238,921.29	1,204,601.29
Expenditures			
Salaries and fringe benefits	3,024,400.00	3,078,823.18	(54,423.18)
Office and other expenses			
Technical consultants	55,000.00	692,083.25	(637,083.25)
Office supplies	64,300.00	48,317.01	15,982.99
Insurance, audit, legal fees	30,750.00	42,433.02	(11,683.02)
Library acquisition and dues	16,950.00	18,026.35	(1,076.35)
Reprographics and publication	113,960.00	163,933.59	(49,973.59)
Newsletter	7,000.00	4,693.24	2,306.76
Postage expense	16,500.00	14,649.10	1,850.90
Travel expense	49,920.00	37,554.25	12,365.75
Telephone expense	58,000.00	40,797.72	17,202.28
Rent	149,160.00	149,531.00	(371.00)
D.P. computer graphics/equipment and supplies	1,331,700.00	1,714,817.68	(383,117.68)
Annual report	3,500.00	4,873.11	(1,373.11)
Other operating expenses	7,000.00	21,178.05	(14,178.05)
Unemployment compensation expense	4,500.00	797.83	3,702.17
Auto/office equipment/maintenance	70,800.00	91,401.81	(20,601.81)
Capital outlay	30,880.00	32,126.96	(1,246.96)
Total Expenditures	5,034,320.00	6,156,037.15	(1,121,717.15)
Excess Revenues Over Expenditures	-	82,884.14	82,884.14
Fund Balance - beginning of year	-	1,034,045.24	-
Fund Balance - end of year	$ -	$1,116,929.38	$ -

The accompanying accountant's audit report and notes to financial statements are an integral part of these statements.

Southeastern Wisconsin Regional Planning Commission

Combined Notes to Financial Statements

For the Year Ended December 31, 1988

The accompanying summary of Southeastern Wisconsin Regional Planning Commission's more significant accounting policies is presented to assist the reader in interpreting the financial statements and other data in this report. These policies, as presented, should be reviewed as an integral part of the accompanying financial statements. The accounting policies of the Southeastern Wisconsin Regional Planning Commission conform to generally accepted accounting principles as applicable to governmental units.

Note 1 - Summary of Significant Accounting Policies

Reporting Entity

The Commission uses the criteria set forth in National Council on Governmental Accounting Statement 3 and Interpretation 7 to determine the scope of the Commission's reporting entity. The accompanying financial statements reflect all significant operations of the Commission which are under control of the Commissioners of Southeastern Wisconsin Regional Planning Commission.

Basis of Presentation

Southeastern Wisconsin Regional Planning Commission is a public agency serving the local communities within the counties of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha.

The accounts of the Commission are organized on the basis of funds and account groups, each of which is considered a separate accounting entity. The operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, liabilities, fund equity, revenues, and expenditures. Government resources are allocated to and accounted for in individual funds based upon the purposes for which they are to be spent and the means by which spending activities are controlled. The following funds and account groups are used by the Commission:

Governmental Funds

General Fund - The General Fund is the general operating fund of the Commission. It is used to account for all financial resources except those required to be accounted for in another fund.

Special Revenue Funds - Special Revenue Funds are used to account for the specific revenue sources (other than major capital projects) that are legally restricted to expenditures for specified purposes.

Southeastern Wisconsin Regional Planning Commission

Combined Notes to Financial Statements

For the Year Ended December 31, 1988

Note 1 - Summary of Significant Accounting Policies (Cont'd)

Account Groups

General Fixed Asset Group - Used to account for fixed assets not accounted for in any other fund.

Total (Memorandum Only) - The column captioned Total (Memorandum Only) in the combined financial statements is a total of the columnar statements by fund type and account groups. The total column is not comparable to a consolidation and does not present financial position and results of operations in conformity with generally accepted accounting principles because the same basis of accounting is not used by all funds and interfund transactions and balances and account groups balancing accounts have not been eliminated.

Budget

The Commissions annual budget is prepared principally on the cash basis and represents departmental appropriations as authorized and any authorized revisions during the year to reflect changes in programs and activities. The budget cash basis differs from generally accepted accounting principles (GAAP). Actual amounts in the accompanying budgetary comparison statement are presented on the modified accrual basis.

Cash and Cash Equivalents

In addition to bank accounts and petty cash, this classification includes all short-term investments.

Basis of Accounting

The modified accrual basis of accounting is followed by the governmental funds. Under the modified accrual basis those items of revenue for which a valid receivable can be determined in advance of their due date should be recognized on the accrual basis. All other items are recognized on the cash basis because the time of collection generally coincides with the determination of the amount. Expenditures are recognized when a liability to be met from fund assets is incurred.

Fixed Assets

Governmental general fixed assets acquired during the year ended December 31, 1988 are recorded as expenditures in the governmental funds. Generally accepted accounting principles require that these fixed assets be capitalized at cost in the general fixed assets account group.

Southeastern Wisconsin Regional Planning Commission

Combined Notes to the Financial Statements

For the Year Ended December 31, 1988

Note 1 - Summary of Significant Accounting Policies (Cont'd)

Accrued Vacation

The Commission accrues unused vacation time since the unused vacation time is cumulative from year to year. The maximum accrual per individual is 20 days.

Fund Balances

The Commission classifies its fund equity as follows:

Designated Fund Balances - indicates that portion of fund equity, which has been segregated for specific purposes.

Undesignated Fund Balances - indicates that portion of fund equity, which is available for budgeting or other uses in future periods.

Note 2 - General Fixed Asset Group

Fixed Assets as of December 31 are as follows:

	1988	1987
Desks	$ 14,205.60	$ 14,205.60
Chairs	15,770.27	14,797.70
Calculators and adding machines	13,274.41	13,064.67
Filing cabinets	40,873.79	39,538.79
Typewriters	21,151.07	18,989.12
Book cases	17,629.83	17,062.52
Tables	16,708.44	11,612.32
Data processing equipment	1,539,308.01	1,276,266.00
Major equipment	70,733.88	61,083.88
Automobiles	74,461.08	62,836.08
Miscellaneous	29,304.45	28,980.79
	$1,853,420.83	$1,558,437.47

Note 3 - Employee Retirement Plan

The Commission is a participant in the State of Wisconsin Retirement System covering substantially all full-time employees on a non-contributory basis. The annual employer's contribution rate, which is actuarially determined by the State of Wisconsin, provides for funding of prior service costs. Information concerning the amount, if any, of the excess of the actuarially computed value of vested benefits over the total assets available in the pension fund is not maintained by individual participant units. Retirement plan expenses, which include amortization of prior service costs, for the year 1988 were $245,515.56.

Southeastern Wisconsin Regional Planning Commission

Combined Notes to the Financial Statements

For the Year Ended December 31, 1988

Note 4 - Cash and Temporary Investments

Cash and temporary investment balances as disclosed on the accompanying financial statements are comprised of the following:

Cash on hand and on deposit	$ 20,381.34
Temporary cash investments	418,011.33
Total	$ 438,392.67

Note 5 - Cognizant Agency

The cognizant agency for the Single Audit report is the Wisconsin Department of Transportation.

Note 6 - Commitments

Rent

The Commission leases space from Waukesha County under a lease agreement that runs through December 31, 1991. The Commission has the option of renewing the lease for three successive periods of three years each. The minimum lease payments are as follows:

1989	$ 173,893.42
1990	173,893.42
1991	112,443.99

Equipment

The Commission purchased various pieces of equipment on monthly payments. The remaining minimum payments are as follows:

1989	$ 360,632.78
1990	153,753.96
1991	128,781.96
1992	97,037.51
	$ 740,206.21

Note 7 - Designated Funds

The Commission has designated the following funds for future purposes:

Equipment replacement	$ 50,000.00
Unemployment Compensation Trust	50,000.00
Errors and Omissions Insurance	70,000.00
Computer Graphics Reserve Account	128,411.00
	$ 298,411.00

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