Twenty-sixth annual report. July 1987

Waukesha, Wisconsin: Southeastern Wisconsin Regional Planning Commission, July 1987

1986 ANNUAL REPORT

SERVING THE COUNTIES OF
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TWENTY-SIXTH ANNUAL REPORT

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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July 1987

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Outside Region $4.00

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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Serving the Counties of: KENOSHA
MILWAUKEE
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July 31, 1987

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 26th annual report of the Commission, summarizes the accomplishments of the Commission in calendar year 1986, 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 1986 by the Commission in carrying out its three basic functions—data collection and dissemination, regional plan preparation, and plan implementation. Importantly, one new major plan element was adopted during the year, that being a comprehensive water resources management plan for the Oak Creek watershed in Milwaukee County. In addition, the Commission adopted a number of important amendments to the regional water quality management plan, including comprehensive management plans for Friess Lake in Washington County, Geneva Lake in Walworth County, and Pewaukee Lake in Waukesha County; and detailed sanitary sewer service area plans for the Village of Paddock Lake and the Towns of Bristol and Salem in Kenosha County, and for the City of Racine, the Villages of Waterford, Rochester, Sturtevant, Elmwood Park, North Bay, and Wind Point, and the Towns of Mt. Pleasant, Caledonia, Rochester, and Waterford in Racine County. Significant progress was also made during the year toward completion of other important plan amendments, including a comprehensive water resources plan for the Milwaukee Harbor estuary. Progress in these and other plan development efforts, as well as in plan implementation activities, is summarized within this annual report.

As it begins its second quarter century of service to the Region, the Commission is pleased with the progress made during the year in guiding the development of the Region in the public interest through a voluntary, cooperative, areawide planning effort. The Commission looks forward to continuing to serve its constituent local units of government and the state and federal agencies concerned.

Very truly yours,

Anthony F. Balestrieri
Chairman

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ABOUT THE COMMISSION

AUTHORITY

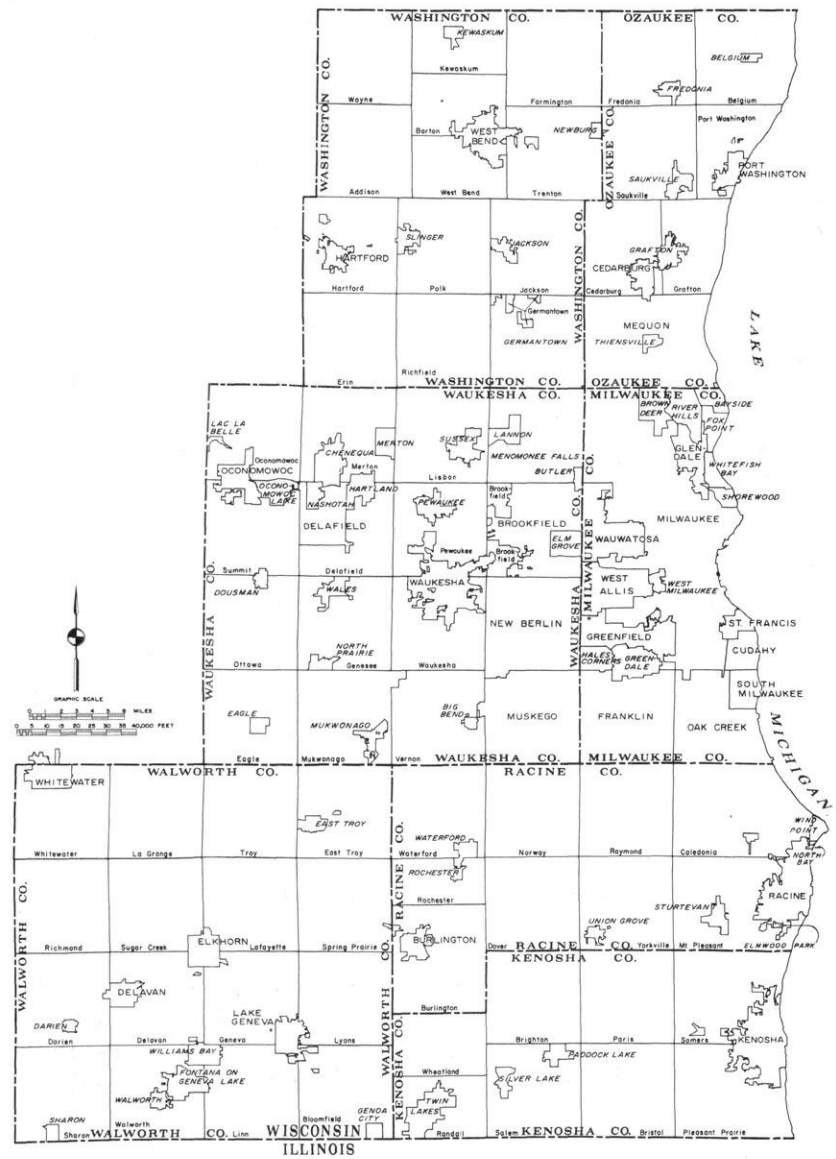
The Southeastern Wisconsin Regional Planning Commission was established in 1960 under Section 66.945 of the Wisconsin Statutes as the official areawide planning agency for the highly urbanized southeastern region of the State. The Commission was created to provide the basic information and planning services 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 1.74 million persons, or about 36 percent of the total population of the State. The seven counties provide about 877,400 jobs, or about 40 percent of the total employment of the State,

Map 1

THE SOUTHEASTERN WISCONSIN REGION



and contain real property worth about $42.6 billion as measured in equalized valuation, or about 37 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 31 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 670 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 1986, the staff totaled 102, including 76 full-time and 26 part-time employees. Interagency staff assignments during the year involved two professional staff members, one from the University of Wisconsin-Extension and one from the Wisconsin Department of Natural Resources.

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 heavily supplemented by state and federal aids. Revenues received by the Commission during 1986 totaled about $5.6 million, of which about 46 percent, or $2.2 million, represents contract revenues for local government data processing services. County tax levies in 1986 totaled $875,910, or about $0.50 per capita. The sources of this revenue for 1986 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

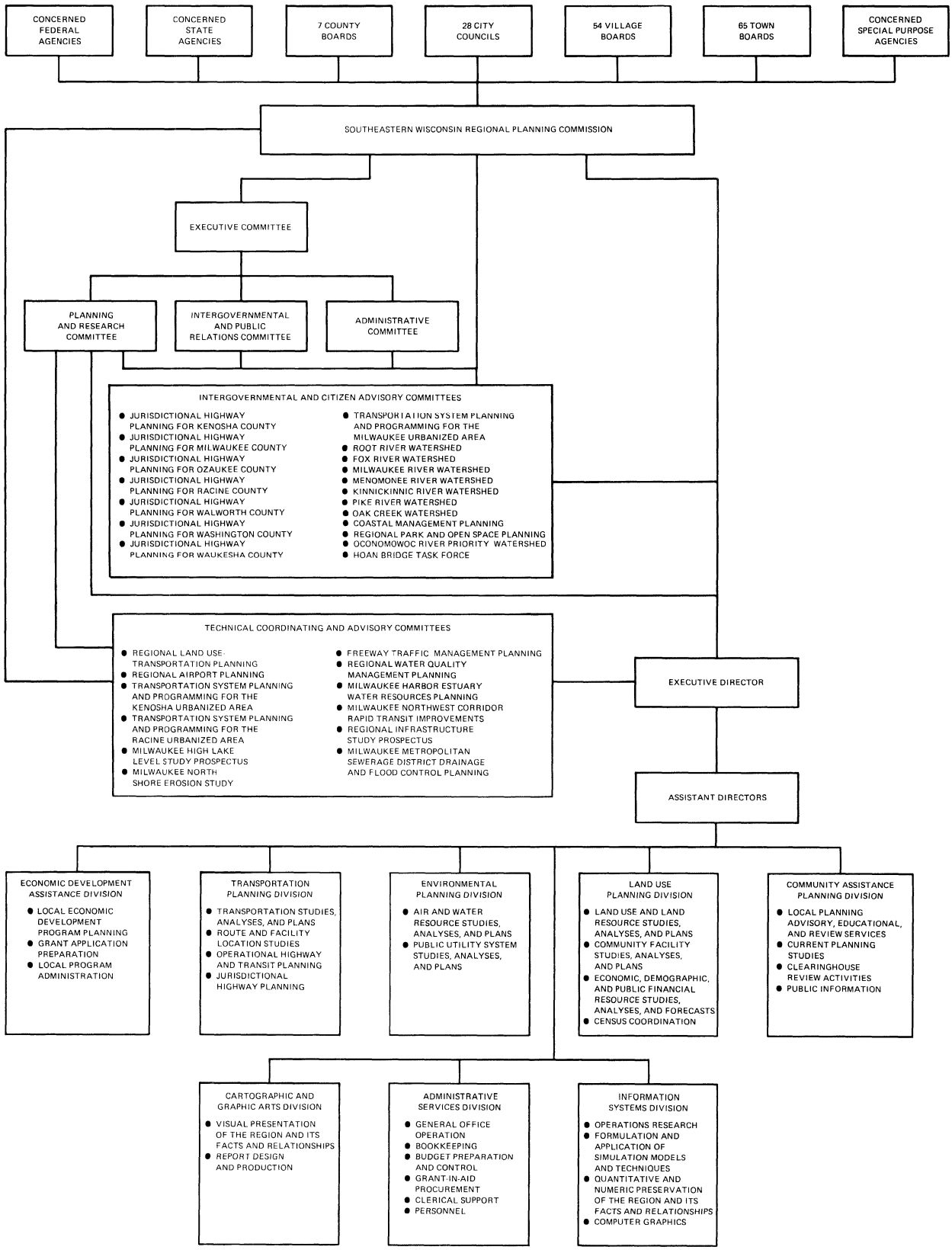


Figure 2

FUNDING TREND: 1961-1986

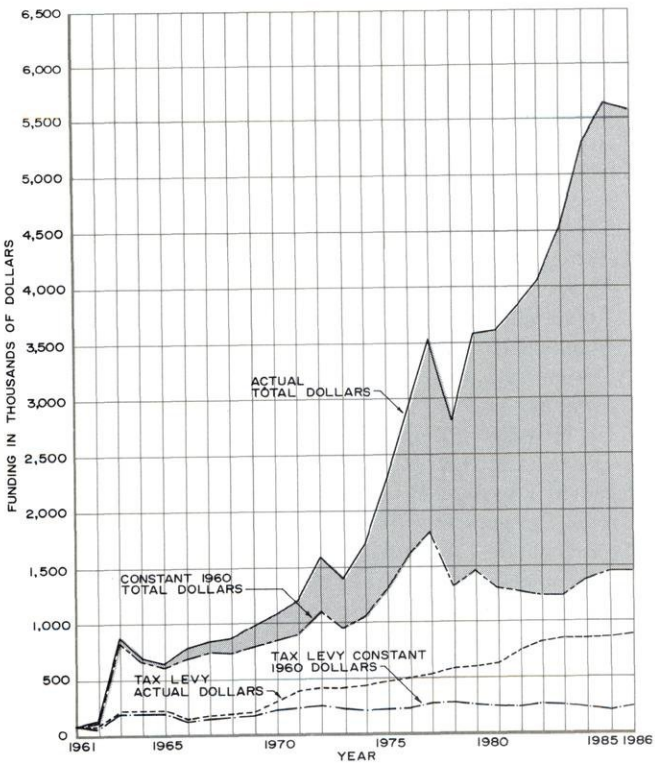


Figure 3

SOURCES OF REVENUES TREND: 1961-1986

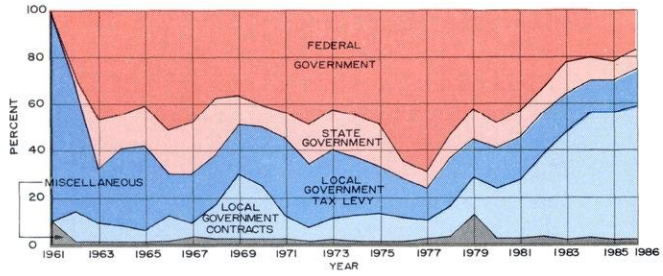


Figure 4

EXPENDITURES TREND: 1961-1986

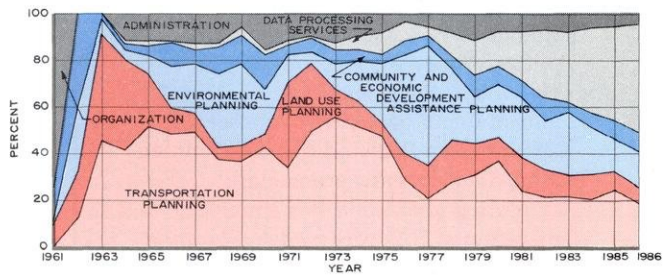
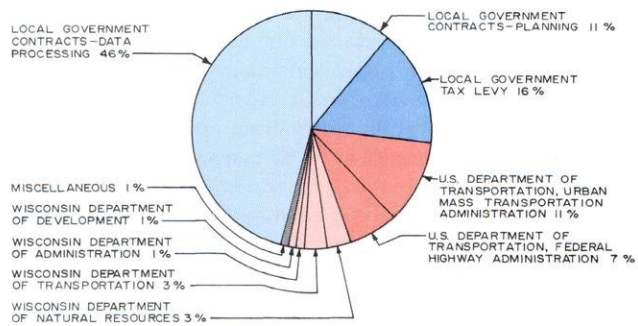


Figure 5

REVENUES AND EXPENDITURES: 1986

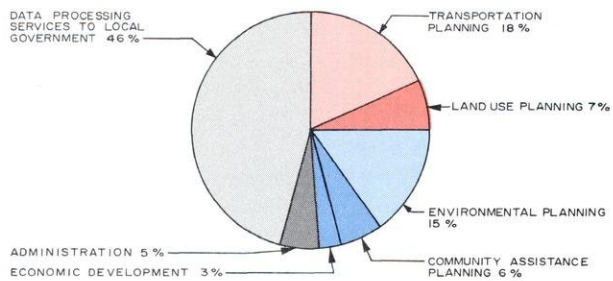
REVENUES

Federal Government	$1,007,087	18%
State Government	428,440	8%
Local Government Tax Levy	875,910	16%
Local Government Contracts	3,180,810	57%
Miscellaneous	86,018	1%
Total	$5,578,265	100%



EXPENDITURES

Transportation Planning	$1,027,374	18%
Land Use Planning	359,745	7%
Environmental Planning	831,773	15%
Community Assistance Planning	321,282	6%
Economic Development Assistance	175,064	3%
Data Processing Services to Local Governments	2,561,332	46%
Administration	301,693	5%
Total	$5,578,265	100%



1986 MEETINGS

COMMISSION AND ADVISORY COMMITTEE MEETINGS

Full Commission	4
Executive Committee	10
Administrative Committee	8
Planning and Research Committee	6
Intergovernmental and Public Relations Committee	1
Technical Coordinating and Advisory Committee on Regional Land Use-Transportation Planning	
Land Use Subcommittee	0
Highway Subcommittee	0
Transit Subcommittee	0
Socioeconomic Subcommittee	0
Utilities Subcommittee	0
Natural and Recreation-Related Resources Subcommittee	0
Traffic Studies, Models, and Operations Subcommittee	0
Technical Coordinating and Advisory Committee on Regional Airport Planning	4
Technical and Intergovernmental Coordinating and Advisory Committees on Jurisdictional Highway System Planning	
Kenosha County	0
Milwaukee County	0
Ozaukee County	0
Racine County	0
Walworth County	0
Washington County	0
Waukesha County	0
Technical Coordinating and Advisory Committee for Detailed Planning and Rapid Transit Improvements in the Milwaukee Northwest Corridor	5
Intergovernmental Coordinating and Advisory Committees on Transportation System Planning and Programming	
Kenosha Urbanized Area	1
Milwaukee Urbanized Area	1
Racine Urbanized Area	1
Technical Coordinating and Advisory Committee on Freeway Traffic Management	0
Hoan Bridge South Task Force	8
Watershed Committees	
Root River	0
Fox River	0
Milwaukee River	0
Menomonee River	0
Kinnickinnic River	0
Pike River	1
Oak Creek	2
Technical Advisory Committee on Regional Water Quality Management Planning	0
Technical and Citizen Advisory Committee on Coastal Management in Southeastern Wisconsin	1
Technical Advisory Committee for the Milwaukee North Shore Erosion Study	3
Technical Advisory Committee Milwaukee Harbor Estuary Comprehensive Water Resources Management Plan	2
Advisory Committee on Stormwater Drainage and Flood Control Planning for the Milwaukee Metropolitan Sewerage District and District Service Areas	1
Oconomowoc River Priority Watershed Plan Development Advisory Committee	3
Technical and Citizen Advisory Committee on Regional Park and Open Space Planning	0
Regional Infrastructure Study Prospectus Steering Committee	3
Milwaukee High Lake Level Prospectus Advisory Committee	0

STAFF TECHNICAL MEETINGS

Executive Director	280
Assistant Directors	148
Cartographic and Graphic Arts Division	23
Community Assistance Planning Division	164
Environmental Planning Division	148
Land Use Planning Division	160
Transportation Planning Division	73
Economic Development Assistance Division	432
Information Systems Division	25

STAFF SPEAKING ENGAGEMENTS

Executive Director	31
Assistant Directors	14
Community Assistance Planning Division	1
Environmental Planning Division	18
Land Use Planning Division	10
Transportation Planning Division	4
Economic Development Assistance Division	3
Information Systems Division	6

The Commission has a complete financial audit performed each year by a certified public accountant. The report of this audit for 1986 is set forth in full in Appendix E. In addition to the Commission's own audit, the federal and state funding agencies perform periodic independent audits of projects to which they contribute financial support.

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.

An eighth type of report was established in 1986: 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 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—1986

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 1986, 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—1986

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 Recreation Plan	Community Assistance Planning Report No. 23, A Park and Recreation Plan for Ozaukee County	September 14, 1978
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
	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	Planning Report No. 21, A Regional Airport System Plan for Southeastern Wisconsin	March 4, 1976
	Kenosha Area Transit[c] Development Plan	Community Assistance Planning Report No. 101, Kenosha Area Transit System Plan and Program: 1984-1988	March 11, 1985

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Transportation Planning (continued)	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
	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—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—Kenosha Area	Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, Volume One, Kenosha Urbanized Area	September 11, 1980
	Amendment—Racine Area	Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, Volume Three, Racine Urbanized Area	September 11, 1980
	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—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
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
	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
	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
	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

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	Regional Water Quality Management Plan[d]	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
	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

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	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, Sanitary Sewer Service Area for the Village of Belgium, Ozaukee County, Wisconsin	March 11, 1985
	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	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
	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

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	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
	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
	Oak Creek Watershed Plan	Planning Report No. 36, A Comprehensive Plan for the Oak Creek Watershed	September 8, 1986
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 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.*

[d] *The regional water quality management plan represents 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 1986 the Commission adopted one new major plan element—a comprehensive water resources management plan for the Oak Creek watershed. In addition, the Commission adopted a number of amendments to the regional water quality management plan. Three of those amendments dealt with lake water quality management and were prepared and adopted for Friess Lake in Washington County, Geneva Lake in Walworth County, and Pewaukee Lake in Waukesha County. The remaining amendments dealt with sanitary sewer service areas, including refined service areas in the Racine urbanized area, the Pewaukee and Waukesha areas, the Cities of Burlington and Muskego, the Village of Paddock Lake, and the Towns of Bristol and Salem. As appropriate, each of these new plans and amendments is described 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 1986 the Commission had underway several programs designed to prepare new plan elements or to refine, detail, or amend existing plan elements. Work should be completed during 1987 on a comprehensive water resources study of the Milwaukee Harbor estuary. This study, which had been requested in July 1973 by the City of Milwaukee and which had to be deferred pending completion of all of the comprehensive watershed studies for the watersheds tributary to the estuary, has become increasingly important in light of certain issues raised in the preparation and implementation of a master sewerage facilities plan for the Milwaukee Metropolitan Sewerage District. The study is intended to address the water quality, flooding, and storm damage problems of this important estuary. Of particular importance will be an evaluation of the effect of in-place pollutant sources—bottom sediments—on water quality conditions. In addition, the study will formulate water quality objectives and supporting water quality standards for the estuary and determine the extent to which combined sewer overflows must be abated if those objectives and standards are to be met. This particular issue, identified as the "level of protection" issue, is expressed in terms of the frequency with which the combined sewers can be allowed to overflow without causing the agreed-upon water quality standards to be violated. When completed, this study will serve in part to amend the regional water quality management plan.

Other studies were underway in 1986 to refine, detail, and amend as necessary the regional water quality management plan. A series of additional detailed sanitary sewer service area plans was being prepared in cooperation with the local communities concerned. Such planning efforts were underway at the end of 1986 for the communities of Silver Lake and Twin Lakes in Kenosha County; Franklin in Milwaukee County; Cedarburg, Grafton, and Mequon in Ozaukee County; Darien, Lyons, and Whitewater in Walworth County; West Bend in Washington County; and Brookfield, Elm Grove, Menomonee Falls, New Berlin, and Oconomowoc in Waukesha County. Work continued during 1986 on one additional lake management plan—that for Fowler Lake in the City of Oconomowoc, Waukesha County.

Additional studies were underway in the area of transportation planning at the end of 1986, including a feasibility study of a comprehensive freeway traffic management system in the Milwaukee urbanized area. Under the tentatively proposed system, the presently limited freeway ramp meter system serving central Milwaukee County will be expanded into an areawide system under which all ramps on freeways in the Milwaukee urbanized area will be metered to restrain automobile and truck access to the freeways during peak travel periods. The ramp meters will be operated through a central control system, using an interconnected series of traffic-sensing devices. As freeway traffic volumes approach the levels beyond which freeway operating speeds may be expected to deteriorate, fewer automobiles and trucks will be permitted to enter the freeway system. Buses and other high-occupancy vehicles such as car- and vanpool vehicles, however, will have free access to the system through preferential ramps. Sufficient constraint would be exercised in the operation of the system to ensure uninterrupted traffic flow and operating speeds of at least 40 miles per hour on all freeway segments, thus providing the basis for rapid transit service over the freeways.

At the end of 1986, work was nearing completion on a second generation regional airport system plan. This plan is being coordinated with a similar

effort being carried out by the Wisconsin Department of Transportation for the remainder of the State. Finally, during 1986 work continued on an update of the regional park and open space plan. This updating effort is to consist of seven individual county plans designed to refine, detail, and update as necessary the regional park and open space plan prepared in the mid-1970's. This updating effort is to ensure that the counties in the Region remain eligible for any federal and state funds for park and open space land acquisition and development.

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.

During 1986 the Commission completed a prospectus for an infrastructure study for the Southeastern Wisconsin Region. This prospectus was prepared at the request of an ad hoc group convened by the Citizens Governmental Research Bureau of Milwaukee. That group noted that it would be useful to public policy formulation to assemble information on the status of the infrastructure systems that provide the foundation for the economy of southeastern Wisconsin. In particular, the group noted that there was growing concern as to whether or not those important systems were being properly maintained and renewed.

The prospectus, published in June 1986, recommends that a regional infrastructure study be undertaken for the entire seven-county Southeastern Wisconsin Region. The study would focus on seven basic infrastructure systems that have traditionally been provided in the public sector and which were perceived by the Advisory Committee created by the Commission to explore this issue to have particular significance for the economic development of the area: streets and highways, airports and seaports, urban mass transit systems, water supply and distribution systems, sanitary sewerage systems, drainage and flood control systems, and park and outdoor recreational facilities. The study would not deal with those equally important infrastructure components that traditionally have been provided largely in the private sector: telephone and communication systems, electric power generation and distribution systems, natural gas distribution systems, and railways.

For each of the seven publicly provided infrastructure systems proposed to be studied, the extent and condition of each system would be determined and the capital investment needs attendant to the maintenance of each system would be estimated, and those capital investment needs would be compared against historic capital investment to determine the extent to which needs are being met. These efforts would necessarily involve some pioneering work in the development of standardized techniques to determine capital investment needs, techniques that would be intended to set forth the relationship between infrastructure system maintenance practices and estimated times-to-failure of infrastructure system components. The study would also examine the potential for creating a computer-based shared infrastructure data base. Finally, the study would include the development of a model approach to infrastructure needs determination and capital budgeting for use by local units of government.

At year's end, the prospectus had been approved in principle by the County Boards of Milwaukee, Waukesha, Racine, and Kenosha Counties and was under consideration by the remaining County Boards in the Region. Efforts were underway to seek state funding of the study as recommended in the prospectus.

In November 1986, the Commission received a resolution adopted by the Milwaukee County Board of Supervisors and by the Milwaukee County

Executive requesting that the Commission prepare a prospectus for a study of the impacts of continuing high levels of Lake Michigan on public and private lands, facilities, and structures in the Milwaukee central business district and adjacent areas along the shorelines of the outer harbor of the Milwaukee, Menomonee, and Kinnickinnic Rivers, the estuaries of which collectively form the inner harbor. Such a study would be intended to define the problems attendant to continuing high lake levels, and to explore alternative means for abating the adverse effects of these high levels. By year's end the Commission had agreed to prepare the prospectus and had created a Technical Advisory Committee to assist in its preparation.

Finally, the Commission continued efforts in 1986 to prepare the third generation regional land use and regional transportation plans. These plans will follow the preparation of new regional population and economic activity forecasts and will extend the regional land use and transportation plans to the plan design year 2010. Completion of these new third generation plans is not expected until 1988.

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 1986, 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 1986, 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 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

Figure 6

LAND USE PLANNING DIVISION

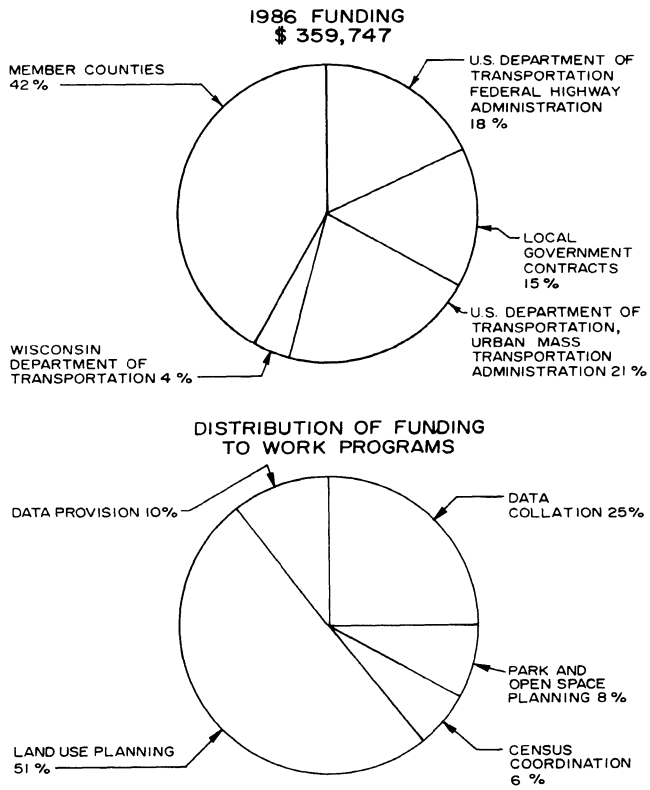


Table 2

REGIONAL EMPLOYMENT BY CATEGORY: 1970, 1980, AND 1986

Employment Category	Jobs (in thousands)			Difference			
				1970-1980		1980-1986	
	1970	1980	1986	Number	Percent	Number	Percent
Agriculture	11.9	12.8	10.6	0.9	7.6	- 2.2	- 17.2
Construction	27.2	25.8	23.8	- 1.4	- 5.2	- 2.0	- 7.8
Manufacturing							
Food and Kindred Products	18.9	20.9	16.7	2.0	10.6	- 4.2	- 20.1
Printing and Publishing	14.9	16.3	20.1	1.4	9.4	3.8	23.3
Primary Metals	22.5	16.6	11.0	- 5.9	- 26.2	- 5.6	- 33.7
Fabricated Metals	24.6	31.8	26.3	7.2	29.3	- 5.5	- 17.3
Nonelectrical Machinery	68.1	73.1	54.8	5.0	7.3	- 18.3	- 25.0
Electrical Machinery	36.5	40.1	34.7	3.6	9.9	- 5.4	- 13.5
Transportation Equipment	22.0	21.5	13.5	- 0.5	- 2.3	- 8.0	- 37.2
Other Manufacturing	44.8	41.5	43.7	- 3.3	- 7.4	2.2	5.3
Manufacturing Subtotal	252.3	261.8	220.8	9.5	3.8	- 41.0	- 15.7
Transportation, Communication, and Utilities	36.7	39.6	39.0	2.9	7.9	- 0.6	- 1.5
Wholesale Trade	35.3	43.5	45.9	8.2	23.2	2.4	5.5
Retail Trade	115.7	131.9	134.7	16.2	14.0	2.8	2.1
Finance, Insurance, and Real Estate	32.8	46.4	51.3	13.6	41.5	4.9	10.6
Services	119.6	178.0	202.7	58.4	48.8	24.7	13.9
Government and Education	83.3	95.7	90.9	12.4	14.9	- 4.8	- 5.0
Self-Employed, Except Farm	37.2	46.2	55.3	9.0	24.2	9.1	19.7
Miscellaneous[a]	1.7	2.5	2.4	0.8	47.0	- 0.1	- 4.0
Total Jobs	753.7	884.2	877.4	130.5	17.3	- 6.8	- 0.8

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

referred to as "place-of-work" employment data. It should be noted that the enumeration of jobs does not distinguish 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 1986 is set forth in Table 2 by employment category.

The number of jobs in the Region was estimated at 877,400 in 1986. Between 1985 and 1986, the number of jobs increased slightly—by 4,500, or less than 1 percent. This increase is slightly higher than the 1984 to 1985 increase of about 3,200 jobs. The 1986 level of 877,400 jobs remains about 24,300 jobs, or 2.7 percent, below the historic high of about 901,700 jobs recorded in 1979.

As set forth in Table 2, a majority of employment sectors continued to provide fewer jobs in 1986 than in 1980 in spite of the recent improvement in the Region's economic climate. Only finance, insurance, and real estate, services, and self employment provided significantly more jobs in 1986 than in 1980. There were about 41,000 fewer manufacturing jobs in 1986 than in 1980. It should be noted that while 44 percent of this decline occurred in the nonelectrical machinery manufacturing sector, which accounted for about 18,300 fewer jobs in 1986 than in 1980, the employment within this manufacturing sector has leveled off within recent years. Within the manufacturing category, only the printing and publishing and other manufacturing sectors provided more jobs in 1986 than in 1980.

Table 3

REGIONAL EMPLOYMENT BY COUNTY: 1970, 1980, AND 1986

County	Jobs			Difference			
				1970-1980		1980-1986	
	1970	1980	1986	Number	Percent	Number	Percent
Kenosha	40,000	49,500	45,800	9,500	23.8	- 3,700	- 7.5
Milwaukee . . .	507,100	547,900	541,400	40,800	8.0	- 6,500	- 1.2
Ozaukee	19,800	24,800	24,300	5,000	25.3	- 500	- 2.0
Racine.	62,700	78,700	76,600	16,000	25.5	- 2,100	- 2.7
Walworth. . . .	24,500	32,100	33,000	7,600	31.0	900	2.8
Washington . .	23,100	31,800	31,500	8,700	37.7	- 300	- 0.9
Waukesha. . . .	76,500	119,400	124,800	42,900	56.1	5,400	4.5
Region	753,700	884,200	877,400	130,500	17.3	- 6,800	- 0.8

Between 1985 and 1986, employment growth was less than 1 percent in each county in the Region. Only Walworth and Waukesha Counties provided more jobs in 1986 than in 1980—about 900 and 5,400 jobs, respectively (see Table 3). In the remaining five counties, there were still fewer jobs available in 1986 than in 1980. Milwaukee County accounted for the largest absolute difference—about 6,500 fewer jobs—and Kenosha County, for the largest percentage difference—about -7.5 percent.

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 fully set forth and documented in SEWRPC Technical Report No. 10 (2nd Edition), The Economy of Southeastern Wisconsin, copies of which are available from the Commission offices.

Because of the increasing uncertainty surrounding future population levels, the Commission has 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 this report 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 945,200 jobs in 1986 under the optimistic scenario, 857,500 jobs under the intermediate scenario, and 809,800 jobs under the pessimistic scenario. The estimated 1986 level of 877,400 jobs is about 7 percent below the level anticipated under the optimistic scenario and about 2 percent and 8 percent, respectively, above the levels anticipated under the intermediate and pessimistic scenerios. The 1986 employment levels projected for each of the Region's seven counties under each of the three alternative futures and the 1986 estimated county employment levels are set forth in Table 4 and Figures 7 through 14.

Table 4

EXISTING AND PROJECTED NUMBER OF AVAILABLE JOBS BY COUNTY: 1986

County	Estimated 1986 Jobs	Projected 1986 Jobs		
		Pessimistic Scenario	Intermediate Scenario	Optimistic Scenario
Kenosha	45,800	45,300	48,200	53,100
Milwaukee	541,400	491,200	515,100	563,600
Ozaukee	24,300	22,800	25,000	28,700
Racine.	76,600	72,100	78,400	88,400
Walworth.	33,000	29,100	32,700	36,300
Washington	31,500	31,000	33,200	37,500
Waukesha.	124,800	118,300	124,900	137,600
Region	877,400	809,800	857,500	945,200

Figure 7

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

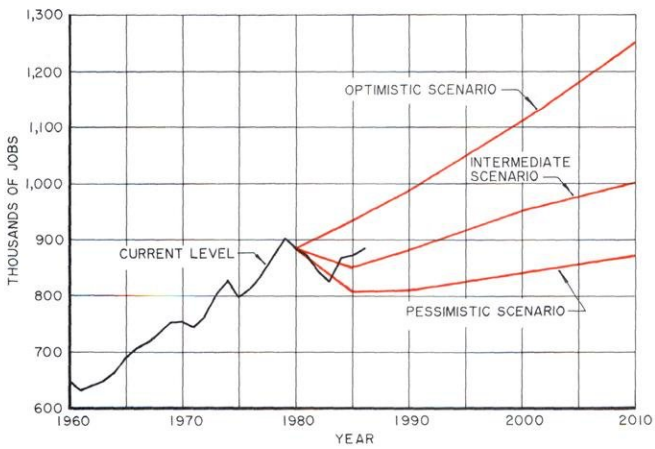


Figure 8

Figure 9

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

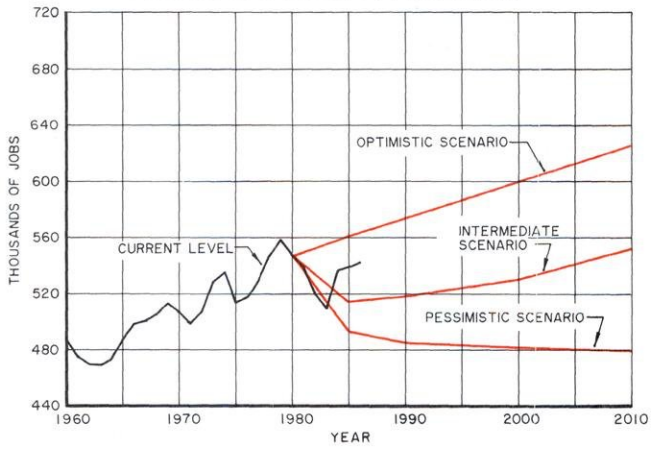
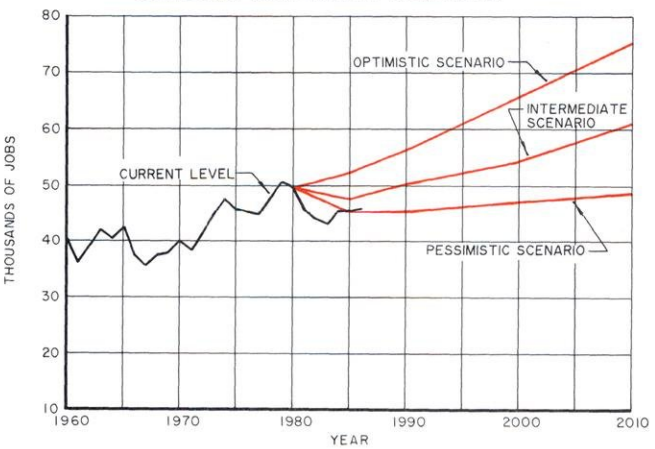
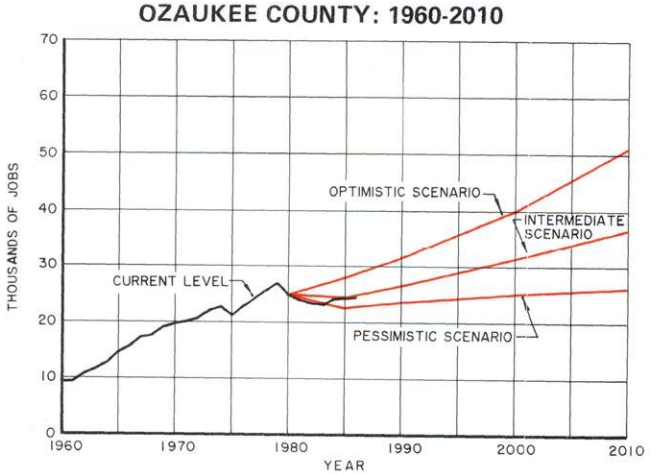


Figure 10

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



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



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 who are 16 years of age and older who are 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 to be 878,800 persons in 1986. Between 1985 and 1986, the civilian labor force decreased slightly, by about 4,600 persons, or less than 1 percent, marking the fourth consecutive year of decline in the civilian labor force from its historic high of 915,600 in 1982. While some of this decline may be a function of

Figure 11

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

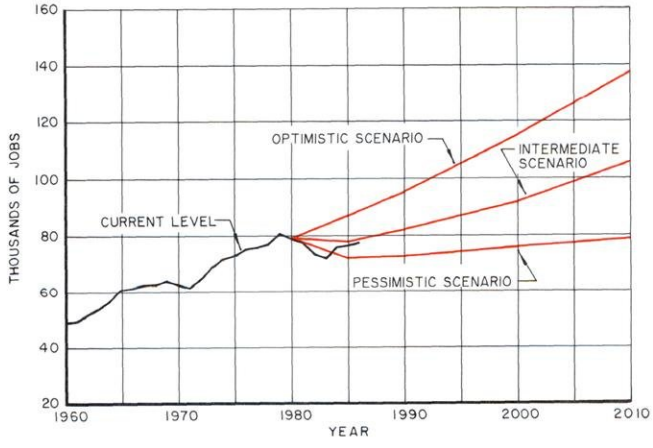


Figure 12

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

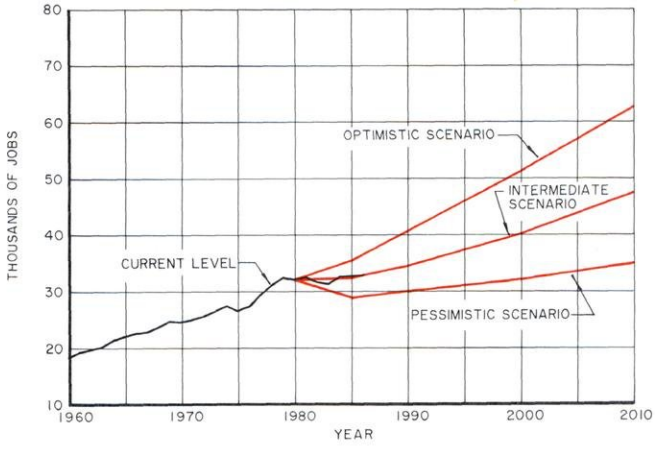


Figure 13

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

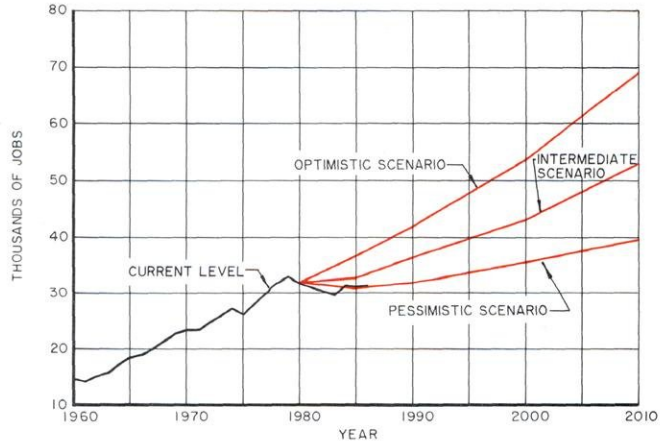


Figure 14

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

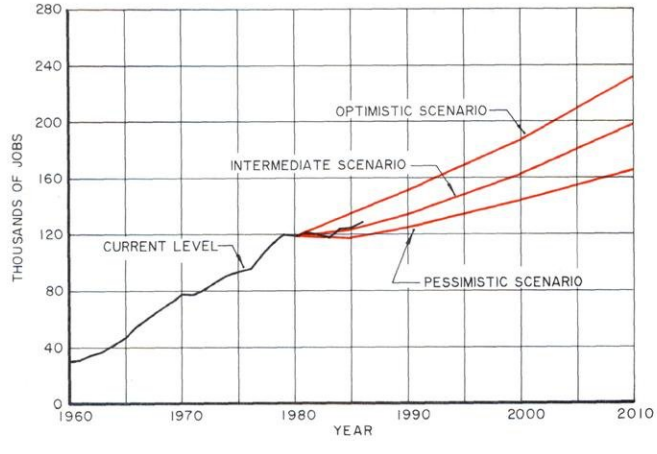


Figure 15

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR THE REGION: 1975-1986

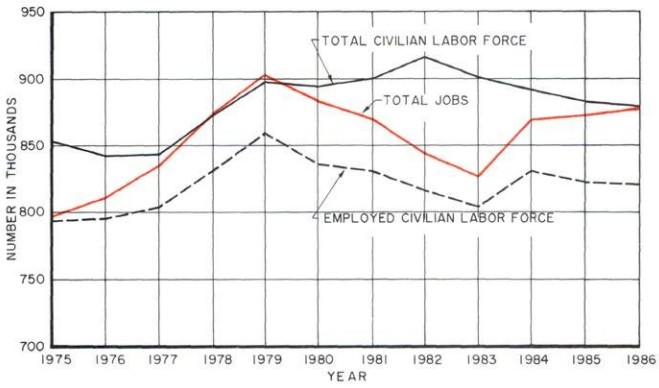


Figure 16

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR KENOSHA COUNTY: 1975-1986

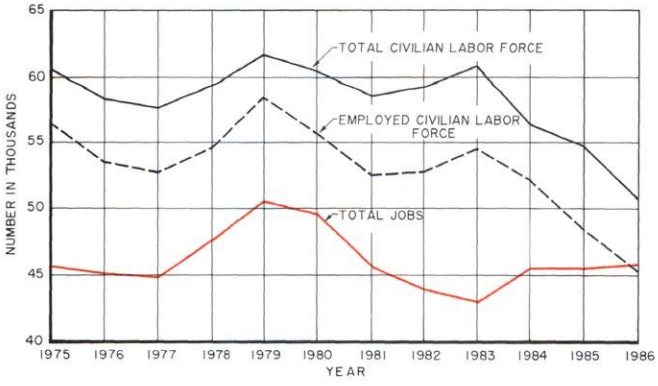


Figure 17

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR MILWAUKEE COUNTY: 1975-1986

Figure 18

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR OZAUKEE COUNTY: 1975-1986

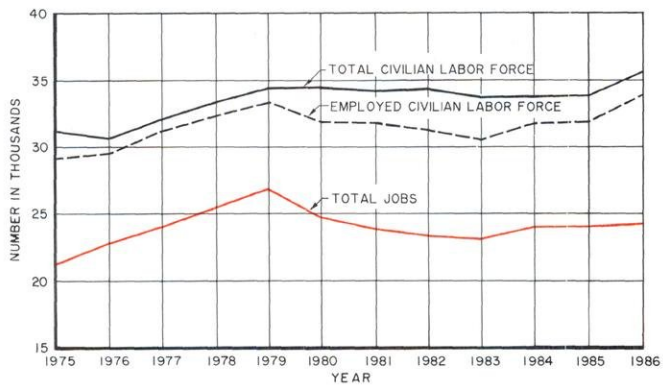


Figure 19

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR RACINE COUNTY: 1975-1986

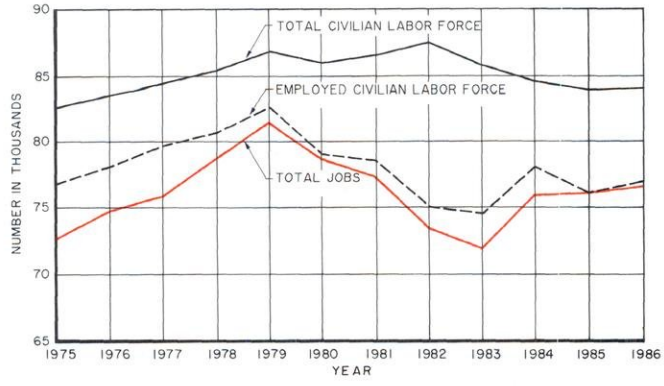


Figure 20

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR WALWORTH COUNTY: 1975-1986

Figure 21

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR WASHINGTON COUNTY: 1975-1986

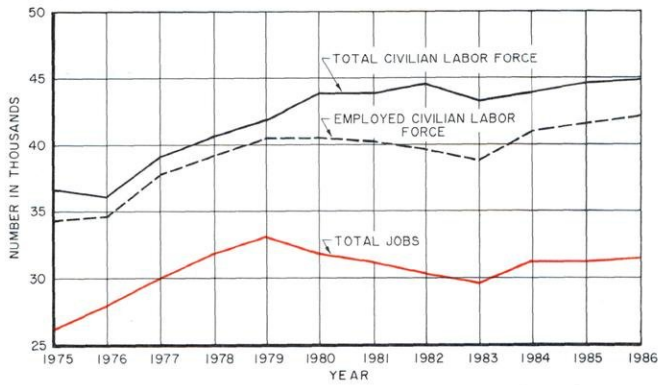


Figure 22

TRENDS IN SELECTED MEASURES OF EMPLOYMENT FOR WAUKESHA COUNTY: 1975-1986

people withdrawing from the labor force, the continued out-migration of persons from the Region is also a factor.

The number of employed members of the civilian labor force decreased from about 821,700 in 1985 to about 820,100 in 1986, a decrease of 1,600 persons or less than 1 percent. The number of unemployed members of the civilian labor force decreased from about 61,700 in 1985 to about 58,700 in 1986—a decrease of about 3,000, or about 5 percent. The unemployment rate in 1986 was 6.7 percent, in comparison to 7.0 percent in 1985.

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 1986, the resident population of the Region was estimated by the Wisconsin Department of Administration to be 1,743,200 persons—essentially unchanged from the 1985 estimated population of 1,742,700 persons. The 1986 population remained about 21,600, or about 1 percent, fewer persons than were enumerated in the 1980 federal census and about 12,900, or about three-quarter percent, fewer persons than were enumerated in the 1970 federal census.

The Wisconsin Department of Administration (DOA) estimates of 1986 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, Kenosha, Milwaukee, and Racine Counties experienced population declines—about 2 percent, 3 percent, and 2 percent, respectively—since the 1980 federal census was taken. The aggregate loss of population in these three counties totaled about 34,800 persons. The resident population of Ozaukee County remained essentially static between 1980 and 1986, changing by only 1.2 percent. The remaining three counties—Walworth, Washington, and Waukesha—experienced increases of about 1,600 persons, 2,900 persons, and 7,900 persons, respectively.

An examination of recent resident population levels in the Region indicates that the character of the population in 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

Table 5

POPULATION IN THE SOUTHEASTERN WISCONSIN REGION BY COUNTY: 1970, 1980, AND 1986

County	Population			1970-1980 Change		1980-1986 Change	
	1970 Census	1980 Census	1986 Estimate	Number	Percent	Number	Percent
Kenosha	117,900	123,100	121,200	5,200	4.4	- 1,900	- 1.5
Milwaukee	1,054,300	965,000	935,800	- 89,300	- 8.5	- 29,200	- 3.0
Ozaukee	54,500	67,000	67,800	12,500	23.0	800	1.2
Racine	170,800	173,100	169,400	2,300	1.3	- 3,700	- 2.1
Walworth	63,500	71,500	73,100	8,000	12.7	1,600	2.2
Washington	63,800	84,900	87,800	21,100	32.9	2,900	3.4
Waukesha	231,300	280,200	288,100	48,900	21.1	7,900	2.8
Region	1,756,100	1,764,800	1,743,200	8,700	0.5	- 21,600	- 1.2

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 is comprised of 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.

Changes in natural increase and net migration over the past 10 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 10 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 occurring in the Region.

In contrast to natural increase, yearly net migration levels for the Region have fluctuated greatly over the past 10 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. In Ozaukee and Washington Counties, the 1980 to 1985 net migration history has generally been of net out-migration, which represents a fundamental deviation from the longer term historic trend. In 1986, Walworth County again experienced net in-migration of about 500 persons, while Waukesha County experienced net in-migration of about 300 persons. All other counties experienced net out-

Figure 23

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR THE REGION: 1975-1986

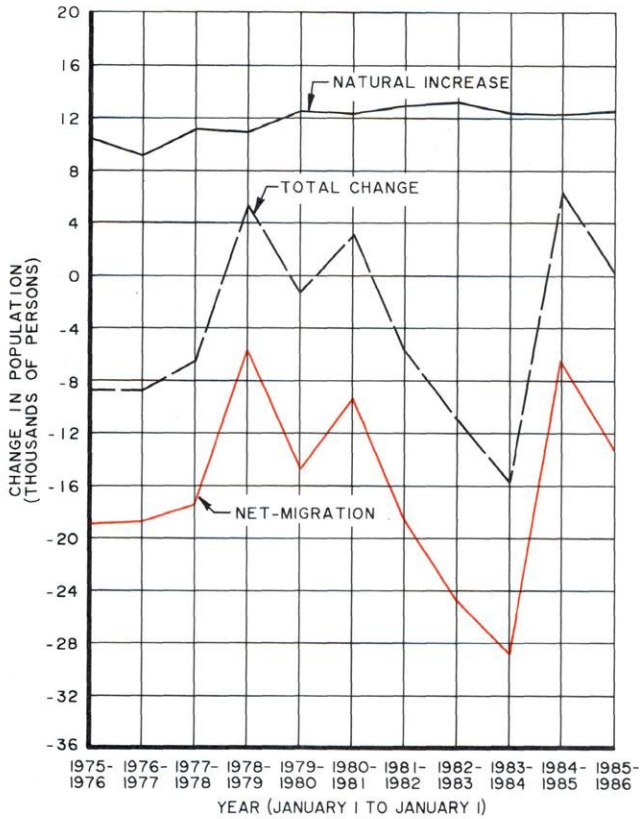


Figure 24

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR KENOSHA COUNTY: 1975-1986

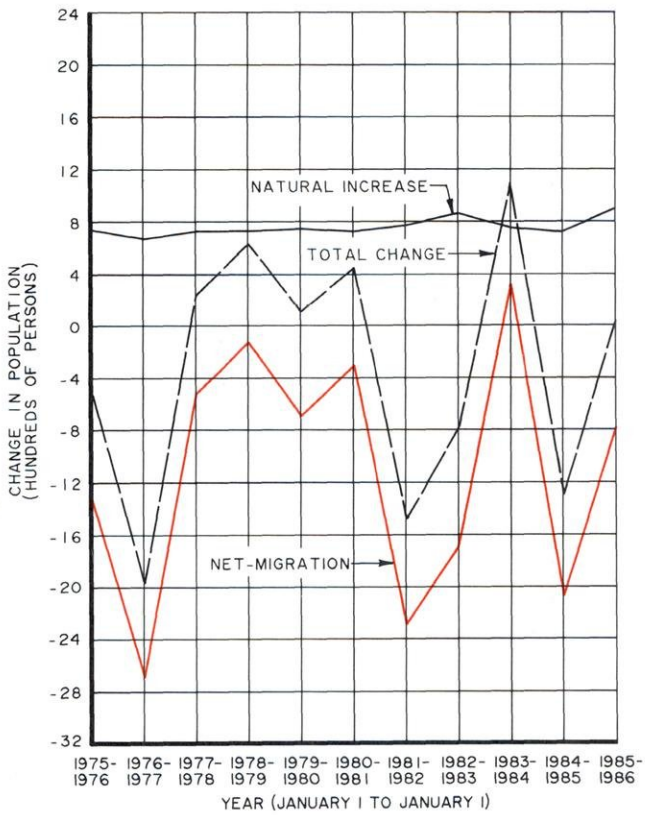


Figure 25

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR MILWAUKEE COUNTY: 1975-1986

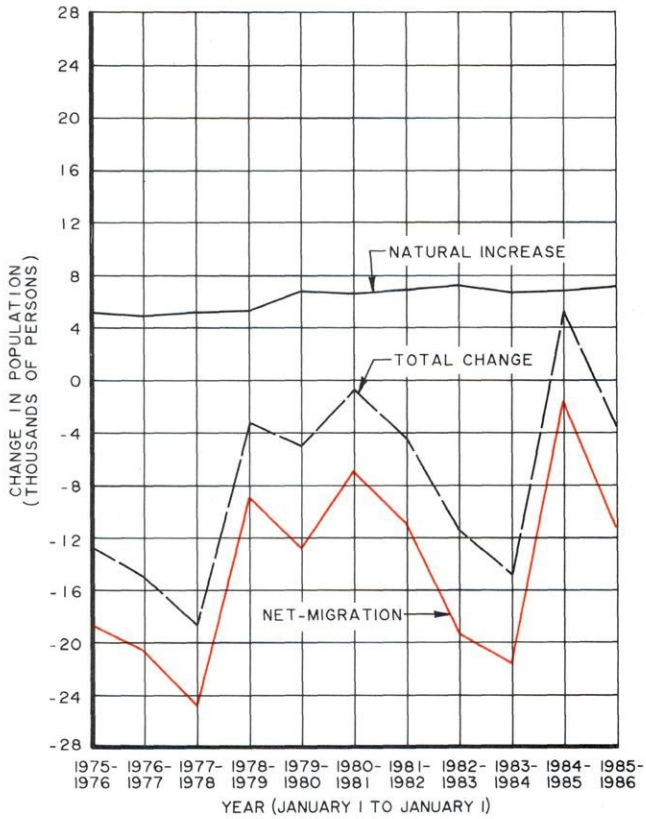


Figure 26

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR OZAUKEE COUNTY: 1975-1986

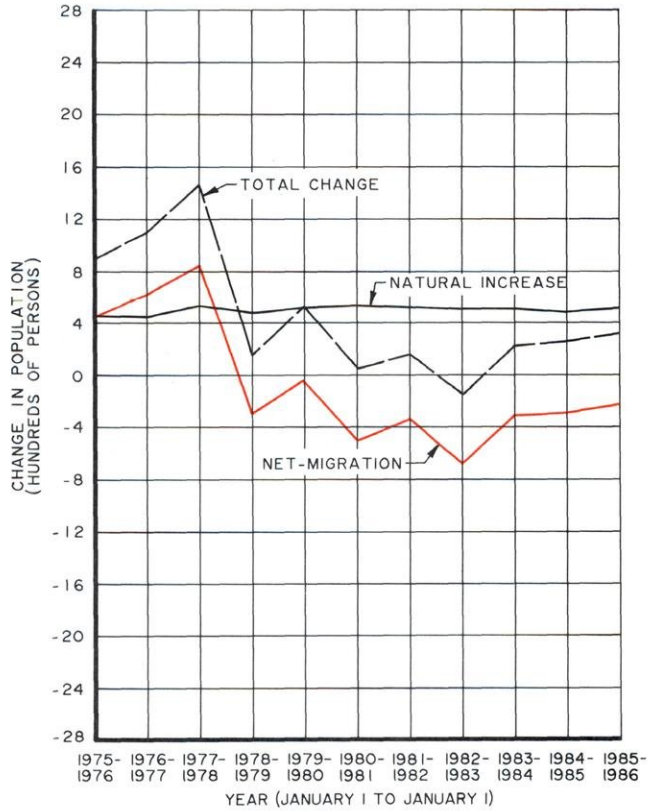


Figure 27

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR RACINE COUNTY: 1975-1986

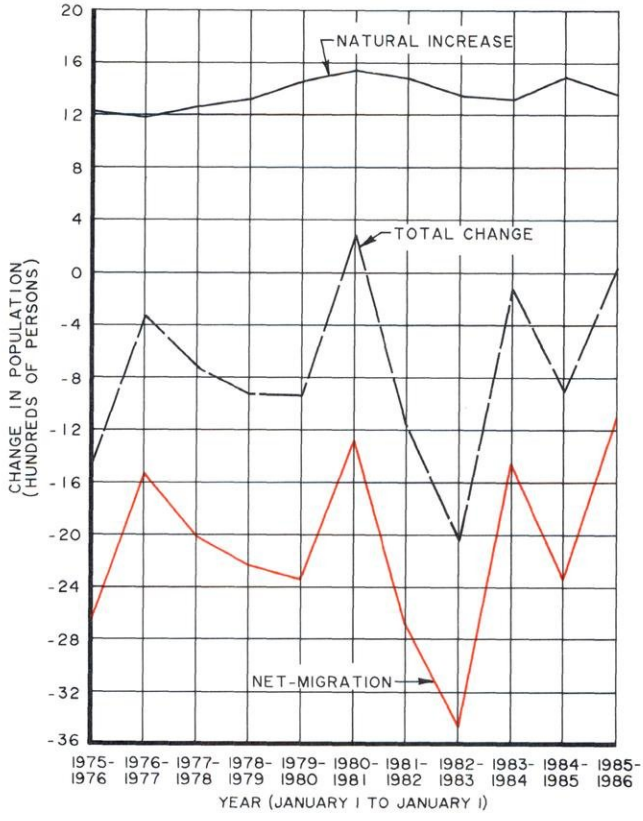


Figure 28

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR WALWORTH COUNTY: 1975-1986

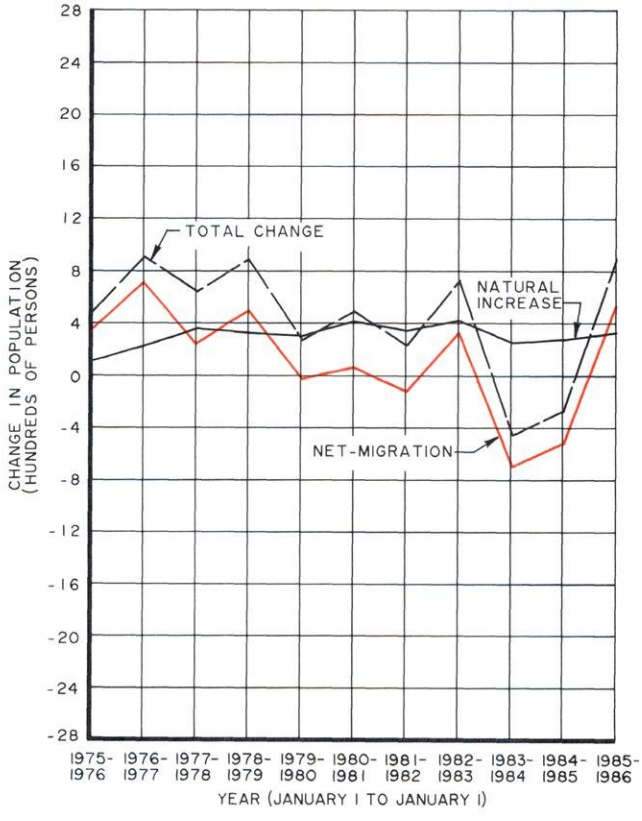


Figure 29

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR WASHINGTON COUNTY: 1975-1986

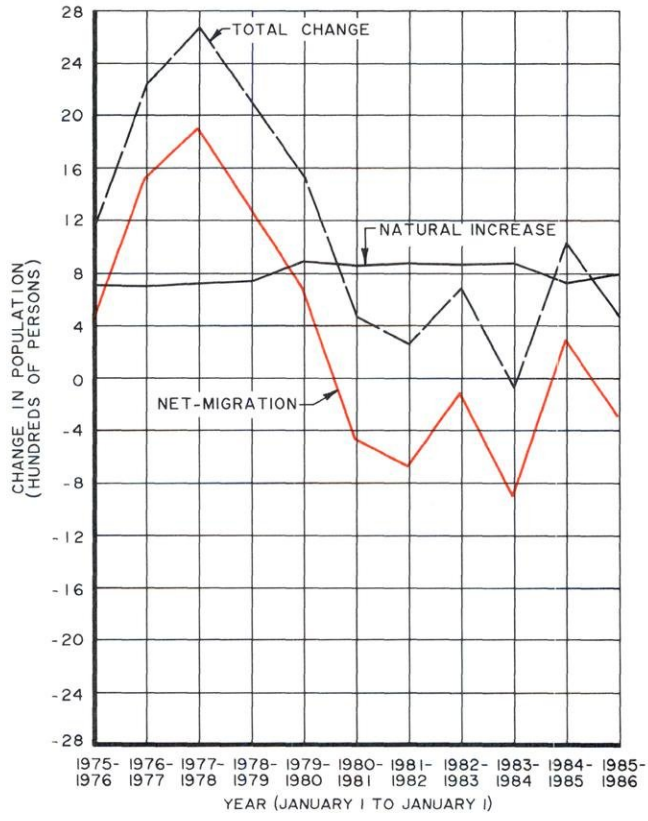


Figure 30

TRENDS IN COMPONENTS OF POPULATION CHANGE FOR WAUKESHA COUNTY: 1975-1986

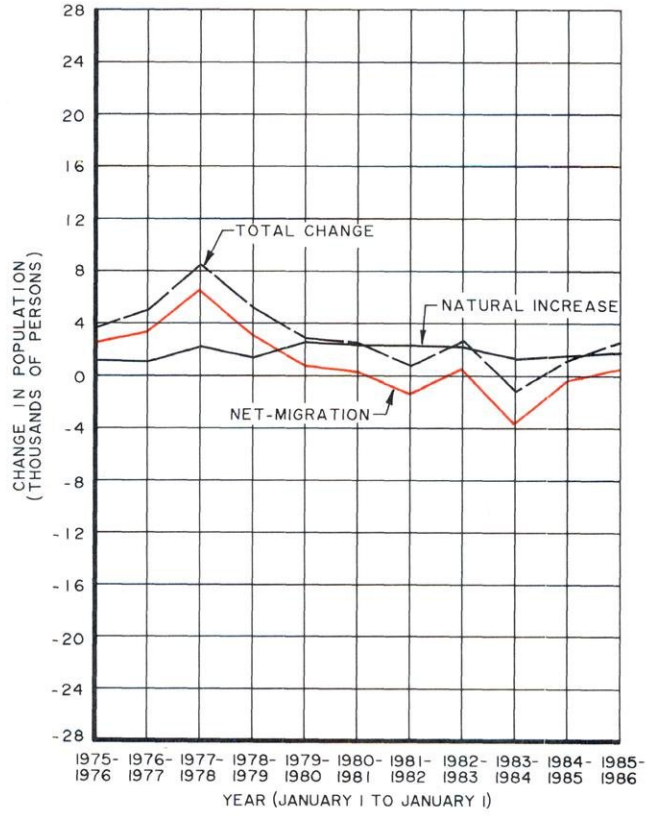


Table 6

EXISTING AND PROJECTED RESIDENT POPULATION LEVELS BY COUNTY: 1986

County	Estimated 1986 Population	Projected 1986 Population		
		Pessimistic Scenario	Intermediate Scenario	Optimistic Scenario
Kenosha	121,200	114,800	118,300	129,900
Milwaukee	935,800	899,900	926,800	961,400
Ozaukee	67,800	63,200	67,900	76,700
Racine	169,400	161,100	166,700	181,400
Walworth	73,100	69,800	74,300	79,400
Washington	87,800	81,400	89,500	101,800
Waukesha	288,100	274,000	292,400	322,400
Region	1,743,200	1,664,200	1,735,900	1,853,000

migration ranging from an estimated 200 persons in Ozaukee County to approximately 11,000 persons in Milwaukee County.

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 fully set forth and documented in SEWRPC Technical Report No. 11 (2nd Edition), The Population of Southeastern Wisconsin.

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 1.85 million persons in 1986. The estimated 1986 regional population level of 1.74 million persons noted above is about 6 percent below this anticipated level. Under the pessimistic scenario, the population level of the Region was anticipated to be 1.66 million persons in 1986. The 1986 estimated population level is about 5 percent above this anticipated level. The regional population level of 1.74 million persons anticipated in 1986 under the intermediate scenario differs from the 1986 estimated regional population level by less than 1 percent. The 1986 population levels projected for each of the Region's seven counties under each of the three alternative futures and the 1986 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 339,700 students in 1986, representing a decrease of about 900 students, less than 1 percent, from the 1985 level of 340,600 students. As indicated in Table 7, the 1986 regional school enrollment was about 29,600 students, or 8 percent, below the 1980 level of 369,300. Enrollment in public schools was about 272,800 students in 1986, about 22,200 students, or 8 percent, below the 1980 level of 295,000. Enrollment

Figure 31

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

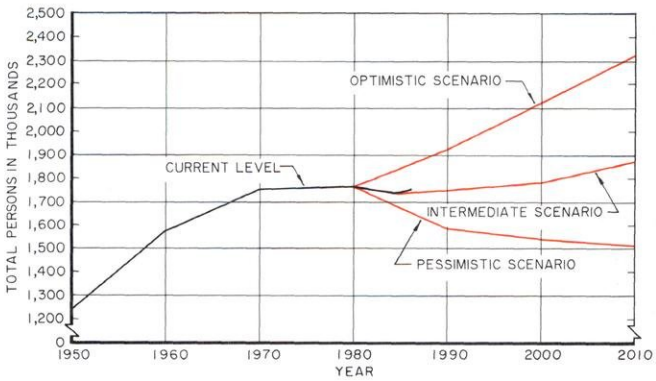


Figure 32

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

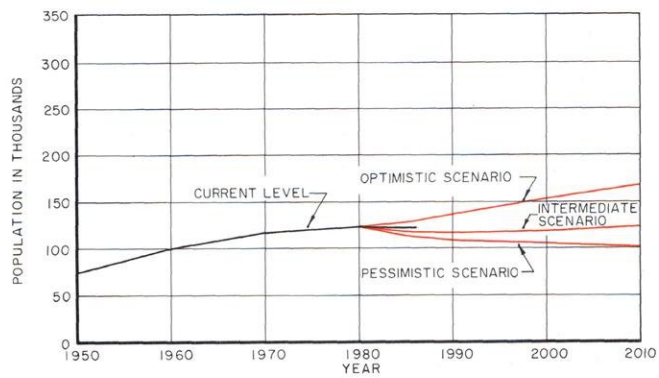


Figure 33

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

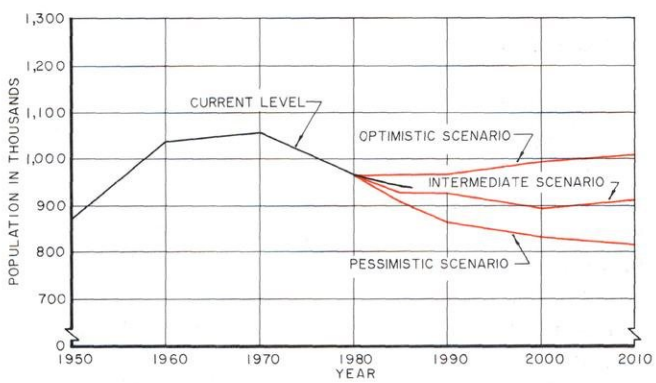


Figure 34

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

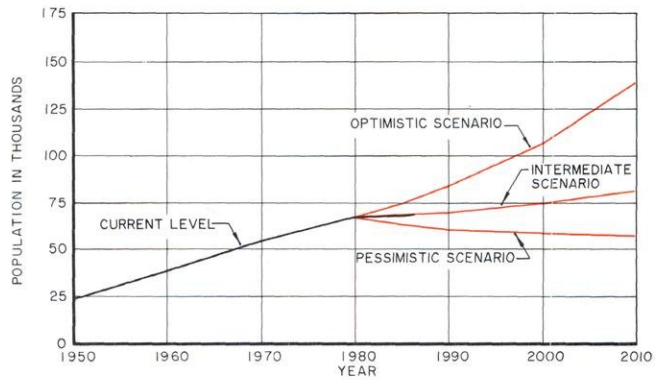


Figure 35

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

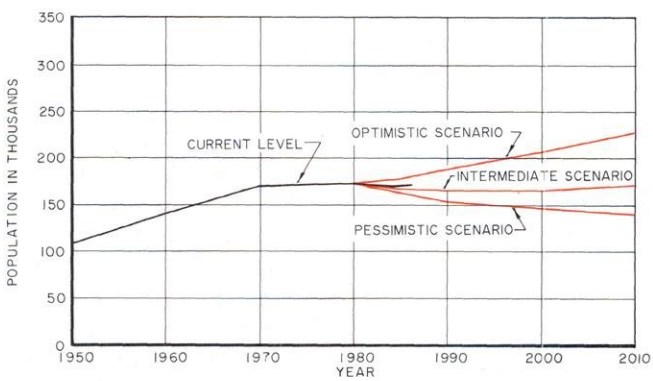


Figure 36

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

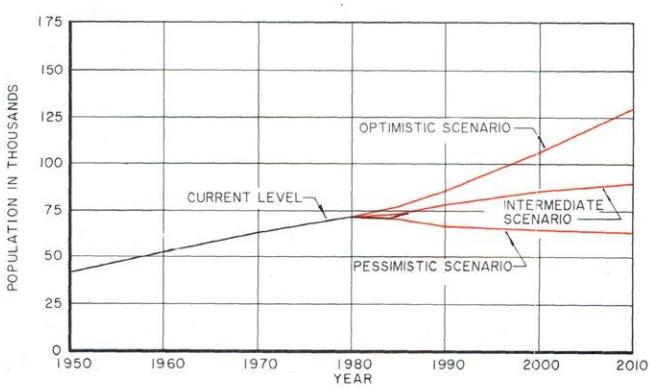


Figure 37

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

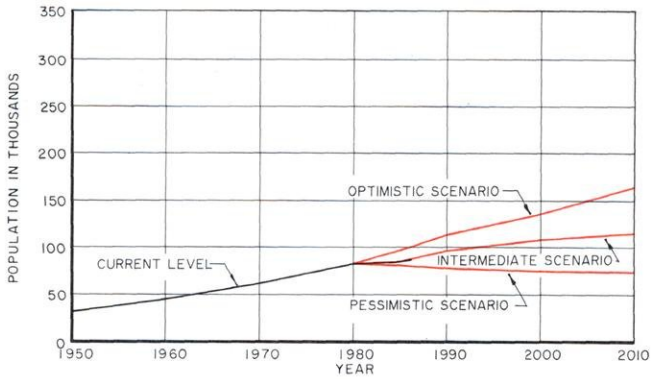
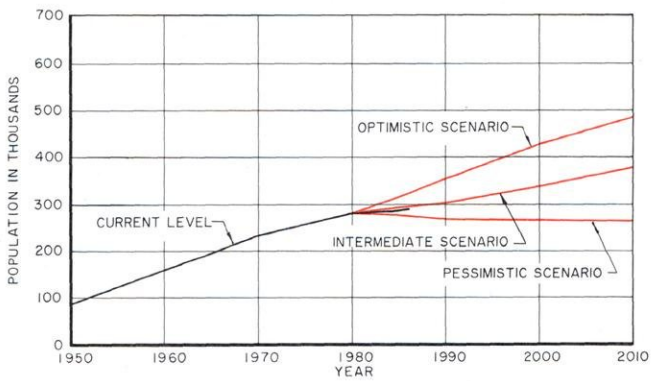


Figure 38

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



in nonpublic schools was about 66,900 students in 1986, about 7,400 students, or 10 percent, below the 1980 level of 74,300.

Map 2 shows public school enrollment changes between 1980 and 1986 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 85 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. Only two districts—Milwaukee Public Schools and Mukwonago Area Schools—experienced an enrollment gain during this period.

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 actually 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 1986, the County Census Statistical Areas Committees continued to review and revise, as necessary, existing 1980 census tract boundaries for use in the 1990 Census of Population and Housing. In addition, the County Census Statistical Areas Committees continued to review 1980 census block group boundaries and delineate new census block groups in areas where they previously did not exist.

The review of census tracts and census block groups by County Census Statistical Areas Committees is important since census tracts and census block groups are the only locally defined areas for which 1990 census data will be tabulated. U. S. Bureau of the Census guidelines utilized by the County Census Statistical Areas Committees in their review of census tract and census block group boundaries specify that all such boundaries must be delineated on visible, physical features such as streets, railroads, or rivers; that census tracts must have approximately the same population and that census block groups must have approximately the same number of total housing units; and that any changes to existing 1980 census tract or block group boundaries must be limited so as to retain to the greatest extent possible historic comparability to previous censuses.

During 1986 the Census Statistical Areas Committees for Kenosha, Racine, Walworth, and Waukesha Counties approved the proposed 1990 census statistical areas boundary maps for their respective counties. Subsequent to the review of the 1990 census statistical areas boundary maps by each county's Census Statistical Areas Committee,

Table 7

REGIONAL SCHOOL ENROLLMENT BY COUNTY: 1970, 1980, AND 1986

County	School Enrollment			Difference			
				1970-1980		1980-1986	
	1970	1980	1986	Number	Percent	Number	Percent
Kenosha	32,300	26,700	23,600	- 8,500	- 26.3	- 3,100	- 11.6
Milwaukee . . .	267,900	184,900	176,700	- 92,500	- 34.5	- 8,200	- 4.4
Ozaukee	15,900	15,000	12,900	- 2,600	- 16.4	- 2,100	- 14.0
Racine.	48,600	38,800	34,500	- 13,500	- 27.8	- 4,300	- 11.1
Walworth. . . .	15,600	13,700	12,500	- 3,200	- 20.5	- 1,200	- 8.8
Washington . .	19,200	21,500	19,500	500	2.6	- 2,000	- 9.3
Waukesha. . . .	73,100	68,700	60,000	- 11,900	- 16.3	- 8,700	- 12.7
Region	472,600	369,300	339,700	- 131,700	- 27.9	- 29,600	- 8.0

the U. S. Bureau of the Census approved the 1990 census areas boundary maps for use in the 1990 Census of Population and Housing.

Also as part of its continuing census coordinating function within the Region, the Commission serves as a clearinghouse and central repository for a wide variety of census data holdings. A computer-readable geographic base file containing street address ranges 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 identifies an agency or group of agencies within the state government to serve as the lead group 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 accessing these materials.

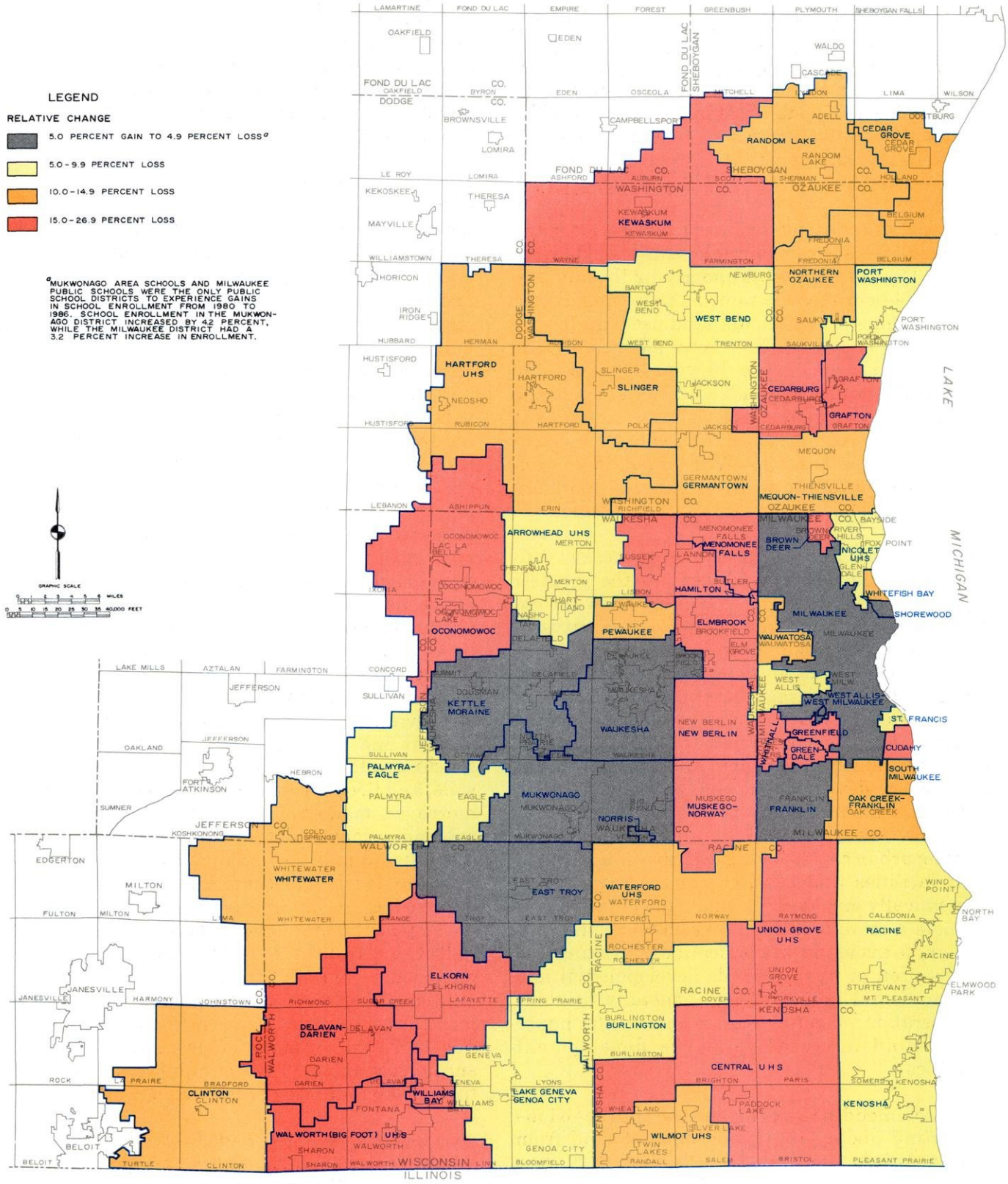
As a part of its census coordination function during 1986, the Division provided assistance in accessing 1980 census data to various local units of government. This assistance was in the form of computer-generated reports of data from the summary tape files, copies of published data tables, and census maps. The Division provided assistance to four counties, 12 cities, five villages, two towns, and four school districts, as well as to federal and state agencies.

LAND USE PLANNING

During 1986, the Division efforts in land use planning were directed primarily toward implementation of the regional land use plan. Major efforts in this regard involved continued work on soil erosion control planning programs for Ozaukee, Racine, Washington, and Waukesha Counties, initiation of work on an animal waste management plan for Waukesha County, and completion of the data collection and analysis phase of a development plan for Kenosha County. The Division also continued to monitor residential subdivision platting and farmland preservation activity within the seven-county Region during 1986.

Map 2

RELATIVE PUBLIC SCHOOL ENROLLMENT CHANGES IN THE REGION: 1980-1986



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.

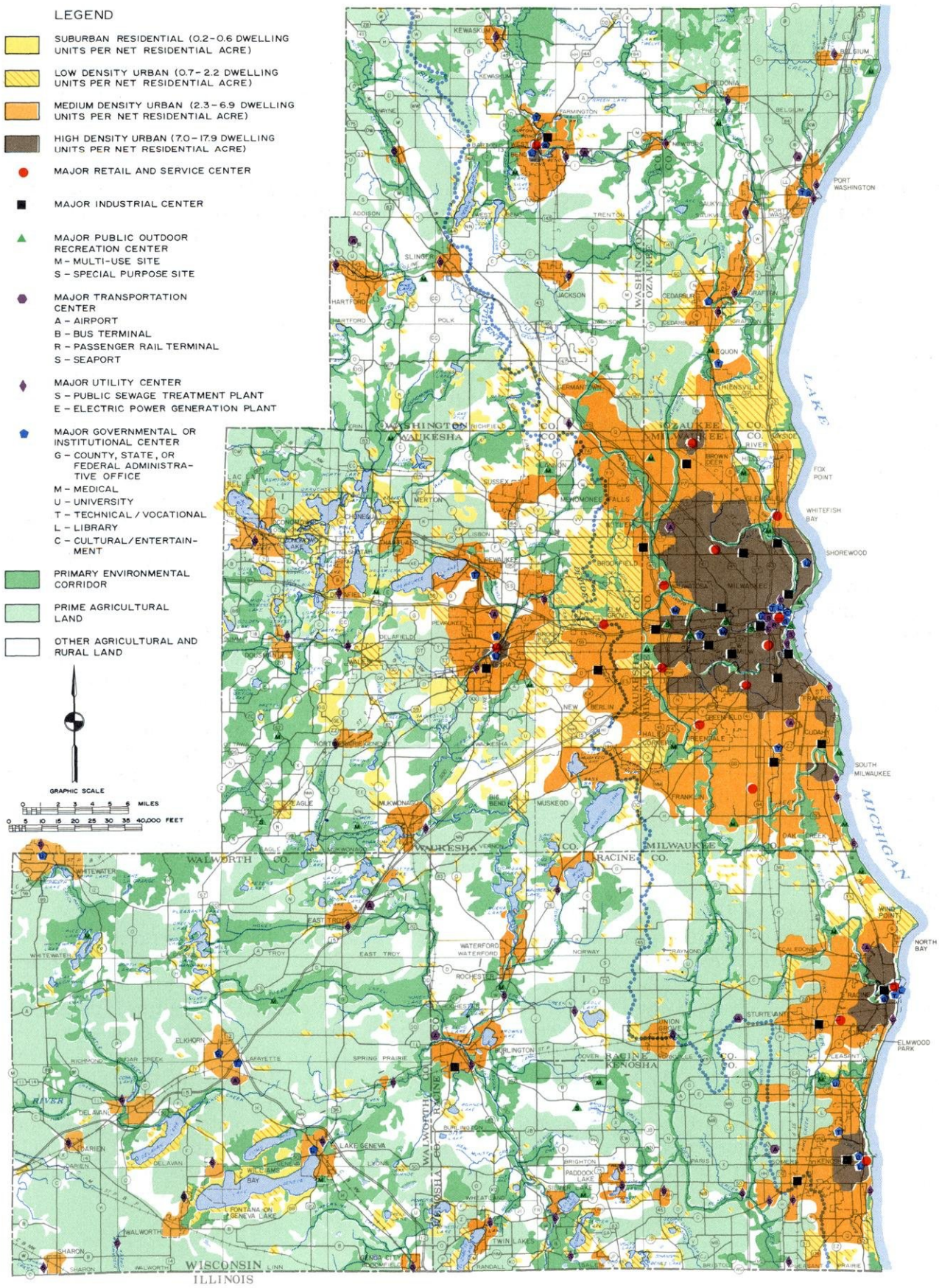
The recommended regional land use plan envisions converting about 113 square miles of land from rural to urban use from 1970 through 2000, less than half of the approximately 235 square miles that would have to be converted if decentralization of urban development were allowed to continue unrestrained; 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 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 by the Commission primary environmental corridors. 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

Map 3

ADOPTED REGIONAL LAND USE PLAN FOR SOUTHEASTERN WISCONSIN: 2000



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 1986, 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.

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

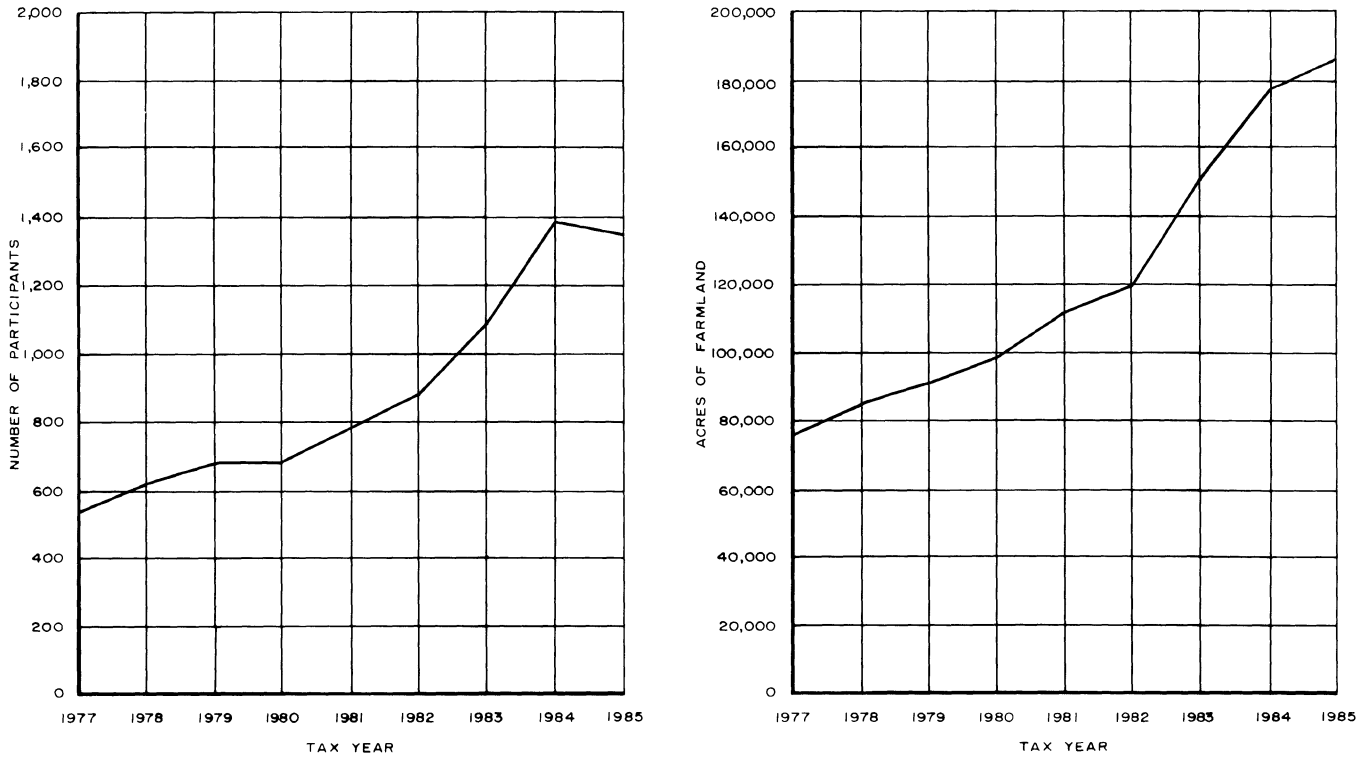
The Wisconsin Farmland Preservation Program provides property tax relief in the form of state income tax credit to eligible owners of farmland who decide to participate. In southeastern Wisconsin, owners of farmland are eligible to participate in the program only if their land has been placed in a state-certified 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, as a result of legislation contained in the 1985-87 state budget bill, all participants in the farmland preservation program are required to adhere to sound soil and water conservation practices. The soil and water conservation compliance requirements apply to "new" participants—landowners who have not claimed a farmland preservation tax credit for tax year 1984 or any prior year—in tax year 1986. The requirements will also apply to past participants—landowners who have claimed a farmland preservation tax credit for tax year 1984 or any prior year—in tax year 1988.

The level of income tax credits for which the farmland owner is eligible depends on the personal financial situation of the farmland owner and on the actions taken by county and local units of government to preserve farmland. Under the 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. As noted above, farmland in southeastern Wisconsin must be placed in an exclusive agricultural zoning district to enable the farmland owner to participate in the tax relief program. 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.

Figure 39

PARTICIPATION IN THE WISCONSIN FARMLAND PRESERVATION PROGRAM FOR THE REGION: TAX YEARS 1977-1985



A farmland owner who claims a farmland preservation tax credit 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 1,346 zoning certificates for farm parcels encompassing 183,337 acres were issued in the Region for tax year 1985 (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 796 zoning certificates for farm parcels encompassing 112,118 acres were issued in Walworth County for tax year 1985.

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).

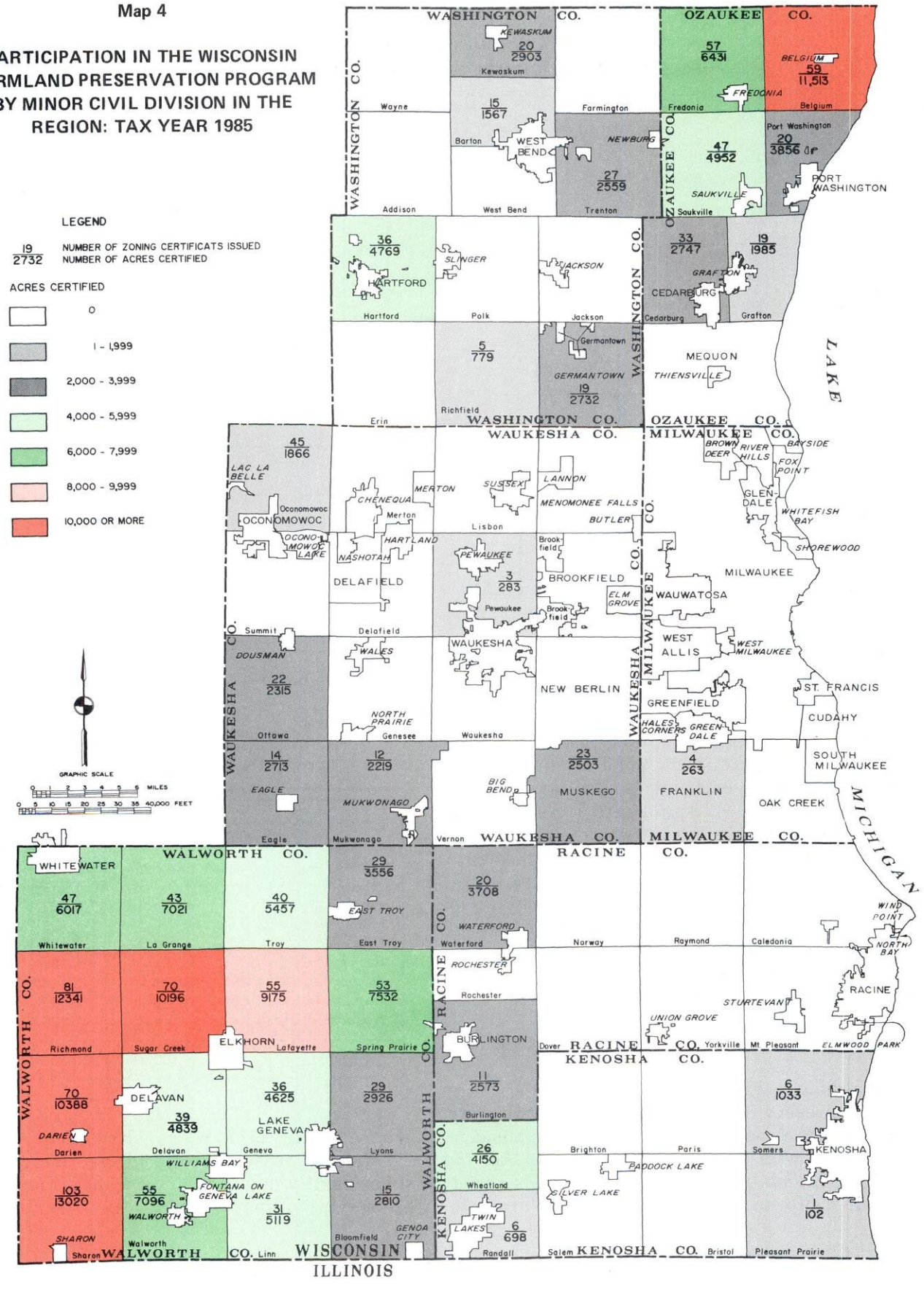
Table 8

PARTICIPATION IN THE WISCONSIN FARMLAND PRESERVATION PROGRAM: TAX YEAR 1985

County	Certificates Issued		Acres Certified	
	Number	Percent of Region	Number	Percent of Region
Kenosha	39	2.9	5,983	3.3
Milwaukee . . .	4	0.3	263	0.1
Ozaukee	235	17.5	31,484	17.2
Racine	31	2.3	6,281	3.4
Walworth. . . .	796	59.1	112,118	61.2
Washington . .	122	9.1	15,309	8.3
Waukesha . . .	119	8.8	11,899	6.5
Region	1,346	100.0	183,337	100.0

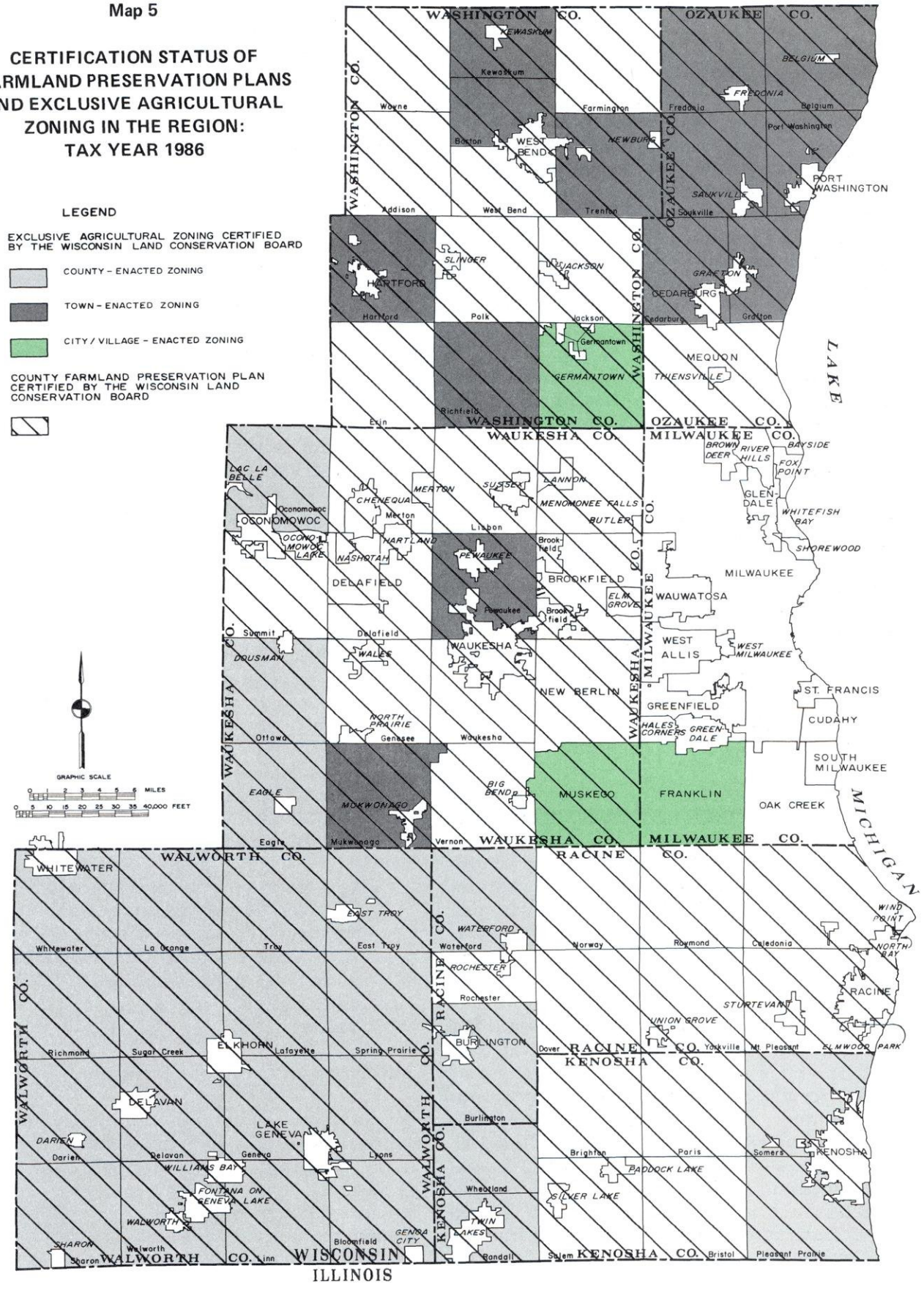
Map 4

PARTICIPATION IN THE WISCONSIN FARMLAND PRESERVATION PROGRAM BY MINOR CIVIL DIVISION IN THE REGION: TAX YEAR 1985



Map 5

CERTIFICATION STATUS OF FARMLAND PRESERVATION PLANS AND EXCLUSIVE AGRICULTURAL ZONING IN THE REGION: TAX YEAR 1986



Farmland Preservation Zoning

As noted above, farmland owners in southeastern Wisconsin are eligible to apply for income tax credits under the Farmland Preservation Program only if the land concerned has been placed in an exclusive agricultural zoning district which has been certified by the Wisconsin Land Conservation Board. 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 1986, 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. Twelve towns—6 in Ozaukee County, 5 in Washington County, and 1 in Waukesha County—have applied exclusive agricultural zoning under town-enacted zoning ordinances. The Cities of Franklin in Milwaukee County and Muskego and Pewaukee in Waukesha County and the Village of Germantown in Waukesha County have also adopted exclusive agricultural zoning in conformance with the standards of the Farmland Preservation Act (see Map 5).

As previously noted, the level of tax credit available to individual farmers depends, in part, on the level of household income and the level of property tax on the farmland, as specified on a state-promulgated schedule. The level of tax credit also depends on the planning and zoning actions taken by county and local units of government to preserve farmland.

- If the county has adopted a state-certified farmland preservation plan and the farmland is within an exclusive agricultural district under a city, village, or county zoning ordinance, farmland owners receive 100 percent of the schedule amount. For tax year 1986, these conditions applied to the Towns of Pleasant Prairie, Randall, Somers, and Wheatland in Kenosha County; the Towns of Burlington and Waterford in Racine County; the Village of Germantown in Washington County; the Cities of Muskego and Pewaukee and the Towns of Eagle, Oconomowoc, and Ottawa in Waukesha County; and all civil towns in Walworth County.

- If the county has adopted a state-certified farmland preservation plan and the farmland is within an exclusive zoning district under a town ordinance, farmland owners may receive 90 percent of the schedule amount. For tax year 1986, these conditions applied to the Towns of Belgium, Cedarburg, Fredonia, Grafton, Port Washington, and Saukville in Ozaukee County; the Towns of Barton, Hartford, Kewaskum, Richfield, and Trenton in Washington County; and the Town of Mukwonago in Waukesha County.

- If the county has not adopted a farmland preservation plan but the farmland is within an exclusive agricultural zoning district under a city, village, or county zoning ordinance, farmland owners may receive 70 percent of the schedule amount. For tax year 1986, these conditions applied only to the City of Franklin in Milwaukee County.

- If the county has not adopted a farmland preservation plan but the farmland is within an exclusive agricultural zoning district under a town zoning ordinance, farmland owners may receive an income tax credit equal to 10 percent of eligible property taxes, up to a maximum credit of $600. For tax year 1986, these conditions did not apply to any communities in the Region.

- If there is no exclusive agricultural zoning in effect, farmers are not eligible to receive tax credits, regardless of whether or not there is a county-adopted farmland preservation plan. This condition applied to the remaining cities, villages, and towns in the Region in tax year 1986.

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 each county to develop a plan for controlling soil erosion. After a county adopts such a plan and the plan is approved by the State Land Conservation Board, the county and cooperating landowners are eligible for state cost-sharing funds for conservation practices under the Wisconsin soil erosion control program. In administering this cost-sharing program, the Wisconsin Department of Agriculture, Trade and Consumer Protection is to give priority to those areas in which the most serious erosion problems are located.

Under state planning guidelines, county soil erosion control plans are intended to be primarily concerned with the reduction of cropland soil erosion. The plans are intended to help reduce the loss of topsoil from cropland to "tolerable" levels, thereby maintaining the long-term productivity of the farmland. The plans are secondarily concerned with offsite damages, including water quality degradation and other problems such as the clogging of culverts, ditches, and channels because of sedimentation.

Four counties in the Region—Ozaukee, Racine, Washington, and Waukesha—have requested the assistance of the Regional Planning Commission in the preparation of county soil erosion control plans. The soil erosion control planning programs for Racine and Waukesha Counties are expected to be completed in 1987, while the programs for Ozaukee and Washington Counties are expected to be completed in 1988.

Waukesha County Animal Waste Management Plan

Because of increasing concern about animal waste-related water pollution problems in the State, the Wisconsin Legislature amended Chapter 92 of the Wisconsin Statutes, establishing an animal waste water pollution grant program known as the Wisconsin Farmers Fund. The Wisconsin Farmers Fund program provides grant money, in the form of cost-sharing dollars, to farmers to help defray the costs of installing animal waste management improvements designed to minimize water pollution. The authority and responsibility for administering the program was delegated by the Legislature to the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP).

Under the Wisconsin Farmers Fund program, certain actions must be undertaken by the concerned county government in order for farmers to be eligible for cost-share assistance. First, the county must prepare an animal waste management plan identifying animal waste water pollution problems in the county and establishing a priority ranking of the problems. This ranking is intended to provide the basis for the allocation of cost-share funds to barnyard operations within the county.

The second county requirement is the preparation and adoption of an ordinance regulating the design and construction of earthen manure storage facilities. Such an ordinance must require all new earthen manure storage facilities to be constructed and designed in compliance with standards and specifications established by the U. S. Soil Conservation Service.

Recognizing the need to control animal waste water pollution problems in Waukesha County and the desirability of making state assistance available to farmers within the County for the control of pollutant runoff from livestock operations, the Waukesha County Board in 1985 acted to prepare a county animal waste management plan. The County Board requested the assistance of the Southeastern Wisconsin Regional Planning Commission in the preparation of the plan.

During 1986, the Commission staff completed most of the inventory and analysis work required for the study. The planning program is scheduled to be completed in 1987.

Kenosha County Development Plan

Wisconsin Counties are authorized under Section 59.97(3) of the State Statutes to prepare comprehensive county development plans, addressing a wide range of physical development concerns. Kenosha County in September 1981 requested the assistance of the Regional Planning Commission in the preparation of such a plan. While much planning had already been accomplished for the sound development of the County through various regional, county, and local planning efforts, the County determined that this previous planning work could provide a more effective guide to decision-making if it were brought forward and synthesized into a single, coherent report, constituting the county development plan.

The findings and recommendations of the requested planning effort are to be presented in a two-volume report. The first volume will set forth the basic planning data essential to the preparation of a viable county development plan, including information regarding the economic and demographic base, the natural resource base, the man-made environment, and pertinent adopted areawide, county, and local plans and land use regulations. The establishment and utilization of such data can in and of itself contribute materially to better decision-making in the County. The first volume of the report will be published early in 1987.

The numerous planning programs which have been completed for Kenosha County—including, importantly, the regional transportation, land use, park and open space, water quality management, and airport system plans; the comprehensive plans for the Fox River, Pike River, and Root River watersheds; the comprehensive plan for the Kenosha Planning District; the county farmland preservation plan; and the county overall economic development program plan—address most of the issues which should be considered in any county development plan. The second volume of this report will collate and summarize the key recommendations of these previous planning efforts, extending and detailing those recommendations as may be necessary. The resulting plan should provide county officials with a sound guide to decision-making concerning the physical development of the County.

Residential Subdivision Platting Activity

The Land Use Division annually monitors land subdivision activities in the Region. A total of 1,631 residential lots were created in the Region during 1986 through subdivision plats, compared with 1,033 lots platted in 1985. Of the total residential lots created in 1986, 1,517 lots, or about 93 percent, were served by public sanitary sewers, and the remaining 114 lots, or 7 percent, were designed to be served by onsite septic tank sewage disposal systems (see Table 9 and Map 6). With respect to the seven counties in southeastern Wisconsin, the number of residential lots created through subdivision plats in 1986 ranged from a low of 5 lots in Walworth County to a high of 853 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.

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 7.

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. This plan was adopted by Ozaukee County in 1978. Thus, all of 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 1986, 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 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 1986, the Commission published SEWRPC Community Assistance Planning Report No. 140, Park and Open Space Plan, Town of Jackson, Washington County, Wisconsin; and SEWRPC Community Assistance Planning Report No. 148, Park and Open Space Plan, Village of Walworth, Walworth County, Wisconsin. Adoption of these plans by the local communities and approval of the plans by the Wisconsin Department of Natural Resources make 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 1986, 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 will be documented in a series of seven community assistance planning reports scheduled for completion in 1987.

Caledonia Wildlife Center Management Plan

During 1986, the Commission completed the preparation of a wildlife habitat management plan for the Nicholson Wildlife Center in the Town of Caledonia. The work was undertaken at the request of the Town of Caledonia Park Commission, which sought a plan to guide the protection and sound management of the Center. The plan was designed to achieve three interrelated objectives: 1) a spatial distribution of land uses and supporting management activities that would encourage use of the area by wildlife—primarily birds; 2) protection of an important wetland in the Town of Caledonia; and 3) provision of opportunities for interested persons to pursue the study of wildlife.

The Nicholson Wildlife Center encompasses about 123 acres in the central portion of the Town of Caledonia in northeastern Racine County. Surrounded by agricultural lands, this isolated natural area is located about seven miles west of the Lake Michigan shoreline and constitutes an important feeding and resting site for birds using a migratory corridor along the Lake Michigan shoreline.

The recommended development and management plan for the Nicholson Wildlife Center is documented in SEWRPC Community Assistance Planning Report No. 146, A Wildlife Habitat Management Plan for the Nicholson Wildlife Center, Town of Caledonia,, Racine County, Wisconsin. The plan envisions an ultimate development that would take place in three phases. Two sets of coordinated improvements would take place in each phase. The first set of improvements would be intended to enhance the natural resource base of the Center and diversify the existing wildlife habitat. Habitat diversifications would be accomplished by such measures as pond construction, creation of supporting habitat, and restoration of agricultural lands to more native plant communities. A second set of improvements in each phase is intended to encourage passive outdoor recreational activities by providing facilities that would promote use of the Center for this purpose. Such facilities would include hiking trails, wildlife observation platforms, viewing facilities for the handicapped, and automobile parking areas.

The ultimate development plan for the Nicholson Wildlife Center is shown on Map 8. At year's end the Nicholson Wildlife Center plan had been formally adopted by the Caledonia Park Commission as a guide to the development and management of the Center.

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

Table 9

RESIDENTIAL SUBDIVISION PLATTING ACTIVITY IN THE REGION: 1986

County	Sewered Lots		Unsewered Lots		Total Lots	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Region
Kenosha	28	100.0	0	--	28	1.7
Milwaukee	330	100.0	0	--	330	20.2
Ozaukee	94	100.0	0	--	94	5.8
Racine.	80	100.0	0	--	80	4.9
Walworth.	5	100.0	0	--	5	0.3
Washington	234	97.1	7	2.9	241	14.8
Waukesha.	746	87.5	107	12.5	853	52.3
Region	1,517	93.0	114	7.0	1,631	100.0

Map 6

RESIDENTIAL PLATTING ACTIVITY IN THE REGION: 1986

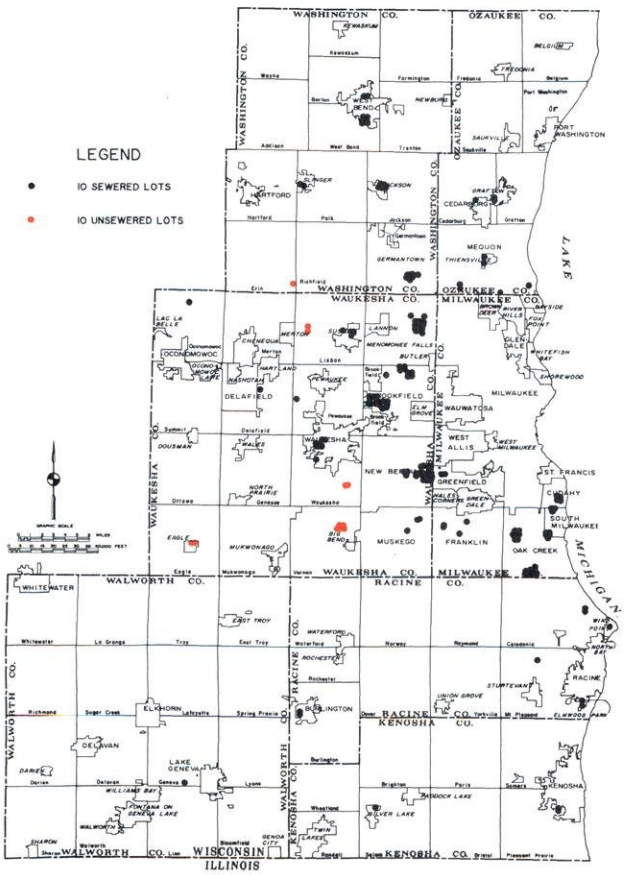


Figure 40

RESIDENTIAL LOTS PLATTED IN THE REGION: 1960-1986

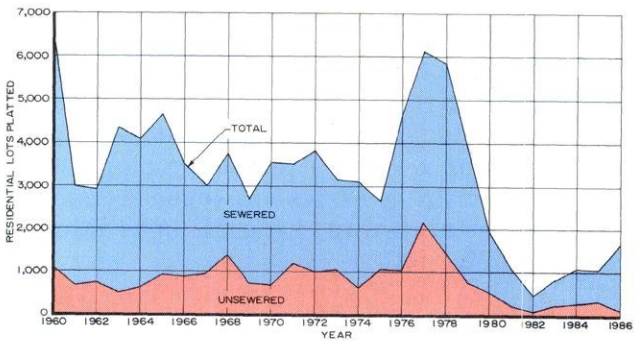


Figure 41

RESIDENTIAL LOTS PLATTED IN KENOSHA COUNTY: 1960-1986

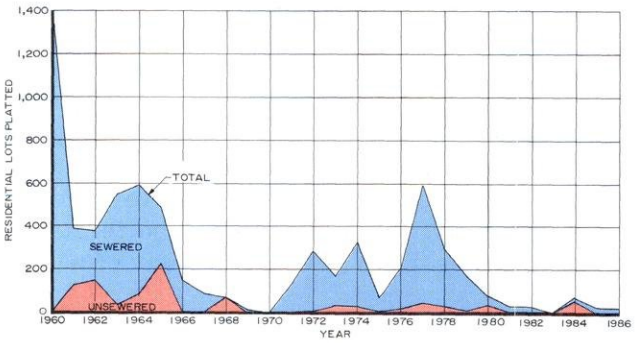


Figure 42

RESIDENTIAL LOTS PLATTED
IN MILWAUKEE COUNTY: 1960-1986

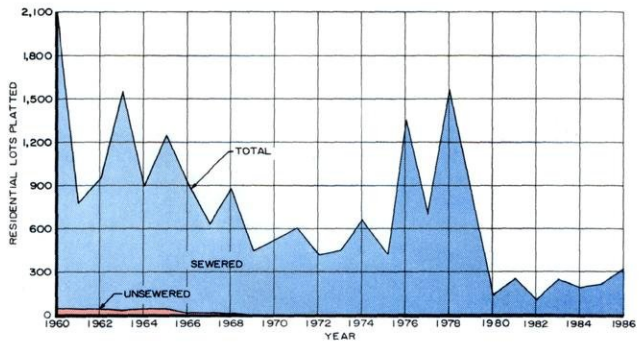


Figure 43

RESIDENTIAL LOTS PLATTED
IN OZAUKEE COUNTY: 1960-1986

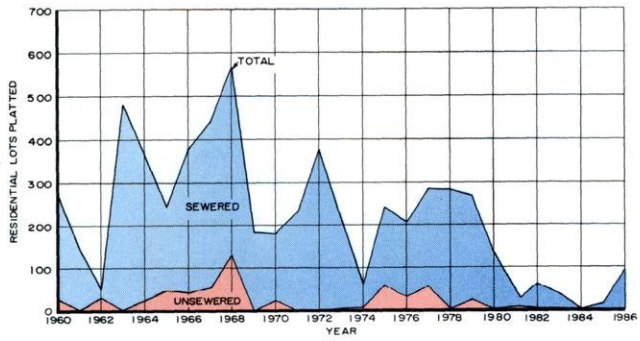


Figure 44

RESIDENTIAL LOTS PLATTED
IN RACINE COUNTY: 1960-1986

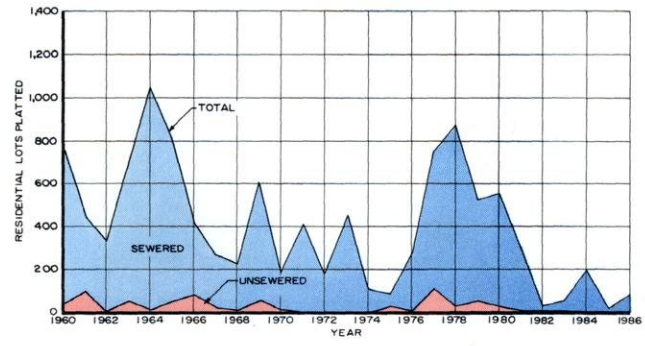


Figure 45

RESIDENTIAL LOTS PLATTED
IN WALWORTH COUNTY: 1960-1986

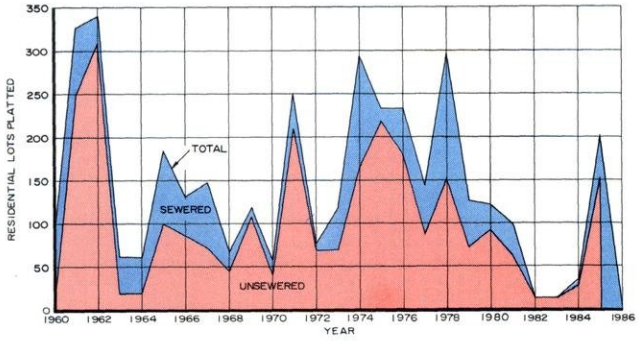


Figure 46

RESIDENTIAL LOTS PLATTED
IN WASHINGTON COUNTY: 1960-1986

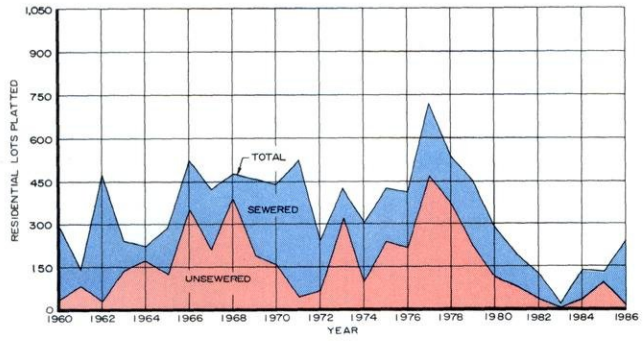
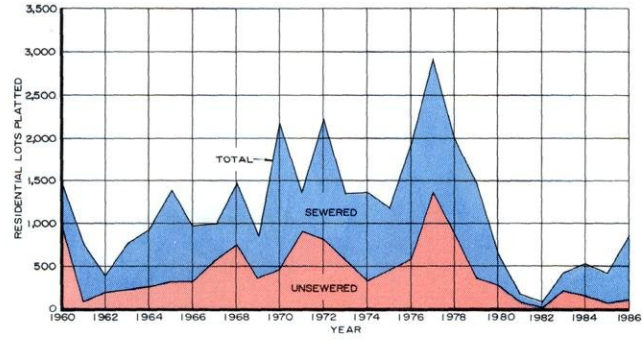


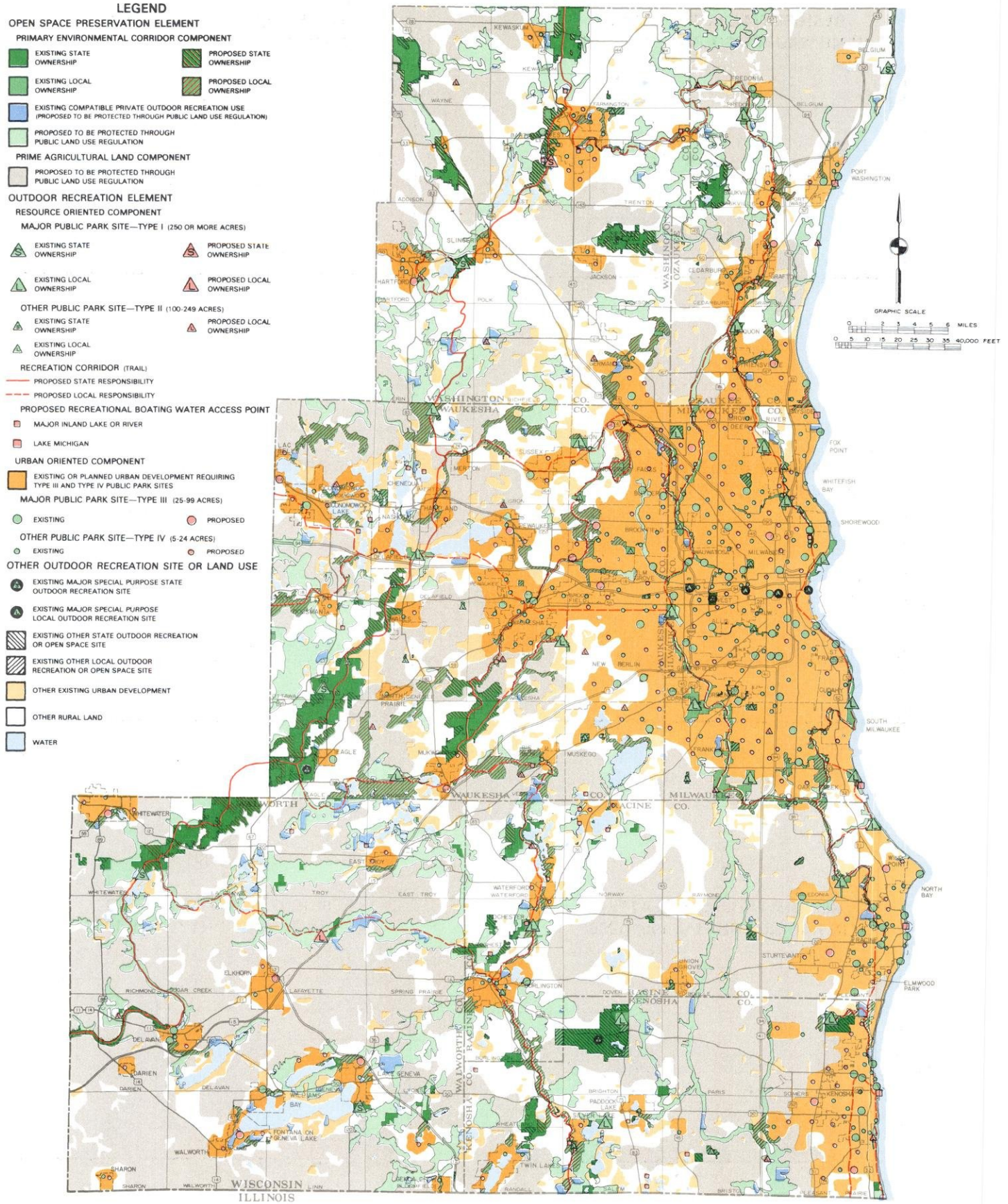
Figure 47

RESIDENTIAL LOTS PLATTED
IN WAUKESHA COUNTY: 1960-1986



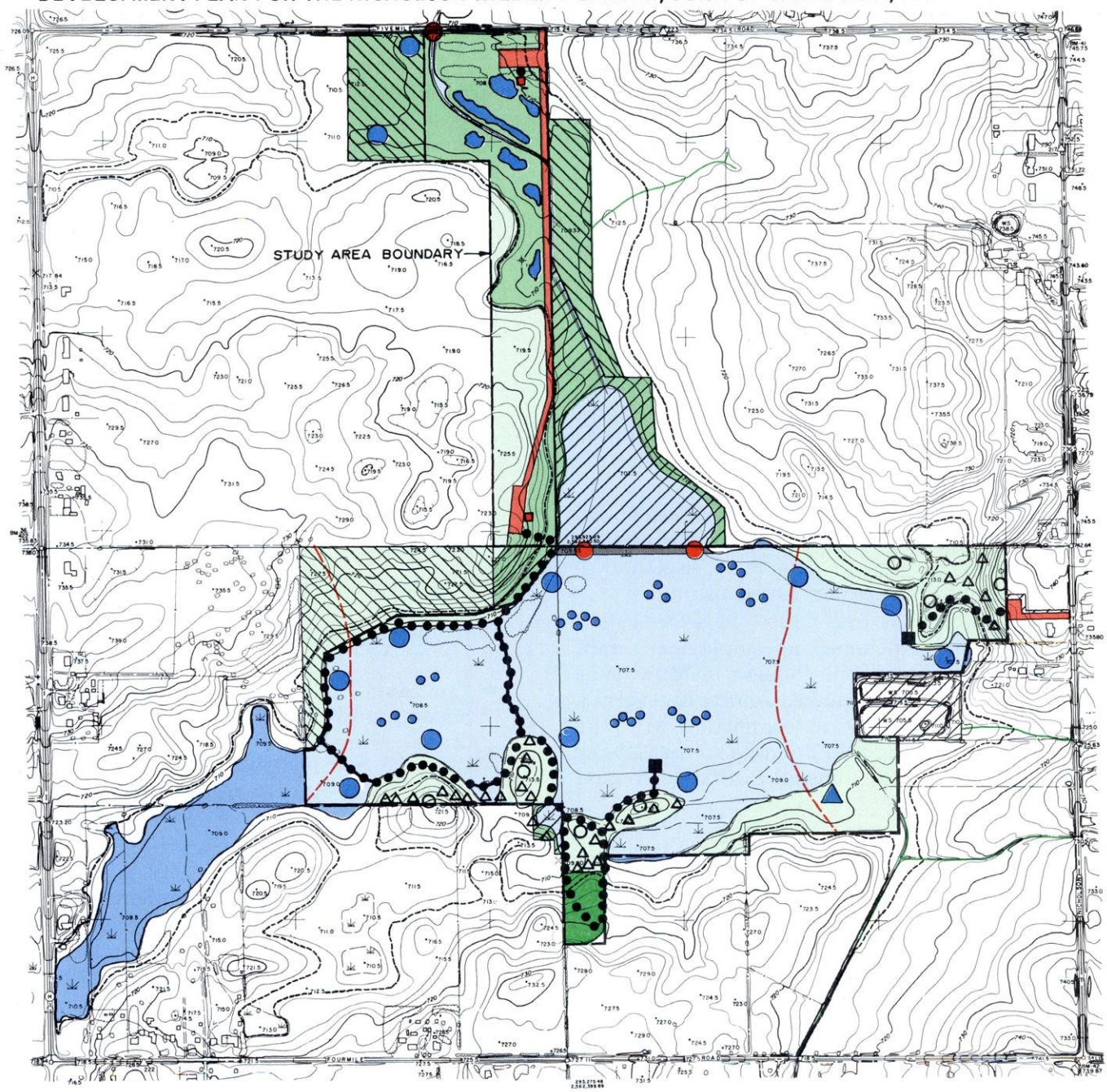
Map 7

REGIONAL PARK AND OPEN SPACE PLAN: 2000



Map 8

DEVELOPMENT PLAN FOR THE NICHOLSON WILDLIFE CENTER, TOWN OF CALEDONIA, RACINE COUNTY



LEGEND

- PROPOSED LAND ACQUISITION: NEAR FUTURE
- PROPOSED LAND ACQUISITION: ULTIMATE
- WETLANDS WITHIN PROJECT BOUNDARY
- WETLANDS ADJACENT TO PROJECT AREA TO BE ZONED SHORELAND-WETLAND UNDER NR 115
- FORESTED NATURAL AREA
- GRASSED WATERWAY
- NONE — MAINTAINED AS ROW CROPS
- RESTORED TO PRAIRIE
- PLANTED TO DENSE NESTING COVER
- EXISTING POND
- PROPOSED EXCAVATED POND
- PROPOSED EXCAVATED POND SHOWING APPROXIMATE CONFIGURATION
- PROPOSED BLASTED POTHOLE
- RAPTOR PERCHES
- BRUSH PILES
- OBSERVATION PLATFORM
- HANDICAPPED VIEWING FACILITY
- BERM
- WATER CONTROL STRUCTURE
- TRAIL
- BOARDWALK
- PROPOSED PARKING AREA
- PROPOSED ACCESS ROAD
- 1/4-MILE BLASTING LIMIT

GRAPHIC SCALE
0 400 800 FEET

and in the analysis of data. During 1986, the Division prepared letter responses to 106 requests for population, economic, and related information from the Commission data files. In addition, 267 requests were handled by telephone and 93 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 1986 in performing this function.

- Provision of technical assistance in determining census data availability for use in a fire service consolidation study for selected municipalities in Milwaukee County.

- Provision of population data and data on the number of households below the census-defined poverty income level to Ozaukee County for health services planning.

- Provision of income and employment data for each minor civil division in Milwaukee County to the Milwaukee County Emergency Government office in connection with the serious flooding that occurred in the County as a result of the unusual rainfall of August 6, 1986.

- Provision of 1980 census data on total persons by ethnic background and of unemployment data for six selected minor civil divisions in Washington County to the West Bend School District for use in evaluating job opportunities within the County for high school graduates.

- Provision of data on the number of households below the census-defined poverty income level to the City of Waukesha for use in determining the boundaries for the City's housing rehabilitation program.

- Provision of selected demographic and economic information on the City of Elkhorn and Walworth County to the Milwaukee office of the State Commissioner of Banking.

- Provision of forecast population data to Waukesha County to be used in determining future correctional facility needs.

Land Use and Park and Open Space Data

The land use and park and open space data files are used extensively by local governmental units and agencies and by private interests. Examples of the provision of land use and park and open space data during 1986 include the following:

- Provision of land use, historic urban growth, population, and socioeconomic data to the City of Cedarburg for use in a study of fire protection needs in the City of Cedarburg and environs.

- Provision of technical assistance to the City of Brookfield in the preparation of a site analysis and general development plan for the undeveloped Mitchell Park site, a 550-acre site located along the Fox River. Assistance included the preparation of alternative plans for intensive development of the site, and of recommendations for the development of trails and for the preservation of wetlands and other natural resources at the site.

- Provision of land use, natural resource, and housing unit information on the Lulu Lake drainage area in Walworth and Waukesha Counties to the University of Wisconsin Water Resources Center for use in a study on surface water quality in the drainage area.

- Provision of primary environmental corridor information to the City of West Bend, including an analysis of change in the extent of natural resource features within the environmental corridor due to the recent past, and planned future, construction of USH 45 within and adjacent to the western portion of the City of West Bend.

- Provision of technical assistance to the City of Delavan in the identification of wetlands within existing and planned future park and open space sites along Swan Creek and Turtle Creek within and adjacent to the City, and in the preparation of a general plan for the development of a system of hiking trails within such parklands in the City.

- Provision of technical assistance to Racine County in the analysis of a proposed campground in the Town of Norway, including a

review of the proposed campground site development plan and the potential impact of campground development on the natural resource base.

- Provision of detailed land use data for each U. S. Public Land Survey quarter section in the northwest side planning area of the City of Milwaukee to the Department of City Development for use in revising the City's land use plan for the northwest side of the City of Milwaukee.

- Provision of detailed land use, natural resource, and environmental corridor information to Planning Resources, Inc., for use in study of the proposed reconstruction of STH 50 at its intersection with IH 94.

- Provision of detailed land use and natural resource information to the Geneva Lake Environmental Agency for use in a study, with the University of Wisconsin-Whitewater, of nonpoint source pollution of Geneva Lake.

- Provision of land use information to the Citizen's Governmental Research Bureau for use in a study of the role of county governmental agencies in promoting economic development in the Milwaukee area.

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 46 requests for such information were received and fulfilled. Examples of such special environmental inventories, assessments, and evaluations prepared during 1986 include the following:

- Provision of wetland plant community information to the Kenosha County Office of Planning and Zoning Administration. The information was used to determine the actual areal extent of two wetlands within the proposed Pheasant Run landfill site expansion area located in the Town of Paris, Kenosha County.

- Provision of a wetland inventory, wildlife habitat information, and primary environmental corridor and wetland boundary delineations on a parcel located in the City of Burlington, Racine County. The information was provided to the City Engineer for use in evaluating future development on the subject parcel.

- Provision of vegetation surveys and wildlife habitat information for seven plant community areas located in the Village of Hales Corners to the Wisconsin Department of Natural Resources. The information was used by the Department to prepare an environmental impact assessment of the Village of Hales Corners stormwater management plan for the WEMP branch of the Whitnall Park Creek.

- Provision of a wetland vegetation inventory, wildlife habitat information, and a wetland boundary determination to the City of Whitewater, Walworth County, for use in verifying the areal extent of a wetland located in the City of Whitewater business park.

- Provision of wetland vegetation inventories and related natural resource information for property located in the Town of Brookfield to the Waukesha County Park and Planning Commission to be used in determining the areal extent of the lowland conservancy zone.

- Provision of vegetation surveys and related natural resource information for property located in the Town of Mt. Pleasant, Racine County, for use in identifying plant community areas requiring special consideration during development of the subject parcel.

- Provision of a vegetation survey, natural area and natural resource information, and resource management recommendations to the Town of Pleasant Prairie, Kenosha County, for a 65-acre woodlot located adjacent to the Des Plaines River in the Town. The information was used to evaluate a logging proposal submitted to the Town for the subject woods.

- Identification for the City of Waukesha of the areal extent of the wetland in, and primary environmental corridor boundaries of, the proposed Legend Hills Subdivision development site in the City.

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 1986 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 1986 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 1986, 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

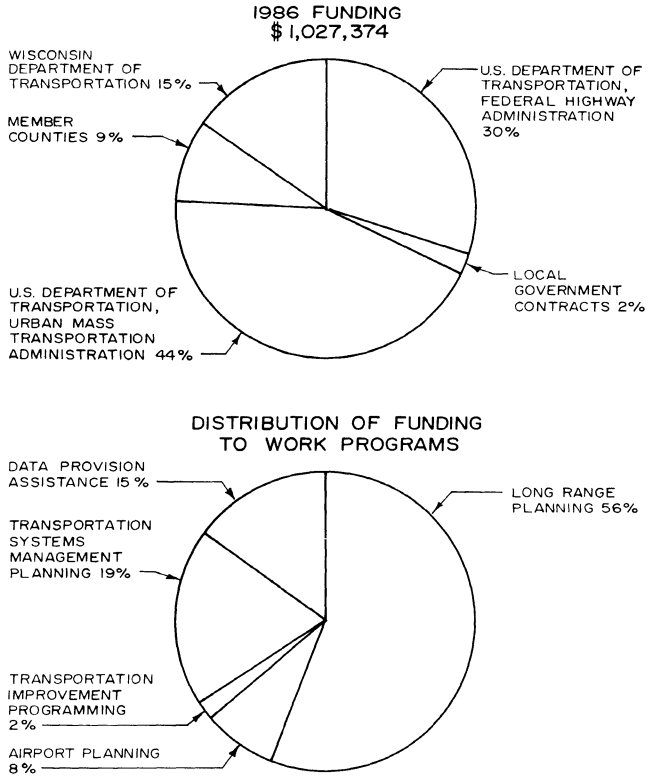


Table 10

AUTOMOBILE AVAILABILITY

County	1963	1972	1985	1986
Kenosha	35,160	48,010	59,070	60,740
Milwaukee	304,120	397,690	430,430	435,830
Ozaukee	14,320	24,430	36,610	37,810
Racine	47,580	68,270	83,400	85,130
Walworth	19,440	27,430	36,900	38,220
Washington	16,240	27,030	42,700	44,150
Waukesha	61,900	102,910	155,260	160,030
Total	498,760	695,770	844,370	861,640

Automobile and Truck Availability

The number of automobiles available to residents of the Region in 1986 totaled 861,640. This represents an increase of 17,270, or about 2.0 percent, over the 1985 level of 844,370 (see Table 10). The increase in automobile availability in 1986 is a return to the general trend of continued increases in the number of automobiles available to residents of the Region over the past 26 years. As shown in the table, all counties registered slight gains in automobile availability during the year. The average annual rate of growth in automobile availability within the Region from 1963 through 1986 was 2.4 percent.

The number of persons per automobile within the Region was estimated to be 2.02 in 1986, lower than the estimated 2.06 in 1985, as shown in Figure 49. The estimated number of automobiles available within the Region in 1986 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 1986 forecast automobile availability ranged from 826,300 under the adopted regional transportation system plan to 900,600 under the "no build" alternative. Thus, the 1986 regional automobile availability of 861,640 was about 4.3 percent lower than the "no build" forecast, and about 4.3 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 147,420, an increase of about 7,680, or 5.5 percent, over the 1985 level of 139,740 trucks (see Table 11 and Figure 51). The increase in 1986 offsets the decline in motor truck availability which occurred between 1984 and 1985 and 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 1986. The number of light trucks available in 1986 totaled about 110,720, an increase of 4,440, or about 4.2 percent, over the number of light trucks available in 1985. The number of heavy trucks and municipal trucks increased to 36,700 in 1986, an increase of about 3,240 trucks, or about 9.7 percent, over the 1985 level of 33,460.

Figure 49

PERSONS PER AUTOMOBILE

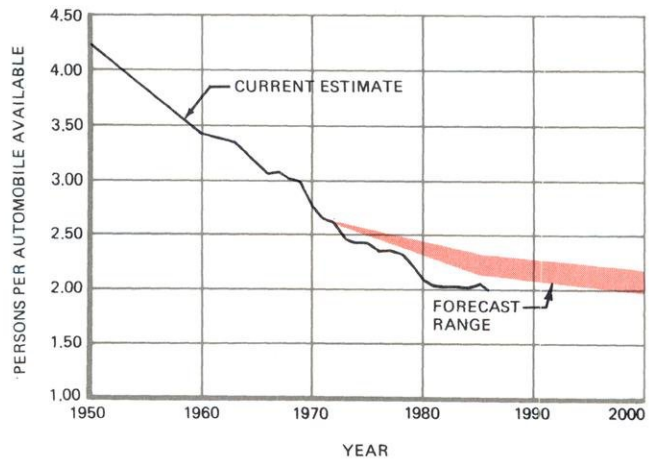


Table 11

TRUCK AVAILABILITY

County	1963	1972	1985	1986
Kenosha	4,860	7,040	12,690	13,170
Milwaukee	25,870	33,350	52,890	55,260
Ozaukee	2,290	3,290	6,260	6,670
Racine.	6,200	9,140	16,240	17,170
Walworth.	4,490	6,430	10,720	11,510
Washington	3,410	5,400	10,790	11,330
Waukesha.	8,280	15,060	30,150	32,310
Total	55,400	79,710	139,740	147,420

Figure 50

FORECAST RANGE OF AUTOMOBILE AVAILABILITY

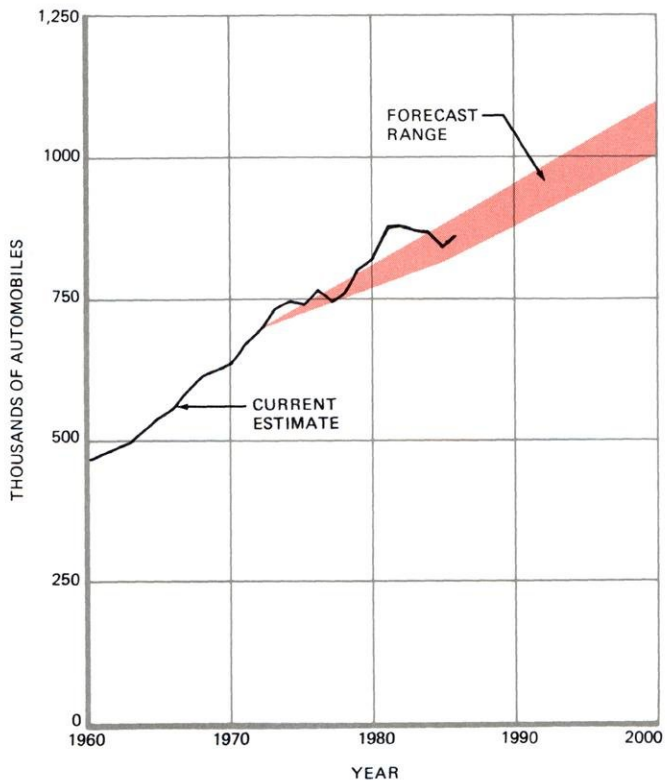
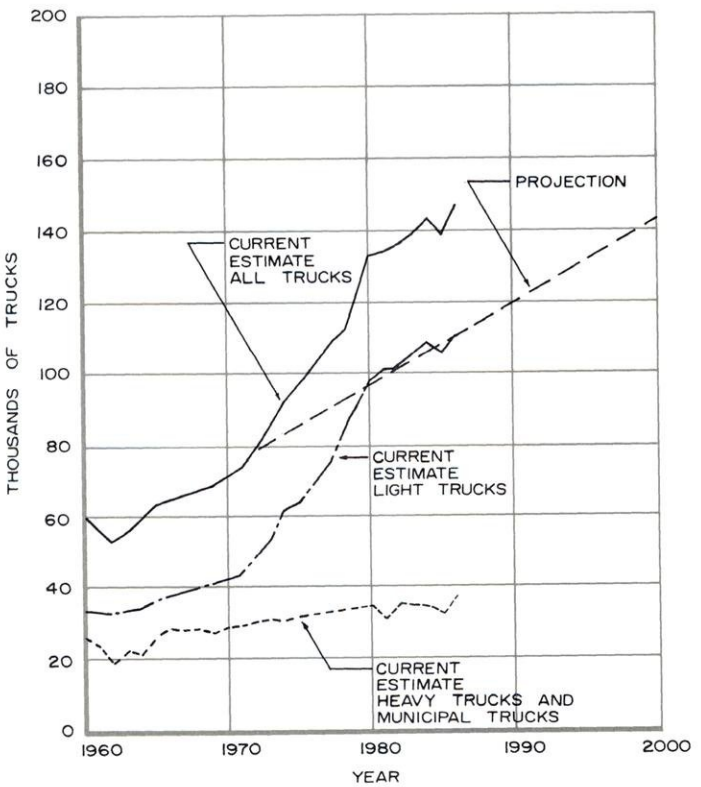


Figure 51

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 12 and Figure 52). In the Kenosha urbanized area, ridership on the fixed route public transit system serving the City of Kenosha decreased during 1986 (see Figure 53). Ridership during the year approximated 1,137,600 revenue passengers, a decrease of about 5 percent from the 1985 ridership level of about 1,194,300 revenue passengers. The number of bus miles operated in

Table 12

PUBLIC TRANSIT RIDERS

Transit Operators by Area	1963	1972	1985	1986	Percent Change 1985-1986
Urbanized Areas					
Kenosha					
City of Kenosha	1,876,000	503,000	1,194,300	1,137,600	- 4.7
Milwaukee					
Milwaukee County	88,546,000	52,141,000	48,339,500	47,073,300	- 2.6
Waukesha County	--	--	321,500	282,100	- 12.2
City of Waukesha	451,000	227,000	406,200	378,000	- 6.9
Ozaukee Metropolitan Transit, Inc.	--	--	10,000	5,000	- 50.0
Subtotal	88,997,000	52,368,000	49,077,200	47,733,400	- 2.7
Racine					
City of Racine-Local Bus	2,907,000	526,000	2,390,300	2,287,400	- 4.3
City of Racine-Commuter Bus	165,000	153,000	89,200	82,400	- 7.6
Subtotal	3,072,000	679,000	2,479,000	2,369,800	- 4.4
Urbanized Area Total	93,945,000	53,600,000	52,751,200	51,245,800	- 2.9
Nonurbanized Areas					
City of Hartford	--	--	15,000	14,600	- 2.7
City of Whitewater	--	--	--	27,000	--
Nonurbanized Area Total	--	--	15,000	41,600	--
Total Region	93,945,000	53,600,000	52,766,000	51,287,400	- 2.8

revenue service totaled about 658,900, a decrease of less than 1 percent from the 662,000 bus miles operated during 1985. The basic fare for the Kenosha system was increased from $0.40 to $0.45 in February 1985, and remained $0.45 during 1986.

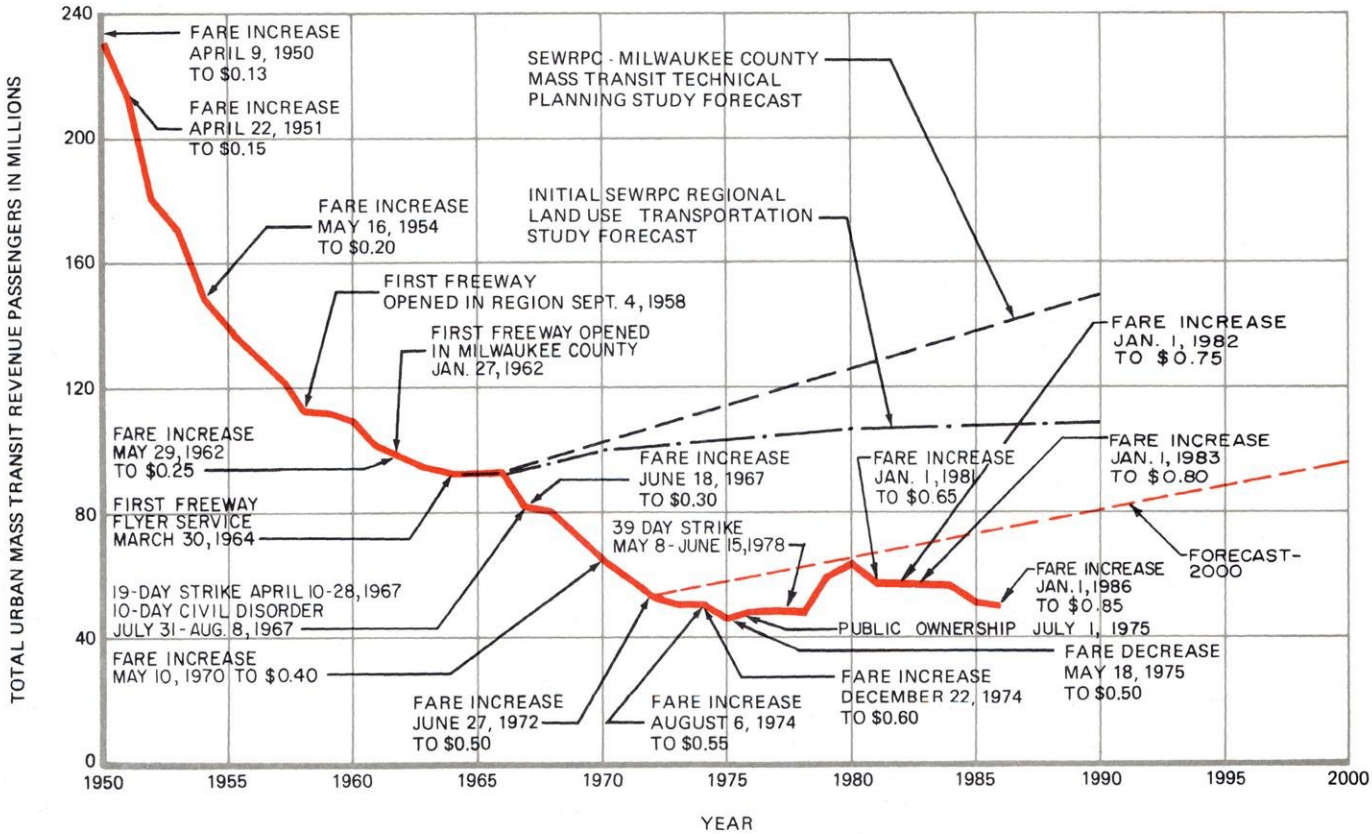
To assist in the public operation of the transit system, the Commission prepared, at the request of the City, a five-year transit development plan in 1976 for the years 1976-1980.[1] Many of the plan's recommendations regarding transit route layout and scheduling were implemented in the mid-1970's as 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.*

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.

Ridership on the fixed route public transit system serving the City of Racine also decreased during 1986. Public transit ridership during 1986 decreased by about 4 percent from the 1985 level of approximately 2,390,300 revenue passengers to the 1986 level of about 2,287,400 revenue passengers. The number of bus miles operated in revenue service increased by less than 1 percent during 1986—from about 1,231,600 bus miles in 1985 to about 1,236,400 bus miles in 1986. The basic fare for the Racine transit system was $0.35 in 1986 and has not changed since 1982.

Transit ridership declines on the City of Racine transit system during 1982 and 1983 and now again in 1985 and 1986 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 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

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

Figure 53

MASS TRANSIT RIDERSHIP:
KENOSHA URBANIZED AREA

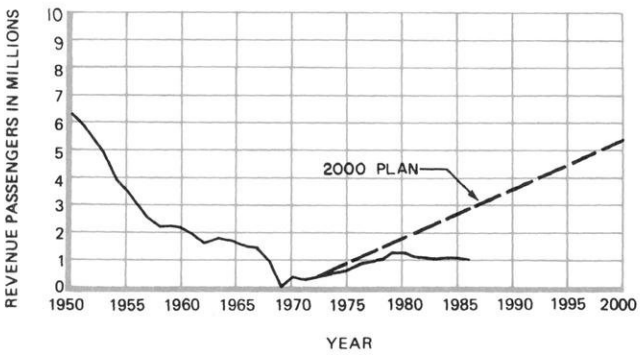
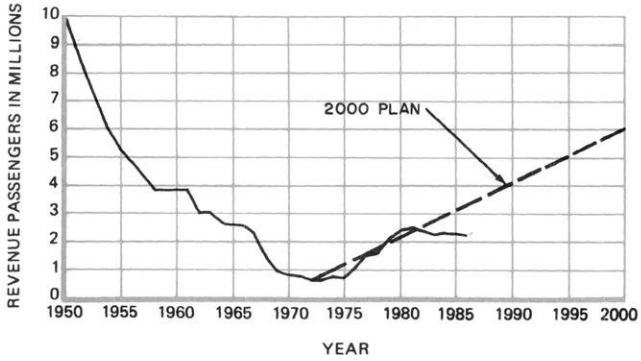


Figure 54

MASS TRANSIT RIDERSHIP:
RACINE URBANIZED AREA



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 1986, 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. Up 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 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 82,400 revenue passengers during 1986, a decrease of about 8 percent from the 1985 ridership level of about 89,200 revenue passengers. The number of bus miles operated in revenue service remained virtually unchanged from the 192,500 bus miles operated in 1985, increasing to about 192,600 bus miles in 1986. Total transit ridership within the Racine urbanized area—including the City of Racine transit system and the special commuter bus service—decreased by about 4 percent—from the ridership level of 2,479,500 revenue passengers to about 2,369,800 revenue passengers in 1986 (see Figure 54).

In the Milwaukee urbanized area, public subsidized, fixed route transit service was provided during 1986 by the Milwaukee County Transit System, Waukesha County, and the City of Waukesha. During 1986, the Milwaukee County Transit System made only minor changes in the transit system route structure. Ridership on the transit system declined during 1986 by about 3 percent from the 1985 level of about 48,339,500 revenue passengers, to the 1986 level of 47,073,300 revenue passengers. The ridership decline was due primarily to a continued reduction in transit service of about 3 percent as measured by bus miles; a fare increase from $0.80 to $0.85; and a substantial decline in the price of gasoline.

During 1986, Waukesha County continued to provide publicly supported, fixed route bus service between Waukesha and Milwaukee Counties. Operated for Waukesha County on a contract basis

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

by both the Milwaukee County Transit System and Wisconsin Coach Lines, Inc., bus service included the commuter-oriented bus service supported by the County since 1977 between the City of Milwaukee central business district and the Cities of Oconomowoc and Waukesha, and additional bus service provided over four bus routes initiated by the County during 1981. These four bus routes operated during 1986 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 should be on a trial basis.[5]

The four routes which continued to be operated during all or part of 1986 included three routes providing modified rapid, or "freeway flyer," transit service between the Milwaukee central business district and the Village of Menomonee Falls, the City of Brookfield, 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 1986. However, service on the freeway flyer route serving the City of Brookfield was eliminated at the end of 1986 because of low ridership levels. Ridership on the Waukesha County Transit System declined by about 12 percent in 1986, from 321,500 trips in 1985 to 282,100 trips in 1986. Transit fares on the Waukesha County Transit System—which are distance-related—were increased in 1986 from between $1.05 and $3.05 to between $1.25 and $3.35.

In the City of Waukesha, ridership on the fixed route bus system serving the City continued to exceed forecast ridership levels, although ridership declined during the year. 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.[6] The new Waukesha transit system—routes, schedule, service levels, and fare structure—was implemented essentially as recommended by that plan. During calendar year 1986, the system carried approximately 378,000 revenue passengers, a decrease of about 7 percent from the 406,200 revenue passengers carried on the system during 1985. Nonetheless, after five years of operation, ridership on the Waukesha transit system exceeded the ridership forecast of 264,000 revenue passengers for the fifth year of system operation as presented in the transit development program.

As mentioned in last year's Annual Report, transit service was reinstituted without public subsidy in Ozaukee County during 1985 by a private transit company—Ozaukee Metropolitan Transit, Inc. The company began operations on July 15, 1985, and provided commuter bus service between communities in Ozaukee County and the Milwaukee central business district over a single bus route. Service, however, was discontinued in April 1986.

The route operated by the new company was almost identical to a publicly subsidized bus route operated by another private bus company, Wisconsin Coach Lines, Inc., until June 1978, when Ozaukee County discontinued the public subsidy for the route. Three round trips were provided over the new route each weekday in 1985 by Ozaukee Metropolitan Transit, with stops along the route located in the Cities of Port Washington, Grafton, Cedarburg, and Mequon, and at the public transit station located on the Ozaukee County campus of the Milwaukee Area Technical College. Ridership on the bus route during the five-and-one-half months it was operated during 1985 totaled about 10,000 revenue passengers. During the first four months of 1986, ridership on the bus route totaled about 5,000 revenue passengers.

The number of bus miles operated in revenue service in the Milwaukee urbanized area during the year totaled about 17.9 million, a decrease of about 4 percent from the approximately 18.6 million bus miles operated during 1985. Total

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

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

transit ridership within the Milwaukee urbanized area decreased by about 3 percent from the 1985 ridership level of about 49.1 million revenue passengers to about 47.7 million revenue passengers in 1986 (see Figure 55). The majority of this ridership decrease may be attributed to decreases in service provided, increased fares, and a substantial decline in the price of gasoline.

During 1986, rapid transit service in the Milwaukee urbanized area was provided by freeway flyer bus service operated by both Milwaukee and Waukesha Counties from 21 outlying parking terminals to the Milwaukee central business district. Ridership on the freeway flyer bus service totaled about 1,428,500 passengers in 1986, representing a decrease of about 7 percent from the 1,542,900 passengers carried in 1985 (see Figure 56). This decrease in freeway flyer ridership can be directly attributed to a decrease in ridership on freeway flyer routes serving the University of Wisconsin-Milwaukee. Ridership on these special routes has been most affected by the decline of gasoline prices over the past year, and by a reduction in the severity of the parking problems which have existed in the past around the University campus. These factors have made travel to the campus by automobile more attractive to students. In addition, the University has more students enrolled on a part-time basis, residing on campus, or commuting from areas outside Milwaukee County. Consequently, the number of students who could make effective use of the special University transit services is lower than it has been in past years. Ridership on the regular freeway flyer routes decreased about 7 percent, from 1,495,600 revenue passengers in 1985 to about 1,392,800 revenue passengers in 1986.

Progress in providing the public transit stations recommended in the adopted year 2000 transportation plan is summarized on Map 9. During 1986, no new public transit stations were constructed to add to those which existed during 1985. Table 13 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 1986 for all transit stations by patrons of freeway flyer bus service and carpoolers. As shown in the table, transit service was provided at 13 of the 14 public transit/park-ride stations and at nine shopping center lots. The total of 23 freeway flyer terminal facilities is the same as that which existed during 1985. The same number of spaces were available at public transit/park-ride stations and at shopping center lots in 1986 as in 1985—3,260 and 1,175, respectively.

Figure 55

MASS TRANSIT RIDERSHIP: MILWAUKEE URBANIZED AREA

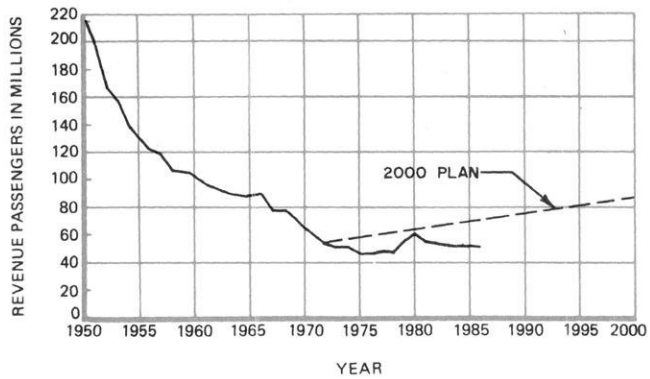
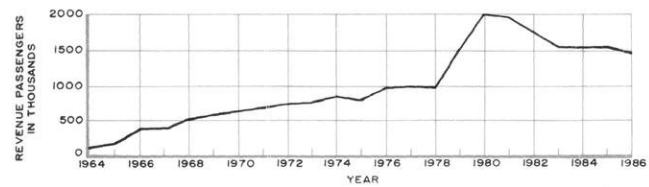


Figure 56

MILWAUKEE URBANIZED AREA FREEWAY FLYER RIDERSHIP



Of the 3,260 spaces available at the 14 public transit/park-ride stations, 1,506 spaces were used on an average weekday during the fourth quarter of 1986, representing a utilization rate of about 46 percent. Of the 1,175 spaces available at the nine shopping center lots, 494 spaces were utilized during the last quarter of 1986, representing a utilization rate of about 42 percent. In total, about 45 percent of all available parking spaces were used on an average weekday during the last quarter of 1986.

Publicly operated transit service was also provided in the nonurbanized portion of the Region during 1986 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

Map 9

PRIMARY TRANSIT SYSTEM PLAN FOR THE REGION: 2000

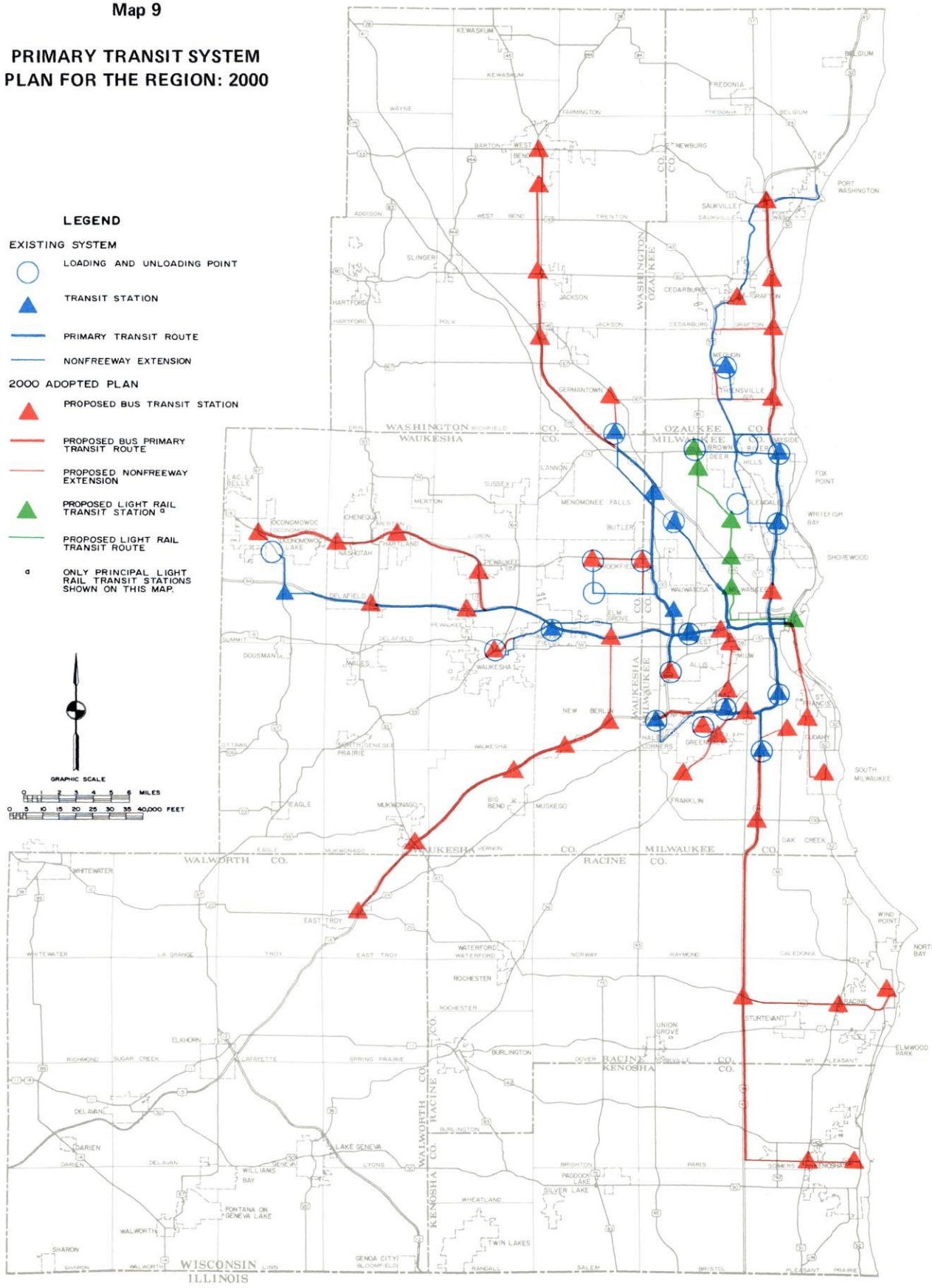


Table 13

USE OF PARKING AT FREEWAY FLYER TERMINALS: FOURTH QUARTER 1986

Location	Available Parking Spaces	Autos Parked on an Average Weekday—Fourth Quarter: 1986	Percent of Spaces Used
Public Transit Stations			
W. College Avenue (Milwaukee)	530	321	61
W. Watertown Plank Road (Wauwatosa)	200	102	51
North Shore (Glendale)	190	109	57
Brown Deer (River Hills)	250	137	55
Goerkes Corners (Brookfield)	250	121	48
Milwaukee Area Technical College (Mequon)	200	10	5
W. Holt Avenue (Milwaukee)	240	111	46
Whitnall (Hales Corners)	360	263	73
Pilgrim Road (Menomonee Falls)	70	51	73
STH 67 and IH 94 (Summit)	80	32	40
State Fair Park (West Allis)	200	75	38
Timmerman Field (Milwaukee)	140	57	41
W. Loomis Road (Greenfield)	415	106	26
W. Good Hope Road	135	11[a]	8[a]
Subtotal	3,260	1,506	46
Shopping Center Lots			
Northland (Milwaukee)	100	21	21
Zayre-Kohls (West Allis)	250	123	49
Zayre (Brookfield)	200	79	40
Southridge (Greendale)	250	133	53
Northridge (Milwaukee)	100	53	53
Zayre (Brown Deer)	125	77	62
Ruby Isle (Brookfield)	50	2	4
Sentry (Brookfield)	50	6	12
Olympia (Oconomowoc)	50	--[b]	--[b]
Subtotal	1,175	494	42
Total	4,435	2,000	45

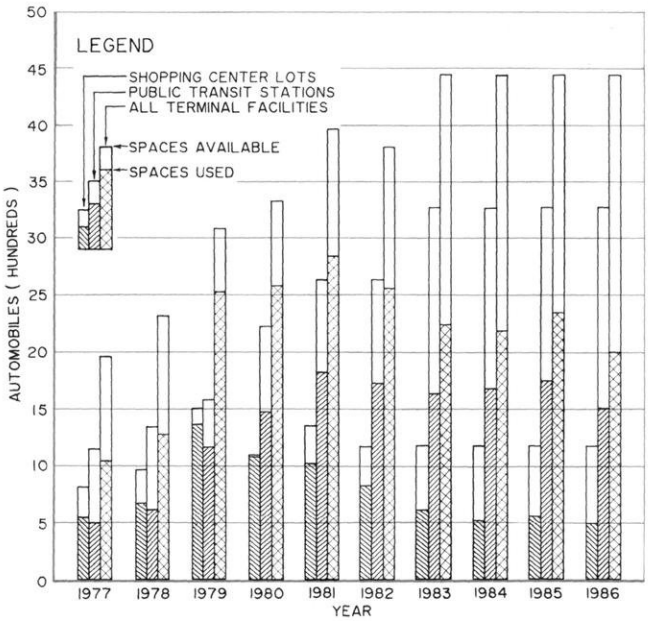
[a] *Public transit service to this station was not provided during 1986. The number of autos parked represents use by carpoolers.*

[b] *Data not available.*

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 1986, the Hartford taxicab and shuttle bus services carried approximately 14,600 revenue passengers and operated about 57,700 total vehicle miles. These figures represent a decrease of about 3 percent from the 15,000 revenue passengers carried in 1985, and a decrease of less than 1 percent from the 58,000 total vehicle miles operated during 1985.

Figure 57

FREEWAY FLYER PARKING LOT USE: FOURTH QUARTER: 1977-1986



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 1986, the Whitewater taxicab service carried approximately 27,000 revenue passengers and operated about 55,700 vehicle miles of revenue service.

Transit operating subsidies during 1986 totaled about $40.7 million, as compared with about $40.9 million during 1985, as shown in Table 14. The overall public operating subsidy per ride in the Kenosha urbanized area increased from about $1.12 in 1985 to about $1.39 in 1986 (see Figure 58). In the Racine urbanized area, the overall operating subsidy per ride increased from about $0.84 in 1985 to about $0.99 in 1986 (see Figure 59). In the Milwaukee urbanized area, the overall operating subsidy per ride increased from about $0.76 in 1985 to about $0.77 in 1986 (see Figure 60). By individual operator in the Milwaukee urbanized area, the per-ride subsidies in 1985 and 1986 were as follows: Milwaukee County Transit System, $0.75 both years; Waukesha County, $1.67 and $2.17; and City of Waukesha, $1.70 and $2.00. The overall operating subsidy per ride for the taxicab and shuttle bus services operated by the City of Hartford increased markedly from about $3.34 per ride in 1985 to about $5.30 per ride in 1986 (see Figure 61). In Whitewater, the per-ride subsidy in 1986 was $1.31.

Carpool Parking Facilities

During 1986, the Commission collected data on the use of available parking supply at carpool parking facilities within the Region. As shown in Table 15, 15 publicly owned carpool parking facilities were in operation at key freeway interchanges in the outlying areas of the Region in 1986. This number represents no change from the number of carpool parking facilities available in 1985, as no new facilities were placed into service during 1986. During the fourth quarter of 1986, about 335 of the total 1,160 parking spaces available were used on an average weekday (see Figure 62). This represents a utilization rate of 29 percent in 1986, a decrease in the number of parked vehicles per average weekday from 36 percent 1985. 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. 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 1986 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.

Table 14

PUBLIC TRANSIT OPERATING SUBSIDIES WITHIN THE REGION: 1985-1986

Area	Public Transit Operating Assistance (dollars)							
	1985 Actual				1986 Estimated			
	Federal	State	Local	Total	Federal	State	Local	Total
Urbanized Areas								
Kenosha	743,500	593,300	--	1,336,800	794,400	756,800	31,800	1,583,000
Milwaukee								
Milwaukee County	5,997,200	22,339,300	7,885,400	36,221,900	5,997,200	23,931,000	5,389,700	35,317,900
Waukesha County	167,700	330,600	37,700	536,000	199,500	364,500	48,400	612,400
City of Waukesha	267,000	300,300	122,100	689,400	206,000	348,900	200,600	755,500
Subtotal	6,431,900	22,970,200	8,045,200	37,447,300	6,402,700	24,644,400	5,638,700	36,685,800
Racine								
City of Racine-Local Bus	1,037,100	943,700	--	1,980,800	1,094,200	1,097,500	--	2,191,700
City of Racine-Commuter Bus	--	107,000	--	107,000	--	155,300	5,500	160,800
Subtotal	1,037,100	1,050,700	--	2,087,800	1,094,200	1,252,800	5,500	2,352,500
Subtotal	8,212,500	24,614,200	8,045,200	40,871,900	8,291,300	26,654,000	5,676,000	40,621,300
Nonurbanized Area								
Hartford	25,100	23,300	1,700	50,100	38,700	35,300	3,400	77,400
Whitewater	--	--	--	--	15,700	19,800	--	35,500
Subtotal	25,100	23,300	1,700	50,100	54,400	55,100	3,400	112,900
Total	8,237,600	24,637,500	8,046,900	40,922,000	8,345,700	26,709,100	5,679,400	40,734,200

Area	Operating Subsidy per Ride (cents)							
	1985 Actual				1986 Estimated			
	Federal	State	Local	Total	Federal	State	Local	Total
Urbanized Areas								
Kenosha	62	50	--	112	70	66	3	139
Milwaukee								
Milwaukee County	13	46	16	75	13	51	11	75
Waukesha County	52	103	12	167	71	129	17	217
City of Waukesha	66	74	30	170	55	92	53	200
Subtotal	13	47	16	76	13	52	12	77
Racine								
City of Racine-Local Bus	43	40	--	83	48	48	--	96
City of Racine-Commuter Bus	--	120	--	120	--	188	7	195
Subtotal	42	42	--	84	46	53	--	99
Nonurbanized Area								
Hartford	168	155	11	334	265	242	23	530
Whitewater	--	--	--	--	58	73	--	131
Subtotal	168	155	11	334	131	132	8	271

Figure 58

MASS TRANSIT OPERATING SUBSIDIES IN THE KENOSHA URBANIZED AREA: 1975-1986

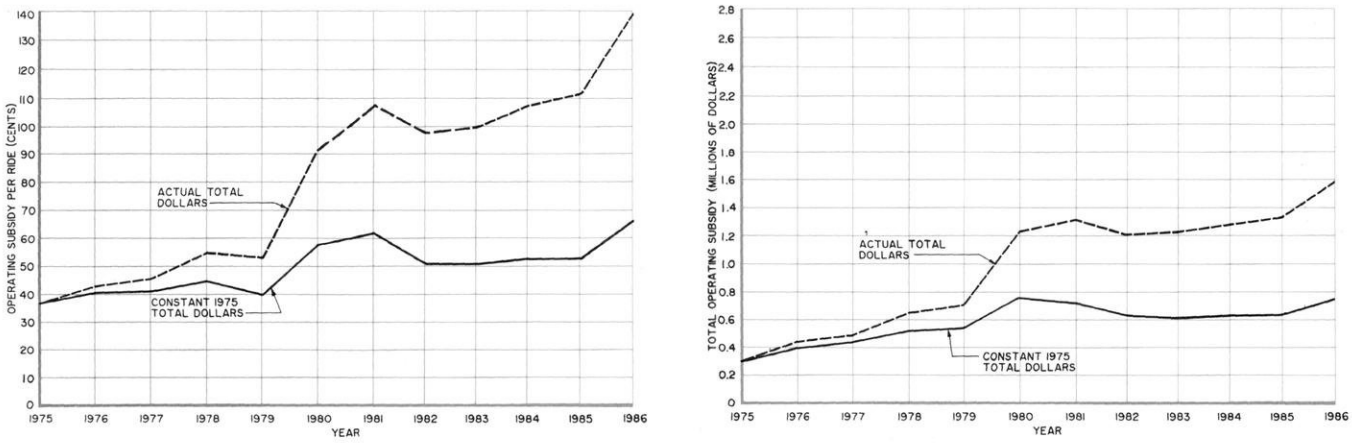
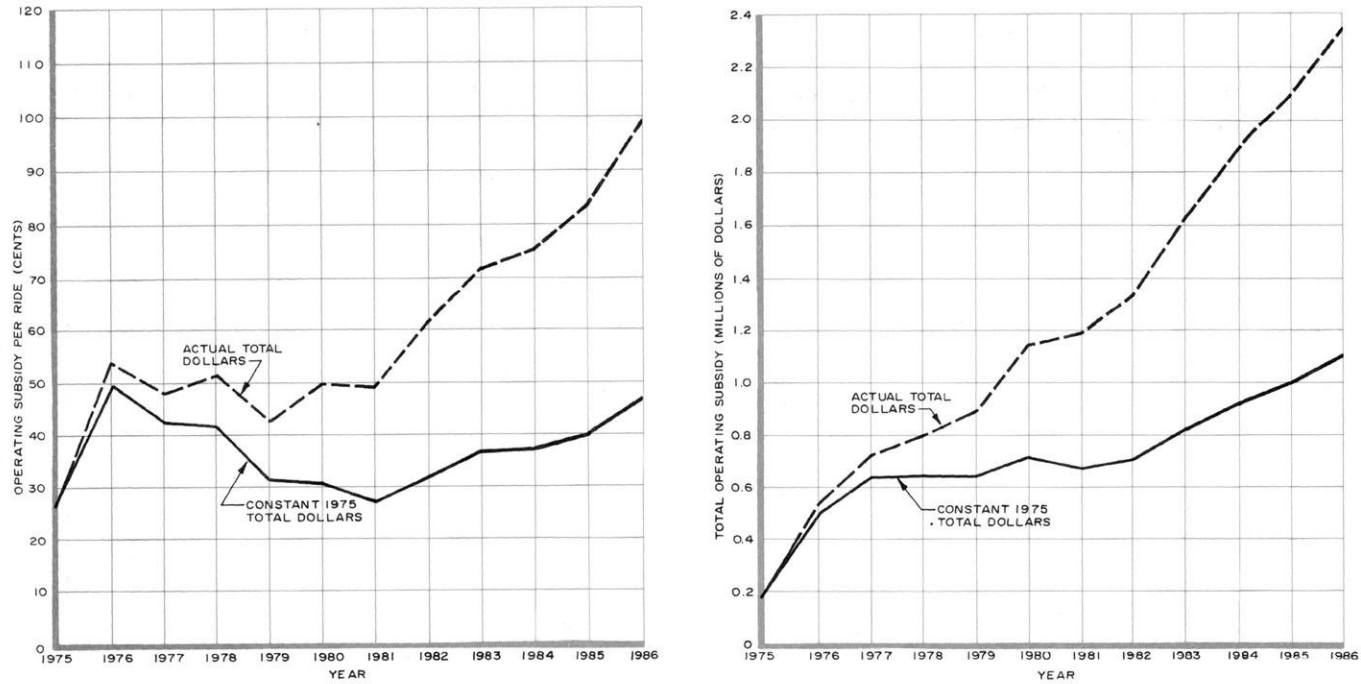


Figure 59

MASS TRANSIT OPERATING SUBSIDIES IN THE RACINE URBANIZED AREA: 1975-1986



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

Figure 60

MASS TRANSIT OPERATING SUBSIDIES IN THE MILWAUKEE URBANIZED AREA: 1975-1986

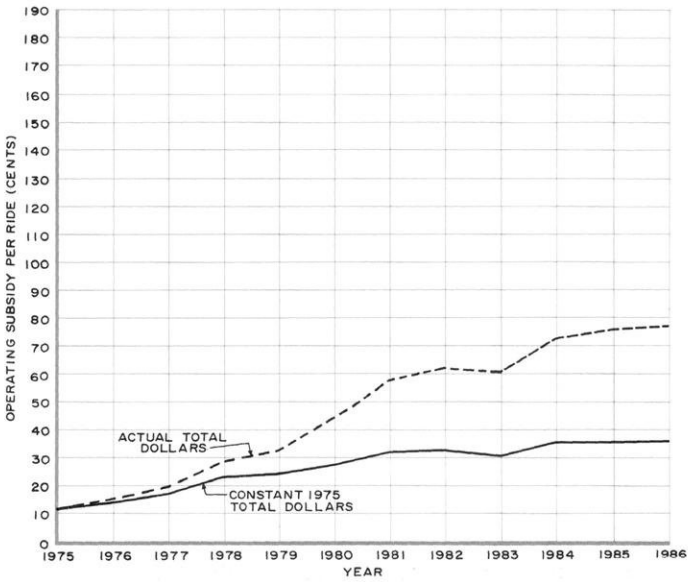


Figure 61

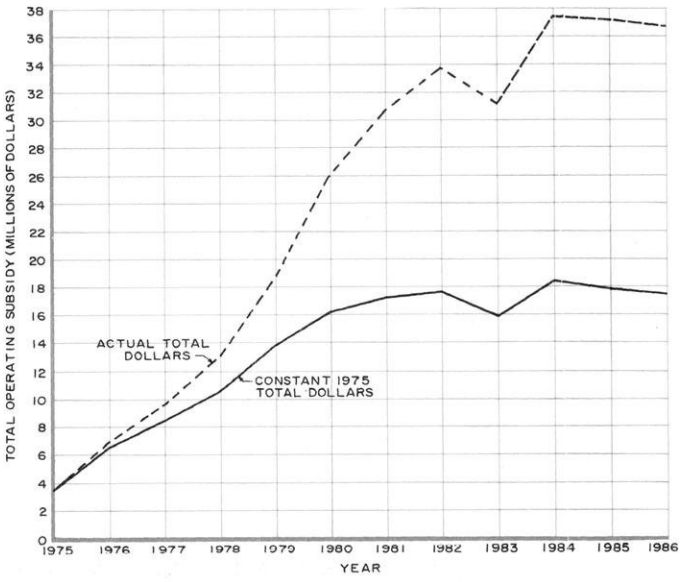
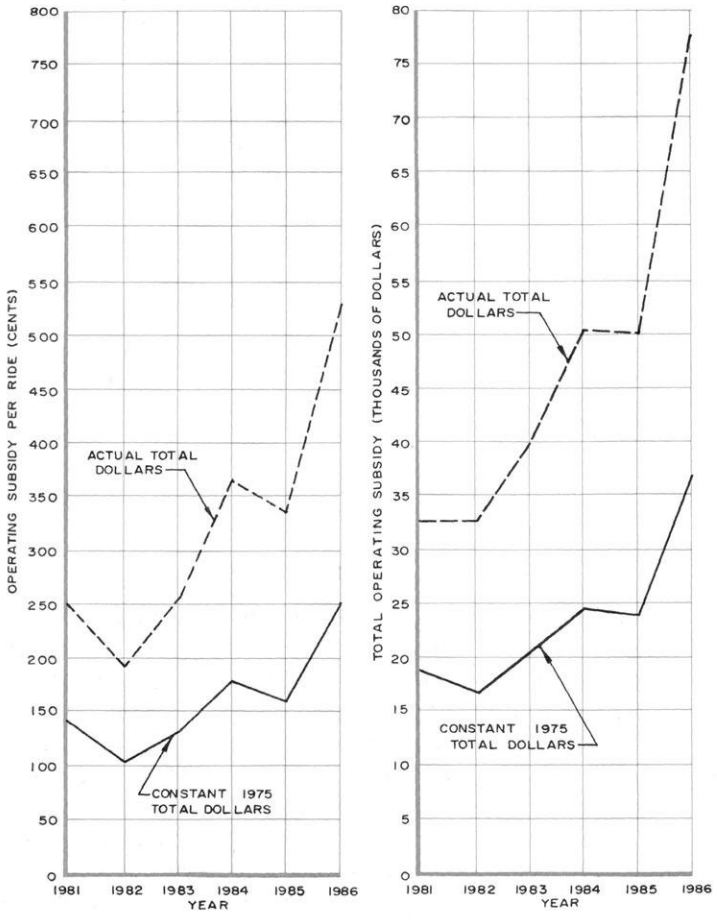


Figure 62

MASS TRANSIT OPERATING SUBSIDIES IN THE CITY OF HARTFORD: 1982-1986



CARPOOL PARKING LOT USE: 1978-1986

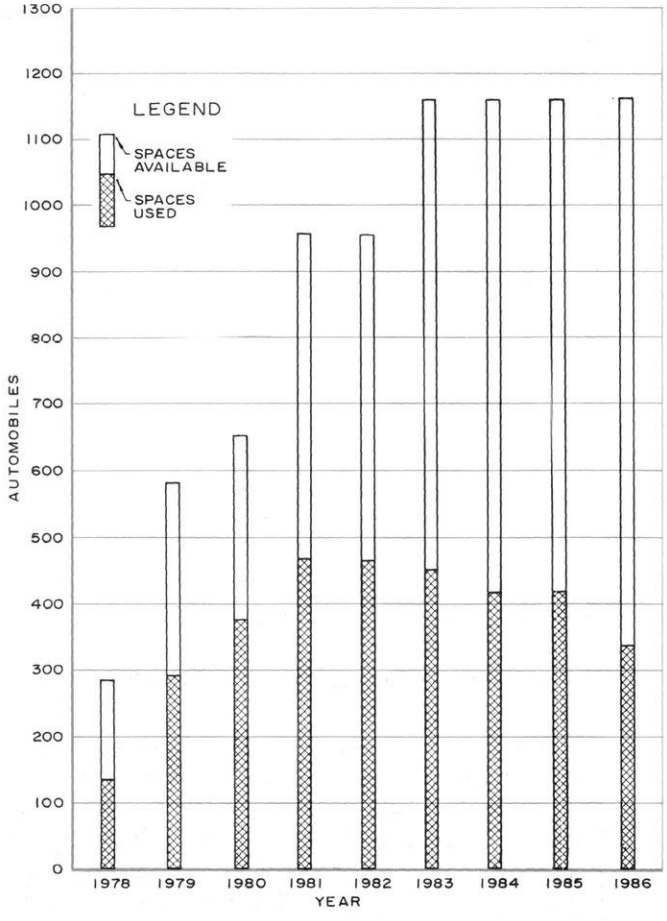


Table 15

USE OF PARKING SUPPLY AT CARPOOL PARKING LOTS: FOURTH QUARTER 1986

Location	Available Parking Spaces	Autos Parked on an Average Weekday Fourth Quarter 1986	Percent of Spaces Used
Ozaukee County			
IH 43 and STH 57(Saukville)	100	18	18
IH 43 and CTH C(Grafton)	50	21	42
STH 57 and STH 84(Fredonia)	20	7	35
Washington County			
USH 41 and CTH Y(Germantown)	120	16	13
Waukesha County			
STH 16 and CTH C(Nashotah)	50	13	26
STH 16 and STH 83(Chenequa)	65	7	11
IH 94 and STH 67(Oconomowoc)	80	32	40
STH 16 and CTH P(Oconomowoc)	40	16	40
IH 94 and CTH CC(Delafield)	30	10	33
IH 94 and STH 164(Pewaukee)	80	34	43
STH 15 and STH 83(Mukwonago)	95	39	41
STH 15 and CTH F(Big Bend)	100	28	28
STH 15 and CTH Y(New Berlin)	60	21	35
STH 15 and CTH O(New Berlin)	200	21	11
USH 41 and Pilgrim Road (Menomonee Falls)	70	52	74
Total	1,160	335	29

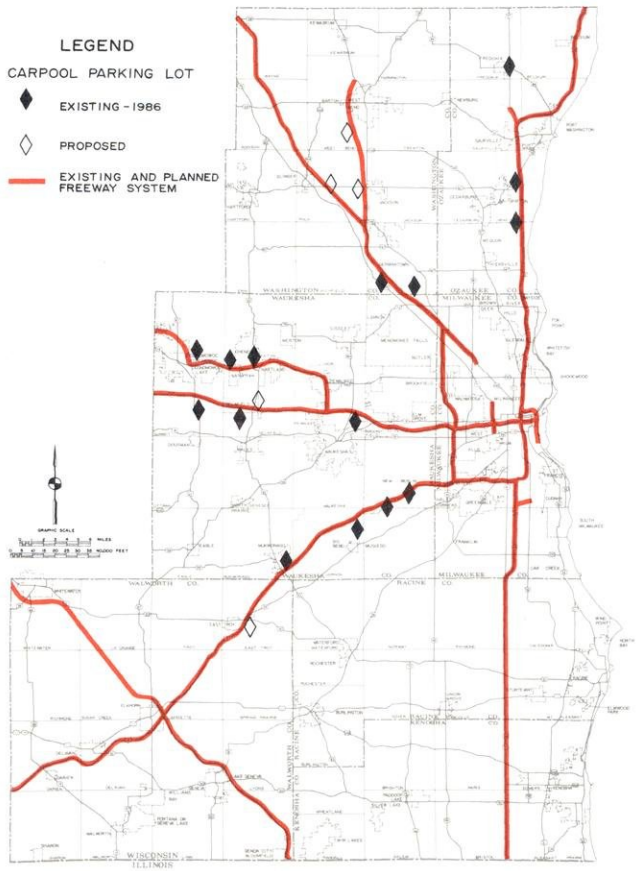
about 5.7 million such trips by the year 2000. Total vehicle miles of travel on an average weekday is anticipated to increase by more than 49 percent—from about 20.1 million to about 30.1 million. The design year 2000 regional transportation system plan seeks to provide the Region with a safe, efficient, 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

Map 10

EXISTING 1986 AND PROPOSED CARPOOL PARKING LOTS



system began in 1984. The connections of the Lake Freeway-North and East-West Freeway were opened to traffic in December 1985.

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.

Southern Connection to Hoan Bridge

On March 3, 1986, the Commission created a 28-member Task Force to seek a community-based consensus as to how best to resolve the growing costly disruptive traffic problems at the south end of the Daniel Webster Hoan Memorial Bridge, while 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.

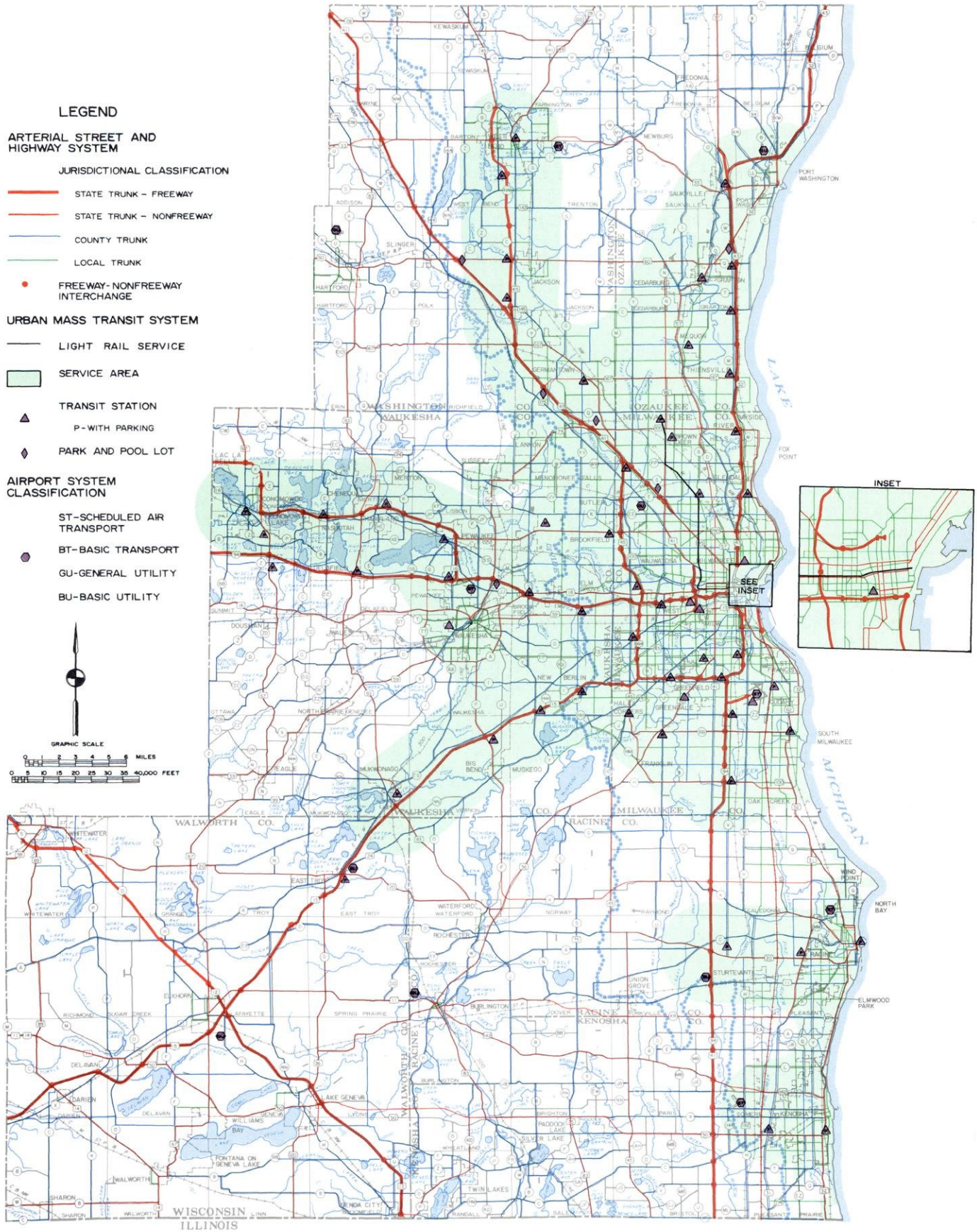
The Task Force requested information from the Commission to help define the existing and probable future traffic and related community development problems at the south end of the Hoan Bridge; to identify and evaluate alternative means of abating those problems; and to provide a basis for identifying the best of those alternative means and recommending its adoption and implementation. The information was analyzed for a study area bounded on the north by the stub end of the Hoan Bridge at approximately E. Lincoln Avenue; on the east by Lake Michigan; on the south by E. Layton Avenue; and on the west by S. Howell Avenue and S. 1st Street.

Existing traffic congestion problems in the study area were found to be particularly severe at the existing terminus of the Hoan Bridge; along S. Lincoln Memorial Drive and E. Russell Avenue; along S. Superior Street and S. Lake Drive; and along segments of S. Kinnickinnic, E. Layton, and E. Oklahoma Avenues. The traffic congestion problems at many of these locations and on additional segments were forecast to substantially increase by the year 2000.

The Task Force considered a wide range of alternatives for addressing the identified transportation and community development problems. The traffic impacts, disruption and property taking, energy consumption, air pollution, and capital costs of each alternative were identified and compared. The alternatives considered included a "do nothing" alternative and 11 alternatives, along with many subalternatives, proposing various Hoan Bridge connections and street improvements. The Task Force met eight times to consider the information provided by Commission staff on existing and probable future traffic problems and alternative

Map 11

REGIONAL TRANSPORTATION SYSTEM PLAN FOR THE SOUTHEASTERN WISCONSIN REGION: 2000



improvements and their impacts. Each meeting was well attended by the public, and was, in effect, a public hearing, with a portion of the meeting devoted to comments from the public.

On December 17, 1986, the Hoan Bridge South Task Force 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 (see Map 12). 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 minimal four-lane highway recommended may be expected to resolve traffic and related community development problems in the Bay View area. It would abate traffic congestion on, and remove excess traffic from, S. Superior Street without diverting such traffic to other local streets in the area. Excessive traffic would also be removed from other local residential and arterial streets in the area, and a pedestrian-oriented environment would be re-created in the Bay View area immediately south of the Hoan Bridge and east of the railway right-of-way. The proposed facility would have a capital cost of approximately $49 million, including recommended landscaping, and would require the taking of only six properties—four residences and two businesses. The work of the Task Force and their recommendations are presented in SEWRPC Memorandum Report No. 6, Report of the Hoan Bridge South Task Force.

Racine Loop Arterial

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. That arterial loop was to have been composed of a new highway interchange with IH 94 at Four Mile Road; an improved segment of Four Mile Road from that interchange to STH 31; and an improved segment of CTH KR from STH 31 to its interchange with IH 94. The improvements proposed for the arterial loop included, in addition to the construction of a new interchange with Four Mile Road on IH 94, the widening of STH 31 to four lanes between CTH KR and STH 11 and between Four Mile Road and CTH MM, and widening to six lanes between STH 11 and CTH MM, and the designation of the entire arterial loop as a state trunk highway. Of these proposed improvements, 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—that is, Four Mile Road on the north, STH 31 on the east, CTH KR on the south, and IH 94 on the west. The impact of traffic which moves through the study area and is generated by areas outside the study area—such as the City of Racine—was explicitly considered in the study. Also, alternative configurations of the arterial loop were examined, including the development of a system of east-west and north-south arterial streets, which would provide a grid, rather than a loop, system of arterials in the eastern Racine County area.

By the end of 1986, the preliminary draft of the report had been completed, reviewed by the Wisconsin Department of Transportation and Racine County staffs, revised, and transmitted to the Racine County Highway Department.

Milwaukee Northwest Corridor Rapid Transit Study

In 1986, work continued 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 com-

Map 12

RECOMMENDED FACILITY-SOUTH END OF HOAN BRIDGE: MINIMIAL FOUR-LANE ARTERIAL ALONG CHICAGO & NORTH WESTERN RAILWAY RIGHT-OF-WAY WITH CONNECTION TO E. LINCOLN AVENUE EXTENSION

prehensive 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.

The second phase study is being funded cooperatively by the federal Urban Mass Transportation Administration, the Wisconsin Department of Transportation, and Milwaukee County. On behalf of Milwaukee County, the Commission applied for and received in September 1983 a federal grant in the amount of $713,800, representing 80 percent of the cost of the study. Milwaukee County and the Wisconsin Department of Transportation are equally sharing the remaining 20 percent of the cost, or $89,225 each. By June 1984, the Commission had completed a final scope of work for the study which had been approved by the Milwaukee County Board of Supervisors. By September 1984, the County Board had approved the recommendations of a consultant selection panel, and an agreement for the consultant work with the firm of Parsons, Brinckerhoff, Quade & Douglas, Inc., had been executed.

In 1985, the study advisory committee had approved study documents completed by the consultant team and the Commission staff which included the detailed study design and eight technical memoranda documenting methodologies to be followed in the critical areas of patronage estimation, operating and maintenance cost estimation, capital cost estimation, alternative evaluation and environmental impact analysis, financial analysis, assessments of land development and redevelopment potential, and public involvement.

Much of the technical work for the evaluation of the rapid transit alternatives was also completed in 1985. The study advisory committee reviewed and approved study documents created by the consultant team which described the detailed design criteria and the preliminary operating plans for the alternatives. The advisory committee also recommended specific express bus and light rail routing alignments to be fully evaluated during the study, and the station spacing to be followed under each rapid transit alternative. Ridership forecasts were also completed in 1985 for each of the 10 alternative rapid transit configurations in the northwest corridor using the Commission's travel simulation models and procedures.

The results of the initial ridership forecasts for the rapid transit alternative were presented to the study advisory committee in February 1986. The ridership forecasts were then used to generate detailed information for each rapid transit alternative concerning rapid and express transit ridership, on both a systemwide and corridorwide basis, as well as information on passenger revenues, transit travel times and travel time savings, vehicle miles and vehicle hours, and vehicle requirements. Such information was then provided to the consultant team for use in preparing study reports documenting the results of the technical analyses conducted on the rapid transit alternatives.

One such document, which was completed by the consultant team and reviewed by the study advisory committee in February 1986, was a report documenting an in-depth market analysis of the potential for the different transit technologies and alternative routing alignments to influence sound land use development and redevelopment within the Milwaukee northwest corridor. The conclusions reached from this analysis indicated that:

- The Milwaukee area currently has a very good bus system that includes several express bus and freeway flyer routes from outlying areas into the downtown. If an improved bus system, with more express service, were developed as an alternative to a light rail transit system in the northwest corridor, it would likely have little impact on land use development or redevelopment within the corridor. Development in the corridor could be expected to continue to occur as it would with a "no build" or "status quo" transit system.

- Light rail service may be expected to have some positive impacts on land use development and redevelopment within the corridor. However, it should not be expected to stimulate new economic activity in the greater Milwaukee area. Rather, it may be expected to encourage development that would occur anyway within the greater Milwaukee area to locate along the light rail line. Some portion of this development may be expected to occur, otherwise, outside the City of Milwaukee, and perhaps further into the future.

- Light rail service may be expected to help stabilize declining neighborhoods; however, it alone should not be expected to bring about significant land use development and redevelopment. Other programs and incen-

tives would be necessary to bring about revitalization of the declining neighborhoods concerned. Such programs would use public funding to bring entrepreneurial risk down to a level justified by potential rewards.

- Light rail service would help focus and cluster development in areas attractive to new development. Light rail service could act as a catalyst in such areas, encouraging development to proceed earlier and more quickly. It should be noted, however, that some of this development may consist of relocation from less attractive areas.

- Light rail service may be expected to provide some reinforcement of downtown revitalization efforts; provide some encouragement of more concentrated development in the far northwest area of the corridor; and potentially be a positive factor in helping stabilize mid-corridor neighborhoods.

Other technical reports were completed by the consultant team and approved by the study advisory committee in July and August 1986, including reports documenting the final operating plans, estimated operating and maintenance costs, estimated capital costs, and the financial plans for the rapid transit alternatives considered in the northwest corridor.

Progress was also made during 1986 in completing an alternatives analysis/draft environmental impact assessment report following the format defined by the federal Urban Mass Transportation Administration (UMTA) and the U. S. Environmental Protection Agency (EPA) regulations—the former having responsibility for reviewing the transportation impacts of the proposed rapid transit facilities, and the latter having responsibility for reviewing the environmental impacts. By December 1986, all of the chapters composing the alternatives analysis/draft environmental impact statement report had been completed and approved by the study advisory committee and subsequently transmitted to the federal Urban Mass Transportation Administration for review and comment.

Late in 1986, the study advisory committee began reviewing the final report to be produced for the study, documenting the preferred rapid transit alternative for the Milwaukee northwest corridor. Work on the draft of the report, which will be published as SEWRPC Community Assistance Planning Report No. 150, Milwaukee Northwest Corridor Rapid Transit Study Preferred Alternative Report, was completed by the Commission staff in December 1986, and was reviewed and approved late in 1986 by the study advisory committee. The report draws upon much of the information presented in the other reports prepared for the study concerning the rapid transit alternatives considered, and the performance of each alternative relative to its forecast ridership, estimated costs, and environmental and land development and redevelopment impacts. Based upon this information, the report sets forth separate comparative evaluations for the express bus and light rail alternatives proposed, from which the study advisory committee made its recommendations. Based upon the results of these evaluations, the study advisory committee recommended as the best express bus alternative the provision of express bus service in reserved lanes on W. Fond du Lac Avenue, N. 16th and N. 17th Streets, and E. and W. Wisconsin Avenue. As the best light rail alternative, the advisory committee recommended the use of an alignment following the existing Soo Line Railroad right-of-way paralleling N. 33rd Street, as well as portions of N. 35th Street and E. and W. Wisconsin Avenue, between downtown Milwaukee and a terminus at N. 60th Street and W. Mill Road.

The advisory committee also decided that a final decision concerning which alternative should be implemented for the corridor should be made by the elected officials of the City of Milwaukee, Milwaukee County, and the State of Wisconsin. In making this recommendation, the Committee recognized that neither alternative could be implemented solely by Milwaukee County; that financial assistance from federal and state government was needed to help defray a major portion of the capital costs for each alternative; and that, while federal transit capital assistance is currently available through programs administered by the Urban Mass Transportation Administration, there is currently no state program for financing mass transit capital improvements.

At the end of 1986, the Commission had submitted a draft copy of the preferred alternative report to the federal Urban Mass Transportation Administration for review and comment, and was awaiting receipt of formal comments from the Wisconsin Department of Transportation on both the preferred alternative report and the report documenting the financial plans for the rapid transit alternatives. The preferred alternative report and the other study reports completed during the year are expected to be published in 1987.

TRANSPORTATION SYSTEMS MANAGEMENT PLANNING

During 1986, the Commission completed a number of transportation systems management planning efforts for communities in southeastern Wisconsin. These included a traffic study of Pilgrim Parkway in the Village of Elm Grove; a study of parking problems in the Cedarburg central business district; and an analysis of parking conditions at the Ozaukee County Courthouse.

Pilgrim Parkway Traffic Study

During 1986, the Commission completed a traffic study of Pilgrim Parkway for the Village of Elm Grove in response to a request by the Village in November 1985. The purpose of the planning effort was to identify existing and probable future traffic problems in the area, and to design and evaluate short- and long-range solutions to these problems. The resulting plan is documented in SEWRPC Memorandum Report No. 4, Pilgrim Parkway Traffic Study.

Over the past several years, residents of the Village of Elm Grove have become concerned about increasing traffic volumes and the attendant deterioration in motor vehicle operating conditions along the 1.8-mile segment of Pilgrim Parkway that forms the boundary between Elm Grove and the City of Brookfield. Based upon inventories and analyses conducted by Commission staff of the existing roadway geometric conditions, traffic control devices, traffic volumes, and traffic accidents on this segment of Pilgrim Parkway, it was determined that serious vehicle conflict and congestion problems do exist at the Pilgrim Parkway intersections with W. Gebhardt Road and W. North Avenue. Although not causing a traffic congestion problem, two additional locations with numerous vehiclar conflicts were identified: the parking lot entrance to Elliott's Ace Hardware and the Elmbrook Middle School driveways on Pilgrim Parkway.

A review of motor vehicle accident records for Pilgrim Parkway between 1983 and 1985 indicates that 52 percent of the accidents occurred at the intersection of W. North Avenue and Pilgrim Parkway. These accidents primarily involve collisions with oncoming traffic or rear end collisions.

Traffic volumes on Pilgrim Parkway may be expected to increase from the current 8,000 to 11,000 vehicles per average weekday to 14,000 vehicles per average weekday under the adopted regional land use plan for the year 2000. This increase in traffic may be expected to exacerbate traffic congestion and accident problems.

A number of alternative short- and long-range roadway improvement measures were evaluated with respect to their potential to alleviate traffic problems on the study segment of Pilgrim Parkway. Based upon this analysis, it was recommended that the following short-range improvements be made:

- Widen the Pilgrim Parkway intersection approaches to W. Gebhardt Road to accommodate two lanes of traffic in each direction.
- Install and interconnect traffic signals at the W. North Avenue intersections with Pilgrim Parkway and Pilgrim Road.
- Reconstruct and skidproof the roadway surface of the segment of W. North Avenue between its intersections with Pilgrim Parkway and Pilgrim Road to accommodate two lanes of traffic in each direction (see Figure 63).
- Construct a cul-de-sac at the north end of Pilgrim Parkway West south of its intersection with W. North Avenue.
- Reconstruct the driveway entrance on Pilgrim Parkway at the Elliott's Ace Hardware parking lot.
- Construct a southbound left-turn bypass lane and widen the driveway at Elmbrook Middle School.

The estimated cost of these recommended improvements is $280,000.

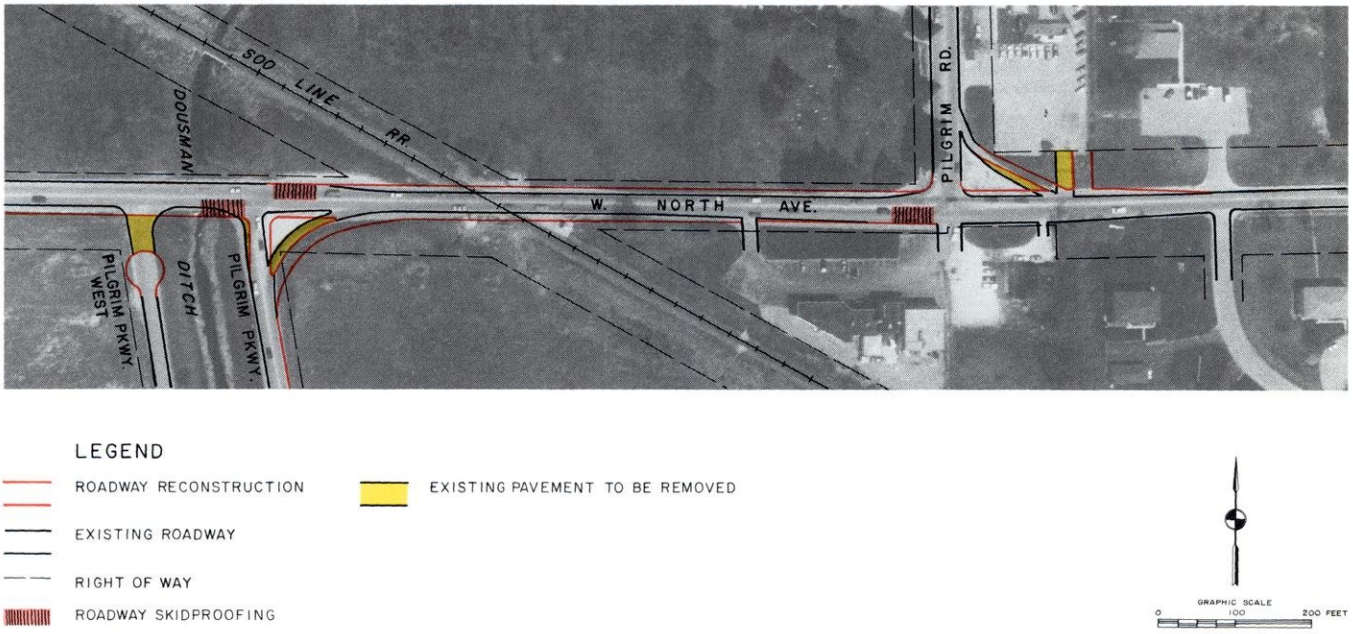
The study also indicated that by the year 2000, the limits of the capacity and safety enhancements provided by the recommended short-range traffic engineering improvements will be reached, and Pilgrim Parkway will need to be widened to four traffic lanes, and a new roadway will need to be constructed to eliminate the indirection and route continuity problems at the Pilgrim Parkway and Pilgrim Road intersections with W. North Avenue.

Cedarburg Central Business District Parking Study

At the request of the City of Cedarburg, the Commission in 1986 undertook a study of the parking conditions in the Cedarburg central busi-

Figure 63

ALTERNATIVE ROADWAY WIDENING IMPROVEMENT FOR THE INTERSECTION OF PILGRIM PARKWAY AND W. NORTH AVENUE



ness district. The purpose of the study was to identify parking problems and propose and evaluate parking improvements based on the existing parking supply and demand in the central business district. The results of the study are documented in SEWRPC Memorandum Report No. 1, Cedarburg Central Business District Parking Study.

A total of 1,749 parking spaces effectively serve parking demand in the Cedarburg central business district, with on-street parking comprising 37 percent of the total parking available in the district.

A parking demand survey was conducted on Thursday, October 3, 1985, to assess weekday parking patterns in the central business district. The weekday survey was conducted during the hours of 9:00 a.m. to 6:00 p.m. A total of 2,485 vehicles, or an average of 276 vehicles per hour, were observed to park in the central business district. Average parking space turnover was 3.0 vehicles during the 1:00 p.m. to 2:00 p.m. time period. A weekend survey was conducted on Saturday, October 5, 1985 from 9:00 a.m. to 5:00 p.m. A total of 2,955 vehicles, or an average of 369 vehicles per hour, were observed parking in the central business district, or a 34 percent greater average hourly parking demand when compared with the weekday demand. Average parking space turnover was 3.1 vehicles per space, and the maximum parking space occupancy was 40 percent during the 11:00 a.m. to 12:00 p.m. time period.

Analysis of the parking inventory and utilization survey data indicated that there are an insufficient number of on-street parking spaces in the central business district. The total number of on- and off-street parking spaces was found to be adequate to serve the overall parking demand. Also, it was determined that parking demand exceeded the available supply of parking in various areas of the central business district.

The Commission recommended improvements for 18 specific locations with parking problems. These solutions included encouraging local business employees to change their parking habits, changing the parking restrictions at several on- and off-street parking facilities, and the construction of a new public off-street parking facility. The total capital investment, in 1986 dollars, required to implement these parking management actions is estimated at $149,850, of which $129,000 is the cost of acquiring the Mobil Service Station on Washington Avenue south of Bridge Road and constructing a 60-space public off-street parking facility.

In addition to the problem-specific parking improvements recommended in this study, the following set of general parking improvements were recommended to improve overall parking conditions in the Cedarburg central business district: 1) pave and mark each of the municipal off-street public parking facilities; 2) upgrade guide signage to the municipal off-street public parking facilities; 3) construct an access driveway from Washington Avenue to the municipal off-street parking facility at the Cedarburg Senior Citizen Center; 4) enforce the existing on-street parking regulations; 5) direct employee parking to all-day unrestricted parking facilities outside the Washington Avenue commercial area; and 6) remove the three-hour parking restriction on northbound Portland Road between Columbia Avenue and Mill Street to permit all-day unrestricted parking.

Implementation of the parking management actions recommended in this study should result in a marked improvement in parking conditions in the central business district, while maintaining the historic character of the City of Cedarburg. Action taken now will ameliorate existing parking problems and provide the direction required to encourage commercial stability and development in the City's central business district.

Ozaukee County Courthouse Parking Study

On June 18, 1986, the Ozaukee County Clerk, on behalf of the Ozaukee County Board of Supervisors Buildings Committee, asked the Commission to conduct a study of parking needs at the Ozaukee County Courthouse. The objectives of the study were to determine the existing supply of parking at the Courthouse, estimate existing and probable future parking demand, identify existing and potential future parking problems, and propose and evaluate alternative parking improvements as necessary. The request for the study was prompted by the Buildings Committee consideration of potential courthouse expansion. The findings and recommendations of this study are documented in SEWRPC Memorandum Report No. 2, Ozaukee County Courthouse Parking Study.

The first step in the requested study was an inventory of existing parking supply serving the Ozaukee County Courthouse. The Buildings Committee identified an area within 600 feet of the Courthouse which, in its judgment, could be considered for providing parking for the Courthouse. A total of 358 parking spaces are located in the study area; 155 are on-street parking, with over one-half having a two-hour parking limit and most of the remaining spaces being unrestricted; and 203 are off-street parking, of which 154 are generally available to county employees.

The current courthouse parking demand and its characteristics were defined by means of two surveys: One survey was designed to identify employee and visitor parking demand, and the other to measure parking occupancy and turnover rates at all parking spaces within the courthouse parking area.

Based upon these surveys, which indicated an employee parking demand of 218 spaces and a supply of 154 off-street parking spaces generally available to county employees, it was determined that there was a shortage of at least 64 long-term employee parking spaces in the courthouse area. With respect to visitor needs, it was determined that the 155 on-street parking spaces in the study area were well used, principally by courthouse visitors. According to the county department head estimates, there was a demand for about 150 visitor parking spaces, thus indicating a need, at a 75 percent occupancy rate, of 200 spaces. Thus, it was also concluded that there was a shortage of about 50 short-term visitor parking spaces in the study area.

A short-range plan was prepared by the Commission, recommending parking improvements to resolve the identified parking needs. It was recommended that two actions be taken to increase the short-term visitor parking supply: 1) the reconstruction of W. Main Street to provide angle parking, and 2) the establishment of two-hour visitor parking restrictions in a portion of an existing county parking lot. One improvement was recommended to increase courthouse employee parking: the construction of a new surface parking facility south of the Courthouse along Sauk Creek that would be restricted to employees.

The future parking needs at the Ozaukee County Courthouse will depend upon the extent to which the county government functions now housed at the Courthouse continue to be located at the Courthouse. Five alternative scenarios for future county government functions at the Courthouse were identified by the Ozaukee County Board of Supervisors Buildings Committee. For each of these scenarios, the anticipated number of employees and forecast employee parking demand at the

Courthouse was determined, along with the anticipated number of visitors and forecast visitor parking demand. Also prepared for each scenario was a forecast of future parking deficiencies.

It was determined that under two of the five scenarios—one which proposed relocation of the law enforcement and courts functions and the other which proposed relocation of the law enforcement and social services functions—no expansion of parking beyond the short-range recommended improvements would be necessary.

Under another two of the five scenarios—one which proposed relocation of the law enforcement function and the other which proposed relocation of the social services function—it was determined that expansion would be necessary of both the existing Courthouse north parking lot and the new lot south of the Courthouse along Sauk Creek which was proposed to be developed as a short-range improvement to meet existing parking needs.

Under the fifth scenario, in which all departments would continue to be located at the Courthouse, it was determined that the construction of a new parking structure was the only feasible alternative for providing parking for Courthouse employees and visitors within 600 feet of the Courthouse.

Freeway Traffic Management Study

During 1986, the Commission continued the detailed planning and preliminary engineering for the proposed Milwaukee area freeway traffic management system. Such a system was recommended in both the new design year 2000 regional transportation system plan and the regional transportation systems management plan. The detailed planning and preliminary engineering study will examine in depth the performance, environmental, economic, and technical features of alternative freeway traffic management systems for the greater Milwaukee area in order to determine the best means of managing the freeway system to meet specified objectives. The study is a major step toward implementation of a freeway traffic management system.

The envisioned freeway traffic management system would provide preferential treatment on area freeways for buses and carpool and vanpool vehicles by obtaining operational control of area freeways. Traffic entering freeway on-ramps throughout the greater Milwaukee area during peak travel periods, except buses and carpool and vanpool vehicles, would be metered, and sufficiently restrained so that freeway traffic breakdowns would be avoided. To the extent possible, smooth traffic flow at speeds of at least 40 miles per hour would be maintained on all segments of the freeway system, particularly on those which would otherwise be congested and subject to stop-and-go traffic. Buses and carpool and vanpool vehicles would be provided with exclusive freeway on-ramps or on-ramp lanes in order to bypass the ramp meters. As a result, the peak-period level of service for buses and carpool and vanpool vehicles on area freeways will substantially increase. The peak-period level of service for automobiles and trucks on area freeways should not necessarily be significantly affected, and may even increase slightly, as the required waiting at freeway on-ramps should be offset by the faster and more reliable speeds on area freeways. The freeway operational control system may also incorporate a freeway advisory information system to inform motorists of freeway and surface street traffic conditions, and freeway incident management strategies may be applied to identify and minimize the effects of freeway incidents.

During 1985, the Commission began the design and evaluation of alternative freeway traffic management system plans, with particular emphasis on the ramp metering element of the freeway traffic management system. This work included the calibration of a freeway corridor traffic simulation model and an evaluation of the impacts of different ramp meter strategies utilizing both the existing metering system and an expanded system.

The Commission also began analyzing freeway accident and nonaccident incident data. This analysis will provide the basis for the design of the incident management and motorist advisory information system elements of the freeway traffic management system.

Several draft chapters of the study report were presented to the advisory committee for its review during 1985. These chapters covered the following material: the freeway traffic management system planning objectives, principles, and standards; an inventory of existing freeway traffic management systems in North America; and an inventory of freeway capacity and use in the greater Milwaukee area.

During 1986, the Commission continued to consider alternative systems of ramp meter locations throughout the Milwaukee area, and alternative systems of freeway incident management and advisory information.

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 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 to/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 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 1986. The Commission has continued to assist in this effort by providing the computer facilities necessary to conduct the matching program.

Milwaukee County Short-Range Transit Planning

During 1986, 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 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 service 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 Transition Plans

The adopted transportation plan for the transportation handicapped was amended during 1980 following the completion of "transition plans" for each of the public transit operators within the Region. These planning efforts were designed to identify activities 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 rules promulgated by the Secretary of the U. S. Department of Transportation and issued in 1979. Recommendations for making the federally assisted public transportation systems within the Region accessible to handicapped persons are set forth in SEWRPC Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, Volume One, Kenosha Urbanized Area; Volume Two, Milwaukee Urbanized Area/Milwaukee County; Volume Three, Racine Urbanized Area; and Volume Four, Milwaukee Urbanized Area, Waukesha County. The four transition plans were submitted during 1980 for review by the U. S. Department of Transportation, Urban Mass Transportation Administration (UMTA), and were approved by this agency in early 1981.

On July 20, 1981, the U. S. Department of Transportation issued a new interim revised regulation on transportation for elderly and handicapped persons which amended the Department's former regulation in Section 504 of the Rehabilitation Act of 1972. In direct contrast to requirements established under the former Section 504 regulation, the new regulation no longer required buses for fixed route transit systems to be equipped with wheelchair lifts, or facilities for transit systems to be retrofitted with accessibility features, as the sole means of making transit systems accessible to wheelchair-bound handicapped persons. Instead, the new rule adopts the "special efforts" approach originally employed in a federal rule issued during 1976 which requires transit operators receiving federal funds to certify that special efforts are being made in their service area to provide transportation that handicapped persons can effectively use. The new regulation also eliminates the requirement for the preparation of transit operator transition plans and the submission of subsequent status reports thereon.

Within the Southeastern Wisconsin Region, the change in approach to meeting handicapped accessibility requirements has had significant impacts on the fixed route transit systems operating within the Kenosha, Milwaukee, and Racine urbanized areas. During 1986 the transit systems within these areas met the special efforts requirements of the new regulations by continuing to provide funds for the operation of specialized transportation services to serve handicapped persons within their transit service areas. The specialized transportation services supported by the transit operators within each urbanized area are described below:

- In the Kenosha urbanized area, the City of Kenosha currently supports a dual strategy for providing transportation services for handicapped persons. This strategy consists of the provision of a limited level of accessible fixed route bus service on the regular city bus routes, and the provision of finan-

cial support to the operation of a specialized transportation service provided by the Kenosha Achievement Center. During 1986, approximately 13,100 one-way trips were made on the specialized transportation service supported by the City—about the same as the 1985 level.

- In the Milwaukee urbanized area, Milwaukee County provides transportation services for handicapped persons primarily through support of a user-side subsidy program which provides door-to-door transportation for mobility-restricted Milwaukee County residents. Under the current program, eligible users are provided with a subsidy for their transportation with which they can purchase service from private taxicab companies and wheelchair van carriers. During 1986, about 462,000 one-way trips were made on this program by mobility-restricted residents of Milwaukee County, representing a substantial increase over the 1985 level of 393,200. Milwaukee County also provides transportation service for handicapped persons through programs sponsored by the Milwaukee County Commission on Aging and the Milwaukee County Social Services Department. These agencies contract with a private nonprofit organization—Elder Care Lines, Inc.—for specialized transportation services. During 1986, about 317,600 one-way trips were provided to elderly and handicapped persons through these programs, slightly more than the 315,000 such trips made during 1985.

  Waukesha County continued to support specialized transportation services for elderly and handicapped persons during 1986. The County supported a specialized transportation project administered by the Waukesha County Department of Aging—the parallel commuter bus transportation project—which provided elderly and handicapped persons with service similar to that offered by the commuter bus service provided to the general public and supported by the County. This project was administered in combination with two other projects: an advance-reservation, door-to-door general transportation service for elderly and handicapped county residents, and a similar service for handicapped persons operated only on two weeknights and on Saturdays. During 1986, about 30,300 one-way trips were made using these services, representing an increase of about 8 percent over the 1985 level of 28,000 trips.

  Finally, the City of Waukesha also provided specialized transportation service for mobility-restricted persons through a special program operated by the City's public transit system. The program, which utilized small accessible buses provided by a private transportation company, served handicapped persons within the service area of the City's fixed route transit system who were unable to use the regular bus system. During 1986, about 4,000 one-way trips were made using this special program, representing a decrease from the 1985 level of 5,700 trips.

- In the Racine urbanized area, the City of Racine annually contributes funds to the operation of the specialized transportation program administered by the Racine County Human Services Department. The Department uses the funds provided by the City to support the operation of an advance-reservation transportation service in the eastern portion of Racine County, including the entire service area of the Racine transit system. The service is made available to both elderly and nonelderly transportation-handicapped persons. During 1986, approximately 35,100 one-way trips were made on the Racine County specialized transportation service partially supported by the City of Racine, about the same as the 1985 level.

RAILWAY 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 1986, Commission activities included review and monitoring of the regional railway system facilities and services, railway line abandonment activities within the Southeastern Wisconsin Region, and shortline railroad activities.

Regional Railway System

As of December 31, 1986, railway freight service was being provided within southeastern Wisconsin

over a total of 458 active miles of railway line by four railroads, representing no change from the 1985 total railroad mileage in the Region. Two of the four carriers operated about 91 percent of the total railway mileage: the Soo Line Railroad Company, which operated 214 miles, or 47 percent of the railway mileage in the Region; and the Chicago & North Western Transportation Company (C&NW), which operated 203 miles, or 44 percent of the railway mileage in the Region. Operation of the remaining 9 percent of the railway mileage in the Region was divided between two remaining shortline carriers: the Wisconsin & Southern Railroad Company—34 miles; and the Municipality of East Troy Wisconsin Railroad—6 miles.

The locations of the common carrier railway lines within southeastern Wisconsin are shown on Map 13. The extent of railway mileage in each of the seven counties is set forth in Table 16. In addition, there are a total of 71.0 miles of inactive railway lying in the Region with the track and structures intact. These lines, formerly owned and operated by the Chicago, Milwaukee, St. Paul & Pacific Railroad Company (the Milwaukee Road), are now the property of the State of Wisconsin.

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 northeastern Illinois. 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.

Soo Line Railroad Activities

In 1985, the Soo Line Corporation, a holding company, acquired the former core operating properties of the Chicago Milwaukee St. Paul & Pacific Railroad Company through a subsidiary known as The Milwaukee Road, Inc. Throughout most of 1985, operations of The Milwaukee Road, Inc., together with the Soo Line Railroad Company, were marketed as a single carrier known as the Soo/Milwaukee System. In January 1986, the Milwaukee Road, Inc., and the Minneapolis, Northfield & Southern Railway, Inc., a shortline railroad in Minnesota, were merged into the Soo Line Railroad Company. The combined system is operated and marketed simply as the Soo Line Railroad and continues to be a wholly owned subsidiary of the Soo Line Corporation.

Also during 1986, the Soo Line Railroad Company created its Lake States Transportation Division, consisting of many secondary and branch lines located in Wisconsin and the Upper Peninsula of Michigan. This division was created to restore an acceptable level of profitability to these railway lines through reduced operating and labor expenses. At the end of 1986, some activities toward this end were underway.

Shortline Railroad Activities

An important railway planning issue of continuing concern within the Southeastern Wisconsin Region is the status of shortline railroads, especially those that have begun operating over former branch lines abandoned by major railroads. During 1986, a joint effort to resume freight service over certain former Milwaukee Road branch lines in southeastern Wisconsin which are now inactive was continued by the Wisconsin River Rail Transit Commission and the Wisconsin Department of Transportation. In October 1986, the Rail Transit Commission and the Department purchased the Janesville to Madison, Burlington to Bardwell Junction, and Walworth to Fox Lake railway lines from the CMC Real Estate Corporation. The CMC Real Estate Corporation is a successor to the trustee for the Chicago, Milwaukee, St. Paul & Pacific Railroad Company (the Milwaukee Road) and retains ownership of real estate and other assets not sold by the trustee as part of the reorganization efforts for the Milwaukee Road. At the end of 1986, these railway lines, in addition to the Janesville to Walworth and Milton to Waukesha lines already owned by the Wisconsin Department of Transportation, remained inactive.

Railroad Abandonment Activities

Another railway planning issue of concern in southeastern Wisconsin is the status of railway branch lines which are being abandoned by major railroad companies. During 1986, only a single railway line was actively being considered for abandonment.

In July 1984, the Trustee of the Chicago, Milwaukee, St. Paul & Pacific Railroad Company

Map 13

COMMON CARRIER RAILWAY FREIGHT LINES IN SOUTHEASTERN WISCONSIN: DECEMBER 31, 1986

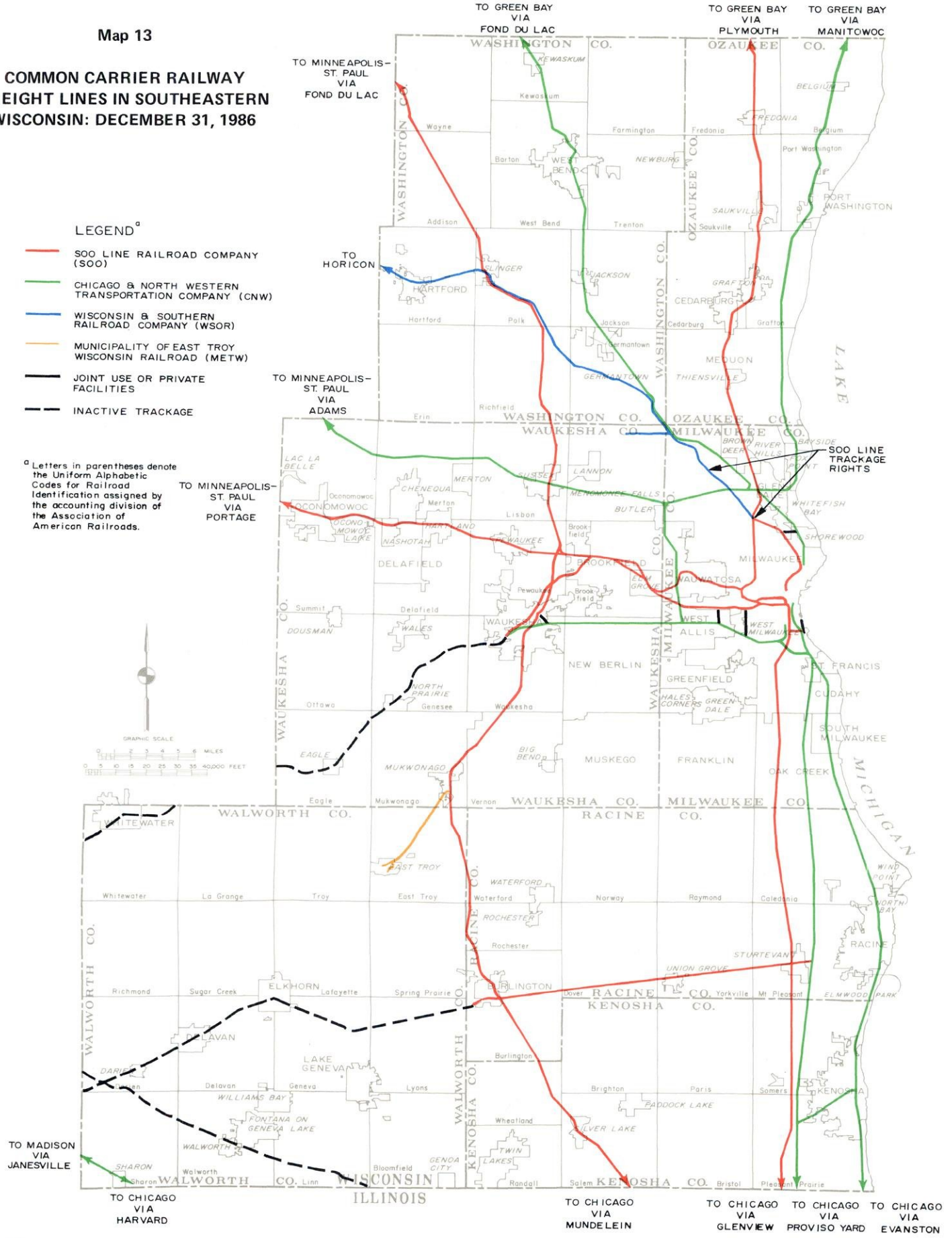


Table 16

ACTIVE COMMON CARRIER RAILWAY MAINLINE MILEAGE
IN SOUTHEASTERN WISCONSIN: DECEMBER 31, 1986

County	Soo Line Railroad Company		Chicago & North Western Transportation 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
Kenosha	22.4	4.9	28.5	6.2	--	--	--	--	50.9	11.1
Milwaukee	37.2	8.1	61.2	13.4	9.1	2.0	--	--	107.5	23.5
Ozaukee	25.1	5.5	25.8	5.6	--	--	--	--	50.9	11.1
Racine	40.9	8.9	24.5	5.4	--	--	--	--	65.4	14.3
Walworth	4.0	0.9	3.8	0.8	--	--	5.0	1.1	12.8	2.8
Washington	25.3	5.5	27.3	6.0	22.5	4.9	--	--	75.1	16.4
Waukesha	59.5	13.0	32.1	7.0	2.4	0.5	1.3	0.3	95.3	20.8
Region	214.4	46.8	203.2	44.4	34.0	7.4	6.3	1.4	457.9	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.

(Milwaukee Road) filed an application before the ICC in connection with its proposal to abandon 2.7 miles of industrial trackage in the Milwaukee terminal area. This segment of this railway line—locally referred to as the "Chestnut Street Line," or the "Beer Line"—is located entirely within the City of Milwaukee and extends from W. Highland Avenue north to N. Richards Street and includes a network of switching tracks in the Richards Street industrial area, referred to as the "Snake." Because of procedural complications arising from the Milwaukee Road's bankruptcy and the subsequent sale of its operating assets to the Soo Line Railroad, this abandonment application was still awaiting resolution at the end of 1986.

TRANSPORTATION IMPROVEMENT PROGRAM

In December 1986, 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: 1987-1991. 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 1987-1991 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 Administration (FHwA) and the Urban Mass Transportation Administration (UMTA). Following approval of the 1987-1991 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 1, 1986.

The 1987-1991 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 W. Capitol Drive (STH 190)

Table 17

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

Funding	Kenosha	Milwaukee	Racine	Total
Federal	$7,960,850	$134,194,351	$10,453,900	$152,609,101
State	3,048,950	102,112,736	3,856,500	109,018,186
Local	1,344,600	68,103,550	2,086,150	71,534,300
Total	$12,354,400	$304,410,637	$16,396,550	$333,161,587

from N. 124th Street to Mayfair Road; and the replacement of the Silver Spring bridge over the Milwaukee River. The TIP also authorizes funding for key transit maintenance projects, including the rehabilitation of 32 buses and the purchase of new buses for the Milwaukee County Transit System. In addition, the TIP authorizes projects essential to the improvement of the highway and transit systems. For example, included in the TIP are the reconstruction of the Silver Spring Interchange on IH 43 and the reconstruction with additional lanes of N. 107th Street (STH 100) from W. Good Hope Road to W. Brown Deer Road.

Within the three urbanized areas of the Region, the program contains 437 projects for the five-year programming period, representing a total potential investment in transportation improvement and services of about $816 million. Of this total, $387 million, or about 47 percent, is proposed to be provided in federal funds; $246 million, or about 30 percent, in state funds; and $183 million, or about 23 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, 1987. 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 1987 and the federal 1988 fiscal year beginning October 1, 1987 and extending through September 30, 1988. For federally funded transit projects involving transit system operating assistance, the annual element consists of a 24-month period, calendar years 1987 and 1988. All other federally assisted transit projects within the transportation improvement program have an annual element consisting of a 12-month period of calendar year 1987.

A cost summary for these projects is shown in Table 17. The cost data in this table represent the proposed annual element expenditures for a total of 273 projects.

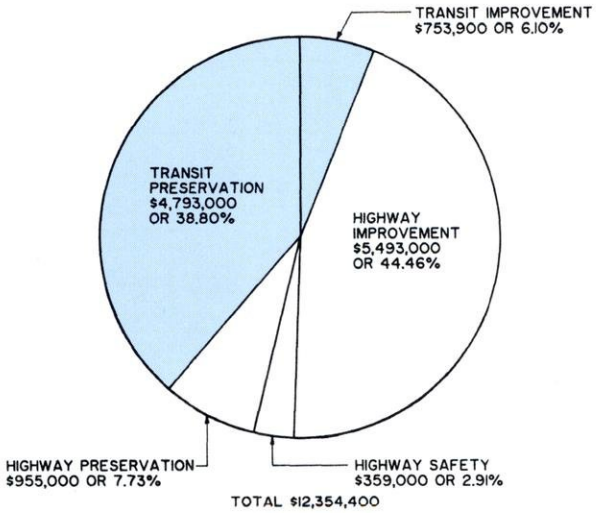
In order to provide a basis for a better understanding of the types of transportation improvements proposed to be undertaken in the three urbanized areas, projects have been grouped into nine categories: 1) highway preservation—that is, reconstruction of existing facilities to maintain present capacities; 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 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 1987 annual element: about 67 percent in the Milwaukee urbanized area, about 82 percent in the Racine urbanized area, and about 46 percent in the Kenosha urbanized area. This allocation of resources is especially notable when it is realized that virtually

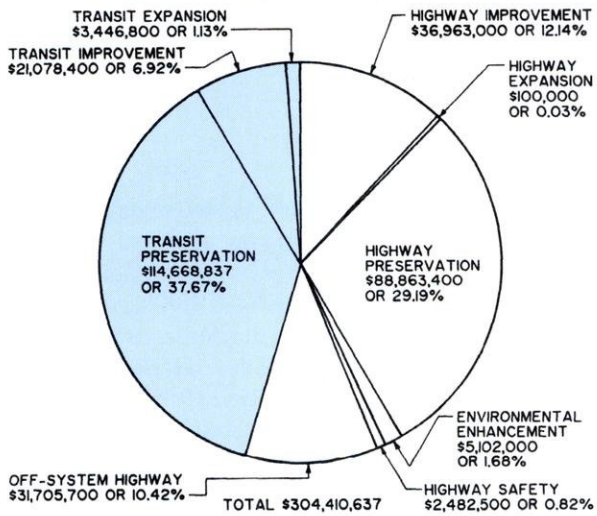
Figure 64

DISTRIBUTION OF EXPENDITURES IN THE ANNUAL ELEMENT OF THE 1987-1991 TRANSPORTATION IMPROVEMENT PROGRAM BY PROJECT CATEGORY

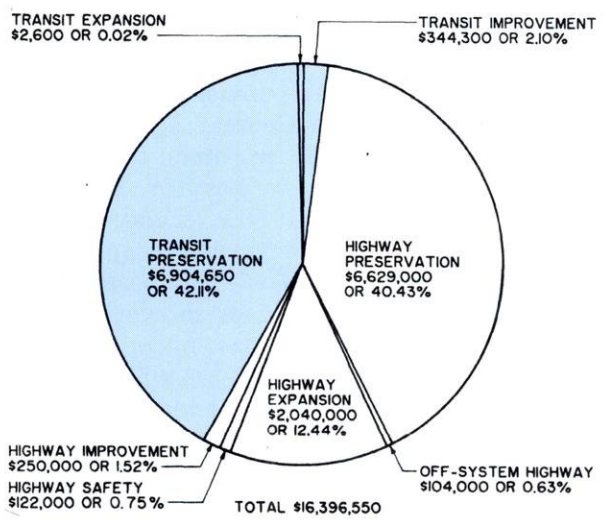
KENOSHA URBANIZED AREA



MILWAUKEE URBANIZED AREA



RACINE URBANIZED AREA



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 less than 1 percent of the total expenditures is proposed for this purpose in the Milwaukee urbanized area, and about 12 percent in the Racine urbanized area.

- A significant proportion of financial resources is devoted to public transit projects, which account for about 46 percent of the resources in the Milwaukee urbanized area annual element, about 44 percent of the resources in the Racine urbanized area annual element, and about 45 percent of the resources in the Kenosha urbanized area annual element.

A comparison of the 1987 annual element of the TIP with the 1986 annual element of the 1986-1990 TIP as reported in the Commission's 1985 Annual Report indicated the following:

- In the Kenosha urbanized area, total expenditures are proposed to increase by about 39 percent—from $8.9 million to about $12.4 million. Expenditures for highways, which constituted about 44 percent of total expenditures in 1986, are proposed to equal about 55 percent of total expenditures in 1987. Expenditures for transit were about 56 percent of total expenditures in 1986, and are proposed to account for about 45 percent of expenditures in 1987.

- In the Milwaukee urbanized area, total expenditures are proposed to decrease by about 1 percent—from about $308.0 million to about $304.4 million. Expenditures for highways, which made up about 54 percent of total expenditures in 1986, are proposed to constitute about 53 percent of total expenditures in 1987.

- In the Racine urbanized area, total expenditures are proposed to decrease by about 25 percent—from $21.8 million to $16.4 million. Expenditures for highways, which made up about 67 percent of total expenditures in 1986, are proposed to account for about 56 percent of total expenditures in

1987. Expenditures for transit were about 33 percent of total expenditures in 1986, and are proposed to account for about 44 percent of expenditures in 1987.

AIRPORT TRANSPORTATION PLANNING

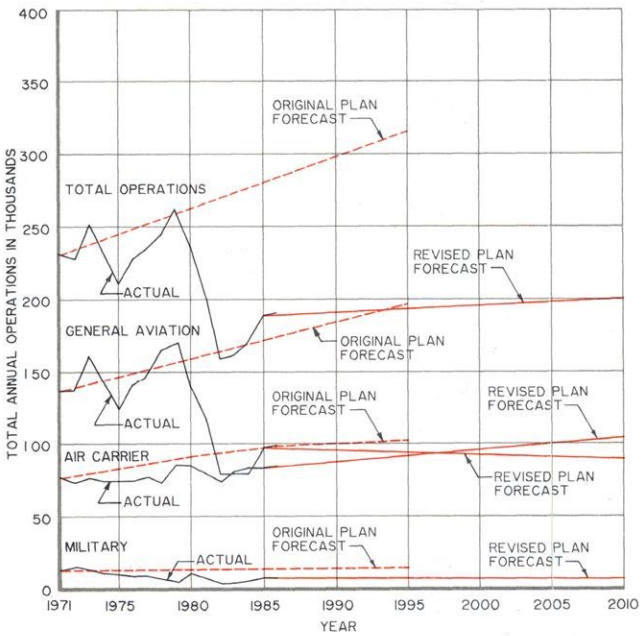
During 1986, Commission activities in air transportation and airport planning included the continued monitoring of aviation activities within the Region through secondary data sources, continuation of work on the preparation of a second generation regional airport system plan, and the continued monitoring of airport master planning activities within the Region. Airport master plans are prepared as the first step toward implementation of the adopted regional airport system plan. This plan, adopted in 1976, is documented in SEWRPC Planning Report No. 21, A Regional Airport System Plan for Southeastern Wisconsin.

Aviation Activity

The Commission staff continued to monitor aviation activity within the Region during 1986. 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. Figure 65 presents the estimated actual aviation operations in the Region and compares them to the 1995 forecasts under the original airport system plan prepared in the mid-1970's, and to the new year 2010 forecasts prepared in 1986 under the reevaluation of that plan which is now underway. As shown in Figure 65, in 1986 aircraft operations of all types at General Mitchell International Airport totaled about 191,700, an increase of about 3,700 operations, or 2 percent, over the 188,000 operations that occurred during 1985. This total is, however, 33 percent below the 285,600 operations forecast to occur at the airport during 1986 under the original regional airport system plan, a condition attributable to the continued effects of the economic recession within the Region over the past several years; to the effects of federal deregulation of commercial air service; and to the continued increase in the cost to private individuals of owning and operating general aviation aircraft. The total of 191,700 operations in 1986 is about 2 percent above the 188,500 operations forecast in 1986 under the revised year 2010 forecasts.

Figure 65

ANNUAL AIRPORT OPERATIONS AT GENERAL MITCHELL INTERNATIONAL AIRPORT, MILWAUKEE



Total aircraft operations at General Mitchell International Airport can be divided into three categories: air carrier, general aviation, and military. Air carrier operations during 1986 totaled about 85,500, about a 1 percent increase over the 1985 level of 84,400 operations. General aviation operations at General Mitchell International Airport totaled about 99,300 during 1986, an increase of 4 percent over the 1985 level of about 95,700 operations. Military aircraft operations at General Mitchell International Airport during 1986 totaled about 6,900, a decrease of about 14 percent from the 1985 level of 8,000 operations.

From 1985 to 1986, air carrier enplaning and deplaning passengers at General Mitchell International Airport increased by about 321,700 to about 3.4 million passengers per year, 10 percent above the 1985 level. The 1986 level was about 0.8 million, or about 19 percent, less than the 4.2 million passengers forecast for 1986 in the original regional airport system plan, as shown in Figure 66. The total of 3.4 million passengers in 1986 is about 6 percent greater than the 3.2 million passengers forecast in 1986 under the revised year 2010 forecasts. The increase in the actual 1986 passenger level demonstrates a significant recovery of passen-

Table 18

GENERAL AVIATION AIRCRAFT BASED IN THE REGION

County	1960	1965	1970	1975	1980	1985	1986
Kenosha	28	60	76	148	123	112	119
Milwaukee	338	362	356	371	388	373	384
Ozaukee	19	13	32	28	29	27	27
Racine	65	89	108	151	179	207	219
Walworth	23	31	48	82	98	121	117
Washington	45	63	118	136	158	165	185
Waukesha	118	163	243	255	304	350	351
Total	636	781	981	1,171	1,279	1,355	1,402

Figure 66

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

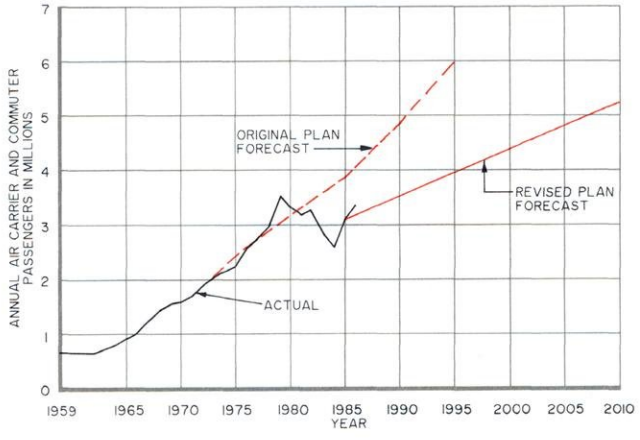
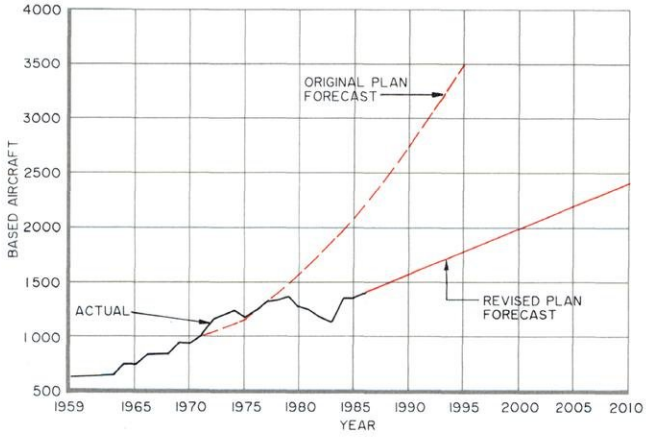


Figure 67

GENERAL AVIATION AIRCRAFT BASED IN THE REGION



ger traffic following several consecutive years of passenger decline, attributed primarily to the economic recession experienced in the Region and to the impacts of federal deregulation of commercial air service.

General aviation activity can also be measured in terms of the number of aircraft based within southeastern Wisconsin. A total of 1,402 aircraft were based in the Region during 1986, compared with the 1,355 aircraft based in the Region during 1985, as shown in Figure 67 and Table 18. The number of aircraft based in the Region during 1986 was about 37 percent lower than the total of 2,215 aircraft forecast for 1986 under the original regional airport system plan. The severe economic

recession experienced within the Region from 1979 to 1983, together with the dramatic increase in the costs of purchasing and operating private aircraft, has contributed to this condition. The total of 1,402 based aircraft in the Region during 1986 is less than 1 percent higher than the 1,390 based aircraft forecast in 1986 under the revised year 2010 forecast.

Regional Airport System Plan Revision

In 1986, work continued toward the completion of a second generation regional airport system plan for southeastern Wisconsin. The purpose of this work effort was to review the original regional airport system plan and the underlying assumptions supporting it, particularly the forecasts that differ substantially from actual levels of aviation activity; to examine alternative airport improvement plans as necessary given changes in the existing and forecast air carrier, passenger, and general aviation demands; and to revise, update, and amend the adopted regional airport system plan based upon the actual implementation of the plan that has occurred, and upon changes in aviation travel demand in the Region. This work effort was cooperatively conducted with the Wisconsin Department of Transportation, which was conducting a similar work effort for the balance of the State of Wisconsin. The study will be documented in SEWRPC Planning Report No. 38, A Regional Airport System Plan for Southeastern Wisconsin: 2010.

During 1986, work on the regional airport system plan update was conducted in five areas. The first area of work was the analysis of alternatives designed to correct the future airfield capacity deficiency identified in the area around northeastern Waukesha County. Evaluation of these alternatives indicated that retention of the existing Capitol Airport site would be the best means of providing the necessary airport capacity in this portion of the Region. The second area of work was the preparation of detailed plan recommendations for each of the 10 airports in the preliminary plan. These recommendations included a description of the necessary land acquisition and physical improvements, and an estimate of the capital investment necessary for such improvements. The third and fourth areas of work involved the completion of an evaluation of the impact of aeronautical activity and airport system development in northeastern Illinois, and of the importance and effect of public use-private ownership airports in southeastern Wisconsin. The fifth area of work involved the investigation of existing and planned land uses around those airports to be included in the updated airport system plan, including the preparation of area land use plans for each of the 10 airports based on the forecast level of aircraft activity, as well as the ultimate development of the airport site.

The plan also included an analysis of the financial feasibility of the plan, and recommended an institutional structure for the regional airport system, as well as a series of steps which must be taken by the various levels and agencies of government and private parties concerned if the new system plan is to be fully carried out over the next 20 to 25 years.

By the end of 1986, the Technical Coordinating and Advisory Committee to the study had reviewed and approved all 12 chapters of the second generation plan. Following the Advisory Committee review, arrangements were made for the conduct of a series of four public hearings throughout southeastern Wisconsin. To announce these hearings, as well as the findings and preliminary recommendations of the second generation plan, a newsletter and news release were widely distributed throughout southeastern Wisconsin during September. The purpose of these hearings was to receive comments and questions concerning the preliminary plan from public officials and concerned citizens. The public hearings were held on October 2 through October 15, 1986, in or near the Cities of Waukesha, Elkhorn, West Bend, and Kenosha. As a result of the public hearings, two principal issues were brought forward which justified further review and examination prior to completion of the second generation plan.

The first issue was the best alignment for the new primary runway recommended for East Troy Municipal Airport. A more detailed examination of several runway alternatives with respect to capital costs, environmental impacts, airspace considerations, and community impacts was conducted by the Village of East Troy, the Wisconsin Department of Transportation, representatives of Air Troy Estates Airport, the Regional Planning Commission staff, and other state and federal agencies. Based on this examination, it was determined that the runway alignment originally proposed for the development of the East Troy Municipal Airport was still the best alternative for meeting the future aviation needs of the area.

The second issue was whether or not Sylvania Airport should be included in the second generation plan. The Regional Planning Commission staff carefully reviewed the advantages and disadvantages of including Sylvania Airport in the updated plan, and concluded that representatives of Racine County, the I-94 Business Association, Sylvania Airport, the Wisconsin Department of Transportation, and the Regional Planning Commission would need to meet in order to provide the Advisory Committee with the local guidance necessary to respond to this issue. At the end of 1986, this important issue was still in the process of being resolved.

Appropriate descriptions of both these issues were prepared for inclusion in the final planning report. By year's end, the publication and printing of the final planning report for the study had been initiated. With the exception of resolving the issue concerning Sylvania Airport, the technical work on this study had been essentially completed by the end of 1986.

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 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 Field in Milwaukee, but the plan has yet to be adopted by the Milwaukee County Board of Supervisors. In addition, airport layout plans—an important element of the airport master planning process—have been completed for the 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 listing of the typical data and assistance requests received by the Commission in 1986:

- The Commission prepared traffic volume forecasts for use in the design of improvements to Northview Road between Meadowbrook Road and University Drive at the request of the engineering consulting firm preparing plans for the improvement of Northview Road in the Town of Pewaukee.

- The Commission, with the assistance of personnel from the City of Whitewater, collected turning movement, pedestrian, and 24-hour average daily traffic volumes at selected intersections along Main Street (USH 12) in the City of Whitewater.

- At the request of the Wisconsin Department of Transportation, the Commission prepared forecasts of the traffic volumes that would result from the closing of, or the restriction of motor vehicle activity on, three bridges in Milwaukee County, and prepared the resulting user costs—including travel time costs, accident costs, and vehicle operating costs. This work provided the information necessary to prioritize the S. Kinnickinnic Avenue, W. State Street, and W. Wisconsin Avenue bridge reconstruction projects within the statewide program.

- The Commission prepared estimates for the average length of trips, expressed in both miles and minutes, for trips occurring within communities, between communities within the county, and between communities in

the county and areas outside the county for Milwaukee and Waukesha Counties for use in a research study of local road benefits at the request of the Wisconsin Department of Transportation.

- The Commission prepared detailed land use, travel, and traffic growth data for the northwestern Milwaukee and northeastern Waukesha County areas for use in a preliminary engineering study of freeway improvements at the request of the Wisconsin Department of Transportation.

- The Commission initiated a study requested by the Village of Brown Deer regarding the access that should be provided to a proposed commercial development along W. Brown Deer Road in the Village. The Commission provided estimates of the total traffic and distribution of traffic that could be expected from the development; collated inventory data concerning traffic volumes and the physical and operational characteristics of arterial and local streets in the vicinity of the development; and identified alternative means of providing access to 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 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?

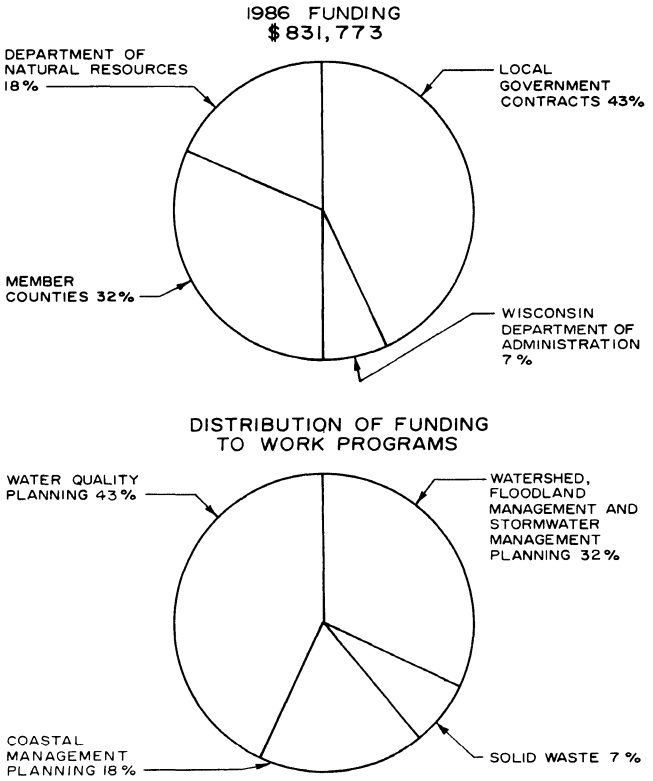
In attempting to find sound answers to these and related questions, develop recommendations concerning environmental protection and enhancement, monitor levels of environmental quality in the Region, and respond to requests for data and technical assistance, activities were conducted in 1986 in four identifiable program areas: water quality management planning; watershed, floodland, and stormwater management planning; coastal management planning; and solid waste management planning. In addition, in an effort to actively seek input from the public on the Commission's ongoing environmental work programs, the Commission continued a strong public participation/education program during 1986.

WATER QUALITY MANAGEMENT PLANNING

During 1986, 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 the preparation of more detailed

Figure 68

ENVIRONMENTAL PLANNING DIVISION



and refined nonpoint source pollution abatement plans, inland lake water quality management plans, and 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 Department of Natural Resources in the review of proposed public sanitary sewer extensions and proposed private main sewers, building sewers, and large onsite sewage disposal systems and holding tanks. Finally, the Commission continued work on the comprehensive Milwaukee Harbor estuary water resources planning program.

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. The recommendation for this more detailed level of planning was made 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 which 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 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 14. Prior to 1986, 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; and for the Turtle Creek watershed, a major portion of which lies in

Map 14

STATUS OF PRIORITY WATERSHEDS IN SOUTHEASTERN WISCONSIN: 1986

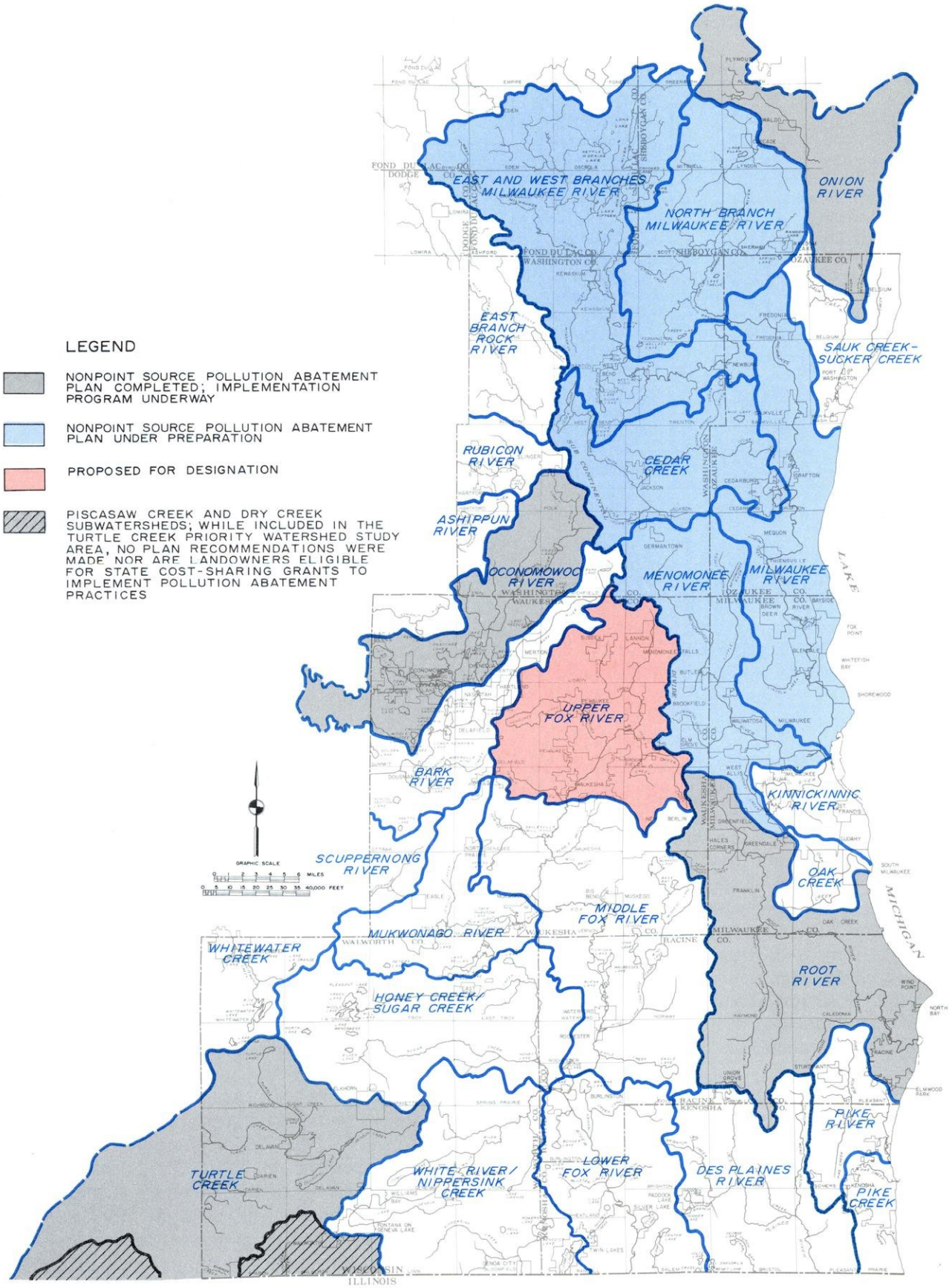


Table 19

ROOT RIVER PRIORITY WATERSHED PROJECTS AND PRACTICES COMPLETED IN THE REGION AS OF DECEMBER 31, 1986

Projects and Practices	Extent Recommended	Extent Implemented	Cost of Implemented Projects and Practices		
			Wisconsin Fund	Local Government or Landowner	Total
Diversions	50,000 feet	5,271 feet	$ 14,010	$ 11,853	$ 25,863
Grassed Waterways with Tile	182 acres	57.5 acres	318,185	129,995	448,414
Conservation Tillage	11,500 acres	332 acres	8,162	8,162	16,324
Contour Strip Cropping	490 acres	66 acres	349	149	498
Manure Storage Facilities	44 facilities	2 facilities	9,087	9,165	18,252
Barnyard Runoff Systems	23 systems	3 systems	14,112	6,048	20,160
Terraces	1,225,200 feet	16,100 feet	14,771	6,331	21,102
Structural Stream Crossing	10 crossings	1 crossing	283	120	403
Grade Stabilization Structures	111 structures	48 structures	111,564	42,662	154,226
Stream Bank Protection	40,020 feet	14,092 feet	196,860	71,856	268,716
Critical Area Planting	18 acres	162.5 acres	95,845	41,644	137,488
Oil Disposal Storage Units	20 units	2 units	314	314	628
Street Sweeping	4 new programs	1 new program	2,326	2,326	4,652
Concrete-Lined Waterway	--[a]	1,264 feet	10,910	4,675	15,585
Total	--	--	$776,778	$335,300	$1,132,311

[a] *Not specified in priority watershed plan as an urban nonpoint source pollution control practice.*

Walworth County and which drains west out of the Region through Rock County. During 1986, a priority watershed plan was completed for the Oconomowoc River watershed, 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, installation of spent oil disposal stations, roadside and stream bank erosion control, and landfill site runoff control; 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 1986 in the Root River watershed are summarized in Table 19. 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 1986 are summarized in Table 20. Local governments and landowners in the Onion River watershed will have through the end of June 1989 to complete all projects and practices which 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 will conclude on April 12, 1987. The projects and practices completed within the portion of the watershed in the Region through the end of 1986 are summarized in Table 21. Local governments and landowners in the Turtle Creek watershed will have through the end of April 1992 to complete all projects and practices which are approved by the DNR during the sign-up phase.

Table 20

ONION RIVER PRIORITY WATERSHED PROJECTS AND PRACTICES
COMPLETED IN THE REGION AS OF DECEMBER 31, 1986

Projects and Practices	Extent Recommended	Extent Implemented	Cost of Implemented Projects and Practices		
			Wisconsin Fund	Local Government or Landowner	Total
Diversions	22,500 feet	400 feet	$ 420	$ 180	$ 600
Grassed Waterways with Tile	41 acres	5.3 acres	9,481	4,787	14,268
Conservation Tillage	975 acres	220 acres	1,760	--	1,760
Manure Storage Facilities	5 facilities	1 facility	6,000	19,000	25,000
Total	--	--	$17,661	$23,967	$41,628

Table 21

TURTLE CREEK PRIORITY WATERSHED PROJECTS AND PRACTICES
COMPLETED IN THE REGION AS OF DECEMBER 31, 1986

Projects and Practices	Extent Recommended	Extent Implemented	Cost of Implemented Projects and Practices		
			Wisconsin Fund	Local Government or Landowner	Total
Diversions	5,456 feet	1,000 feet	$ 729	$ 312	$ 1,041
Grassed Waterways	182 acres	32.3 acres	34,606	14,830	49,436
Grassed Waterways with Tile	--[b]	1.6 acres	2,835	1,215	4,050
Conservation Tillage	3,930 acres	468 acres	8,937	--	8,937
Contour Farming	499 acres	40 acres	240	103	343
Contour Strip Cropping[a]	560 acres	35 acres	--	--	--
Barnyard Runoff Systems	22 systems	4 systems	28,017	12,007	40,024
Stream Bank Protection	28,873 feet	850 feet	2,380	1,020	3,400
Total	--	--	$77,744	$29,487	$107,231

[a] *Contracted as a noncost-sharing item.*

[b] *Not specified in priority watershed plan recommendations as separate from grassed waterways in general.*

During 1986, the Commission worked with the DNR and the land conservation committees of Washington, Waukesha, and Jefferson Counties to complete a detailed nonpoint source pollution abatement plan for the Oconomowoc River priority watershed. Commission involvement in that planning effort included assisting the DNR and county staffs in conducting inventories of the sources of nonpoint pollution, the preparation of materials for a public information effort in the watershed, and staffing the Oconomowoc River Priority Watershed Plan Development Advisory Committee. That Committee met two times during 1986 and held a public hearing on the draft priority watershed plan. The Commission staff also participated in town meetings to help explain the draft plan. The priority watershed plan for the Oconomowoc River watershed was completed in June 1986, and the implementation phase of the priority watershed program was initiated. 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 1986 are summarized in Table 22. Local governments and landowners in the Oconomowoc River watershed will have through

Table 22

OCONOMOWOC RIVER PRIORITY WATERSHED PROJECTS AND PRACTICES COMPLETED IN THE REGION AS OF DECEMBER 31, 1986

Projects and Practices	Extent Recommended	Extent Implemented	Cost of Implemented Projects and Practices		
			Wisconsin Fund	Local Government or Landowner	Total
Grassed Waterways	90 acres	2.5 acres	$ 6,850	$ 2,695	$ 9,545
Conservation Tillage	4,020 acres	302 acres	8,250	8,550	16,800
Contour Strip Cropping	700 acres	18 acres	216	216	432
Barnyard Runoff Systems	30 systems	1 system	17,550	5,000	22,550
Grade Stabilization Structures	10 structures	2 structures	4,800	600	5,400
Critical Area Stabilization	350 acres	0.6 acre	4,800	600	5,400
Shoreline Protection	700 feet	500 feet	76,000	9,500	85,500
Total	--	--	$118,466	$27,161	$145,607

the end of April 1994 to complete all projects and practices which 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 as soon as possible. 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 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 ending in 1989.

During 1986, the Commission staff assisted the Department in the Milwaukee River priority watersheds effort primarily through participation on the Department's advisory committee, with particular emphasis on the work of the Information and Education Subcommittee. During 1986 that subcommittee sponsored a bus tour of the watershed for local officials, agency representatives, and the news media.

During 1986 the Upper Fox River watershed remained on the list of watersheds statewide that are eligible for funding under the Wisconsin Fund nonpoint source pollution abatement program. Depending upon funding levels established by the State Legislature, it may be possible to proceed with nonpoint source pollution abatement planning for the Upper Fox River watershed during the next several years.

Lake Water Quality Management Planning

The adopted regional water quality management plan recommended that in-depth lake water quality management plans be prepared for the direct tributary drainage areas to each of the 100 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 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 required land management and land use measures in each lake watershed; and required point and nonpoint source pollution abatement measures.

By the end of 1986, 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. During 1986 the plans for Friess, Geneva, and Pewaukee Lakes were adopted by the Commission

as amendments to the regional water quality management plan. The plans for the other four lakes had been adopted by the Commission prior to 1986.

In addition to adopting the three lake plans during the year, the Commission continued to provide assistance to lake districts in carrying out their activities. For example, assistance was provided to a newly established district at Powers Lake in preparing a base map of the drainage area tributary to the lake and in preparing and reproducing a newsletter for the new district. Powers Lake lies in both Kenosha and Walworth Counties. Assistance was also given to the Geneva Lake Environmental Agency in preparing an educational brochure entitled, "Geneva Lake: A Commitment to the Future."

At the end of 1986, the Commission had additional lake studies underway. These included studies for the tributary drainage areas to Oconomowoc Lake and Fowler Lake in Waukesha County and Pike Lake in Washington County. Detailed lake management plans for these and other major lakes are proposed to be completed over the next several years as budget conditions permit.

Local Sewerage Facilities Planning

During 1986, 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 preliminary engineering practice. Work activities during 1986 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 1986 local sewerage facilities plans were completed for the Village of Paddock Lake and the Town of Bristol in Kenosha County; the Towns of Lisbon and Oconomowoc in Waukesha County; the City of Cedarburg in Ozaukee County; the Town of Waterford Sanitary District No. 1 in Racine County; and a small portion of the Town of Ixonia in Jefferson County which is proposed to be connected to the City of Oconomowoc sewerage system in adjacent Waukesha County. These plans set forth recommendations for the construction of new sewerage facilities in accordance with the recommendations of the adopted regional water quality management plan as amended. As such, these facilities plans were recommended by the Commission to the Wisconsin Department of Natural Resources for approval. At year's end similar sewerage facilities plans were under development for the Village of Lac La Belle in Waukesha County; the Country Estates Sanitary District in Walworth County; the Town of Pleasant Prairie Sewer Utility District F in Kenosha County; and the sewage treatment facilities operated by the Wisconsin Department of Transportation and serving rest areas located along IH 94 in the Town of Pleasant Prairie, Kenosha County, and along STH 15 in the Town of LaFayette, Walworth County.

During 1986, the Commission continued to respond to requests to amend the regional water quality management plan as that plan relates to sewerage facilities. Action was completed during the year on a request by the Village of Thiensville to amend the plan to provide for the construction of a new village sewage treatment plant rather than connect the Village to the Milwaukee Metropolitan Sewerage District (MMSD) system. Cost-effectiveness analyses completed by the Commission prior to 1986 had concluded that there was no basis upon which the Commission could amend the plan to provide for the construction of a new Thiensville sewage treatment facility. During the year, the Village Board determined to proceed with implementation of the plan as adopted by the Commission by abandoning the existing Thiensville sewage treatment plant and constructing a trunk sewer connecting the Village to the MMSD system. At year's end, negotiations were underway between the Village of Thiensville and the City of Mequon to effect an intergovernmental agreement between those two communities that would provide for the construction of a Mequon-Thiensville trunk sewer in the manner envisioned in the adopted plan.

During 1986 the Commission also continued to work with the Bark Lake Sanitary District located in the Town of Richfield, Washington County, in response to that District's request to amend the regional water quality management plan. As reported in the Commission's 1985 Annual Report,

the District's request would have the Commission create a Bark Lake sanitary sewer service area and designate in the plan a new sewage treatment plant to serve that area. That plant would discharge treated effluent to the headwaters of the Bark River. Cost-effectiveness analyses completed by the Commission prior to 1986 demonstrated that it would be more cost-effective and environmentally sound to connect the Bark Lake Sanitary District to the MMSD system through the adjacent Village of Germantown than to build a permanent sewage treatment facility that would discharge effluent to the Bark River. During the year the Commission continued to work with the Bark Lake Sanitary District as that District attempted to secure an agreement with the MMSD. At the request of the Wisconsin Department of Natural Resources, the Commission staff prepared a memorandum setting forth the results of an analysis of the potential impacts on the MMSD system of the connection of existing enclaves of urban development located outside the planned MMSD service area to the MMSD sewerage system. This analysis was prepared to help the Department and the MMSD consider the potential connection of the Bark Lake Sanitary District to the MMSD system. At year's end, the Bark Lake Sanitary District, the MMSD, and the Department of Natural Resources were continuing discussions toward implementation of the recommendation to connect the Bark Lake District to the MMSD system.

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 1986, the recommended plan refinement process had been completed for 43 of the 85 initially identified sanitary sewer service areas. Thirty-one of these refinements had been completed and adopted both by the local governments concerned and by the Commission prior to 1986. During 1986 such detailed planning efforts were completed for 12 additional areas. Seven of these areas are located in Kenosha County: the Bristol-George Lake area, renamed the Town of Bristol Utility District Nos. 1 and 1B; the Hooker-Montgomery Lake area, renamed the Town of Salem Utility District No. 1; the Camp-Center Lakes, Cross Lake, Rock Lake, and Wilmot areas, collectively renamed the Town of Salem Utility District No. 2; and the Paddock Lake area. The remaining five areas lie within Racine County and consist of the Burlington area, the Caddy-Vista area, the Racine area, and the Tichigan Lake and Waterford-Rochester areas, the latter two collectively renamed the Waterford-Rochester area. The plans for all of these areas were adopted locally and by the Commission during 1986. As noted, the refinement process has resulted in a redefinition and combination of certain areas such that, upon completion of the refinement of the 43 areas, there remained only 36 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 four new sanitary sewer service areas. Refined sewer service area plans for all four of these service areas—Army Lake 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 1986.

The existing status of all planned sanitary sewer service areas is summarized in Table 23 and on Map 15. This table identifies the originally defined 85 sewer service areas and the relationship of those areas to the 43 refined and detailed sewer service areas and the four 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 1986. These included plans for the Silver Lake and Twin Lakes areas in Kenosha County; the Cedarburg, Grafton, Mequon, and Thiensville areas in Ozaukee County; the Lyons, Whitewater, and Darien areas in Walworth County; and the New Berlin, Brookfield, Elm Grove, and Menomonee Falls 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 1986, such review comments were provided on 170 public sanitary sewer extensions and 257 private main sewers or building sewers, distributed by county as shown in Table 24. In addition, the Commission provided review comments on one large-scale private sewage disposal system during the year: an onsite septic tank sewage disposal system to serve an expanded mobile home park in the Town of Grafton, Ozaukee County.

Milwaukee Harbor Estuary Comprehensive Water Resources Planning Program

In 1986, the Commission continued work on a multi-year study of the water resources of the Milwaukee Harbor estuary. This study, which was undertaken at the request of the Common Council of the City of Milwaukee, represented a cooperative effort between the U. S. Environmental Protection Agency (EPA), the U. S. Geological Survey (USGS), the Milwaukee Metropolitan Sewerage District, and the Commission. The primary objectives of the Milwaukee Harbor estuary study are to assess the existing and historic water quality, flooding, and storm damage problems in the inner and outer harbors of the estuary; to identify and quantify sources of water pollutants—including in-place sediments; to review water uses and supporting water quality objectives and standards; to formulate and evaluate alternative means of attaining those objectives and standards; and to recommend a cost-effective water resources management plan for the Milwaukee Harbor estuary. The study will have particularly important implica-

PLANNED SANITARY SEWER SERVICE AREAS IN THE REGION: 1986

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	Town of Bristol Utility District Nos. 1 and 1B	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 Pleasant Prairie North	Town of Pleasant Prairie Sewer Utility District D	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	Town of Salem Utility District No. 2	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
	Cross Lake	Town of Salem Utility District No. 2	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	Town of Salem Utility District No. 1	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	Town of Pleasant Prairie Sanitary District No. 73-1	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 23 (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)	Rock Lake	Town of Salem Utility District No. 2	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
	Silver Lake	--	--	--
	Twin Lakes	--	--	--
	Wilmot	Town of Salem Utility District No. 2	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
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	--	--	--
	Fredonia	Fredonia	September 13, 1984	SEWRPC Community Assistance Planning Report No. 96, Sanitary Sewer Service Area for the Village of Fredonia, Ozaukee County, Wisconsin
	Grafton	--	--	--
	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	--	--	--
	Waubeka	Waubeka	September 13, 1984	SEWRPC Community Assistance Planning Report No. 96, Sanitary Sewer Service Area for the Village of Fredonia, Ozaukee County, Wisconsin

Table 23 (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	Burlington	Burlington	June 16, 1986	SEWRPC Community Assistance Planning Report No. 78, Sanitary Sewer Service Area for the City of Burlington, Racine County, Wisconsin
	Caddy Vista	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
	Center for the Developmentally Disabled	--	--	--
	Eagle Lake	--	--	--
	Racine	Racine	December 1, 1986	SEWRPC Community Assistance Planning Report No. 147, Sanitary Sewer Service Area for the City of Racine and Environs, Racine County, Wisconsin
	Tichigan Lake	Town of Waterford Sanitary District No. 1	June 16, 1986	SEWRPC Community Assistance Planning Report No. 141, Sanitary Sewer Service Area for the Waterford/Rochester Area, Racine County, Wisconsin
	Union Grove	--	--	--
	Waterford/Rochester	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	--	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
	Darien	--	--	--
	Delavan	Delavan	December 3, 1981	SEWRPC Community Assistance Planning Report No. 56, Sanitary Sewer Service Areas for the Walworth County Metropolitan Sewerage District
	Delavan Lake	Delavan Lake	December 3, 1981	SEWRPC Community Assistance Planning Report No. 56, Sanitary Sewer Service Areas for the Walworth County Metropolitan Sewerage District

Table 23 (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)	East Troy	East Troy	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
	Elkhorn	Elkhorn	December 3, 1981	SEWRPC Community Assistance Planning Reprot No. 56, Sanitary Sewer Service Areas for the Walworth County Metropolitan Sewerage District
	Fontana	--	--	--
	Genoa City	--	--	--
	Lake Como	--	--	--
	Lake Geneva	--	--	--
	Lyons	--	--	--
	Potter Lake	Potter 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
	Sharon	--	--	--
	Walworth	--	--	--
	Walworth County Institutions	Walworth County Institutions	December 3, 1981	SEWRPC Community Assistance Planning Report No. 56, Sanitary Sewer Service Areas for the Walworth County Metropolitan Sewerage District
	Whitewater	--	--	--
	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

Table 23 (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
Washington (continued)	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	--	--	--
	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	--	--	--
	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 Nashotah-Nemahbin Lakes	Delafield-Nashotah	December 2, 1985	SEWRPC 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
	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

Table 23 (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)	Muskego	Muskego	June 17, 1982	SEWRPC Community Assistance Planning Report No. 64, Sanitary Sewer Service Area for the City of Muskego, Waukesha County, Wisconsin
	New Berlin	--	--	--
	North Lake	--	--	--
	North Prairie	--	--	--
	Oconomowoc-Lac La Belle	--	--	--
	Oconomowoc Lake	--	--	--
	Okauchee Lake	--	--	--
	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

tions for the selection of the level of protection to be provided by the combined sewer overflow abatement measures, and for the need to provide in-stream treatment measures, including sediment removal.

During 1986, all of the data collection and analysis efforts for the study were completed and documented in a draft of the first volume of a two-volume Commission planning report. The first volume was scheduled for final publication early in 1987. Work continued on the simulation modeling of the hydrologic-hydraulic and water conditions in the estuary. The results of the modeling efforts were documented and reviewed by the Technical Advisory Committee on the Milwaukee Harbor Estuary Comprehensive Water Resources Management Plan, as well as the Water Quality Modeling

Map 15

RECOMMENDED SANITARY SEWER SERVICE AREAS IN THE REGION: 1986

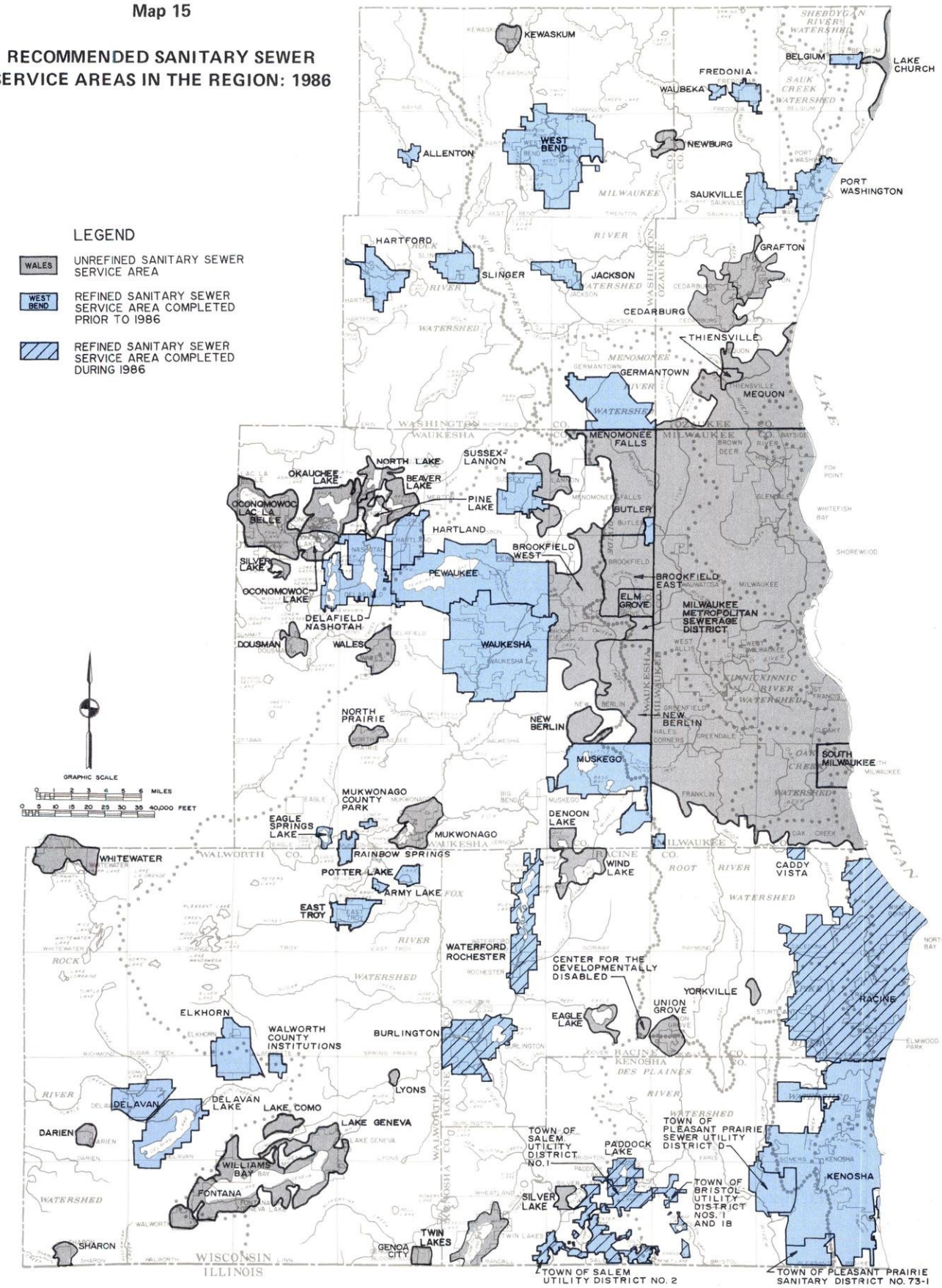


Table 24

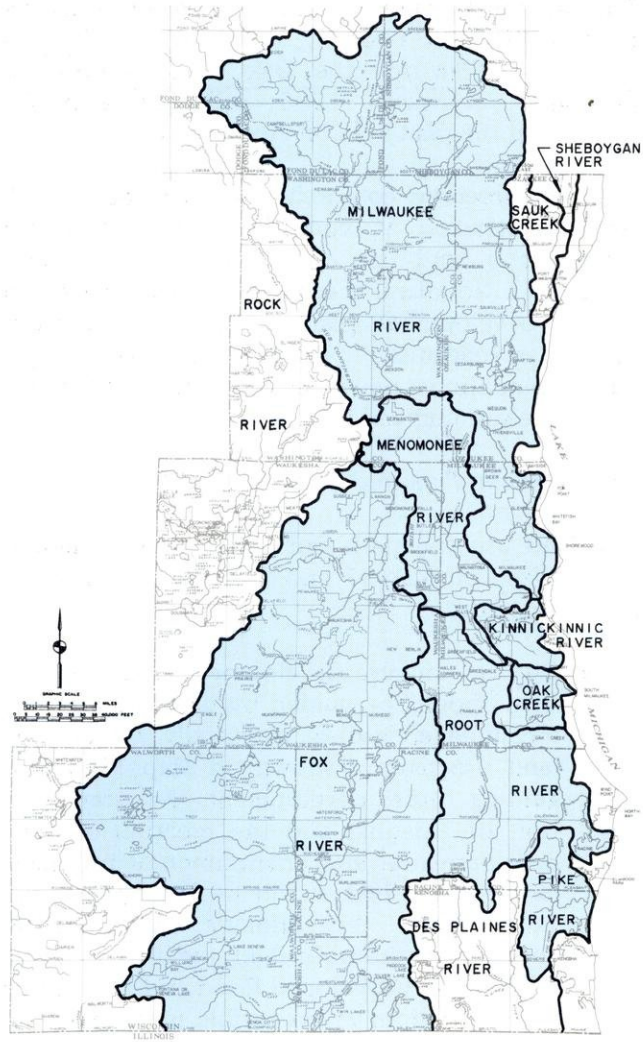
SANITARY SEWER EXTENSION REVIEWS: 1986

County	Public Sanitary Sewer Extensions	Private Main Sewer or Building Sewer Extensions	Total
Kenosha	10	9	19
Milwaukee . . .	50	65[a]	115
Ozaukee	11	13	24
Racine	15	19	34
Walworth. . . .	10	24	34
Washington . .	20	26	46
Waukesha . . .	54	101	155
Total	170	257	427

[a] *The Commission has delegated the responsibility for the review of building sewer extensions within the City of Milwaukee to the City. During 1986, 405 reviews of building sewer extensions were conducted by the City.*

Map 16

SEWRPC WATERSHED STUDIES COMPLETED: 1986



Subcommittee for the study established to help the Technical Committee in its work. The Technical Advisory Committee requested that further analyses be undertaken to verify that the water quality simulation models were properly simulating water quality conditions at two particular locations in the estuary. At year's end, the additional analyses requested by the Commission were nearing completion. In addition, alternative plans were developed and comparatively evaluated for harbor dredging and spoils disposal, and for anchorage and flood damage protection.

The Technical Advisory Committee met twice during the year to review report progress and draft report materials. The Water Quality Modeling Subcommittee also met twice during the year.

The study is now scheduled to be completed in the fourth quarter of 1987.

WATERSHED, FLOODLAND, AND STORMWATER MANAGEMENT PLANNING

During 1986, Commission efforts in watershed, floodland, and stormwater management consisted of completion of the Oak Creek watershed study; initiation 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 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 16 indicates the coverage of the watershed studies conducted by the Commission through 1986.

Oak Creek Watershed Study

During 1986, all work was completed on a comprehensive plan for the Oak Creek watershed. This work effort was conducted by the Commission at the request of the Milwaukee Metropolitan Sewerage District. The plan preparation was guided by

the Oak Creek Watershed Committee, a committee comprised of local and state officials and concerned citizen leaders from within the watershed. The findings and recommendations of the study are set forth in SEWRPC Planning Report No. 36, A Comprehensive Plan for the Oak Creek Watershed, published in August 1986, following a public hearing on the plan held on April 30, 1986.

The recommended comprehensive plan for the Oak Creek watershed is comprised of four major elements: a land use and park and open space element; a floodland management plan element; a fishery development plan element; and a water quality management plan element. The major recommendations under each of these plan elements are summarized herein.

Land Use and Park and Open Space Element

The land use and park and open space element is summarized on Map 17 and contains the following recommendations:

- Future land use development in the watershed should be guided by land use controls locally exercised to essentially achieve the land use pattern shown on Map 17. By so guiding future development, the intensification of existing, and the creation of new, developmental and environmental problems in the watershed would be largely avoided. Importantly, the primary environmental corridors of the watershed, together with the remaining undeveloped floodlands, would be protected from incompatible urban development, thereby assuring continued enjoyment of the recreational, aesthetic, ecological, and cultural values associated with the riverine areas, while avoiding the intensification of flood damage and water pollution problems. It should be noted that the proposed corridor preservation would be an important means of providing floodwater storage within the watershed.

- The recommended plan would accommodate a resident population in the watershed of about 72,600 persons, an increase of about 32,900 persons over the 1980 level; and a planned employment of about 27,300 jobs, an increase of about 7,300 jobs over the 1980 level. To accommodate the increase in population and employment, an additional 11.1 square miles of land would be converted from rural to urban use between 1980 and 2000, bringing the total urban land to 24.3 square miles, or 87 percent of the total area of the watershed. New urban development in the watershed is proposed to occur primarily at medium population densities, with gross residential population densities ranging from about 3,000 to 9,000 persons per square mile. The new urban development would be located in areas served, or proposed to be served, by a full range of public utilities and essential urban services, particularly public sanitary sewer and water supply services.

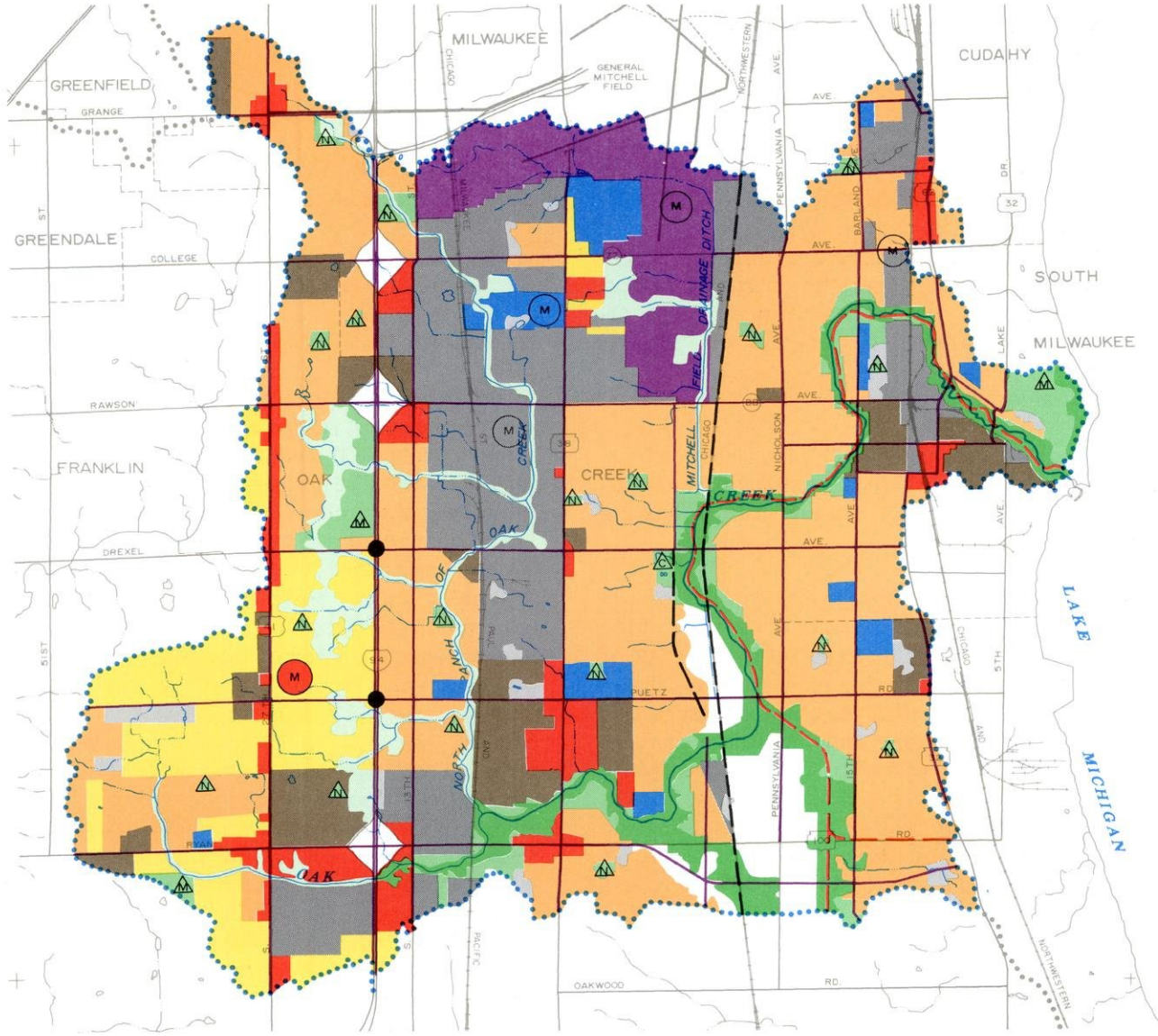
- The eventual public acquisition through purchase, dedication, or gift of the remaining primary environmental corridor lands in the watershed, with the exception of about 30 acres, or about 7 percent, of the total corridor lands which are proposed to be converted to urban use, reflecting committed local planning and zoning decisions. The primary environmental corridors of the Oak Creek watershed total about 447 acres and are located generally along the lower reaches of Oak Creek in the City of South Milwaukee, and in an area encompassing a large concentration of wetlands and woodlands in the southeastern area of the watershed in the City of Oak Creek. Of the total corridor lands, 229 acres, or about 51 percent, are already in public ownership. Accordingly, the plan recommends that 188 acres, or 42 percent of the total corridor lands, be acquired for public use over time through purchase or dedication as urbanization in the watershed proceeds. This would provide for the completion of the acquisition of lands for the Oak Creek Parkway, and the continued provision of needed major park and open space reservations within the watershed.

- The restoration of 579 acres of agricultural and other open lands to wetland vegetation, thereby restoring and re-creating primary environmental corridors within the watershed. These lands are all located within existing and proposed county-owned parkway boundaries.

- The development of eight miles of recreational trails through environmental corridor lands—seven miles along Oak Creek between Lake Michigan and E. Fitzsimmons Road, and one mile between the Oak Creek recreational corridor and Bender Park.

Map 17

RECOMMENDED LAND USE AND PARK AND OPEN SPACE PLAN FOR THE OAK CREEK WATERSHED: 2000



LEGEND

- LOW-DENSITY RESIDENTIAL
- MEDIUM-DENSITY RESIDENTIAL
- HIGH-DENSITY RESIDENTIAL
- COMMERCIAL CENTER M-MAJOR
- INDUSTRIAL CENTER M-MAJOR
- GOVERNMENTAL OR INSTITUTIONAL CENTER M-MAJOR
- TRANSPORTATION CENTER M-MAJOR
- EXISTING FREEWAY
- EXISTING NONFREEWAY ARTERIAL
- PROPOSED NONFREEWAY ARTERIAL
- PROPOSED FREEWAY-NONFREEWAY INTERCHANGE
- OUTDOOR RECREATION
  M-MAJOR PARK (TYPE I OR II)
  C-COMMUNITY PARK (TYPE III)
  N-NEIGHBORHOOD PARK (TYPE IV)
- PROPOSED RECREATION CORRIDOR
- PRIMARY ENVIRONMENTAL CORRIDOR
- SECONDARY ENVIRONMENTAL CORRIDOR
- ISOLATED NATURAL AREA
- AGRICULTURAL AND OTHER OPEN LANDS

- The continued provision of park and outdoor recreational facilities throughout the watershed, including the maintenance of Grant Park and Oakwood Park as large, multi-purpose outdoor recreational facilities; the development of outdoor recreational facilities at Falk Park; the continued maintenance of Abendschein, Copernicus, and Maitland Parks as community parks; the continued maintenance of seven existing neighborhood parks; the provision of additional recreational facilities at five publicly owned but only partially developed neighborhood parks; and the acquisition and development of four additional neighborhood parks as needed.

Floodland Management Plan Element

The floodland management plan element of the Oak Creek watershed is graphically summarized on Map 18 and contains the following recommendations:

- Deepening and shaping of 1.4 miles of the main stem of Oak Creek between River Mile 10.30 and S. 27th Street, all in the City of Oak Creek. Within this reach the streambed would be lowered an average of three feet, resulting in average and maximum channel depths of 7.5 feet and 10.0 feet, respectively. The modified channel would be turf-lined, with a bottom width of 10 feet and side slopes of one on three, and would have an estimated capital cost of $163,000.

- Deepening and shaping of 1.0 mile of the North Branch of Oak Creek channel between the steel sheet pile spillway located west of the United Parcel Service distribution center and S. 13th Street, in the Cities of Oak Creek and Milwaukee. Within this reach the streambed would be lowered an average of three feet, resulting in average and maximum channel depths of 5.7 feet and 11.0 feet, respectively. The modified channel would be turf-lined, with a bottom width of 10 feet and side slopes ranging from one on two to one on five, similar to the existing side slopes in this reach, and would have an estimated capital cost of $44,000.

- The floodproofing of 21 buildings, of which 20 are in the City of Oak Creek and one is in the City of Milwaukee, at an estimated capital cost of $367,000; the elevation of six buildings, all in the City of Oak Creek, at an estimated cost of $193,000; and the removal of two buildings, both in the City of Oak Creek, at an estimated cost of $132,000.

- The replacement of two bridges on the North Branch of Oak Creek—the Milwaukee Road railway crossing at River Mile 4.75, at an estimated capital cost of $110,000; and the W. College Avenue crossing at River Mile 4.91.

- The development of stormwater management system plans for individual subwatersheds.

In addition to the foregoing measures, the floodland management element of the plan includes recommended standards relative to bridge replacement to ensure that major streets and highways remain operable during flood events. The plan also includes several supplemental measures intended to minimize the monetary losses associated with flooding, including participation in the Federal Flood Insurance Program and continuation of desirable lending institution and realtor policies concerning the sale of riverine properties. The maintenance of a basic cooperative stream gaging program is also recommended.

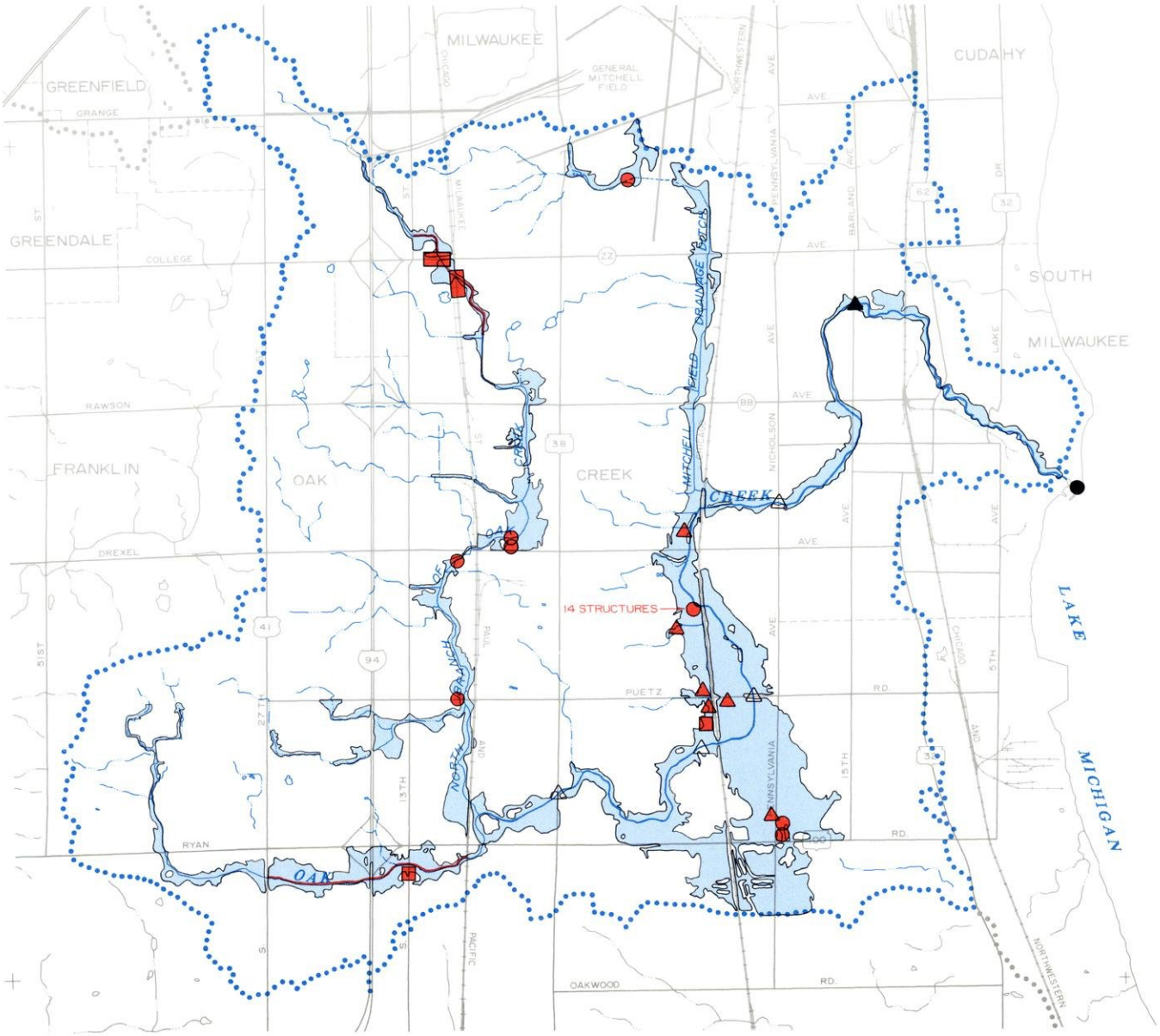
Finally, the plan recommends that each of the units of government in the watershed carefully review their floodland zoning regulations to ensure that such regulations complement the recommended watershed land use plan element and are coordinated with the structural flood control measures recommended in the plan. In general, those floodlands lying within the 100-year recurrence interval flood hazard lines under planned land use conditions that are presently neither developed for urban use, nor committed to such use by the recordation of land subdivision plats and the installation of municipal improvements, should be zoned so as to prohibit incompatible urban development. Those existing urban land uses in the floodlands scheduled to be floodproofed, elevated, or protected through structural flood control measures should be placed in a flood hazard district until implementation of the recommended flood control measures, at which time the lands should be appropriately rezoned.

Accessory Considerations—Floodland Plan Element

In addition to the flood control measures described above, the floodland management plan element contains measures which address the need to main-

Map 18

RECOMMENDED FLOODLAND MANAGEMENT PLAN ELEMENT FOR THE OAK CREEK WATERSHED: 2000



LEGEND

RECOMMENDED FLOODLAND MANAGEMENT PLAN ELEMENT

- 100-YEAR RECURRENCE INTERVAL FLOODLANDS--PLANNED LAND USE AND EXISTING CHANNEL CONDITIONS
- CHANNEL DEEPENING AND SHAPING
- BRIDGE OR CULVERT REPLACEMENT
- STRUCTURE FLOODPROOFING
- STRUCTURE ELEVATION
- STRUCTURE REMOVAL
- NAVIGATION CHANNEL BULKHEAD
- CONTINUOUS RECORDER STREAM GAGE
- CREST STAGE GAGE

tain recreational navigation at the mouth of Oak Creek. These measures are aimed at alleviating the problem of sandbar formation at the mouth of Oak Creek, which at times interferes with the use of a public boat launch facility located in Grant Park. These measures are stepwise in nature and consist of the following:

- Construction of a jetty south of, and parallel to, the north side of the mouth of the creek to define a 20-foot-wide by 4-foot-deep navigation channel; lowering of the sand level on the beach north of the channel to an elevation which is 2 feet below the top of the existing jetty located along the north side of the mouth of the creek; and such minimal dredging of the navigation channel as may be required to maintain 4 feet of depth, given that the proposed channel confinement should keep the channel clear by the scouring action of the stream flows. The capital cost of these measures is estimated to total $140,000. These measures would have an annual operation and maintenance cost of about $5,000.

- Design and construction of either a diffuser network within the navigation channel or a dry dam at or near the existing footbridge near River Mile 0.14, to supplement the scouring action created by the jetty construction, if that scouring action proves to be inadequate, and dredging of the navigation channel must be done too frequently. Water either pumped through the diffusers or stored behind the dam would be used to flush accumulated sand from the navigation channel.

Fishery Development Plan Element

The fishery development plan element for the Oak Creek watershed is summarized on Map 19 and consists of the following recommendations:

- Removal or modification of five sill and drop structures, two of which are on the main stem of Oak Creek, and three of which are on the North Branch.

- In-stream habitat mitigation measures, including the placement of boulder retards and stone rip-rap, and encouraging the development of stands of emergent vegetation in the streambed.

- Stream bank stabilization measures, including the placement of stone rip-rap and wing deflectors, as well as prescribed plantings.

- An initial fish-stocking program.

- The construction of a handicapped access fishing pier at the mouth of Oak Creek.

In addition, the plan includes a preliminary recommendation for the construction of a "fish migration channel" beginning at a point about 80 feet downstream of Mill Road and extending along the north side of the Oak Creek Parkway lagoon to the first parkway bridge located upstream of the lagoon. As initially conceived, this channel would have a bottom width of five feet, side slopes of one on two, and a depth ranging from 6.5 feet to 15.0 feet. A berm would be constructed along the new channel in order to maintain the existing park lagoon. This new channel would allow for the migration of coldwater fish from Lake Michigan to those reaches of Oak Creek upstream of the Mill Road Dam. The plan recommends that this preliminary recommendation be reevaluated through a more detailed planning effort proposed to be conducted by the Wisconsin Department of Natural Resources in cooperation with Milwaukee County and the City of South Milwaukee. This more detailed planning effort would include additional data collection attendant to subsurface conditions in the vicinity of the proposed channel; the preparation of preliminary engineering plans for the channel; the preparation of recommendations as to limitations on the times during which, and on the locations at which, fishing would be allowed in the watershed; and the preparation of recommendations as to how the various elements of the fishery development plan should be funded. Importantly, this more detailed process would include the holding of additional public informational meetings and a public hearing on the detailed fishery development recommendations for the watershed.

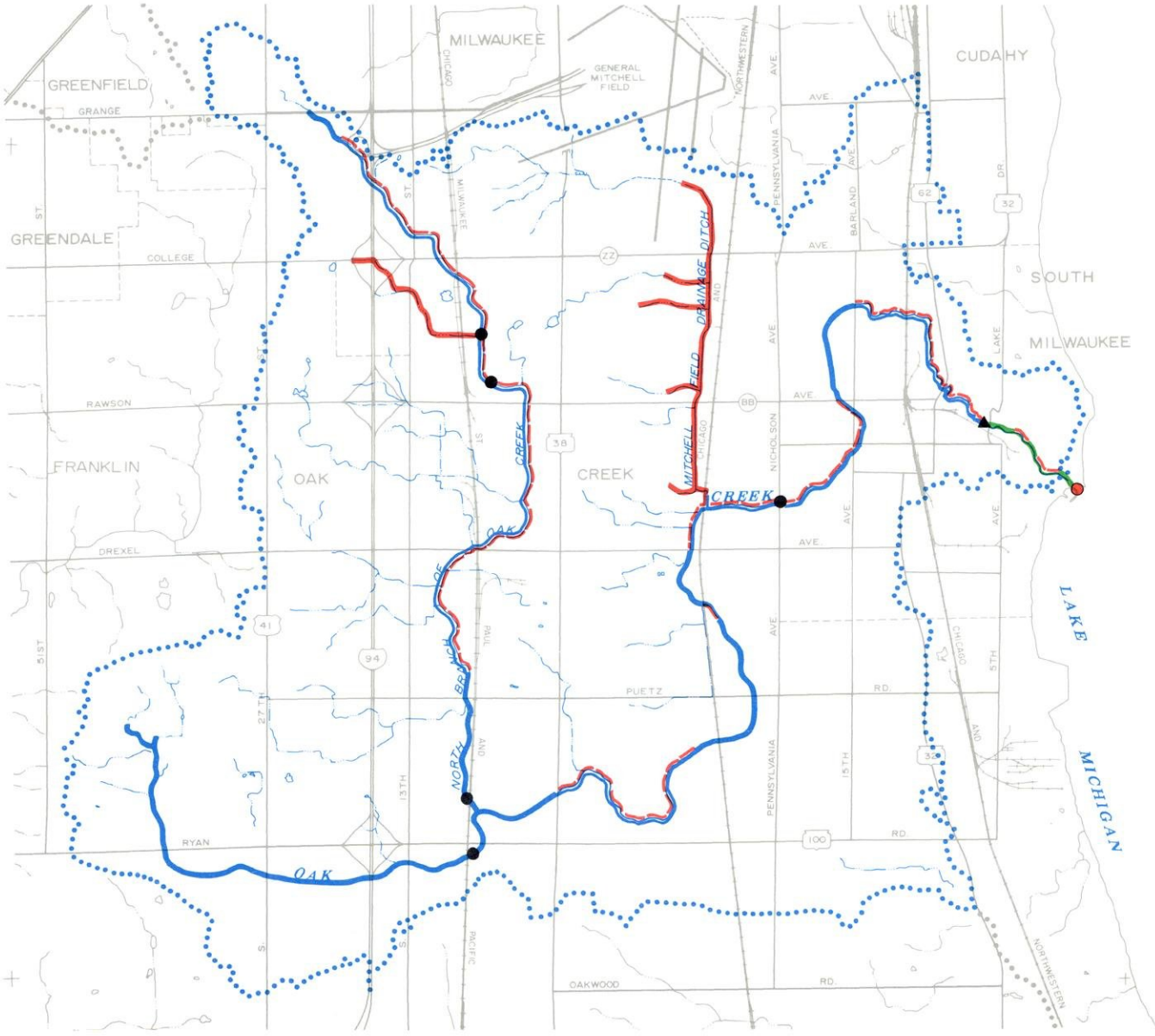
Water Quality Management Plan Element

The water quality management plan element of the Oak Creek watershed plan contains the following recommendations:

- The elimination of the direct or indirect discharge of industrial wastes to Oak Creek and its tributaries while allowing the continued discharge of clear water, such as spent cooling water, to the stormwater drainage system.

Map 19

RECOMMENDED MEASURES TO MAINTAIN A MAXIMUM WARMWATER AND SEASONAL COLDWATER FISHERY IN THE OAK CREEK WATERSHED



- The abatement of pollution from nonpoint sources throughout the Oak Creek watershed through implementation of a combination of the following measures: proper material storage and runoff control on industrial and commercial sites; control of sediment and debris during demolition and construction activities; public education programs to promote proper use of fertilizers and pesticides; litter and pet waste control; the application of soil conservation practices on rural land; improved timing and efficiency of street sweeping, leaf collection, and catch basin cleaning; stream bank erosion control; provision of sanitary sewer service to all developed areas of the watershed; development of accidental hazardous spill prevention and control plans; and the alteration of floor drains and sump pumps in industrial facilities which collect toxic and hazardous substances to eliminate discharges to storm sewers and surface watercourses. State funding for up to 70 percent of the cost of such measures would be available upon designation of the Oak Creek watershed as a priority watershed under the Wisconsin Nonpoint Source Pollution Abatement Program.

- Construction of three sediment retention basins, all in the City of Oak Creek: one on the North Branch of Oak Creek about 1,300 feet upstream of the first S. 6th Street crossing; one on Oak Creek upstream of the confluence with the North Branch of Oak Creek; and one on the Mitchell Field Drainage Ditch upstream of E. Rawson Avenue. These basins would be designed to maintain a permanent pool of water with a mean depth of five feet. The water surface area and volume of each basin would be: eight acres and 40 acre-feet, respectively, for the North Branch of Oak Creek basin; seven acres and 35 acre-feet, respectively, for the Oak Creek basin; and six acres and 30 acre-feet, respectively, for the Mitchell Field Drainage Ditch basin. Construction of these basins would result in water quality objectives being met in the Oak Creek main stem from the mouth upstream to the confluence with the North Branch of Oak Creek, a distance of about 9.8 miles; in the North Branch of Oak Creek from its confluence with Oak Creek upstream to the proposed basin, a distance of about 2.6 miles; and in the Mitchell Field Drainage Ditch from its confluence with Oak Creek upstream to E. Rawson Avenue, a distance of about 0.8 mile. These basins would be designed solely for water quality improvement purposes and would not be expected to have significant flood control benefits. The capital cost of these three basins is estimated to total $530,000, with annual operation and maintenance costs approximating $20,000.

- The undertaking of a cooperative, continuing water quality monitoring program.

Plan Adoption

The Oak Creek watershed plan was adopted by the Commission on September 8, 1986 and certified to the local, state, and federal units and agencies concerned. By the end of 1986, the Oak Creek watershed plan had been formally adopted by the Milwaukee Metropolitan Sewerage District; the City of Franklin; the Wisconsin Department of Transportation; the U. S. Department of Agriculture, Soil Conservation Service; and the U. S. Army Corps of Engineers.

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

During 1986 the Commission began 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 Distrist 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 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 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 1986 the Commission, working under the guidance of a Technical Advisory Committee created for this purpose, completed preparation of the policy plan element. That policy plan is documented in SEWRPC Community Assistance Planning Report No. 130, A Stormwater Drainage and Flood Control Policy Plan for the Milwaukee Metropolitan Sewerage District. The policy plan was adopted unanimously by the Milwaukee Metropolitan Sewerage Commission at a meeting held on June 19, 1986. The policy plan has three important elements: jurisdictional classification, eligible improvements, and priority establishment.

- Jurisdictional Classification

  Prior to agreeing upon a recommendation of those streams and watercourses for which the Milwaukee Metropolitan Sewerage District should assume jurisdiction for the resolution of drainage and flood control problems, the Advisory Committee concluded that it was unreasonable for the District to assume jurisdiction over those reaches of perennial streams having tributary drainage areas lying primarily outside the study area. The Committee noted that the drainage or flood control problems of such reaches should be the responsibility of a state or federal agency having a broader geographic authority in addressing such matters. Similarly, the Advisory Committee deemed it unreasonable for the District to assume jurisdiction over the estuary reaches of the Kinnickinnic, Menomonee, and Milwaukee Rivers because the U. S. Army Corps of Engineers maintains navigational responsibility for the majority of these reaches, and because these reaches are subject to the influence of Lake Michigan water levels.

  The Advisory Committee thus recommended that major stream reaches having 50 percent or more of their tributary drainage area outside the study area be excluded from District jurisdiction. Similarly, the Advisory Committee recommended that the estuary reaches of the Kinnickinnic, Menomonee, and Milwaukee Rivers be excluded from District jurisdiction. The Advisory Committee then recommended that the Milwaukee Metropolitan Sewerage District jurisdiction for perennial streams for drainage and flood control purposes include, with the exception of the above-mentioned overriding considerations, all perennial streams which meet at least one of the following three criteria:

  1. Streams within the District for which the District has completed channel improvements.

2. Streams within the District with significant monetary flood damage risk.

3. Streams within the District having a tributary drainage area in more than one community.

In addition, the Advisory Committee recommended that the Milwaukee Metropolitan Sewerage District jurisdiction for intermittent streams for the resolution of drainage and flood control problems include all intermittent streams which meet any two of the above three criteria.

The application of the foregoing criteria and overriding considerations to the perennial streams within the current limits of the Milwaukee Metropolitan Sewerage District and its ultimate planned service area is shown on Map 20. Within the current limits of the District, the District would assume jurisdictional responsibility for a total of 103.3 miles of perennial streams and 8.3 miles of intermittent streams. Should the District's legal limits ultimately be extended to the entire planning area—that is, the District and the District contract service area—the District would assume jurisdictional responsibility for an additional 35.1 miles of perennial streams.

- Eligible Drainage and Flood Control Improvements

Historically, the Milwaukee Metropolitan Sewerage District has limited its participation in flood control works to channel modification and enclosure, with limited dike and floodwall construction and bridge and culvert alteration or replacement. The District had not constructed storage or diversion facilities or engaged in nonflood-control structures other than the limited publication of flood protection elevations for riverine properties along the estuary of the Milwaukee River. This emphasis on conveyance in past flood control efforts of the District reflects the historic evolution of that flood control program in a period predating the development of more comprehensive approaches to flood damage abatement. The Advisory Committee recommended that the historic practices of the District not be regarded as a precedent, constraining the use of present day state-of-the-art concepts. Rather, the Advisory Committee recommended that the District policy plan consider as eligible all drainage and flood control measures and improvements which an adopted system plan has found to be the most cost-effective and environmentally sound measures for resolving a particular problem along a particular reach of stream over which the District has assumed jurisdiction.

More specifically, to the extent that the District-adopted drainage and flood control system plan has found the measures concerned to be cost-effective, all forms of the following structural measures should be considered eligible for implementation by the District: storage; diversion; containment; channel modification and enclosure, including rights-of-way for such measures; and bridge, culvert, and dam alteration, provided only that the District responsibilities be limited to the construction, maintenance, and operation of centralized on-channel storage facilities and such larger decentralized storage facilities as may have multi-community impacts.

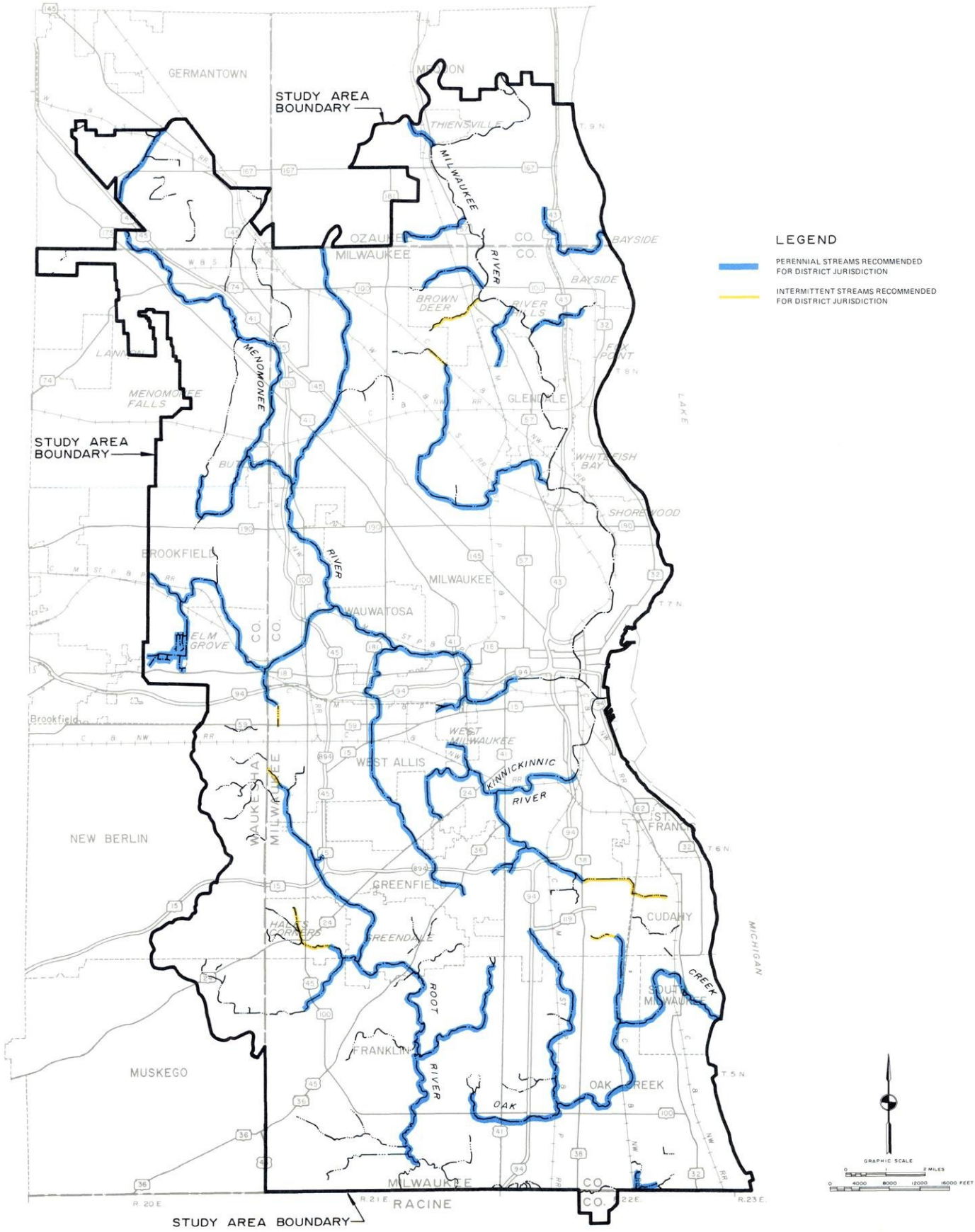
The sole nonstructural measure that should be considered eligible for implementation by the District is structural removal where this measure has been found in the system plan to be more cost-effective and environmentally sound than structural measures. The District would no longer issue flood regulatory elevations along the estuary portions of the Milwaukee, Menomonee, and Kinnickinnic Rivers, this responsibility having been superseded by the state-mandated local floodland zoning.

The Committee recommended that it be the policy of the District that, for those structural and nonstructural drainage and flood control measures for which the District has assumed jurisdiction, the following components be eligible for District funding:

1. Acquisition of right-of-way for necessary constructed storage, diversion, containment, and channel modification and enclosure facilities. If county park and parkway lands, or if municipally owned lands, are required for the location of the

Map 20

PERENNIAL AND SELECTED INTERMITTENT STREAMS WITHIN POSSIBLE FUTURE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT BOUNDARIES RECOMMENDED FOR DISTRICT JURISDICTION: 1985



structural drainage and flood control facilities, such lands should be provided by the County or municipality at no cost to the District.

2. Development of storage, diversion, containment, and channel modification and enclosure facilities, including necessary grading and construction of appurtenances, such as dams and outlet control structures, channel and reservoir linings, stormwater pumping stations, necessary erosion control measures, appropriate environmental restorative measures, and final landscaping, and, subsequent to the construction of such measures, their proper operational maintenance.

3. Acquisition of flood damage-prone sites and removal of buildings and other flood damage-prone structures from flood hazard areas. Upon clearance of the floodlands, it is intended that the cleared land be conveyed to the appropriate county or local municipal unit of government for park and open space use or other flood hazard-compatible uses.

4. Necessary legal, engineering, and administrative services.

It is also recommended that the policy of the District be to pay for the removal of any bridge or culvert if such removal is required for the construction by the District of drainage and flood control works. The cost of the replacement of such bridges or culverts, however, should be borne entirely by the owner of such facilities.

The relocation and reconstruction of public utilities, including sanitary sewers and water supply mains and power and communication cables, should be the responsibility of the local unit of government or public utility corporation owning the utilities concerned. Similarly, the adjustment of local drainage channels, storm sewers, and other stormwater drainage facilities to accommodate needed storage, diversion, containment, or channel modification or enclosure should be the responsibility of the local municipality concerned.

- Priority for Drainage and Flood Control Improvements

  It is recommended that the District establish priorities for the construction of otherwise eligible drainage and flood control improvements within the District on the basis of the benefit-cost ratios of the projects concerned as determined in the system plan. Certain overriding considerations must be met before applying the benefit-cost analysis to the prioritization of the drainage and flood control projects. Each project to be considered must have been shown at the systems level of planning to be technically feasible and economically and environmentally sound. Two additional criteria may increase the order of priority of a given project as determined by the benefit-cost analysis. The first would be evidence of a foreseeable danger to human life. The second would be evidence that the timing of the project must be changed in order to coordinate its construction with the construction of other major public works, such as highways, sanitary sewerage facilities, or water supply facilities.

At year's end, the policy plan set forth in SEWRPC Community Assistance Planning Report No. 130 had been transmitted for consideration and adoption to all of the local governmental units within the existing Milwaukee Metropolitan Sewerage District limits and within the contract service area of the MMSD. By the end of the year, the policy plan had been adopted by the governing bodies of Milwaukee County; the Cities of Franklin, Greenfield, Milwaukee, Wauwatosa, and West Allis; and the Villages of Brown Deer, River Hills, and Shorewood. In addition, at year's end the Commission began preparation of the companion system plan that would provide the second element of the comprehensive stormwater drainage and flood control plan for the District.

Stormwater and Floodland Management Planning

During 1986, 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 areas of concern 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 a major work effort completed during 1986, the Commission assisted the Village of Hales Corners in preparing a comprehensive stormwater management plan. That plan is documented in SEWRPC Community Assistance Planning Report No. 121, A Stormwater Management Plan for the Village of Hales Corners, Milwaukee County, Wisconsin. The plan was developed under the guidance and direction of the Village Board of Public Works. The technical work on the plan was accomplished by the Commission staff in cooperation with the firm of W. G. Nienow Engineering Associates.

The Hales Corners plan recognizes that the basic concepts underlying urban stormwater management are undergoing revision. The older concepts sought to remove excess surface water during and after a rainfall as quickly as possible through the provision of an efficient conveyance system consisting of enclosed conduits and improved open channels. The newer concepts emphasize storage of rainfall, thus reducing both the total volume and the peak rate of runoff, reducing the transport of sediment and other water pollutants to downstream surface waters, and protecting against downstream flooding. The newer concepts are aimed at controlling the quality, as well as quantity, of runoff, and seek to manage stormwater as a resource rather than to treat it as a nuisance. As a part of the planning process, criteria and procedures were developed and documented for use by the Village in estimating stormwater flows and for designing street cross-sections, storm sewer inlets, storm sewers, open drainage channels, storage facilities, pumping facilities, culverts, and water quality management measures.

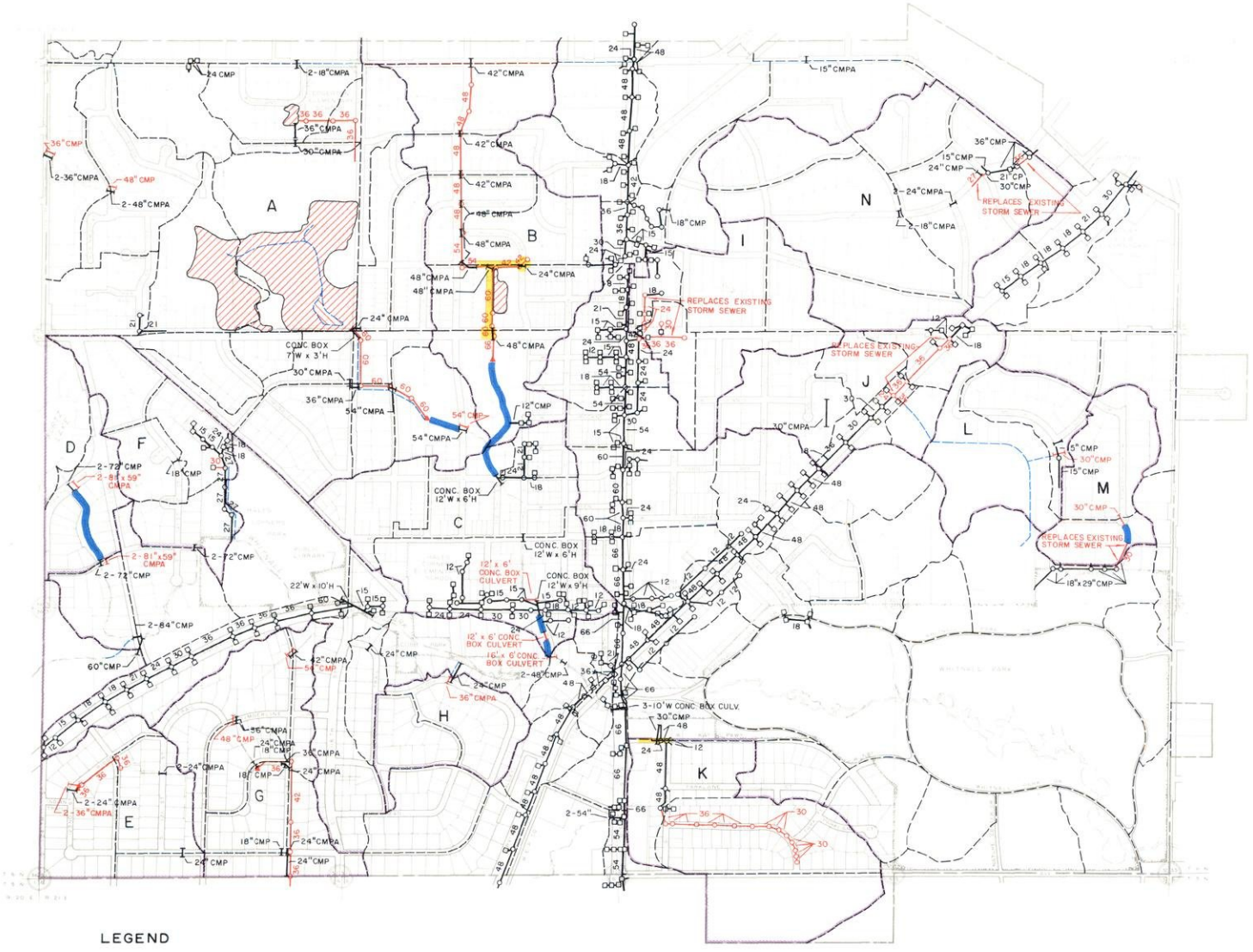
The planning process followed in preparing the stormwater management plan for Hales Corners included an evaluation of the existing stormwater drainage system. The locations, configurations, and hydraulic capacities of the major components of the existing system were determined and compared to estimated design flows. Those system components that were found to be unable to accommodate the runoff expected from the design storms under either existing or future land use conditions, or both, were thus identified, and the deficiencies of these components were then addressed in the design of alternative stormwater management plans. Inadequate components were identified under both existing and design year development conditions.

Three alternative stormwater management system plans were evaluated for the Hales Corners area: 1) a conveyance alternative, 2) a centralized detention alternative, and 3) a decentralized detention alternative. The conveyance alternative proposed new storm sewers and engineered open channels to abate existing stormwater runoff problems and to effectively serve planned new urban development within the Village of Hales Corners and environs. The centralized detention alternative proposed eight relatively large centralized surface detention facilities, and one parking lot storage facility, to store temporarily a portion of the stormwater runoff generated from the planning area for subsequent slow release to the drainage system. These storage facilities were designed to reduce downstream discharges, allowing, in some cases, the use of smaller conveyance facilities. This alternative would also require some new conveyance facilities similar to but smaller than those required under the conveyance alternative. The decentralized detention alternative considered 14 relatively small detention basins, but found that only five of these would be effective in reducing downstream conveyance needs. Accordingly, this alternative proposed five relatively small decentralized detention facilities supplemented by numerous rooftop and parking lot detention facilities. This alternative would also require the reconstruction of some existing storm sewers, the construction of some new storm sewers, and some engineered open channels to serve planned development within the Village. The decentralized detention alternative would also require significant new conveyance facilities similar to those required under the conveyance alternative. Storage would also be provided under all of the alternatives by the preservation of certain floodlands, wetlands, and other natural open areas.

The final recommended stormwater management plan for the Village of Hales Corners represents a judicious combination of the most efficient features of the conveyance, centralized detention, and

Map 21

RECOMMENDED STORMWATER MANAGEMENT PLAN FOR THE VILLAGE OF HALES CORNERS



decentralized detention alternatives. Careful consideration was given in the design of the plan to components required both upstream and downstream of the corporate limits of the Village, and particularly to the impacts on receiving streams, which were quantified and the resulting flood hazard areas mapped. Map 21 graphically summarizes the recommended plan.

The recommended plan combines three detention basins ranging in size from 1.6 to 23.2 acre-feet in storage volume; about 12,400 lineal feet of new or reconstructed storm sewer ranging in size from 24 inches to 66 inches in diameter; and about 4,400 lineal feet of new or regraded open channel to effectively and economically serve existing and planned land use development within the Vil-

lage. The proposed channels would all be turf-lined, would have side slopes of one on four, and would have bottom widths ranging from 1 foot to 12 feet. Culverts appurtenant to these channels would range in size from 30 to 72 inches in diameter. It is important to note that the plan also utilizes and seeks to preserve the storage capacity of the existing floodlands and wetlands in the area.

The components of the major stormwater management system are fully detailed in the plan--with locations, sizes, elevations, and grades given on large-scale system plan maps. A portion of such a plan map is shown in Figure 69. It should be noted that the system plan map, in addition to providing data in the form of sizes, elevations, and grades for all components of the minor subsystem, provides, in the form of proposed street grades and related major channel sizes, elevations, and grades, the information required to assure the integrity of the major subsystem.

The recommended plan may be expected to have water quality benefits as a result of the incorporation into the plan of roadside swales, grass-lined open channels, and detention facilities. These facilities should reduce the amount of biochemical oxygen-demanding organic materials, nutrients, and toxic metals, including lead, in the runoff. Thus, the recommended stormwater management plan is consistent with, and serves to advance implementation of, the adopted regional water quality management plan, thereby helping to achieve adopted water use objectives and supporting water quality standards in the stream system. In addition, implementation of a recommended village erosion control program would further assist in improving surface water quality conditions.

In addition to the Hales Corners planning effort, the Commission undertook numerous stormwater and floodland management planning activities at the request of local units of government during the year. The following are examples of such work:

- Work continued on the preparation of a stormwater management plan for the Crayfish Creek subwatershed. This work is being 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. At year's end, the Commission staff had recommended a final plan and plan implementation measures, and those recommendations were under review by the engineering and planning staff of the City of Oak Creek.

- At the request of Racine County, hydrologic and hydraulic analyses were completed attendant to a development plan for the proposed relocation of the 7 Mile Fair in the Town of Raymond. The analysis resulted in revisions to the development plan in order to ensure that county and state floodplain management regulations would be met.

- At the request of the City of Brookfield, hydraulic analyses were completed to determine the potential impacts on regulatory flood stages of alternative replacement bridge proposals attendant to the W. Hampton Avenue crossing of Butler Ditch. The data developed by the Commission enabled the City of Brookfield to select the most cost-effective design for the new bridge.

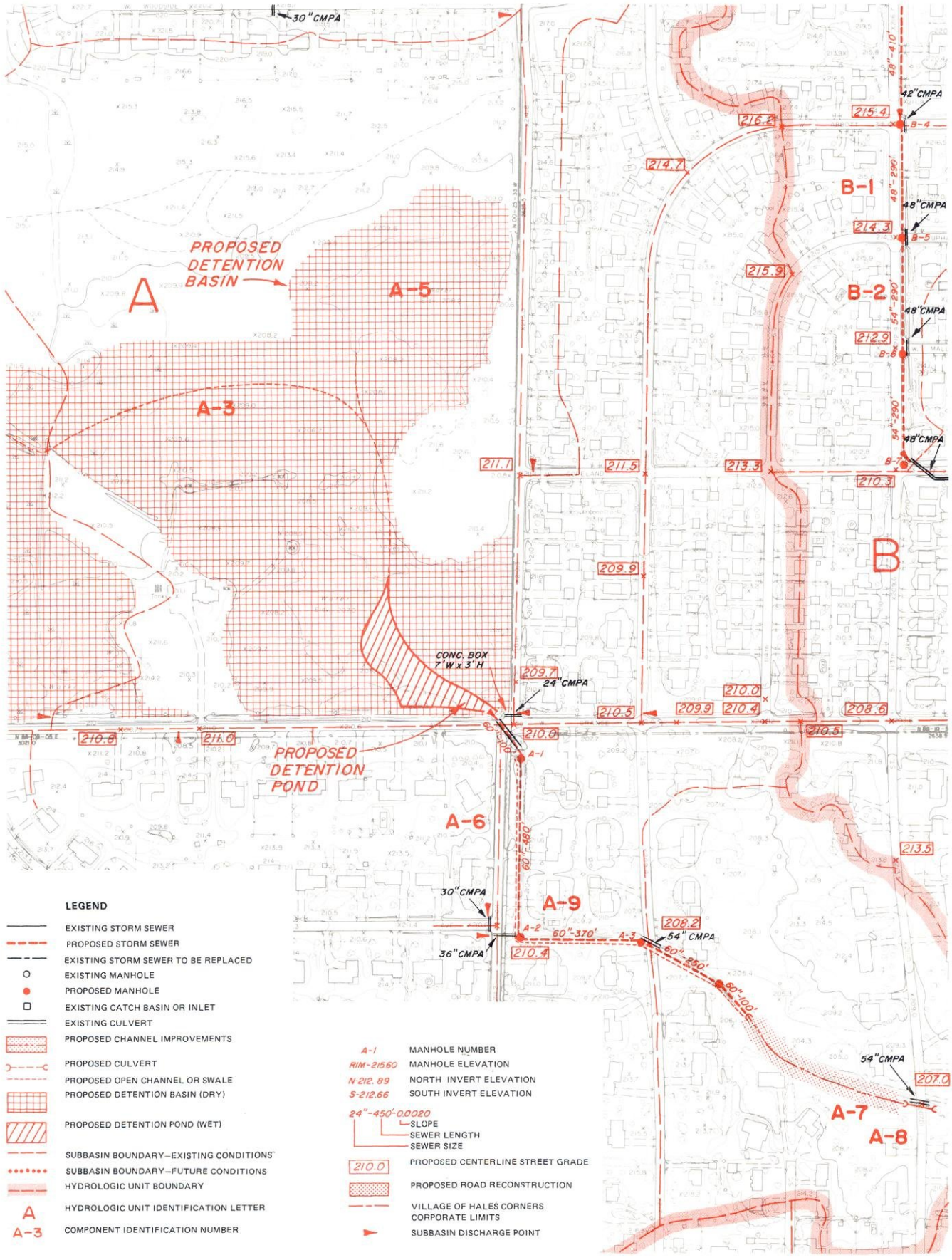
- At the request of the Village of Germantown, hydraulic analyses were conducted to evaluate the impact of a commercial development project along the Menomonee River near the intersection of CTH Q and USH 41/45. The results of the analyses were used by the Village and the land developer to revise initially proposed development plans to ensure that village and state floodplain and shoreland management regulations would be met.

- At the request of the City of Waukesha, hydraulic analyses were conducted attendant to the proposed development of a new church on a site located along Pebble Creek. The data provided by the Commission to the City, including the limits of the floodway and floodplain boundaries and the areal extent of wetlands on the site, were used by the City and the church to complete a site development plan that would meet city and state floodplain and shoreland management standards.

In 1987 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.

Figure 69

SAMPLE PORTION OF LARGE-SCALE STORMWATER MANAGEMENT PLAN MAP FOR THE VILLAGE OF HALES CORNERS



LEGEND

- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING STORM SEWER TO BE REPLACED
- EXISTING MANHOLE
- PROPOSED MANHOLE
- EXISTING CATCH BASIN OR INLET
- EXISTING CULVERT
- PROPOSED CHANNEL IMPROVEMENTS
- PROPOSED CULVERT
- PROPOSED OPEN CHANNEL OR SWALE
- PROPOSED DETENTION BASIN (DRY)
- PROPOSED DETENTION POND (WET)
- SUBBASIN BOUNDARY–EXISTING CONDITIONS
- SUBBASIN BOUNDARY–FUTURE CONDITIONS
- HYDROLOGIC UNIT BOUNDARY
- A — HYDROLOGIC UNIT IDENTIFICATION LETTER
- A-3 — COMPONENT IDENTIFICATION NUMBER

- A-1 — MANHOLE NUMBER
- RIM-215.60 — MANHOLE ELEVATION
- N-212.89 — NORTH INVERT ELEVATION
- S-212.66 — SOUTH INVERT ELEVATION
- 24"-450'-0.0020 — SLOPE, SEWER LENGTH, SEWER SIZE
- 210.0 — PROPOSED CENTERLINE STREET GRADE
- PROPOSED ROAD RECONSTRUCTION
- VILLAGE OF HALES CORNERS CORPORATE LIMITS
- SUBBASIN DISCHARGE POINT

Floodplain Data Availability

The status of existing flood hazard data in the Region is shown on Map 22. 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 channels, 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 delineation of floodlands for about another 25 miles of stream channel. Large-scale flood hazard maps prepared to Commission specifications are available for the riverine areas along about 361 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 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 1986 is shown on Map 23. During 1986, studies were underway only for the City of New Berlin and the Village of Dousman. In addition, the federal government had contracted for updated studies for the Village of Pewaukee 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 23, as of 1986 there are a total of 25 cities or villages in the Region for which FEMA has not conducted a flood insurance rate study. In nine 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 exists and 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.

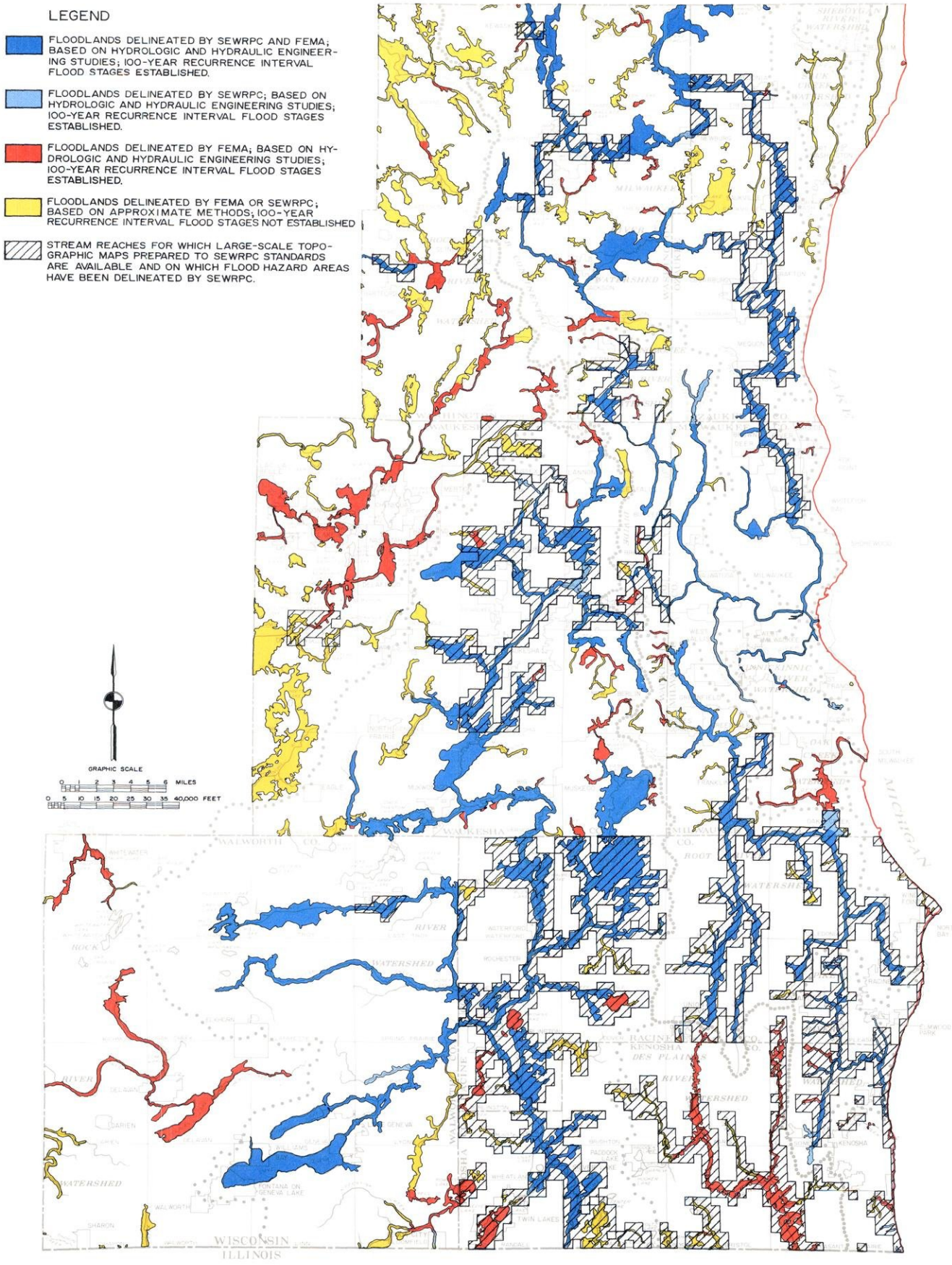
Besides providing available data from the Commission files to the contractors conducting such studies for FEMA, the Commission helps to delineate regulatory floodways and attends meetings with local officials and citizens to discuss the results of flood insurance rate studies. Under its community assistance 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

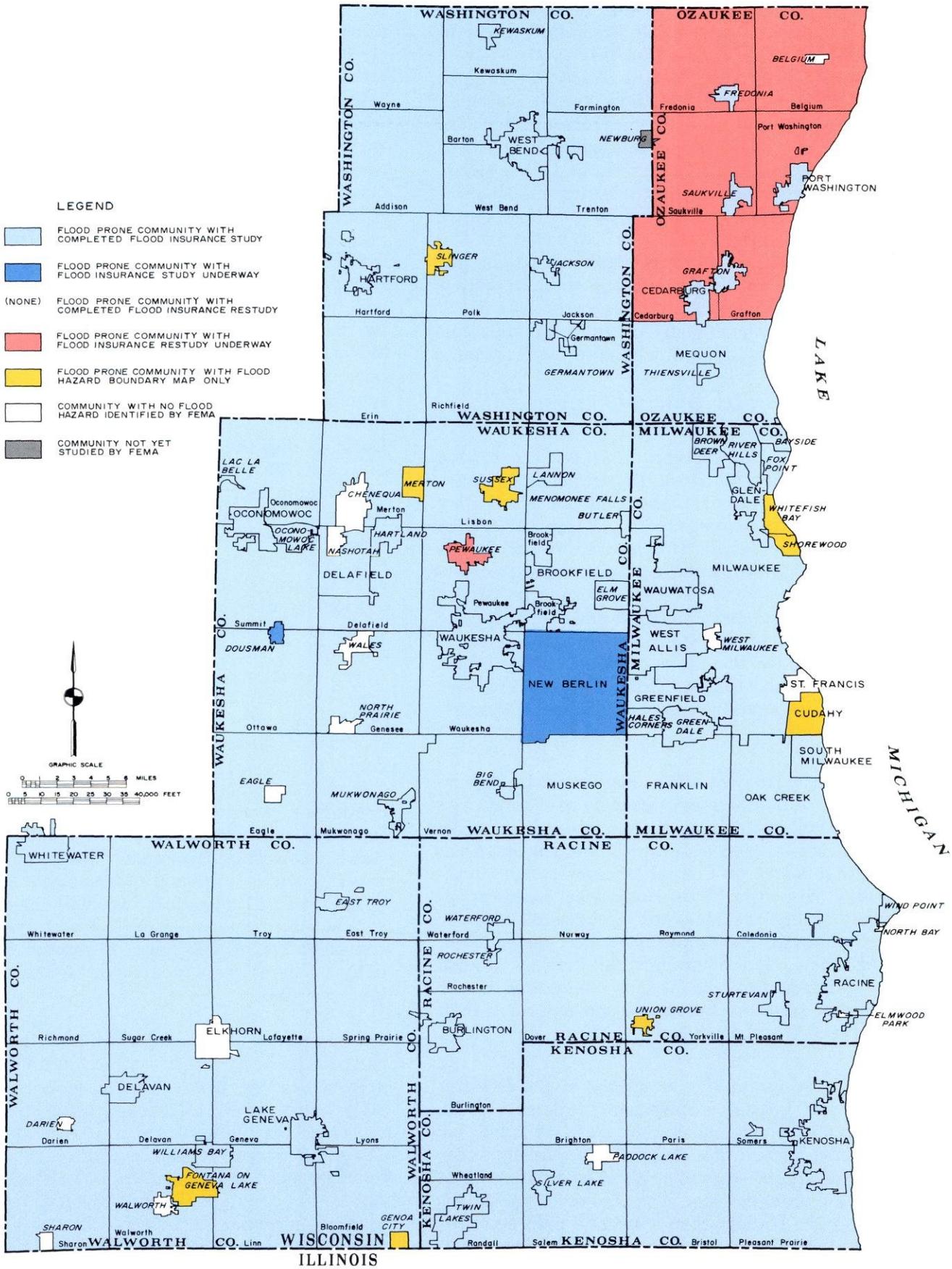
Map 22

DELINEATION OF FLOODLANDS: 1986



Map 23

STATUS OF FLOOD INSURANCE RATE STUDIES: 1986



action, a more comprehensive streamflow gaging program (see Map 24). In 1986, there were a total of 18 continuous recording streamflow gages in operation in the Region. Of that total, 15 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, the Village of Slinger, 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 1986, the Division 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 interest groups. The primary function of this Committee is the review of state coastal studies and reports as they are proposed and produced.

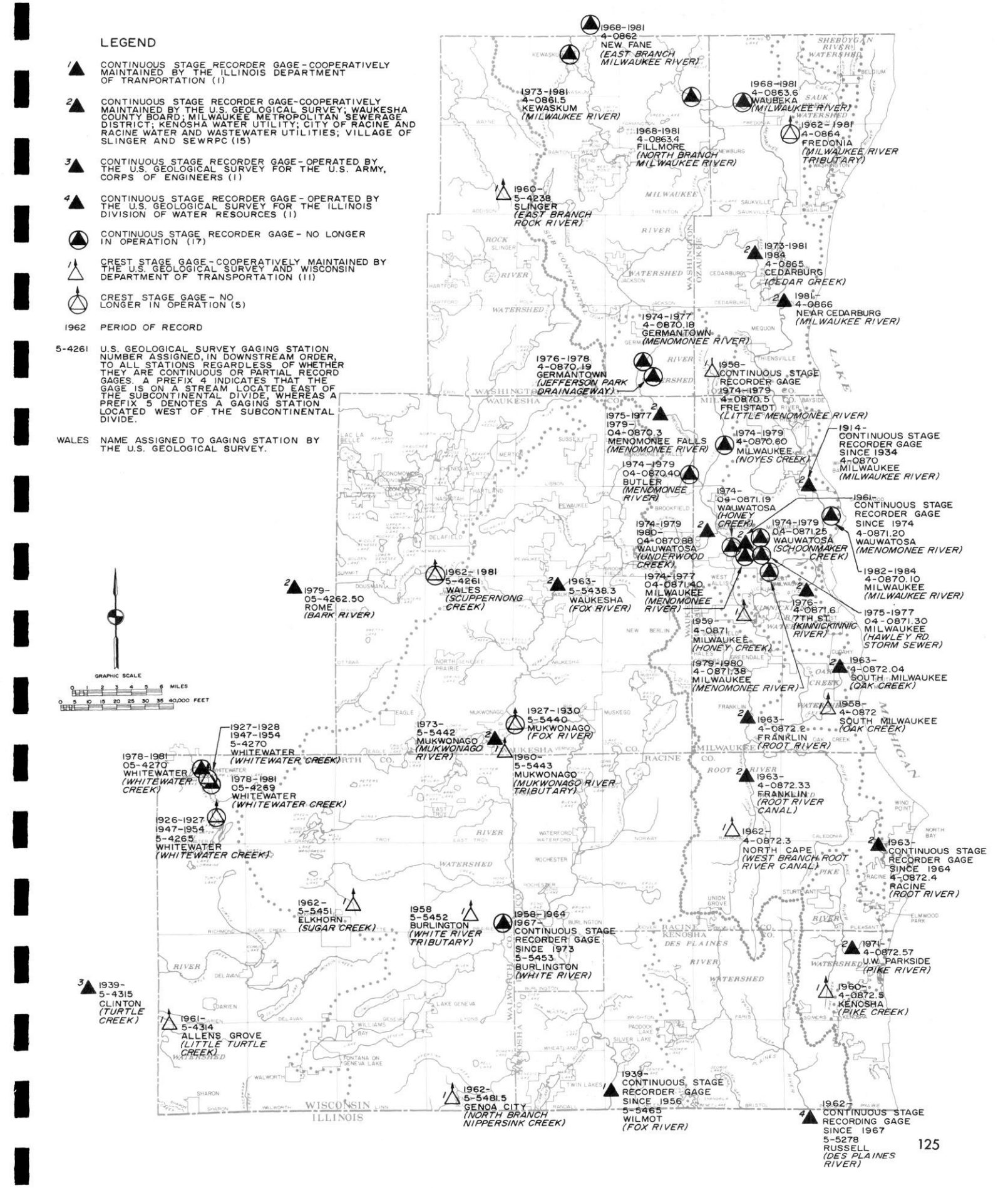
One of the continuing functions of the Division under the coastal management program is the designation of special coastal areas. In 1986, no additional areas in the Region were formally designated as special coastal areas. The existing Lake Michigan shoreline special coastal areas are shown on Map 25. 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.

As part of the coastal management efforts in the Region, the Commission staff assists local units of government along the Lake Michigan shoreline in developing and submitting coastal management projects for funding under the coastal management program. Two projects were funded from southeastern Wisconsin in 1986: the Milwaukee County Lake Michigan/Milwaukee Harbor shoreline erosion and high lake level management study submitted by the Commission on behalf of the City of Milwaukee and Milwaukee County, and the small boat harbor floating dock construction grant submitted by Racine County.

During 1986, the Commission undertook a study of Lake Michigan shoreline erosion and bluff recession in northern Milwaukee County at the request of Milwaukee County, the City of Milwaukee, and the Villages of Fox Point, Shorewood, and Whitefish Bay. The study is intended to address both bluff slope recession and shoreline erosion by wave and ice action along a seven-mile reach of the Lake Michigan shoreline extending from the City of Milwaukee Linnwood Avenue Water Treatment Plant northward to Doctors Park in the Village of Fox Point. In 1986 the preparation of one inch equals 100 feet scale topographic maps and oblique color aerial photographs of the study area shoreline was completed. The staff and geotechnical engineering consultants conducted comprehensive field surveys of the shoreline, evaluated groundwater conditions, measured historical bluff recession rates, and surveyed existing shore protection structures. Nine soil borings and 11 electrical resistivity studies were conducted to help identify soil and groundwater conditions in critical areas. Computer slope stability analyses were conducted for each of 46 bluff profiles.

The northern Milwaukee County shoreline is characterized by high, often receding bluffs, narrow beaches, and extensive shoreline erosion. Most bluffs are 80 to 120 feet high, and the land on top of the bluffs is primarily in residential use. The bluff recession rate averages less than 0.5 foot per year, but ranges up to 1.6 feet per year. About 40 percent of the shoreline reach was found to have marginal or unstable bluff slopes, with about 20 percent consisting of a relatively stable low terrace. About 80 percent of the shoreline was

LOCATION OF U. S. GEOLOGICAL SURVEY STREAM GAGING STATIONS



found to exhibit bluff toe or shoreline erosion in 1986. About 76 percent of the existing 80 shore protection structures surveyed were in need of repair. A comprehensive plan to both stabilize the bluff slopes and protect the shoreline from wave and ice erosion is scheduled to be completed in 1987.

SOLID WASTE MANAGEMENT

During 1986, the Commission continued to assist counties in the Region in the preparation and implementation of locally developed, county-oriented, solid waste management plans. These activities included the following:

- The continuation of work at the request of Milwaukee County on a comprehensive solid waste management plan for the County. This planning effort is being conducted under the guidance of a technical coordinating and advisory committee comprised of elected and appointed officials and technicians from throughout Milwaukee County. At year's end, all inventory work had been completed and reviewed by the Technical Coordinating and Advisory Committee. A draft of the report chapters describing and evaluating alternative solid waste management plans and implementation measures was completed, with Technical Coordinating and Advisory Committee review anticipated in the first quarter of 1987.

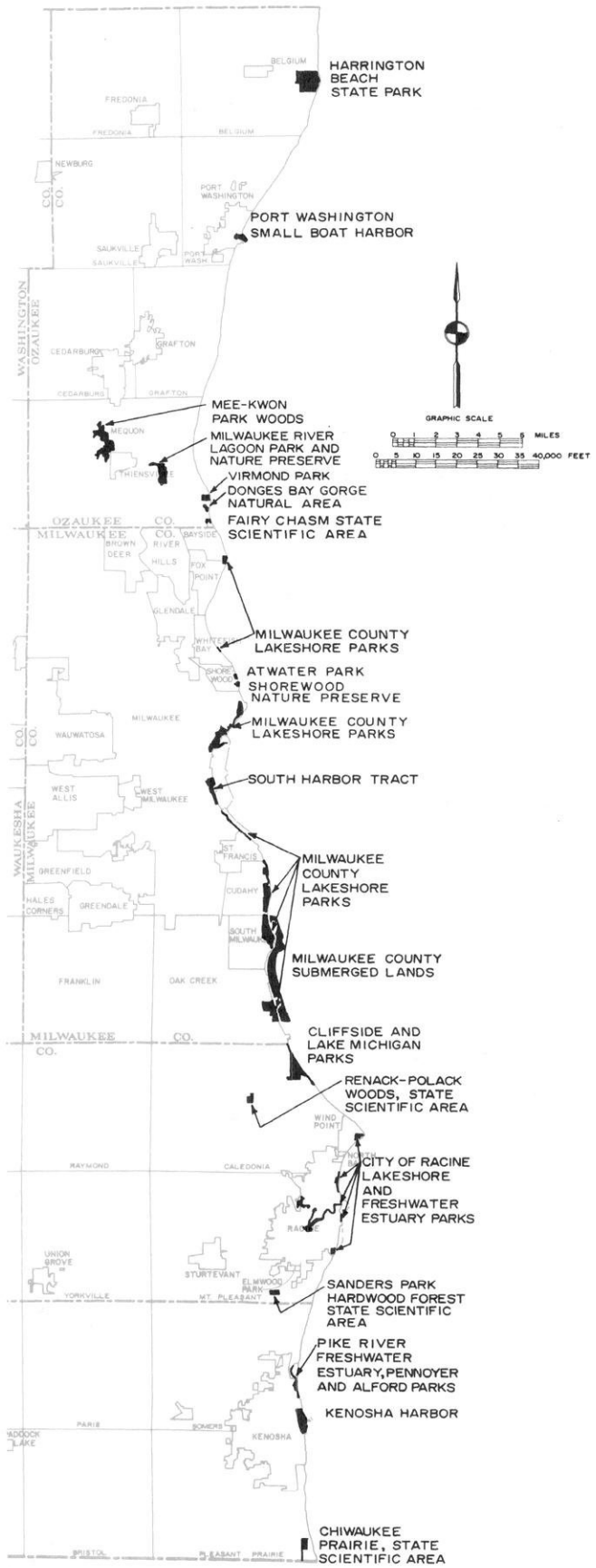
- The continuation of work at the request of Kenosha County on a comprehensive solid waste management plan for the County. This planning effort is being conducted under the guidance of a technical coordinating and advisory committee comprised of elected and appointed officials from throughout Kenosha County. At year's end, all inventory work had been completed, documented, and reviewed by the Technical Advisory Committee. Work had been initiated on alternative solid waste management plans and implementation actions.

PUBLIC PARTICIPATION EFFORTS

During 1986, an Extension Agent continued to work with the Commission under an interagency agreement with the Cooperative Extension Service-University of Wisconsin-Extension in order to assist the Commission staff in public participation efforts. Work conducted in this area included formulating and conducting educational and informational programs in the areas of water quality management, land use, and natural resource

Map 25

DESIGNATED SPECIAL COASTAL AREAS IN SOUTHEASTERN WISCONSIN: 1986



preservation and utilization. The following is a summary of some of the public educational and informational work undertaken during the year:

- At the request of the District of Powers Lake, an introductory educational publication entitled, "Charting a Course for Powers Lake" was prepared to explain the District's formation, the District's objectives, and specific activities that should serve to improve water quality. Provided along with this publication was an insert sheet listing land management actions that could be taken to reduce nonpoint source pollutants. Two meetings were conducted with Lake District commissioners to obtain local input for the review process regarding the above.

- The Commission staff attended two meetings of the Oconomowoc River Priority Watershed Plan Development Advisory Committee. Prior to the public hearing held to receive comments on the completed draft plan, Commission staff assisted in the conduct of a public informational meeting in the Town of Concord to explain the plan preparation process and plan recommendations to attendees from Jefferson and Waukesha Counties. A meeting was also conducted with staff from the Wisconsin Department of Natural Resources to coordinate the content of the town meeting. An issue of the Oconomowoc River Watershed Newsletter was prepared for distribution to key audiences in the study area. Recipients of this publication include some 3,000 elected and agency officials, rural landowners, and lake district residents.

- Educational assistance was provided to the agencies and units of government participating in the Wisconsin Department of Natural Resources Milwaukee River Priority Watershed Program. Leadership was provided for an effort to investigate the feasibility of, and develop an appropriate framework for, a survey of urban residents within the Milwaukee River basin. Five subgroup and interagency staff coordinating meetings were conducted.

  - Leadership was provided for an ad hoc group of the Milwaukee River Priority Watershed Information and Education Committee to address long-range educational needs in the watershed program. A total of four meetings were held, leading to the completion of a 1986-88 educational work plan and the identification of basinwide educational goals and objectives.

  - A bus tour presentation was given to about 45 local elected officials, agency representatives, and the media prior to an educational canoe trip down a portion of the Milwaukee River. Participants were advised of the scope of the nonpoint source pollution problems they were about to see first hand. Interviews were subsequently conducted with two of the three major commercial network television stations serving the greater Milwaukee metropolitan area, with coverage aired twice on each station.

  - The Commission staff attended a meeting of the advisory committee of the National Nonpoint Pollution Institute which is exploring research needs related to the control of nonpoint sources of pollution. The relationship to the Milwaukee River Priority Watershed was discussed.

- An educational publication entitled "Improving Animal Waste Management and Water Quality in Waukesha County" was prepared by the Commission staff and distributed to landowners and local officials for the purpose of implementing an animal waste management plan for the County.

- A fact sheet/brochure entitled "Preventing Soil Erosion and Protecting Water Quality in Waukesha County" was completed to satisfy an educational need and to fulfill a request by the County. An interagency review process was utilized to promote coordination and cooperation for this effort and to ensure the most useful and technically sound publication possible. A total of 2,000 copies were produced to meet the county needs. Subsequently, the Wisconsin Department of Agriculture, Trade and Consumer Protection requested that the information sheet be made available for distribution to its statewide program staff working at the county level.

- An educational publication entitled "Geneva Lake: A Commitment to the Future" was published. This effort involved extensive review coordination with the Geneva Lake Environmental Agency, and an agreement

was reached whereby that agency would assume responsibility for distributing 3,900 copies of the publication directly to landowners and decision-makers.

- Representation was provided on the inter-organizational steering committee planning for the Fourth Annual Spring Sludge Symposium to be held in the Greater Milwaukee metropolitan area. Three steering committee meetings and an ad hoc brochure development session were attended. Additional contributions regarding the 1986 Symposium included the provision of mailing lists of local elected and appointed officials, and the development of an evaluation form to provide a quantitative measure of the Symposium's success.

ECONOMIC DEVELOPMENT ASSISTANCE DIVISION

DIVISION FUNCTIONS

The Economic Development Assistance Division has primary responsibility for assisting county and local units of government in the Region in the pursuit of economic development activities, thereby promoting coordination of county and local plans that affect or are affected by these activities. The Division provides four basic types of services: economic development program planning; data provision; preparation of grant applications and administration of grant awards; and project planning services.

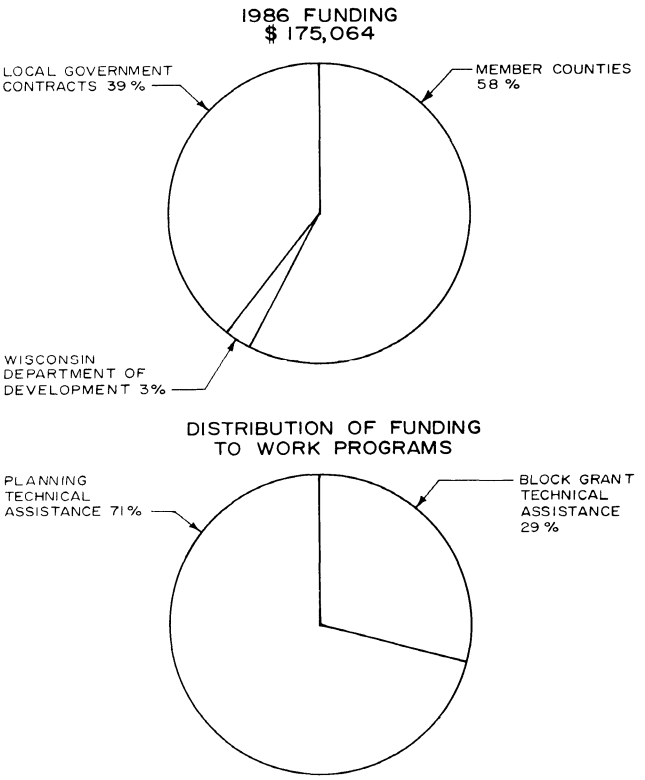
LOCAL ECONOMIC DEVELOPMENT PROGRAM PLANNING

Increasingly, communities within the Southeastern Wisconsin Region have identified a need for ongoing local economic development program activities. This need has often been evidenced by a decline in the strength and vitality of the local economy as marked by: 1) the dramatic increases in unemployment rates that began during the severe national economic recession that took place from 1979 to 1983; 2) the potential long-term increases in unemployment and decreases in personal income attendant to the decline in the importance of durable goods manufacturing within the national, state, and regional economies; and 3) decisions by local businesses and industries to relocate to, or expand in, areas outside the community.

There has also been an increasing interest in local economic development programs because of the increasing 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. As the cost of these improvements have escalated, however, 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 growth compatible with overall community development goals and objectives, and promoting compatible economic 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 70

ECONOMIC DEVELOPMENT ASSISTANCE DIVISION



During 1986, the Commission engaged in the following overall economic development efforts:

- Preparation of local economic development program plans for the City of Burlington in Racine County, the City of South Milwaukee in Milwaukee County, and the City of Oconomowoc in Waukesha County. At the end of 1986, the City of Oconomowoc program plan was being considered for adoption by the Common Council. The City of South Milwaukee and City of Burlington program plans were expected to be completed in 1987. The local units of government concerned requested that the Commission assist them in the conduct of the local economic development programs, identifying appropriate public and private activities for improving the local economies.

- Preparation of a countywide economic development program plan for Kenosha County, and assistance in the preparation of such a program plan for Walworth County. In addition, the Commission staff assisted in the preparation of an annual report required to update the Racine County program plan. These program plans, which during 1986 were completed and adopted by the respective County Boards, 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 time is directed to answering requests for economic development data and information. 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 1986, the Division prepared letter responses to 20 requests for economic development data and related information from the Commission data files. In addition, approximately 150 requests were handled 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 1986:

- Provision of demographic and economic data to the City of Waukesha Community Development Block Grant program regarding the availability, cost, and condition of housing for low- and moderate-income persons in Waukesha County. The data were used in making determinations regarding the need for new housing programs for these persons.

- Provision of information to Hintz & Fitzgerald, Inc., relative to the total size and the total number of acres available for sale in the industrial parks in the Region. The information was used in an economic development promotional brochure that was part of a Wisconsin marketing effort in Japan.

- Provision of employer information to: the Office of Kenosha Area Economic Development; United Way in Waukesha County, Inc.; Gateway Technical Institute in Kenosha County; and the City of Milwaukee. The information was used in identifying the number and industry type of employers in the service areas of these organizations.

- Provision of information regarding state and federal economic development assistance programs to the City of Whitewater Community Development Authority. The information was used in helping that Authority attract employers to the City and to retain employers.

- Provision of demographic and economic data to Holiday Inn-Milwaukee Northwest. The data were used in analyzing the market for new hotel development in Waukesha County.

- Distribution of free loan copies of videotapes to 12 development organizations of a previously co-sponsored workshop by the Commission and the Wisconsin Council of Regional Organizations on industrial park development.

- Provision of information regarding the location, size, and ownership of industrial buildings in the Region to the City of Delavan. The information was used in evaluating the need to purchase a large industrial building in the City.

PREPARATION AND ADMINISTRATION OF ECONOMIC DEVELOPMENT GRANT APPLICATIONS

The Commission staff provides assistance to local units of government in the preparation and administration 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 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 to provide for the expansion of employment opportunities and to increase the community's tax base.

The following are representative grant application and administration services performed during 1986:

- The administration at the request of the City of Whitewater of two urban development action grants totaling $859,000 awarded to the City by the U. S. Department of Housing and Urban Development in 1985. The City is using the grant to make business development loans to the Moksnes Manufacturing Company and the Hawthorn Mellody Company. Those two local firms will undertake expansion programs that are intended to create about 40 new jobs in the City.

- The provision of assistance to the Kenosha County Housing Authority in the administration of a $648,000 housing rehabilitation grant awarded to the County in 1985 by the Wisconsin Department of Development. The grant is intended to be used to rehabilitate 98 low- and moderate-income housing units. The target areas for the rehabilitation program are the Town of Salem and the Villages of Paddock Lake, Silver Lake, and Twin Lakes.

- The administration of the economic development portion of a Wisconsin Development Fund grant award to the City of Whitewater in 1985. The City, which had originally requested the Commission to prepare the grant application for the program, also asked the Commission to help administer the program. The program involves the making of low-interest business development loans. The funds available total about $720,000 and are expected to create about 100 new jobs in the Whitewater community.

- The preparation at the request of the City of West Bend of a Wisconsin Development Fund grant application for $270,300. The application, which was approved, was used to provide a business loan to Elite Plastic Services, Inc., that is expected to create about 40 new jobs, and to result in the investment of over $700,000 of private funds in plant improvements. Upon receipt of the grant award, the City requested that the Commission assist the City in administering the business development loan.

- The preparation at the request of Kenosha County of a Wisconsin Development Fund grant application for $400,000. The application, which was approved, was used to provide a business loan to I.T.O. Industries, Inc., in the Town of Bristol that is expected to retain about 60 existing jobs and to result in the investment of about $1.1 million of private funds in plant improvements. Upon receipt of the grant award, the County requested the Commission to assist the County in administering the business development loan.

- The provision of assistance to 14 communities throughout the Region that were considering the preparation of grant applications under the Wisconsin Community Development Block Grant program. For example, during 1986 the Commission, at the request of the Village of Belgium, consulted with two local firms and village officials to ascertain the potential for compiling a successful 1986 Wisconsin Development Fund grant application.

- The preparation at the request of Kenosha County of two grant pre-applications to the U. S. Department of Commerce, Economic Development Administration, for the establishment of a low-interest business loan fund and the development of a small business incubator building. The applications were to be considered by the federal agency in 1987.

ECONOMIC DEVELOPMENT PROJECT PLANNING SERVICES

Economic development project planning services involve the conduct of detailed economic develop-

ment planning studies for local units of government, development corporations, and other organizations interested in economic development and seeking Commission assistance. During 1986, the following representative project planning services were conducted:

- The continued preparation of economic development profiles for communities in southeastern Wisconsin. These 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 are prepared in a succinct, easy-to-read format and 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 graphs that serve to highlight detailed information, and with a map of the community area. During 1986, the Commission completed such community profiles for two additional communities: South Milwaukee and West Milwaukee. To date, the Commission has prepared a total of 62 such profiles, including a profile for each county in the Region and a regional profile. The communities for which profiles have been prepared are listed in Appendix D.

- At the request of the Office of Kenosha Area Economic Development, the Commission prepared an industrial park brochure for the City of Kenosha Industrial Park. The brochure describes the specific characteristics of the park and is intended to be used in the marketing of the park to prospective tenants.

- At the request of the City of Oconomowoc, the Commission conducted a telephone consumer survey of residents of the City. The purpose of the survey was to collect data on consumer needs and buying habits that could be used by businesses in expanding local markets, as well as information on the type of new retail stores that could be expected to be successful in the City.

- At the request of the Village of Saukville, the Commission prepared a list of "targeted" industries for use in the Village's economic development efforts. The industries indicated on the listing are being contacted by the Village in an attempt to induce them to relocate to the Village.

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 1986, educational efforts included the following:

- Presentations on the work of the Commission generally and on the details of specific work programs to local governmental, civic, and professional groups, such as the Village of Paddock Lake Plan Commission; the Town of Erin Plan Commission; classes at the University of Wisconsin-Milwaukee, Waukesha County Technical Institute, and Milwaukee Riverside High School; the Waukesha County Realtors Association; the Society of Real Estate Appraisers of Kenosha County; the Milwaukee County Pastoral Conference; and the Wauwatosa Rotary Club. An office tour and briefing was also presented to the City Manager of the City of Parkville, British Columbia, Canada.

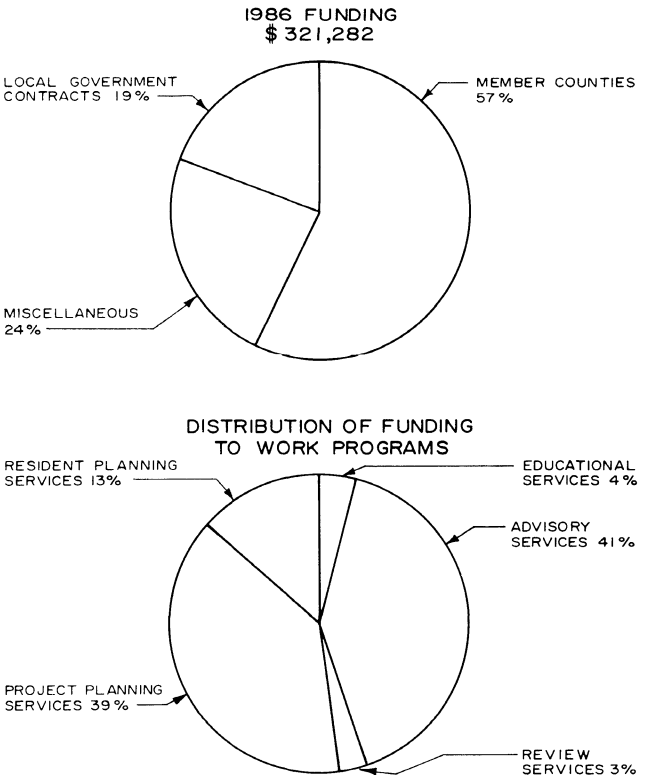
- Conduct of wetland presentations and tours for the City of West Bend Parks and Recreation Department, the Chiwaukee Prairie Rescue Coalition, the Kettle Moraine Audubon Society, the Milwaukee Audubon Society, the Waukesha Environmental Action League, and classes at Waukesha North High School.

- Conduct of presentations on automated land records management for the Cities of Janesville and Waukesha; Lake County, Illinois; the Wisconsin Department of Administration; and the University of Wisconsin-Madison Institute for Environmental Studies.

- Presentation of papers on automated land records management and computer mapping at the Urban and Regional Information Systems (URISA) annual conference, and at the Federation Internationale des Geometres annual conference.

Figure 71

COMMUNITY ASSISTANCE PLANNING DIVISION



- Preparation of six Commission newsletters discussing Commission planning programs and related activities. The newsletters are distributed to about 1,600 public officials and interested citizens.

- Preparation and distribution to newspapers and to radio and television stations of three news releases during the year, concerning the creation of a task force to study the Hoan Bridge south arterial; the conduct of public hearings on the Oak Creek watershed plan; and the completion of the second generation regional airport systems plan.

- Preparation of the Commission's 1985 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 1986 include:

- Provision of data and advice concerning the location of floodway and floodplain boundaries to the Cities of Mequon, West Bend, and Waukesha; the Villages of Menomonee Falls, Pewaukee, and Saukville; the Towns of Barton and Pleasant Prairie; and Milwaukee and Washington Counties.

- Conduct of hydraulic and hydrologic analyses of floodland-related development proposals for the Cities of Brookfield, Greenfield, Mequon, and Oak Creek; the Villages of Saukville, Sussex, and Union Grove; and the Towns of Fredonia, Mt. Pleasant, Pleasant Prairie, and Trenton.

- Conduct of vegetative inventories on three properties in the Towns of Mt. Pleasant and Salem.

- Participation on an expert panel to determine land use impacts associated with the construction of the West Bend Freeway (STH 45) for the Wisconsin Department of Transportation.

- Preparation of 1 inch equals 400 feet scale wetland jurisdictional maps for the Cities of Brookfield and Muskego, and for the Village of Silver Lake, to determine areas affected by Chapter NR 117 of the Wisconsin Administrative Code.

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 1986 in the first review category:

- Review of and comment on 14 preliminary land subdivision plats at the request of the Cities of Franklin, Hartford, Muskego, and West Bend; the Villages of Hartland and Sussex; and Walworth County.

- Review of and comment on seven certified survey maps at the request of the City of Burlington and the Village of Sussex.

- Review of and comment on six petitions to rezone lands and nine proposed zoning text amendments at the request of the Cities of Burlington, Cedarburg, and Franklin; the Village of Sussex; and the Town of Trenton.

- Review of and comment on the issuance of conditional use permits at the request of the Towns of Brookfield and Raymond, and Kenosha County.

- Review of and comment on two Community Development Block Grant applications in the City of Kenosha.

- Review of and comment on four specific requests pertaining to the possible sale of excess parklands located in the Little Menomonee River Parkway, the Root River Parkway, and the Underwood Creek Parkway for Milwaukee County.

Table 25

STATE AND FEDERAL GRANT REVIEWS: 1986

Review Category	Number of Reviews	Aggregate Amount of Federal and/or State Grant, Loan, or Mortgage Insurance Requests
Air Quality	1	$ 4,565,187
Community Action	33	138,358,435
Community Development	19	14,559,462
Community Facilities	5	2,058,115
Conservation	39	40,466,013
Historic Programs	1	601,135
Housing	7	13,073,787
Law Enforcement	2	83,000
Park and Open Space	5	522,410
Sanitary Sewerage	7	1,489,600
Solid Waste	4	946,070
Transportation	55	61,437,607
Water Supply	1	1,328,910
Total	179	$279,489,731

Table 26

ENVIRONMENTAL IMPACT STATEMENT REVIEWS: 1986

Document Reviewed	Requesting Agency
Draft Environmental Impact Statement for Anderson Library Computer Center Addition	University of Wisconsin-Whitewater
Draft Environmental Impact Statement for University Center Addition	University of Wisconsin-Whitewater
Draft Environmental Impact Statement for the 1987-89 Lapham Hall Science Center Addition	The University of Wisconsin System

Commission activities regarding the review of federal and state grant applications are summarized in Table 25. In total, review comments were provided for 179 applications for federal and state grants, loans, and mortgage insurance guarantees, requesting in the aggregate over $279 million in federal and state financial assistance. Of the 179 requests, 56 were found to be in conformance with and serve to implement the adopted regional plan elements, and 123 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 26. 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 1986 the Division conducted a total of 300 flood hazard reviews, distributed by county as shown in Table 27.

Table 27

FLOOD HAZARD REVIEWS: 1986

County	Number of Reviews
Kenosha	2
Milwaukee	87
Ozaukee	27
Racine	19
Walworth	8
Washington	36
Waukesha	121
Total	300

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 1986, the following representative project planning efforts were conducted:

- Completion of a Memorandum Report setting forth a capital improvements program for the Village of East Troy. The program presents a schedule of major improvement projects in the Village for the years 1987 through 1991. The program is intended to assist village officials in better managing current and future outlays and in the preparation of annual village budgets.

- Completion of A Thematic History and an Intensive Survey of Historical Resources for the Village of Hartland. This study, prepared with the assistance of Professional Historians John N. Vogel and Elizabeth L. Miller, is intended to provide information on the Village's historical and architectural resources which may be useful in the formulation of a local preservation plan, and to partially satisfy criteria for the listing of properties on the National Register of Historic Places.

- Completion of 102 Zoning Maps for Washington County prepared on 1 inch equals 400 feet scale Commission aerial photographs. The maps depict shoreland jurisdictional limits, floodplain boundary delineations, and shoreland-wetland delineations.

- Completion of 75 Zoning Maps for Ozaukee County on 1 inch equals 400 feet scale Commission aerial photographs.

- Completion of zoning ordinances and attendant zoning district maps for the Villages of Thiensville and Williams Bay, and the Towns of Trenton and West Bend. The Trenton Zoning Ordinance was prepared in part to implement the Washington County farmland preservation plan, and was subsequently certified by the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP)

- Completion of a 1 inch equals 1,000 feet scale zoning district map for the Town of Hartford.

- Completion of land subdivision control ordinances for the Villages of Saukville and Williams Bay. These ordinances regulate the creation of plats and certified survey maps within the subject villages and their extraterritorial plat approval jurisdiction. Special attention is given to land divisions within the approved sanitary sewer service areas.

- Preparation of a number of ad hoc planning studies to address special planning problems. These studies included the review and analysis of 11 industrial sites in the City of Oconomowoc, and the layout of an industrial park and the design of a landscaped entrance to the industrial park in the City of Delavan. The site design plan prepared for the City of Delavan is shown in Map 26.

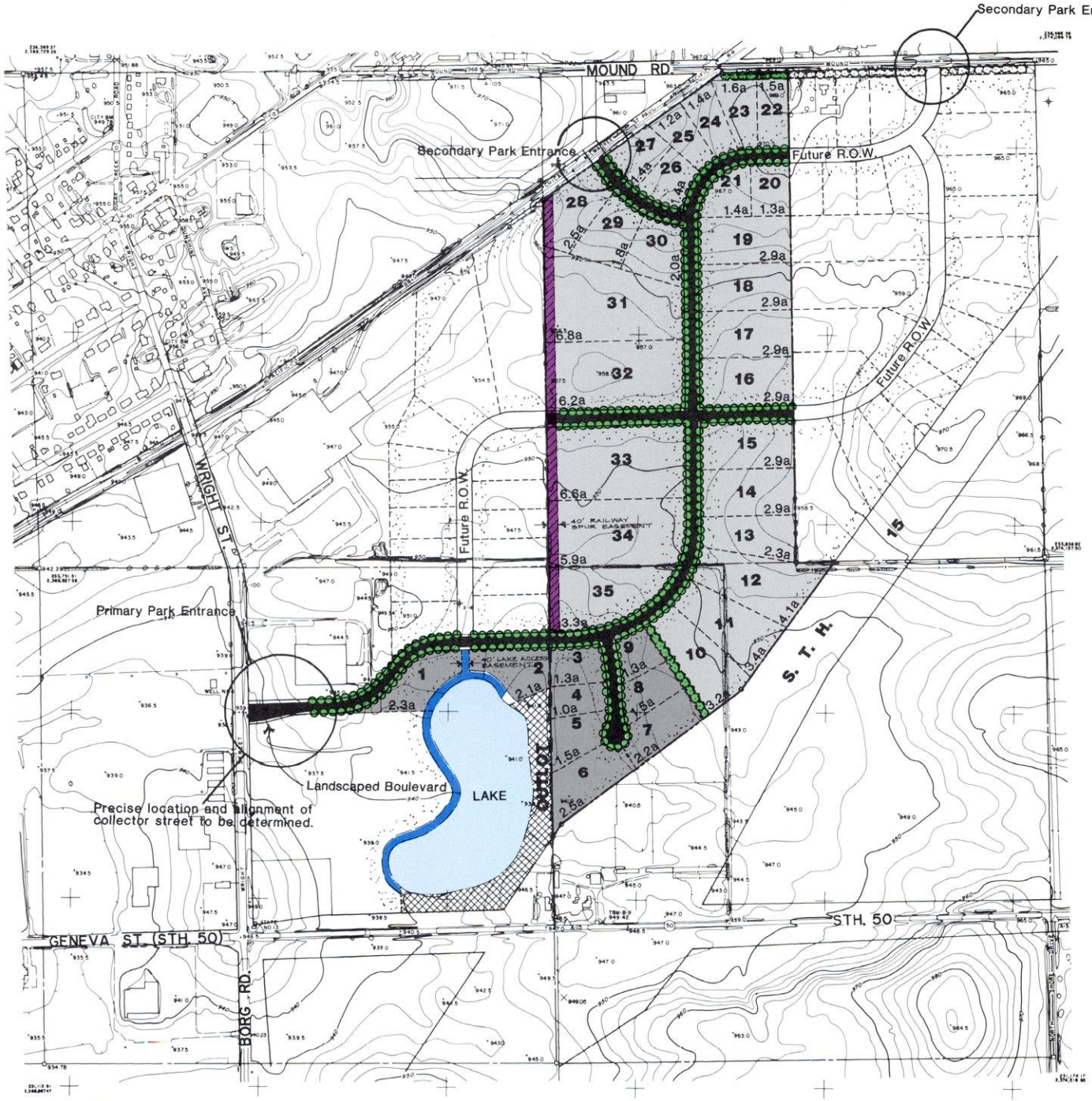
RESIDENT PLANNING SERVICES

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 local plan commission meetings and to provide such local planning findings and 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 1986, resident planning assistance was provided on a contractual basis to the Cities of Burlington, Cedarburg, and Franklin; to the Village of Sussex; and to the Town of Somers. Collectively, these services required Division staff attendance at and participation in a total of 54 plan commission, town board, village board, and city council meetings.

Map 26

SITE PLAN DESIGN FOR THE CITY OF DELAVAN INDUSTRIAL PARK NO. 3



LEGEND

- CITY OWNED PROPERTY BOUNDARY LINE
- EXISTING STREET RIGHT-OF-WAY LINE
- PROPOSED STREET RIGHT-OF-WAY AND PAVING (ALL 80 FEET WIDTH)
- PROPOSED LOT LINE
- PROPOSED EASEMENTS (ALL 40 FEET IN WIDTH)
- PROPOSED RAILWAY SPUR EASEMENT
- PROPOSED VISUAL ACCESS EASEMENT AREA FOR LAKE EXPOSURE
- PROPOSED INDUSTRIAL USES
- PROPOSED OFFICE USES
- WATER
- PROPOSED STREET TREES
- PROPOSED CONIFEROUS SHRUB SCREENING WITH EARTH BERM
- 26 LOT NUMBER (CITY OWNED LOTS)
- 2.2a LOT SIZE IN ACRES
- NOTE: ALL LOTS CAN BE AMASSED INTO LARGER PARCEL SIZES DEPENDING UPON INDIVIDUAL INDUSTRIAL CLIENTELE NEEDS

GRAPHIC SCALE
0 400 800 FEET

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 1986, work continued on the updating of the Commission 1 inch equals 2,000 feet scale county planning base maps using Wisconsin Department of Transportation state aid mileage summary maps. In 1986, the updating effort included changing civil division corporate limit lines to reflect recent annexations and incorporations.

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, 2-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 1980 Kenosha County undertook 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 and control survey 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 27 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 28, this area totals 1,281 square miles, or over 47 percent of the total area of the Region. A total of 6,632 U. S. Public Land Survey corners in the Region have been or are being relocated, monumented, and coordinated, representing over 56 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 about 450 inquiries for such data during 1986 alone.

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 shall 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 18, 1984. In 1986, under the requirements of the new legislation, the Division received, indexed, and filed 3,942 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 5,069. The number of surveys filed in 1986 represents an over five-fold increase over the 725 such surveys filed in 1985.

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 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. The perpetuation of three corners of that system which were threatened by destruction was carried out in Milwaukee County in 1986 at the request of the Milwaukee County Department of Public Works. This brings to six the total number of corners so perpetuated since 1984.

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 7,196 prints of aerial photographs of portions of the Region were reproduced, along with 85 soil map prints and 319 prints of maps in the Commission base map series. Aerial photographs were purchased 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 1986 the Division was responsible for the production of the following Commission publications:

PROSPECTUSES

- Overall Work Program—1987, Southeastern Wisconsin Regional Planning Commission, September 1986, 219 pages

- Infrastructure Study for the Southeastern Wisconsin Region, June 1986, 34 pages

ANNUAL REPORTS

- 1985 Annual Report, July 1986, 236 pages

Map 27

LARGE-SCALE TOPOGRAPHIC MAPPING AND RELOCATION, MONUMENTATION, AND COORDINATION OF U. S. PUBLIC LAND SURVEY CORNERS: 1986

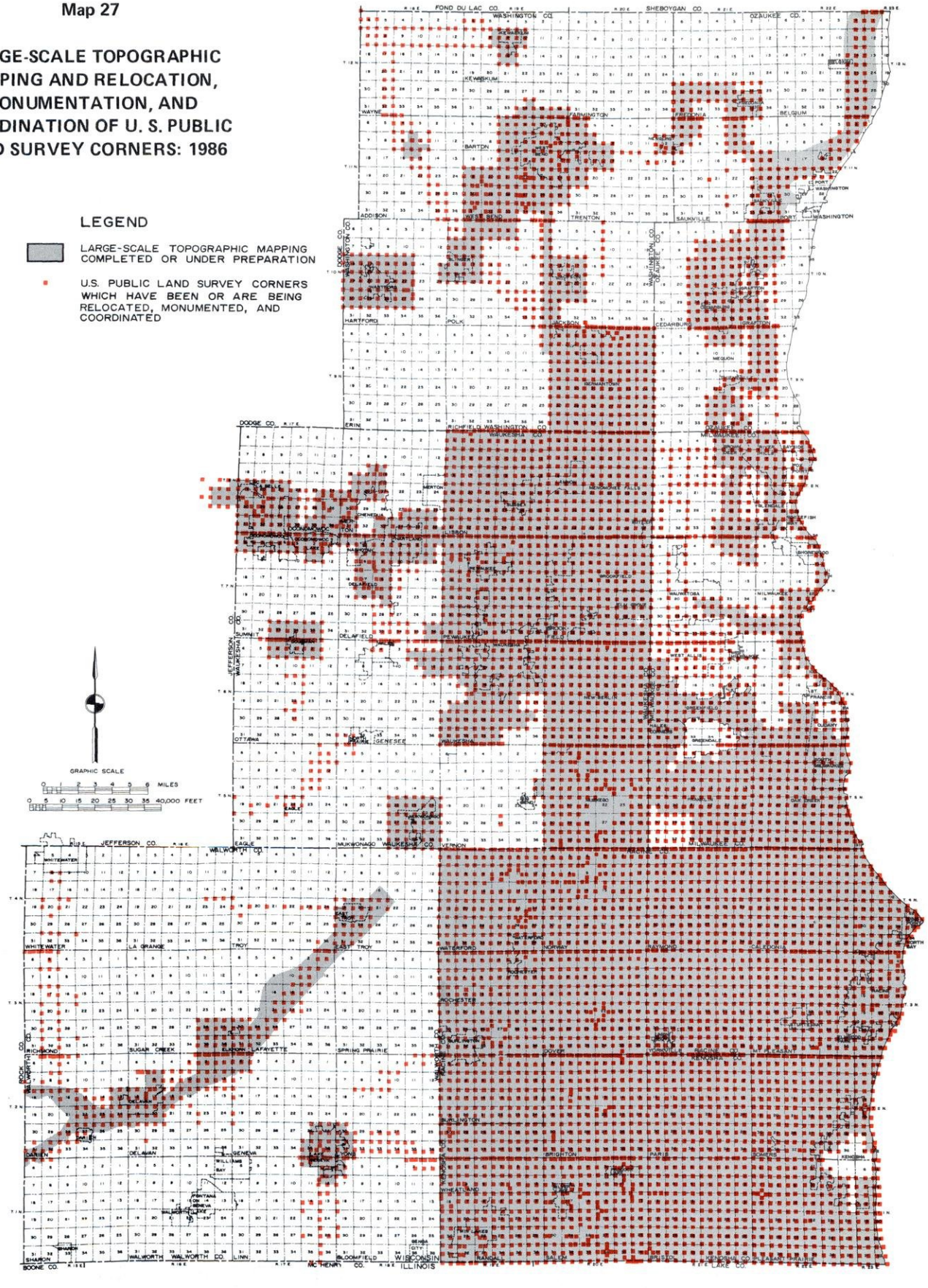
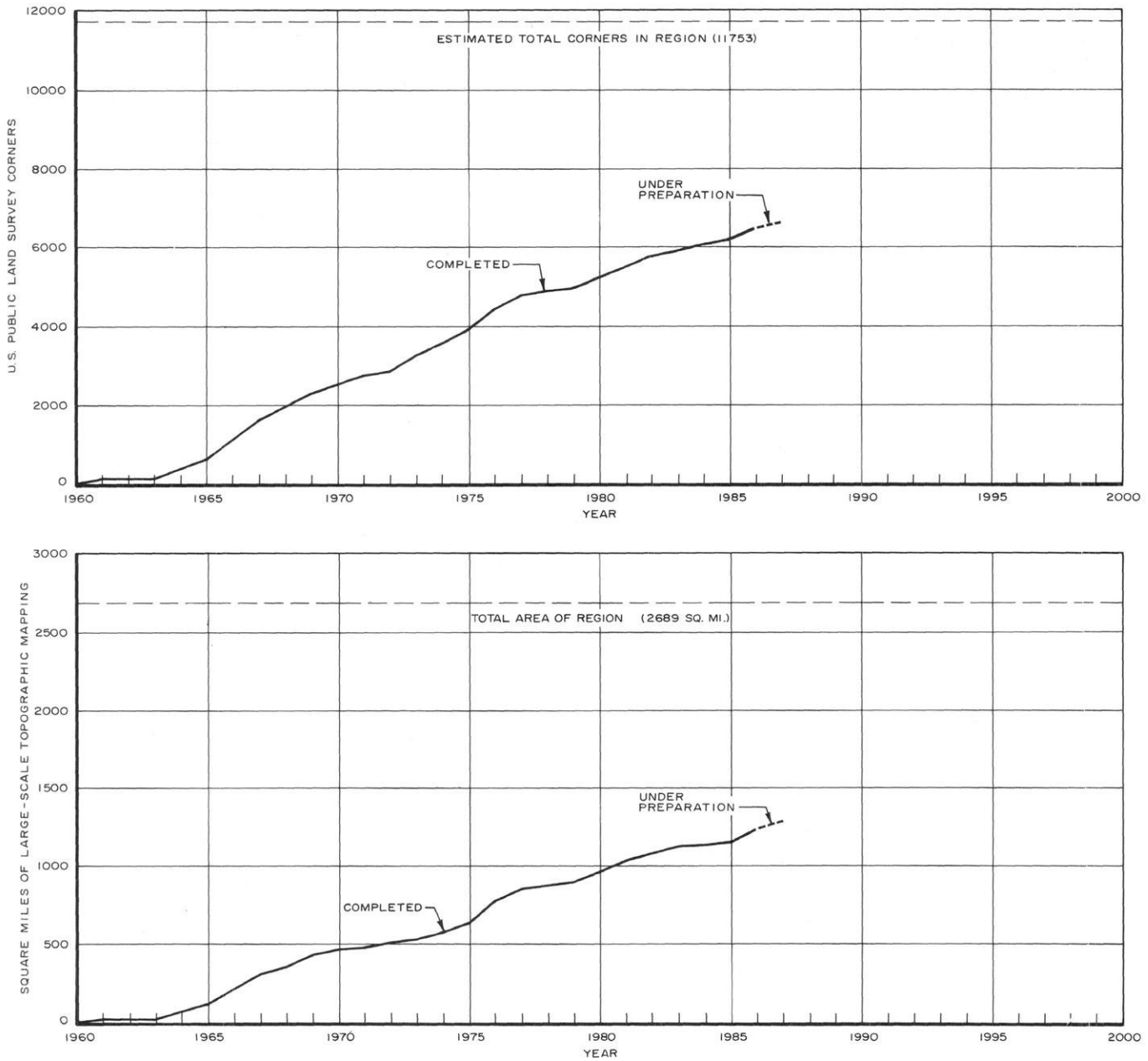


Figure 72

STATUS OF U. S. PUBLIC LAND SURVEY SECTION AND QUARTER SECTION CORNER RELOCATION, MONUMENTATION, AND COORDINATION AND LARGE-SCALE TOPOGRAPHIC MAPPING OF THE REGION: 1960-1986



PLANNING REPORTS

- No. 36, A Comprehensive Plan for the Oak Creek Watershed, August 1986, 579 pages

COMMUNITY ASSISTANCE PLANNING REPORTS

- No. 64 (2nd Edition), Sanitary Sewer Service Area for the City of Muskego, Waukesha County, Wisconsin, March 1986, 40 pages

TYPICAL SEWRPC MONUMENT

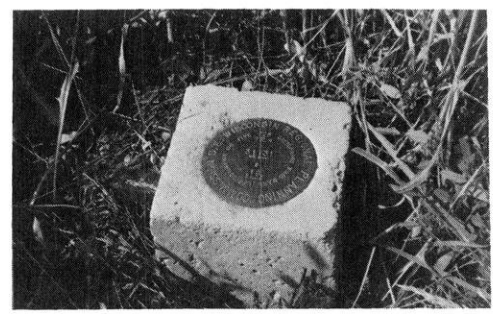


Table 28

LARGE-SCALE TOPOGRAPHIC MAPPING AND RELOCATION, MONUMENTATION, AND COORDINATION OF U. S. PUBLIC LAND SURVEY CORNERS: 1986

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	--	22.50	236.75	--	12.25	--	271.50	97.66
Milwaukee	242	--	26.75	6.25	11.00	78.25	2.50	124.75	51.55
Ozaukee	234	24.00	24.25	15.50	--	12.00	--	75.75	32.37
Racine	340	--	25.32	314.29	--	--	--	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	75.50	101.50	--	129.00	--	307.25	52.88
Region	2,689	57.00	197.07	674.29	11.00	339.25	2.50	1,281.11	47.64

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.

[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	899	--	63	--	1,188	98.75
Milwaukee	1,065	72	145	45	84	493	26	865	81.22
Ozaukee	1,064	109	173	69	--	63	--	414	38.91
Racine	1,478	--	172	1,306	--	--	--	1,478	100.00
Walworth	2,503	298	--	--	--	121	--	419	16.74
Washington	1,905	133	142	23	--	405	--	703	36.90
Waukesha	2,535	73	463	434	--	595	--	1,565	61.74
Region	11,753	743	1,263	2,776	84	1,740	26	6,632[b]	56.43

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

[b] *Because of the need to set witness corners these 6,632 U. S. Public Land Survey corners, including the centers of the sections, are marked by 6,727 monuments.*

- No. 74 (2nd Edition), Kenosha County Overall Economic Development Program (OEDP) Plan—1986 Update, September 1986, 177 pages
- No. 78, Sanitary Sewer Service Area for the City of Burlington, Racine County, Wisconsin, April 1986, 37 pages
- No. 121, A Stormwater Management Plan for the Village of Hales Corners, Milwaukee County, Wisconsin, March 1986, 224 pages
- No. 130, A Stormwater Drainage and Flood Control Policy Plan for the Milwaukee Metropolitan Sewerage District, March 1986, 66 pages
- No. 140, A Park and Open Space Plan for the Town of Jackson, Washington County, Wisconsin, September 1986, 40 pages
- No. 141, Sanitary Sewer Service Area for the Waterford/Rochester Area, Racine County, Wisconsin, May 1986, 38 pages

- No. 143, Sanitary Sewer Service Area for the Town of Salem Utility District No. 2, Kenosha County, Wisconsin, February 1986, 39 pages

- 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, October 1986, 48 pages

- No. 146, A Wildlife Habitat Management Plan for the Nicholson Wildlife Center, Town of Caledonia, Racine County, Wisconsin, May 1986, 42 pages

- No. 147, Sanitary Sewer Service Area for the City of Racine and Environs, Racine County, Wisconsin, November 1986, 61 pages

- No. 148, A Park and Open Space Plan for the Village of Walworth, Walworth County, Wisconsin, November 1986, 45 pages

MEMORANDUM REPORTS

- No. 1, Cedarburg Central Business District Parking Study, City of Cedarburg, Ozaukee County, Wisconsin, December 1986, 35 pages

- No. 2, Courthouse Parking Study, Ozaukee County, Wisconsin, December 1986, 46 pages

- No. 3, Alternative Industrial Park Site Location and Cost Estimate Analysis, City of Oconomowoc, Waukesha County, Wisconsin, December 1986, 69 pages

- No. 4, Pilgrim Parkway Traffic Study, Village of Elm Grove, Waukesha County, Wisconsin, December 1986, 38 pages

- No. 5, Capital Improvements Program: 1987-1991, Village of East Troy, Walworth County, Wisconsin, December 1986, 56 pages

- No. 6, Report of the Hoan Bridge South Task Force, Milwaukee County, Wisconsin, December 1986, 113 pages

- No. 10, City of Elkhorn Fact Book, Walworth County, Wisconsin, November 1986, 112 pages

- No. 11, City of Elkhorn Overall Economic Development Program Plan, Walworth County, Wisconsin, December 1986, 78 pages

NEWSLETTERS

- Volume 26, Nos. 1-6, 162 pages

OTHER

- Amendment to the Regional Water Quality Management Plan—2000, City of Waukesha/Town of Pewaukee, December 1986, 1 page

- A Transportation ImprovementProgram for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1987-1991, December 1986, 276 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 25-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 other Commission divisions in the development and application of simulation models. Finally, the Division provides special data processing services to member local units of government.

REGIONAL PLANNING DATA BANK

The Division maintains a master file of regional planning information on more than 8,700 reels of magnetic tape, representing approximately 3,400 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. The 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 1986, the Commission maintained two mainframe central processing units, an IBM 4341 and an IBM 4381. Both units have 8,000,000 bytes of main memory storage and share six high-speed magnetic tape drives. Both systems have approximately 16 billion characters of high-speed magnetic disk storage, 1,200-line-per-minute printers, and local and remote teleprocessing control units. To support the Commission's graphics operation, the Division maintained a CALMA interactive graphics computer system. This system includes a Data General ECLIPSE central processing unit with 128,000 bytes of main memory storage, 160,000 characters of high-speed magnetic disk storage, one magnetic tape drive, and one dot matrix printer. Attached to the ECLIPSE are three operator stations consisting of a 44-inch by 60-inch digitizing tablet, a graphics monitor, and an alphanumeric display monitor. A similar edit station is also attached with a smaller tablet.

Attached to the mainframe computers are 40 IBM CRT units and eight IBM personal computers through which staff engineers, planners, and computer programmers can enter and retrieve data and use computer programs. Two IBM 3742 data stations are maintained for entering data into the computer via magnetic diskettes.

In addition to the "in-house" terminal equipment, the mainframe computers support approximately 300 remote terminal devices located at four counties and 10 communities. Also attached to the systems are five IBM System 36 computer systems and one IBM 8100 text processing system. The System 36 systems are used for local data and text processing and as control units for access to the Commission's teleprocessing network. During 1986, the workload averaged approximately 75,000 teleprocessing tasks and 500 batch runs daily.

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.

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 1986 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 4341 and Model 4381 computers via telephone lines. These terminals give the community the power of a large computer system at the price of a small computer.

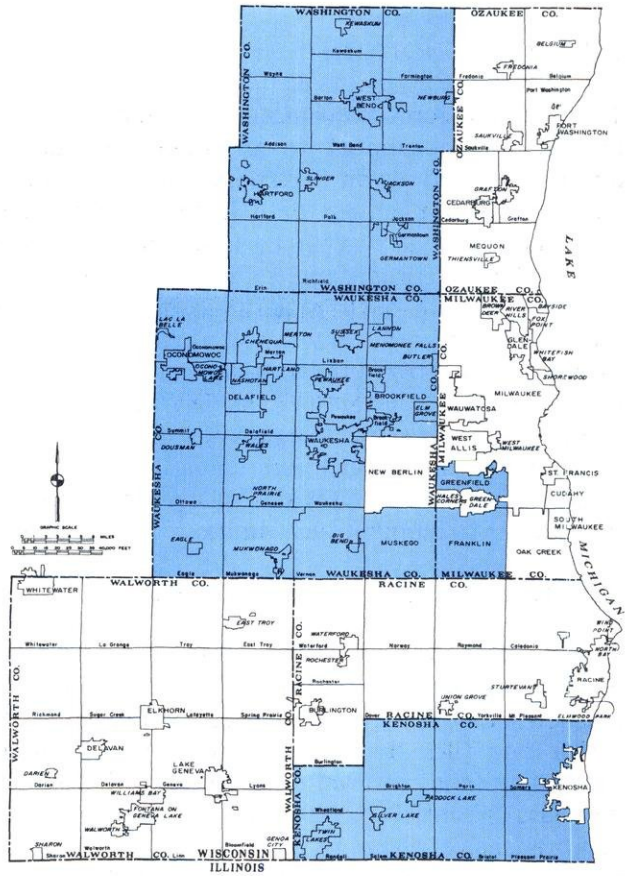
During 1986, services were provided to communities utilizing both methods of processing. Some communities used both methods, doing some data processing in the "batch" mode and some data processing in the "on-line" mode.

One of the services provided in the "batch" mode is the tax bill processing system, which provides communities with property tax assessment rolls and tax bills. Throughout 1986 these property tax-related services were provided at cost to 71 communities, as shown on Map 28. Another service provided in the "batch" mode is the payroll processing system, which was provided to nine school districts and one village in the Region, as shown on Map 29. In addition, payroll services were provided to eight school districts outside the Region. Map 30 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; to the Brown Deer School District in the area of school census; and to one county—Racine—in the area of foster home check processing.

Map 28

LOCAL COMMUNITIES USING SEWRPC FOR PROPERTY TAX DATA PROCESSING

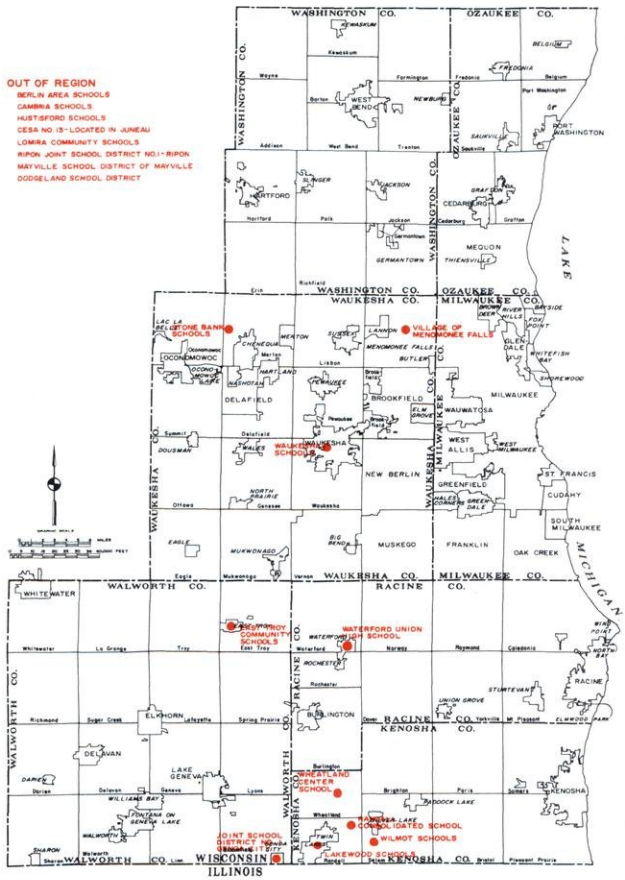


In the "on-line" processing mode, the Commission has installed computer terminals in four counties, 10 cities, and one village, and at the Wisconsin Correctional Service, a government-funded non-profit service agency. Map 31 shows the locations of the terminals and the applications which were processed from those terminals during 1986.

In 1984 and 1985 the Commission, in cooperation with Kenosha County and the State of Wisconsin, undertook a demonstration project in the Town of Randall and the Village of Twin Lakes in Kenosha County to determine the feasibility of building a multi-purpose, automated, land information system utilizing current computer hardware and software technology. The findings of this project were set forth in SEWRPC Technical Report No. 30, The

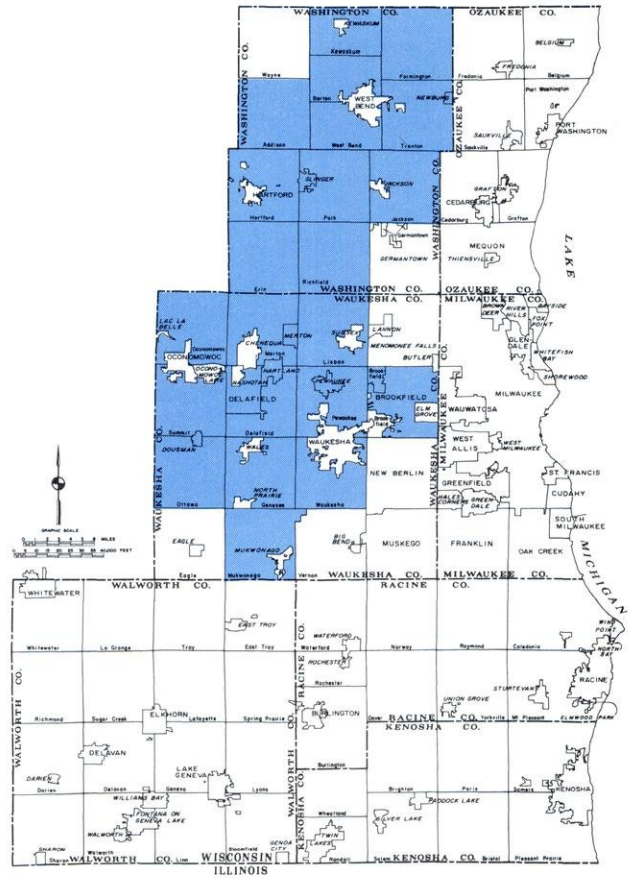
Map 29

SCHOOL DISTRICTS AND LOCAL COMMUNITIES USING SEWRPC FOR PAYROLL DATA PROCESSING



Map 30

LOCAL COMMUNITIES USING SEWRPC FOR VOTER REGISTRATION AND POLL DATA PROCESSING

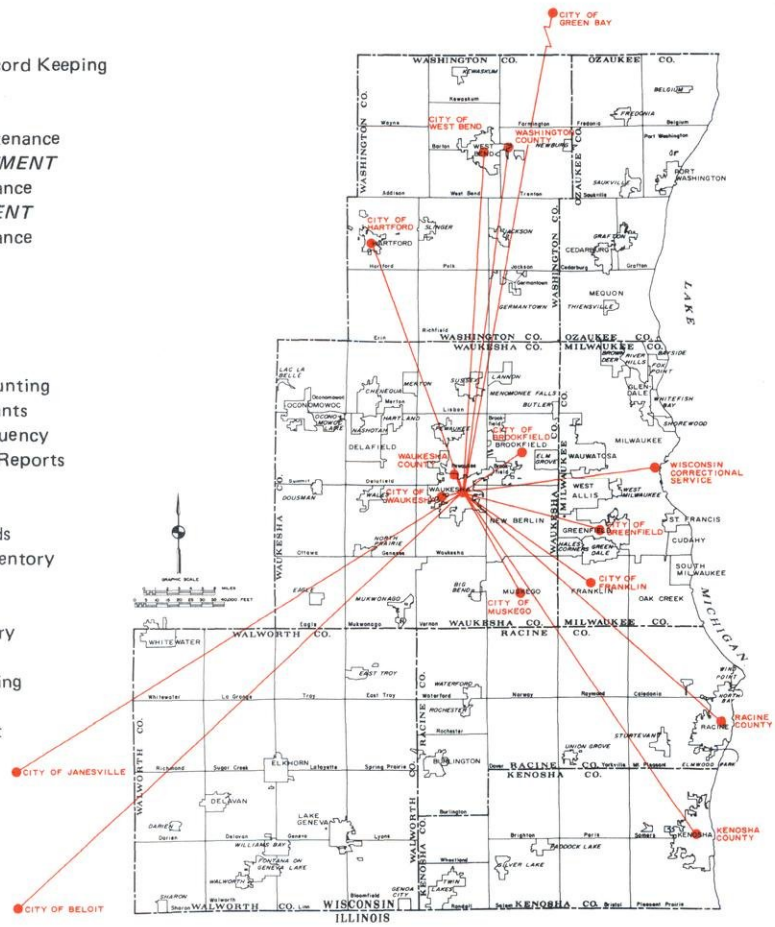


Development of an Automated Mapping and Land Information System: A Demonstration Project for the Town of Randall, Kenosha County, which was released by the Commission in 1986. The demonstration project covered an area of about 24 square miles and resulted in the preparation of digital map overlays of real property boundary lines, hydrography, structure outlines, existing land use, soil units, zoning districts, and floodplains.

In recent years, there has been growing interest among the Commission's member units of government in building automated land information systems. Such systems utilize computer graphic equipment and specialized software for the conversion, storage, retrieval, and analysis of land-related information which has traditionally been represented on analog maps. Increasingly, these automated systems are being identified by the term "multipurpose cadastres."

A multipurpose cadastre can be conceptualized as a public, operationally and administratively integrated, land information system which provides for continuous, readily available, and comprehensive land-related information at the parcel level. The National Research Council has proposed that multipurpose cadastres consist of the following five elements: 1) a geographic reference framework consisting of a geodetic network; 2) a series of current, accurate, large-scale topographic base maps properly related to the geographic reference framework; 3) a cadastral map overlay delineating all cadastral parcels which is also properly related

LOCAL GOVERNMENT–SEWRPC TELEPROCESSING CONFIGURATION AND APPLICATIONS



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
  - Register of Deeds Accounting
  - Sheriff Wants and Warrants
  - Highway Accident Frequency
  - Personnel Management Reports
  - Mailing Labels
  - 4H
  - Grantor-Grantee Records
  - Physical Equipment Inventory
- *TREASURER*
  - Receipts
  - Property Tax File Inquiry
  - Cash Collections
  - Delinquent Tax Processing
- *SHERIFF*
  - Arrest and Confinement

CITY OF JANESVILLE
- *ASSESSOR*
  - Property Tax File Maintenance
- *TREASURER*
  - Cash Receipts

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
- *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 HARTFORD
- *ASSESSOR*
  - Property Tax File Maintenance
  - Computer-Aided Mass Appraisal

RACINE COUNTY
- *SOCIAL SERVICES*
  - Foster Care
  - Work Relief
  - General Assistance

KENOSHA COUNTY
- *SOCIAL SERVICES*
  - General Relief
  - Foster Care
  - Client Profile
  - Access (Hot Line) System
- *COUNTY WIDE TEXT PROCESSING*
- *ASSESSOR*
  - CAMA Tax System
  - Mobile Home System
- *TREASURER*
  - Delinquent System
  - Cash Collection
- *HIGHWAY DEPARTMENT*
  - Cost Accounting
- *FINANCE OFFICE*
  - County Accounting

CITY OF FRANKLIN
- *CLERK*
  - Budget Processing
  - Accounts Payable
  - Receipts
  - Purchase Orders
  - Special Assessments
  - General Ledger
  - Utility Billing
- *ASSESSOR*
  - Property Tax File Maintenance

CITY OF MUSKEGO
- *CLERK*
  - Accounts Payable
  - Receipts
  - General Ledger
  - Payroll
  - Voter Registration
- *ASSESSOR*
  - Property Tax File Maintenance
  - Computer-Aided Mass Appraisal
  - Special Assessments

CITY OF GREEN BAY
- *ASSESSOR*
  - Computer-Aided Mass Appraisal

WASHINGTON COUNTY
- *TAX LISTER*
  - Property Tax File Maintenance
- *TREASURER*
  - Property Tax File Inquiry
  - Receipts
  - Delinquent Tax Processing
- *AUDITOR*
  - Accounts Payable
  - Receipts
  - Payroll
  - General Ledger
  - Nursing Home Billing
  - Nursing Home Staff Statistics
  - Mental Health Billing
  - Welfare Payroll
  - District Attorney Case Disposition
- *CLERK OF COURTS*
  - Alimony and Support
  - Paternity
  - Traffic Fine and Forfeiture
  - Receipts

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

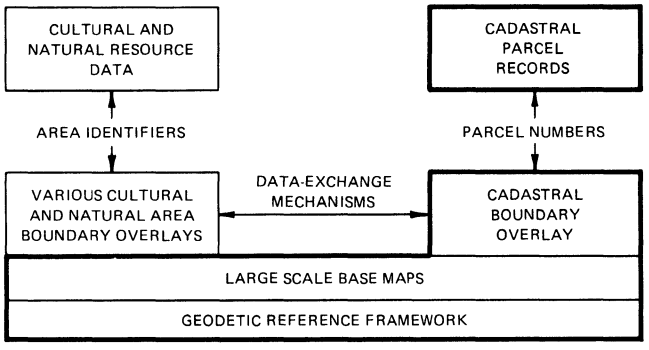
CITY OF GREENFIELD
- *ASSESSOR*
  - Property Tax File Maintenance
- *TREASURER*
  - Utility Billing
  - Cash Receipts
  - Special Assessments

CITY OF BROOKFIELD
- *COMPTROLLER*
  - Receipts
  - Payroll
  - Accounts Payable
  - Special Assessments
  - General Ledger
  - Utility Billing
- *POLICE DEPARTMENT*
  - Uniform Crime Reporting
  - Officer Activity
- *ASSESSOR*
  - Property Tax File Maintenance
- *CLERK*
  - Voter Registration
- *TREASURER*
  - Receipts
- *LIBRARY*
  - Circulation
  - Fines
  - Reference
  - Inventory System

to the geographic reference framework; 4) a unique identifying number assigned to each parcel; and 5) a series of registers, or land data files, each including a parcel index for purposes of information retrieval and cross-referencing with information in other land data files. The relationship of these elements is shown in Figure 73.

Figure 73

COMPONENTS OF A MULTIPURPOSE CADASTRE



The basic elements of a multipurpose cadastre (in heavy outline) provide a ready framework for the incorporation of additional land related information in the form of maps and records.

The first three elements of the procedural model for the creation of a multipurpose cadastre as proposed by the National Research Council have long been embodied in the Regional Planning Commission's recommended large-scale base mapping and attendant survey control program. Recognizing the importance of good large-scale maps and attendant survey control to sound community development and redevelopment, the Commission has for over two decades encouraged the preparation of large-scale topographic and cadastral maps within its 2,689-square-mile Planning Region. These maps are based on a unique system of survey control that combines the best features of the U. S. Public Land Survey and State Plane Coordinate Systems. This unique system calls for the remonumentation of all U. S. Public Land Survey section and quarter-section corners and the determination of State Plane Coordinates for all monument locations. The large-scale maps and attendant survey control system, where they already exist within the Region, provide, in a highly cost-effective manner, the technical foundation for the creation of multipurpose cadastres within the Region, providing the first two of the five elements of such a cadastre, and part of the third element.[1]

The geographic reference framework for the demonstration project was constructed within a computer by key-entry of control survey records prepared as part of the U. S. Public Land Survey System remonumentation and large-scale topographic base mapping program. In this manner, the full precision of the control survey data could be maintained and utilized in the establishment of the geographic reference framework. The Wisconsin State Plane Coordinate System, south zone, was utilized as the coordinate system for all map information in the project. The coordinate system grid was constructed by a computer using basic plane geometry relationships and, once created, was stored for recall and utilization as the map base for all land information integrated into the system. The resulting map projection grid is geodetic, or earth based.

Integration of land ownership information with other types of information about the land required the placement of U. S. Public Land Survey section and quarter-section corners on the State Plane Coordinate System. Coordinates for the corners were key-entered into a computer to the nearest 0.01 foot and placed by the computer upon the State Plane Coordinate grid previously constructed. Under the control survey system utilized, the U. S. Public Land Survey corners were integrated into the geodetic control network by field surveys meeting Third Order, Class I accuracy standards, and thereby converted into a geodetic, or earth-based, control network, as well as a real property boundary survey control network. Quarter-section lines connecting the corners were also plotted on the State Plane Coordinate grid.

Large-scale base maps previously produced for the project area as part of the Kenosha County survey remonumentation and base mapping program provided the source for the digitization of surface water and stream channels, the traveled way—pavements—of public streets and highways, and structure outlines. The locations of surface water areas and stream channels, pavements, and struc-

[1] *As of January 1, 1987, this survey control system had been extended into approximately 1,281 square miles of the seven-county Southeastern Wisconsin Region, or about 48 percent of the Region; and a total of 6,632 U. S. Public Land Survey corners had been relocated, monumented, and coordinated, or about 56 percent of all such corners in the Region.*

ture outlines were determined by photogrammetric methods during the original preparation of the large-scale topographic maps and appeared on the finished maps. A portion of a typical large-scale base map is shown in Figure 75.

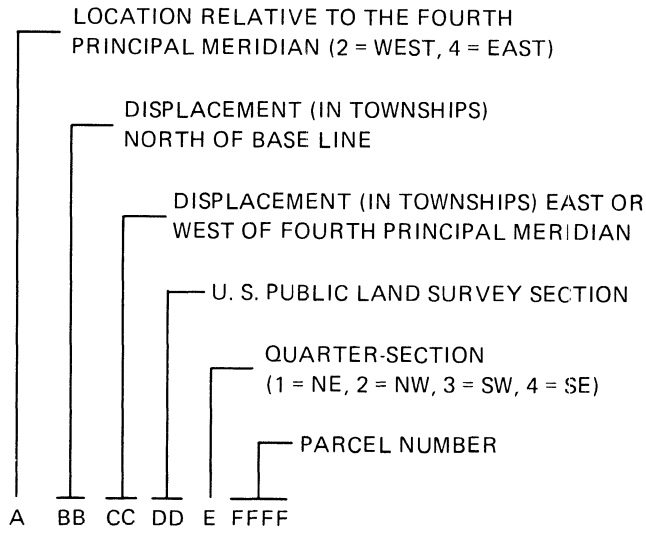
Recorded subdivision plats, certified survey maps, abbreviated legal descriptions, recorded easement descriptions, plats of right-of-way locations, and surveyors' field notes were used to locate real property boundary lines and real property boundary line-related information, such as easement and right-of-way lines. The real property boundary lines were constructed on the maps in the same way a land surveyor would construct those lines in the field. This was possible because of the framework of control provided by the known location of the U. S. Public Land Survey corners on the State Plane Coordinate System and the attendant known grid lengths and grid bearings of all quarter-section lines. A portion of a completed cadastral map is shown in Figure 76. The drafted cadastral map sheets were then digitized. A portion of a digitized cadastral map is shown in Figure 77.

The parcel identification number provides the link between the cadastral maps, which show the location of a particular parcel, and the records, either computer-readable or traditional paper records, that contain information about the parcel. The parcel identification scheme utilized in the project has been established by the Kenosha County Assessor's office for the keeping of records concerning assessments of property, and is the scheme recommended by the Wisconsin Department of Revenue for use throughout the State for this purpose. The scheme is known as a "location identifier" and utilizes the basic framework of the U. S. Public Land Survey in the assignment of the parcel number. The format of this parcel identification numbering scheme is diagrammed in Figure 74.

The final step in the development of an automated mapping and land information system for the Town of Randall was the development of files of land-related information useful in zoning administration. Six additional such files were incorporated into the system: 1) the property ownership and assessment records maintained by the County Assessor's office; 2) land use; 3) zoning districts; 4) soil units; 5) flood hazard areas; and 6) shoreland areas. Two of these files, the property ownership

Figure 74

FORMAT OF THE PARCEL IDENTIFICATION NUMBERING SCHEME IN THE PROJECT AREA



and assessment records file and the land use file, were in existence as computer-readable files prior to the initiation of the project, and their incorporation into the project required merely that appropriate mechanisms be established for their use. The remaining four files were created as part of the system development. The property ownership and assessment records were nongraphic information files. The land use, zoning district, soil unit, flood hazard, and shoreland files were graphic files maintained in the form of map overlays.

Following the demonstration project, Kenosha County contracted with the Commission for the preparation of equivalent digital map files in adjoining portions of the County. During 1986, the Commission was involved in the preparation of these files in the Town of Wheatland and in the southern 12 square miles of the Town of Salem.

The Commission believes that the procedures followed in the demonstration project—if adopted by other units of government—will result in the conceptually and technically sound development of modern, multipurpose, multiuser, land information systems. The Commission is prepared to provide technical assistance to its constituent units of government in the creation and application of these systems.

Figure 75

A PORTION OF A TYPICAL LARGE-SCALE TOPOGRAPHIC MAP PREPARED
IN ACCORDANCE WITH THE COMMISSION'S RECOMMENDED SPECIFICATIONS

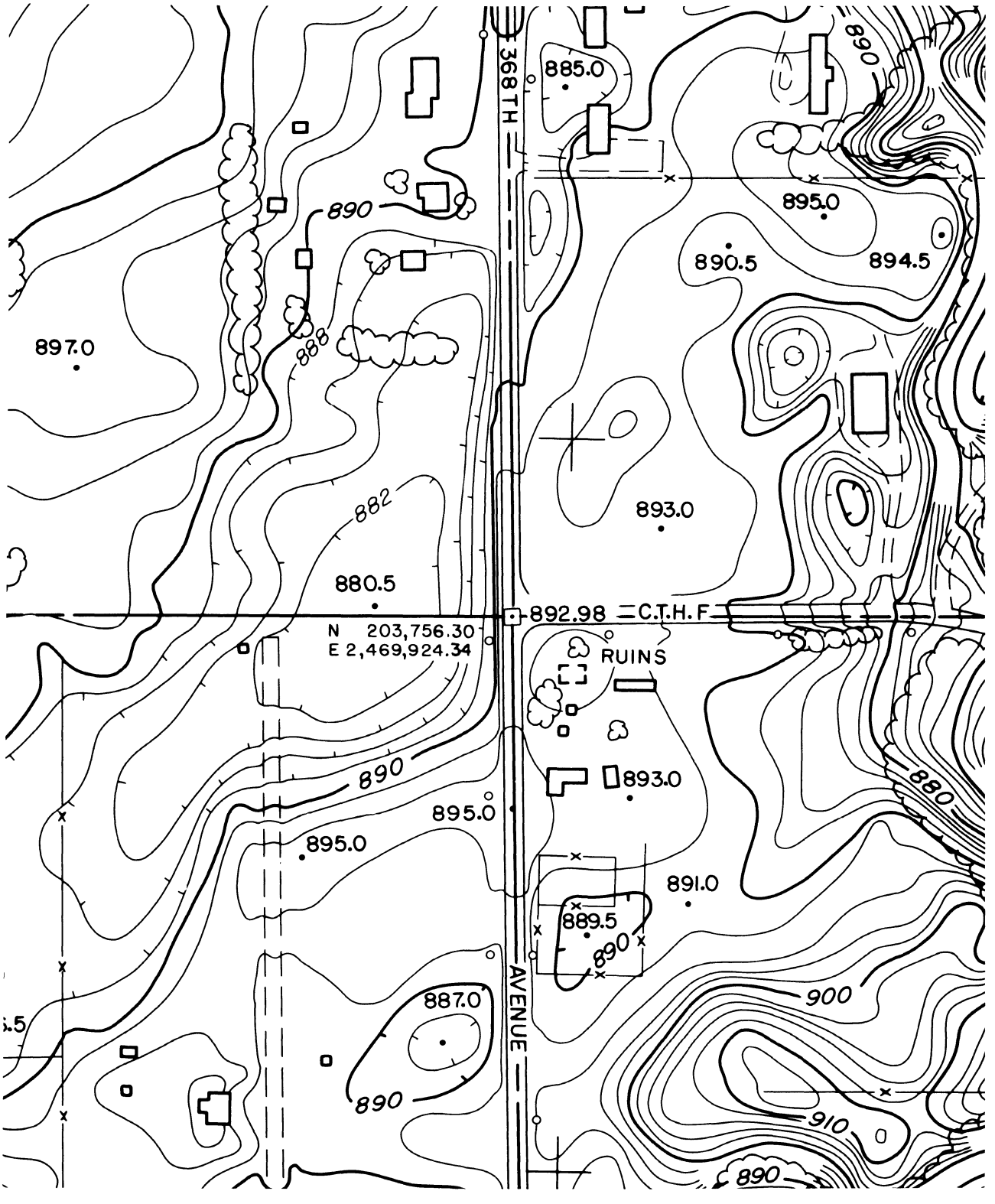


Figure 76

A PORTION OF A TYPICAL CADASTRAL MAP PREPARED IN ACCORDANCE WITH THE COMMISSION'S RECOMMENDED SPECIFICATIONS

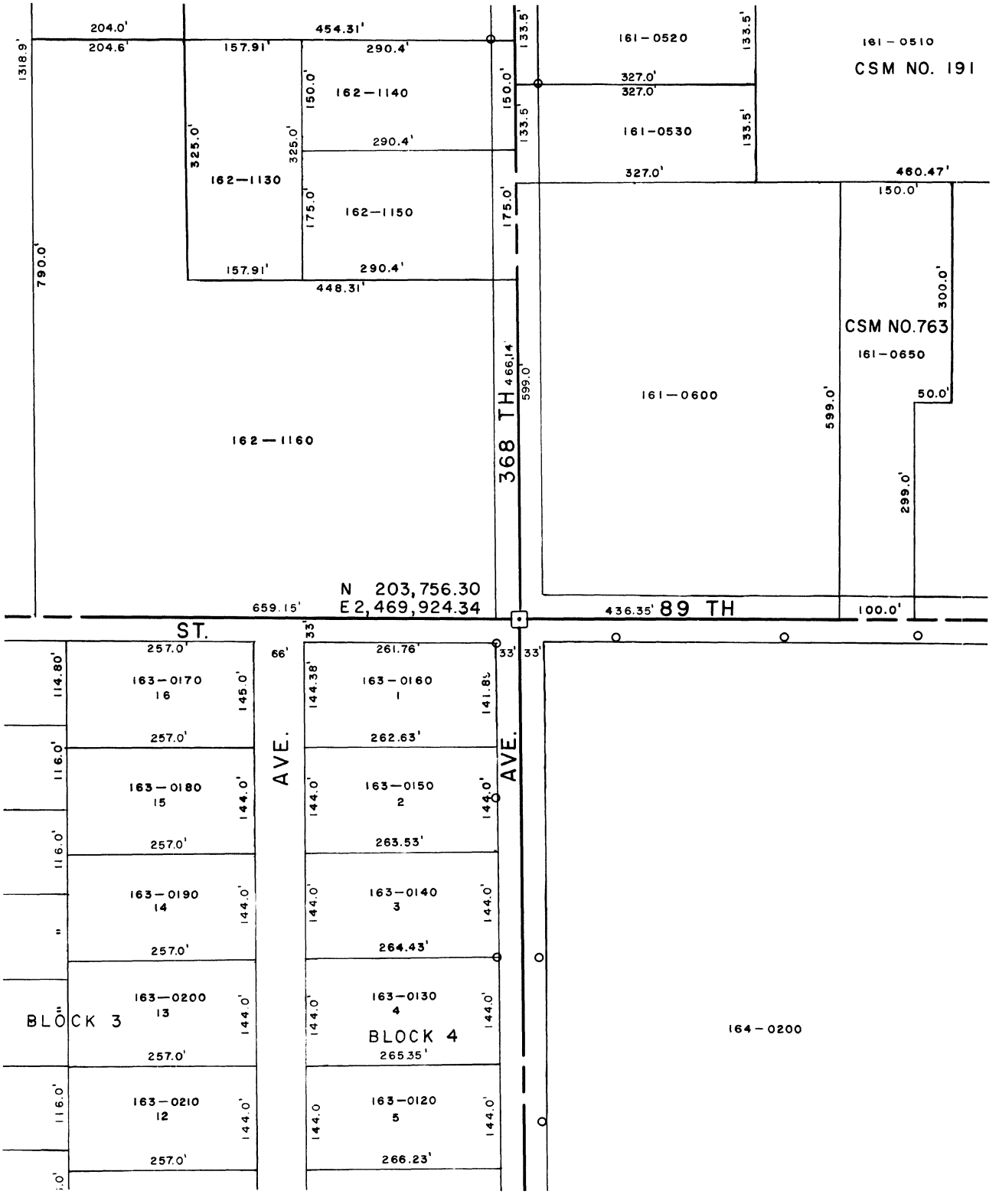
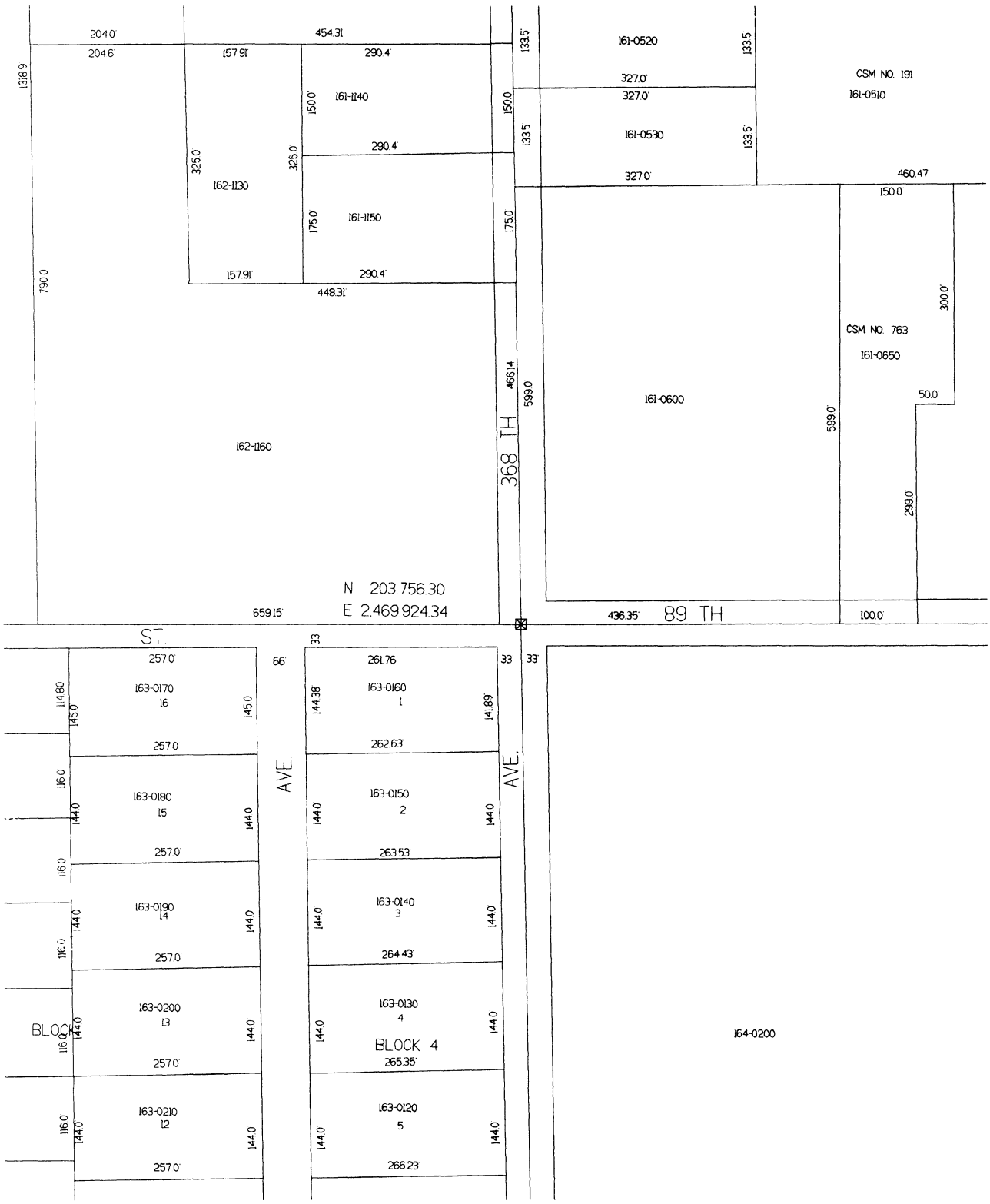


Figure 77

AN EXAMPLE OF A DIGITIZED CADASTRAL MAP FROM THE TOWN OF RANDALL PROJECT AREA



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 1986 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 1986 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 1986 the Division distributed a total of 18,837 copies of Commission publications. These included: 183 prospectuses, 243 planning reports, 120 amendments to planning reports, 3 planning guides, 539 technical reports, 2,554 community assistance planning reports, 21 technical records, 643 annual reports, 11,274 newsletters, 326 conference proceedings, 2,185 community economic development profiles, 29 lake use reports, 124 transportation improvement programs, and 55 overall work programs. A total of 538 copies of the special publication entitled Twenty-five Years of Regional Planning were also distributed. In addition, the Division distributed 7,196 aerial photographs, 85 soils maps, 263 topographic maps, 769 control survey station dossiers and control survey summary diagrams, and 319 maps from the Commission's base map series.

APPENDICES

Appendix A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION COMMISSIONERS AND COMMITTEES AS OF DECEMBER 31, 1986

COMMISSIONERS

	Term Expires
KENOSHA COUNTY	
***Mary A. Plunkett	1988
**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	
***Sara L. Johann	1988
*Allen F. Bruederle	1990
**Alfred G. Raetz	1990
RACINE COUNTY	
*John R. Hansen	1990
***James F. Rooney	1992
**Earl G. Skagen	1988
WALWORTH COUNTY	
**John D. Ames	1990
***Anthony F. Balestrieri, Chairman	1988
*Allen L. Morrison	1988
WASHINGTON COUNTY	
**Daniel S. Schmidt	1992
*Patricia A. Strachota	1990
***Frank F. Uttech	1988
WAUKESHA COUNTY	
***Richard A. Congdon	1992
*Robert F. Hamilton	1988
**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.

****The Planning and Research Committee was chaired through calendar year 1986 by Paul G. Vrakas, whose term of appointment expired on September 15, 1986, but whose replacement was not seated until March 2, 1987. Michael W. Wells served as Vice-Chairman of the Committee through May 1986.

COMMITTEES

EXECUTIVE COMMITTEE
Anthony F. Balestrieri, Chairman
Harout O. Sanasarian, Vice-Chairman
Irene M. Brown
Allen F. Bruederle
Robert F. Hamilton
John R. Hansen
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
Robert F. Hamilton
Allen L. Morrison
Alfred G. Raetz
William D. Rogan
Sheila M. Siegler

INTERGOVERNMENTAL AND PUBLIC RELATIONS COMMITTEE
Robert F. Hamilton, Chairman
Allen L. Morrison, Vice-Chairman
Anthony F. Balestrieri
Allen F. Bruederle
John R. Hansen
Francis J. Pitts
William D. Rogan
Harout O. Sanasarian
Patricia A. Strachota

PLANNING AND RESEARCH COMMITTEE**
John D. Ames
Anthony F. Balestrieri
Irene M. Brown
Robert F. Hamilton
John R. Hansen
Sara L. Johann
Allen L. Morrison
Mary A. Plunkett
William D. Rogan
Sheila M. Siegler
Earl G. Skagen
Patricia A. Strachota
Jean B. Tyler

Appendix B

COMMISSION ADVISORY COMMITTEES: 1986

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL LAND USE-TRANSPORTATION PLANNING

The Technical Coordinating and Advisory Committee on Regional Land Use-Transportation Planning is divided into several functional subcommittees. Members of the Committee often serve on more than one subcommittee. The following key identifies the various functional subcommittees: 1) Land Use Subcommittee; 2) Highway Subcommittee; 3) Socioeconomic Subcommittee; 4) Natural and Recreation-Related Resources Subcommittee; 5) Transit Subcommittee; 6) Utilities Subcommittee; and 7) Traffic Studies, Models, and Operations Subcommittee.

C. Barry Bateman (7) ..... Airport Director, Milwaukee County
John M. Bennett (1,4) ..... City Engineer, City of Franklin
James J. Blazek (2) ..... City Engineer, City of Racine
Richard A. Bolte (2) ..... Highway Commissioner, Waukesha County
Richard R. Brandt (1) ..... Manager, Energy Requirements, Wisconsin Gas Company, Milwaukee
Donald M. Cammack (7) ..... Chief Planning Engineer, Bureau of Aeronautics, Wisconsin Department of Transportation
Dennis M. Carr (1,3) ..... District Accounting Manager, Wisconsin Bell
Arnold L. Clement (1,2) ..... Planning and Development Director, Racine County
Lucian M. Darin (2) ..... Director of Public Works, City of Hartford
Russell A. Dimick (2) ..... City Engineer, City of Cedarburg
Arthur D. Doll (1) ..... Director, Bureau of Planning, Wisconsin Department of Natural Resources
William R. Drew (1,2,3,4,5,6,7) ..... Commissioner, Department of City Development, City of Milwaukee
Raymond T. Dwyer (6) ..... City Engineer, City of Greenfield
Joel P. Ettinger (5,7) ..... Regional Director, Region V, U. S. Department of Transportation, Urban Mass Transportation Administration
John M. Fredrickson (1) ..... Village Manager, Village of River Hills
Lee H. Greenwood (2) ..... District General Manager, Central Greyhound Lines, Milwaukee
Gerald G. Griswold (5) ..... Town Engineer, Town of Caledonia
George Gundersen (1,2,4) ..... Director, Bureau of Systems Planning, Wisconsin Department of Transportation
Douglas F. Haist (5) ..... Administrator, Division of Transportation Assistance, Wisconsin Department of Transportation
John M. Hartz (5) ..... Director, Bureau of Transit, Wisconsin Department of Transportation
Frank M. Hedgcock (7) ..... Director of Community Development, City of Waukesha
Sebastian J. Heifer (3) ..... Director, Campus Planning and Construction, Marquette University, Milwaukee
Donald K. Holland (2,6) ..... City Administrator, City of Kenosha
Karl B. Holzwarth (2,4) ..... Director, Racine County Park Commission
Ronald Hustedde (1,4) ..... Natural Resources Agent, Walworth County
Robert F. Hutter (2) ..... Director of Public Works, Village of Sussex
Jerome P. Hytry (4) ..... State Conservationist, U. S. Soil Conservation Service
Edward A. Jenkins (5) ..... Transportation Director, City of Kenosha
Bal Kale (3) ..... Demographer, Wisconsin Department of Administration
Richard A. Keyes (2) ..... Environmental Engineer, Department of Public Works, Milwaukee County
Henry C. Krebs (3) ..... Chief of Demographic and Special Analysis, Bureau of Health Statistics, Wisconsin Department of Health and Social Services
David A. Kuemmel (2,4,6) ..... Commissioner of Public Works, City of Milwaukee
Thomas P. Kujawa (5) ..... Managing Director, Milwaukee County Transit System
Edwin J. Laszewski, Jr. (2) ..... City Engineer, City of Milwaukee
Gerald P. Lee (1) ..... Building Inspector, City of Muskego
James J. Lynch (1) ..... Village Planner, Village of Shorewood
Patrick Marchese (4,6) ..... Executive Director, Milwaukee Metropolitan Sewerage District
Frank M. Mayer (2,5,6,7) ..... Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Gloria L. McCutcheon (1) ..... District Director, Wisconsin Department of Natural Resources
Paul Milewski (3) ..... Director, Department of Community Development, City of Oak Creek
Paul E. Mueller (1,4) ..... Land Use and Park Administrator, Washington County
William A. Muth, Jr. (6) ..... Director of Public Works, City of Brookfield
Roger M. Nacker (3) ..... Research Director, Wisconsin Department of Development
George J. Novenski (7) ..... Chief, Travel Statistics and Data Coordination Section, Wisconsin Department of Transportation
William F. O'Donnell (1,5) ..... County Executive, Milwaukee County
Daniel J. O'Neil (1,4) ..... Agricultural Agent, Ozaukee County
Glen A. Orcutt (5,7) ..... Airport Planner, U. S. Department of Transportation, Federal Aviation Administration, Minneapolis, Minnesota
Dwayne Partain (1,5) ..... Librarian, Milwaukee Area Technical College
Nick T. Paulos (1,2) ..... Village Engineer, Village of Greendale
John B. Prince (1,3,6) ..... Manager of System Planning, Wisconsin Electric Power Company, Milwaukee
Ronald A. Ramlow (3) ..... Manpower Information Supervisor, Job Service-Milwaukee, Wisconsin Department of Industry, Labor and Human Relations
Richard A. Rechlicz (5) ..... Executive Secretary, Wisconsin School Bus Contractors Association
Donald V. Revello (5,7) ..... Chief of Traffic Planning, Wisconsin Department of Transportation
Donald A. Roensch (1,6) ..... Administrator, City of Mequon
James F. Rooney (2,4,7) ..... Highway Commissioner, Racine County
Gordon Rozmus (1,3) ..... City Planner, City of Wauwatosa
Gene A. Scharfenorth (1,2) ..... Highway Commissioner, Kenosha County
Franklin B. Scharrer (2,7) ..... Highway Commissioner, Washington County
Dr. Eric Schenker (3,5,7) ..... Dean, School of Business Administration, University of Wisconsin-Milwaukee
David F. Schulz (2,4) ..... Director of Parks, Recreation and Culture, Milwaukee County Park Commission
John E. Schumacher (2,7) ..... City Engineer, City of West Allis
Gerald Schwerm (2,7) ..... Director of Transportation and Public Works, Milwaukee County
Harvey Shebesta (2,3,5,7) ..... District Director, Wisconsin Department of Transportation
Leland C. Smith (4) ..... Horticultural Agent, Kenosha County
Walter J. Tarmann (1,4) ..... Director, Waukesha County Park and Planning Commission
Jack Taylor (5) ..... President, Flash City Transit Company, Racine
Norbert S. Theine (1) ..... Administrator, City of South Milwaukee
Floyd W. Usher (2) ..... City Engineer, City of Oconomowoc
Rodney W. Vanden Noven (6) ..... Director of Public Works, City of Waukesha
Ernest R. Vogel (2,5,7) ..... Deputy Director, Milwaukee County Department of Public Works

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL LAND USE-TRANSPORTATION PLANNING (continued)

Max A. Vogt (2,6) ..... Director of Public Works, Village of Menomonee Falls
Donald M. Vold ..... District Staff Manager—Forecasting, Wisconsin Bell
Lloyd O. Wadleigh (3) ..... Professor, Department of Economics, Carroll College, Waukesha
Gerald T. Waelti (2,7) ..... Highway Commissioner, Walworth County
Sylvester N. Weyker (2) ..... Highway Commissioner, Ozaukee County
C. Elgar Williams (1,3) ..... City Planner, City of West Allis
Dan Wilson (4) ..... Resource Development Agent, University of Wisconsin-Extension, Washington County
Thomas A. Winkel (2,5,7) ..... District Chief Planning Engineer, Wisconsin Department of Transportation
Thomas N. Wright (1,3,5) ..... Director of Community Development, City of Racine

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL AIRPORT SYSTEM PLANNING

William D. Rogan ..... Commissioner, Southeastern Wisconsin Regional Planning Commission
Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission
Secretary
C. Barry Bateman ..... Airport Director, General Mitchell International Airport
John H. Batten ..... Chairman, Racine Commercial Airport Corporation, and President, Twin Disc, Inc.
Richard A. Bolte ..... Highway Commissioner, Waukesha County
Roger S. Chapman ..... Manager, Kenosha Municipal Airport
Edwin H. Daniels ..... Citizen Member
Fred D. Gammon ..... Director, Bureau of Aeronautics, Wisconsin Department of Transportation
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
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 ..... Highway Commissioner, Kenosha County
Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission
Secretary
Gary Daniels ..... Chairman, Town of Brighton
Ralph L. Drinkwine, Jr. ..... President, Village of Silver Lake
Noel Elfering ..... Chairman, Town of Bristol
Thomas L. Frank ..... Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
Olga Hoffman ..... President, Village of Paddock Lake
Donald K. Holland ..... City Administrator, City of Kenosha
Earl W. Hollister ..... 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
Richard W. Stetson ..... Chairman, Town of Salem
Virginia Taylor ..... Citizen Member, City of Kenosha
Donald H. Wruck ..... Chairman, Town of Pleasant Prairie
Thomas Zeiger ..... Chairman, Town of Randall
August Zirbel, Jr. ..... Chairman, Town of Paris

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR MILWAUKEE COUNTY

Gerald Schwerm ..... Director of Transportation, Milwaukee County
Chairman and Secretary
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission
Thomas L. Frank ..... Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
Edwin J. Laszewski, Jr. ..... City Engineer, City of Milwaukee
Frank M. Mayer ..... Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Nick T. Paulos ..... Village Engineer, Village of Greendale
Gordon Rozmus ..... City Planner, City of Wauwatosa
John E. Schumacher ..... City Engineer, City of West Allis
Harvey Shebesta ..... District Director, Wisconsin Department of Transportation
David M. Weis ..... City Engineer, City of Glendale

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR RACINE COUNTY

James F. Rooney ..... Highway Commissioner, Racine County
Chairman
Cecil F. Mehring ..... Highway Engineer, Racine County
Secretary
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission
Mary M. Carrington ..... Chairman, Town of Mt. Pleasant
Thomas Cecchini ..... President, Village of Elmwood Park
Arnold L. Clement ..... Planning and Development Director, Racine County
Thomas L. Frank ..... Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
Herbert W. Gauger ..... President, Village of Waterford
Richard L. Hebron ..... Chairman, Town of Raymond
Martin J. Itzin ..... Mayor, City of Burlington
Cyril Ketterhagen ..... Chairman, Town of Burlington
Edward Krueger ..... Chairman, Town of Waterford
Fred H. Larson ..... Commissioner of Public Works, City of Racine
John L. Malchine ..... Chairman, Town of Norway
Lloyd C. Meier ..... President, Village of Wind Point
Patrick F. Motley ..... Chairman, Town of Caledonia
Alvin P. Nelson ..... Chairman, Town of Yorkville
Eistein Pedersen ..... President, Village of Rochester
Richard G. Rehberg ..... Chairman, Town of Rochester
Richard Reich, Sr. ..... President, Village of North Bay
Lucille Sheahan ..... Chairperson, Town of Dover
Harvey Shebesta ..... District Director, Wisconsin Department of Transportation
Thomas Sorenson ..... President, Village of Union Grove
Lester Wald ..... President, Village of Sturtevant
Thomas N. Wright ..... Director of Community Development, City of Racine

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR OZAUKEE COUNTY

Sylvester N. Weyker ..... Highway Commissioner, Ozaukee County
Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission
Secretary
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
Edward Gieck ..... 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
Stephen M. Stapleton ..... Administrator, City of Port Washington

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR WALWORTH COUNTY

Gerald T. Waelti ..... Highway Commissioner, Walworth County, Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission
Gerald E. Byrnes ..... Chairman, Town of Troy; Walworth County Board Supervisor
Schuyler W. Case ..... Citizen Member
Thomas L. Frank ..... Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
Kenneth Loehndorf ..... Chairman, Town of Whitewater
Robert Magill ..... Citizen Member
Allen L. Morrison ..... Chairman, Town of Sharon; Chairman, Walworth County Park and Planning Commission; Walworth County Board Supervisor
Kenneth Pluess ..... President, Village of East Troy
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
James VanDresser ..... Chairman, Town of Walworth; Walworth County Board Supervisor

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR WAUKESHA COUNTY

Richard A. Bolte ..... Highway Commissioner, Waukesha County, Chairman and Secretary
Kurt W. Bauer ..... 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
Donald R. Holt ..... Chairman, Town of Lisbon
Gerald P. Lee ..... Building Inspector, City of Muskego
Frank M. Mayer ..... Division Administrator, U. S. Department of Transportation, Federal Highway Administration
William A. Muth, Jr. ..... Director of Public Works, City of Brookfield
Robert Schreiber ..... Chairman, Town of Genesee
Harvey Shebesta ..... District Director, Wisconsin Department of Transportation
Floyd W. Usher ..... City Engineer, City of Oconomowoc
Rodney W. Vanden Noven ..... Director of Public Works, City of Waukesha
Max A. Vogt ..... Director of Public Works, Village of Menomonee Falls

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR WASHINGTON COUNTY

Lloyd Jacklin ..... Citizen Member, Village of Jackson, Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission, Secretary
George B. Allman ..... Chairman, Town of Kewaskum
James B. Esselmann ..... Chairman, Town of Trenton
Donald L. Gonring ..... Mayor, City of West Bend
Willard Heppe ..... Chairman, Town of Polk
Carl Hohlweck ..... Chairman, Town of Wayne
Dean T. Kirley ..... Mayor, City of Hartford
John B. Kohl ..... Chairman, Town of Richfield
Melvin W. Kowalke ..... Chairman, Town of Germantown
Adolph Lofy ..... Supervisor, Washington County
Frank M. Mayer ..... Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Dennis Melvin ..... Administrator, City of West Bend
Paul E. Mueller ..... Land Use and Park Administrator, Washington County
David Nigh ..... President, Village of Kewaskum
Jerome O'Connor ..... Administrator, Village of Germantown
Dean Otte ..... Clerk, Village of Slinger
Marshall D. Paust ..... President, Village of Germantown
Helmuth F. Prahl ..... Supervisor, Washington County
Merlin Prost ..... Chairman, Town of Barton
William Ripp ..... City Engineer, City of Hartford
Robert Roskopf ..... Chairman, Town of Erin
Franklin B. Scharrer ..... Highway Commissioner, Washington County
Reuben J. Schmahl ..... Chairman, Town of Jackson
Robert Seebach ..... Chairman, Town of West Bend
Harvey Shebesta ..... District Director, Wisconsin Department of Transportation
John Theusch ..... Chairman, Town of Farmington
Gerald G. Uebele ..... Chairman, Town of Hartford
Carl Vogt ..... Clerk, Town of Addison
Gary Wendorf ..... Plan Commissioner, City of Hartford
Milton Wilkens ..... President, Village of Newburg

TECHNICAL COORDINATING AND ADVISORY COMMITTEE FOR DETAILED PLANNING OF RAPID TRANSIT IMPROVEMENTS IN THE MILWAUKEE NORTHWEST CORRIDOR

Frank P. Zeidler ..... Citizen Member, Milwaukee, Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission, Secretary
Bradley D. Carr ..... Citizen Member, Milwaukee
Dennis J. Conta ..... Citizen Member, Milwaukee
William R. Drew ..... Commissioner, Department of City Development, City of Milwaukee
James N. Elliott ..... President, Milwaukee Building and Construction Trades Council—AFL-CIO
Joel P. Ettinger ..... Regional Administrator, Region V, U. S. Department of Transportation, Urban Mass Transportation Administration
John A. Flaherty ..... Home Secretary, Staff of Congressman James P. Moody
John M. Hartz ..... Director, Bureau of Transit, Wisconsin Department of Transportation
David M. Krahn ..... Executive Assistant to U. S. Senator Robert W. Kasten
Thomas P. Kujawa ..... Managing Director, Milwaukee County Transit System
Edwin J. Laszewski, Jr. ..... City Engineer, City of Milwaukee
Kenneth J. Leonard ..... Director, Bureau of Policy Planning and Analysis, Wisconsin Department of Transportation
Paul F. Mathews ..... Supervisor, Milwaukee County
Charles C. Mulcahy ..... President, Mulcahy and Wherry, S.C.
John O. Norquist ..... Wisconsin State Senator
Frank J. Pelisek ..... Member, Board of Directors, Greater Milwaukee Committee
Pepe Rodriquez ..... Member, Milwaukee County Planning Commission
Harout O. Sanasarian ..... Supervisor, Milwaukee County
Susan Schneider ..... Trustee, Village of Brown Deer
Gerald Schwerm ..... Director of Transportation and Public Works, Milwaukee County
Thomas Seery ..... Wisconsin State Assemblyman
Harvey Shebesta ..... District Director, Wisconsin Department of Transportation
Richard L. Spaulding ..... Alderman, City of Milwaukee
Leo C. Talsky ..... Executive Chief of Staff, Milwaukee County Executive's Office
Jon L. Wellhoefer ..... Executive Vice-President, Milwaukee Redevelopment Corporation

INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON TRANSPORTATION SYSTEM PLANNING AND PROGRAMMING FOR THE RACINE URBANIZED AREA

James F. Rooney ..... Highway Commissioner, Racine County
Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin
Secretary 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 Director, Region V,
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 ..... Director, Bureau of Air Management,
Wisconsin Department of Natural Resources
Frank M. Mayer ..... Division Administrator,
U. S. Department of Transportation,
Federal Highway Administration
Harvey Shebesta ..... District Director, Wisconsin
Department of Transportation
Robert F. White ..... Supervisor, Town of Mt. Pleasant
Representative (vacant) ..... Village of Sturtevant

INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON TRANSPORTATION SYSTEM PLANNING AND PROGRAMMING FOR THE KENOSHA URBANIZED AREA

Gene A. Scharfenorth ..... Highway Commissioner,
Chairman Kenosha County
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin
Secretary Regional Planning Commission
Marsha A. Adams ..... Environmental Protection Assistant,
Region V, U. S. Environmental
Protection Agency
Joel P. Ettinger ..... Regional Director, Region V,
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 ..... 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

Harout O. Sanasarian ..... Supervisor, Milwaukee County;
Chairman Chairman, Milwaukee County Transit
Committee; Commissioner, Southeastern
Wisconsin Regional Planning Commission
F. Thomas Ament ..... County Board Chairman, Milwaukee County
Ralph A. Becker ..... Director of Public Works, City of New Berlin
Richard A. Bolte ..... Highway Commissioner, Waukesha County
William C. Carey ..... Director, Department of Fiscal Liaison, City of Milwaukee
William R. Drew ..... Commissioner, Department of City
Development, City of Milwaukee

INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON TRANSPORTATION SYSTEM PLANNING AND PROGRAMMING FOR THE MILWAUKEE URBANIZED AREA (continued)

Gary J. Hamburg ..... City Administrator, City of Wauwatosa
David A. Kuemmel ..... Commissioner of Public Works,
City of Milwaukee
Edwin J. Laszewski, Jr. ..... City Engineer, City of Milwaukee
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
Udo L. Wilharm ..... City Engineer, City of Oak Creek
Representative (vacant) ..... Local Government, Ozaukee/Washington Counties
Representative (vacant) ..... Milwaukee County Board
Representative (vacant) ..... Milwaukee County Board
Representative (vacant) ..... City of Milwaukee
Representative (vacant) ..... North Shore Suburbs

Ex Officio Nonvoting Members

Kurt W. Bauer ..... Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
Joel P. Ettinger ..... Regional Director, Region V,
U. S. Department of Transportation,
Urban Mass Transportation Administration
John M. Hartz ..... Director, Bureau of Transit,
Wisconsin Department of Transportation
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
Frank M. Mayer ..... Division Administrator,
U. S. Department of Transportation,
Federal Highway Administration
Harvey Shebesta ..... District Director, Wisconsin
Department of Transportation
Ernest R. Vogel ..... Deputy Director, Milwaukee County
Department of Public Works
Ernest Wittwer ..... Director, Bureau of Program Management,
Wisconsin Department of Transportation

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON FREEWAY TRAFFIC MANAGEMENT

Harvey Shebesta ..... District Director, Wisconsin
Chairman Department of Transportation
Kurt W. Bauer ..... Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
Richard A. Bolte ..... Highway Commissioner, Waukesha County
George Gundersen ..... Director, Bureau of Systems Planning,
Wisconsin Department of Transportation
Thomas P. Kujawa ..... Managing Director, Milwaukee
County Transit System
Edwin J. Laszewski, Jr. ..... City Engineer, City of Milwaukee
Frank M. Mayer ..... Division Administrator,
U. S. Department of Transportation,
Federal Highway Administration
Robert J. Mooney ..... Captain, Traffic Bureau, Milwaukee
County Sheriff's Department
Brian F. O'Connell ..... Transportation Planner, Department of
City Development, City of Milwaukee
Frank B. Scharrer ..... Highway Commissioner, Washington County
John E. Schumacher ..... City Engineer, City of West Allis
Gerald Schwerm ..... Director of Transportation, Milwaukee County
Sylvester N. Weyker ..... Highway Commissioner, Ozaukee County

HOAN BRIDGE SOUTH TASK FORCE

Harout O. Sanasarian, Chairman — Commissioner, Southeastern Wisconsin Regional Planning Commission; and Supervisor, Milwaukee County
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
Nancy Cannon — South Shore Resident, Bay View
Melvin Cooper — S. Bombay Resident, St. Francis
Daniel Cupertino, Jr. — Supervisor, Milwaukee County
Michael J. Dwyer — Attorney, E. Oklahoma Resident, Bay View
August F. Gamalski — E. Tripoli Resident, St. Francis; Chairman, South Side Resident Council of Project Involve
Michael P. Grimmer — Designee for State Senator John O. Norquist
Richard A. Grobschmidt — Wisconsin State Representative
John Gurda — E. Nock Resident, Bay View
Lawrence P. Kelly — Mayor, City of Cudahy
John J. Kroll — E. Allerton Resident, St. Francis
Richard B. Kuzminski — Supervisor, Milwaukee County
Edwin J. Laszewski, Jr. — City Engineer, City of Milwaukee
Paul Medved — S. Indiana Resident, Bay View
Thomas J. Parker — President, Milwaukee County Labor Council
Frank J. Pelisek — Greater Milwaukee Committee
John R. Plewa — Wisconsin State Senator
Audrey Quinsey — S. Superior Resident, Bay View
Jeffery Remsik — Resident, Bay View
Gerald Schwerm — Director of Transportation, Milwaukee County
Bernadette Skibinski — Supervisor, Milwaukee County
Henry P. Szymanski — S. Quincy Resident, Bay View
Anthony Szymczak — Bay View Terrace Condominium Resident; Secretary, South Side Businessmen's Club of Milwaukee
Louise M. Tesmer — Wisconsin State Representative
Robert Ullenberg — President, Bay View Business Association
Milton Vretenar — Mayor, City of St. Francis
Evan Zeppos — Designee for State Representative Walter J. Kunicki

FOX RIVER WATERSHED COMMITTEE

William D. Rogan, Chairman — Commissioner, Southeastern Wisconsin Regional Planning Commission
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
Nolan Anderson — Agricultural Agent, Walworth County
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 W. Gauger — President, Village of Waterford
Robert E. Harvey — Citizen Member, Town of Mukwonago
Ruth Hilfiker — Resource Agent, UW-Extension, Kenosha County and Racine County
Karl B. Holzwarth — Director, Park Commission, 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
John H. Mielke — Consulting Engineer, Ruekert & Mielke, Waukesha
Raymond J. Moyer, Jr. — Citizen Member, Town of Waterford
Sterling A. Peck — Chairman, Town of Vernon
Eistein Pedersen — President, Village of Rochester
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

ROOT RIVER WATERSHED COMMITTEE

David F. Schulz, Chairman — Director of Parks, Recreation and Culture, Milwaukee County
Thomas N. Wright, Vice-Chairman — Director of Community Development, City of Racine
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
John M. Bennett — City Engineer, City of Franklin
James J. Blazek — City Engineer, 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
Frederick L. Licau — President, Village of Hales Corners
Patrick Marchese — Executive Director, Milwaukee Metropolitan Sewerage District
Stephen F. Olsen — Mayor, City of Racine
Nick T. Paulos — Village Engineer, Village of Greendale
James F. Rooney — Highway Commissioner, Racine County
Wayne G. Salentine — Mayor, City of Muskego
Milo G. Schocher — Mayor, City of Oak Creek
John E. Schumacher — City Engineer, City of West Allis
Patricia Trochlell — Water management Specialist, Southeast District, Wisconsin Department of Natural Resources
Udo L. Wilharm — City Engineer, City of Oak Creek

MILWAUKEE RIVER WATERSHED COMMITTEE

Richard W. Cutler, Chairman — Attorney, Quarles and Brady, Milwaukee
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
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
Arthur D. Doll — Director, Bureau of Planning, Wisconsin Department of Natural Resources
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
David A. Kuemmel — Commissioner of Public Works, City of Milwaukee

MILWAUKEE RIVER WATERSHED COMMITTEE
(continued)

Patrick Marchese ..... Executive Director, Milwaukee Metropolitan Sewerage District
Paul E. Mueller ..... Land Use and Park Administrator, Washington County
Steve Narveson ..... Director, Ozaukee County Department of Environmental Health
Donald A. Roensch ..... Administrator/Engineer, City of Mequon
David F. Schulz ..... Director of Parks, Recreation and Culture, Milwaukee County
George Watts ..... President, George Watts & Son, Inc., Milwaukee
Donald W. Webster ..... Supervisor, Town of Fredonia
Richard E. Zarling ..... Director of Elementary Education, Kewaskum Community Schools

MENOMONEE RIVER WATERSHED COMMITTEE

David A. Kuemmel ..... Commissioner of Public Works, City of Milwaukee, Chairman
Gordon Rozmus ..... City Planner, City of Wauwatosa, Vice-Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission, Secretary
Arthur D. Doll ..... Director, Bureau of Planning, Wisconsin Department of Natural Resources
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 ..... Dean, College of Engineering, Marquette University
Patrick Marchese ..... Executive Director, Milwaukee Metropolitan Sewerage District
Donald A. Roensch ..... Administrator/Engineer, City of Mequon
David F. Schulz ..... Director of Parks, Recreation and Culture, Milwaukee County
John E. Schumacher ..... City Engineer, City of West Allis
Walter J. Tarmann ..... Director, Waukesha County Park and Planning Commission
Lloyd L. Turner ..... Director of Public Works, Village of Germantown
Clark E. Wangerin ..... City Engineer, City of Brookfield

KINNICKINNIC RIVER WATERSHED COMMITTEE

David F. Schulz ..... Director of Parks, Recreation and Culture, Milwaukee County, Chairman
Edwin J. Laszewski, Jr. ..... City Engineer, City of Milwaukee, Vice-Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission, Secretary
Raymond T. Dwyer ..... City Engineer, City of Greenfield
Patrick Marchese ..... Executive Director, Milwaukee Metropolitan Sewerage District
Stanley Polewski ..... Proprietor, Polewski Pharmacy, Milwaukee
Ronald J. Rutkowski ..... Director of Public Works, City of Cudahy
Dr. 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 Zoning Administration, Kenosha County, Chairman
Jerome Konicek ..... Chairman, Mt. Pleasant Drainage District, Vice-Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission, Secretary
Les Aspin ..... Congressman, 1st District
Eual W. Bodenbach ..... Development Coordinator, Town of Mt. Pleasant
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
Karl B. Holzwarth ..... Park Director, Racine County
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
Stanley Renick ..... Member, Kenosha County Country Club
Lester Wald ..... President, Village of Sturtevant

OAK CREEK WATERSHED COMMITTEE

Norbert S. Theine ..... Administrator, City of South Milwaukee, Chairman
Paul E. Milewski ..... Director of Planning, City of Oak Creek, Vice-Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission, Secretary
John M. Bennett ..... City Engineer, City of Franklin
Thomas D. Borgwardt ..... Airport Engineer, Milwaukee County Department of Public Works
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
Edwin J. Laszewski, Jr. ..... City Engineer, City of Milwaukee
Patrick Marchese ..... Executive Director, Milwaukee Metropolitan Sewerage District
John D. St. John ..... Supervisor, Milwaukee County
David F. Schulz ..... Director of Parks, Recreation and Culture, Milwaukee County
Douglas R. Sleight ..... Member, South Milwaukee Yacht Club

TECHNICAL ADVISORY COMMITTEE ON REGIONAL WATER QUALITY MANAGEMENT PLANNING

Patrick Marchese ..... Executive Director, Milwaukee Metropolitan Sewerage District, Chairman
Raymond J. Kipp ..... Dean, College of Engineering, Marquette University, Vice-Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission, Secretary
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
Lester O. Hoganson ..... General Manager, Racine Water and Wastewater Utility

TECHNICAL ADVISORY COMMITTEE ON REGIONAL WATER QUALITY MANAGEMENT PLANNING (continued)

Helen M. Jacobs ..... League of Women Voters; President, Southeast Wisconsin Coalition for Clean Air
Ronald W. Kazmierczak ..... Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
David A. Kuemmel ..... Commissioner of Public Works, City of Milwaukee
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 ..... 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/Engineer, City of Mequon
Marvin E. Schroeter ..... Secretary-Treasurer and General Manager, United Sewer and Water, Inc., Menomonee Falls
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
Vacant ..... Project Officer, Planning Branch, U. S. Environmental Protection Agency

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON COASTAL MANAGEMENT IN SOUTHEASTERN WISCONSIN

Dr. Norman P. Lasca ..... Professor, Department of Geological Sciences, University of Wisconsin-Milwaukee — Chairman
David F. Schulz ..... Director of Parks, Recreation and Culture, Milwaukee County — Vice-Chairman
Donald M. Reed ..... Principal Specialist-Biologist, Southeastern Wisconsin Regional Planning Commission — Secretary
Hubert J. Albert ..... Port Washington Yacht Club
Carl W. Birks ..... Director, Engineering, Environment and Energy, Milwaukee County
Josephine Boucher ..... Member, North Shore League of Women Voters
Sol Burstein ..... Executive Vice-President, Wisconsin Electric Power Company
Benjamin C. Chapla ..... Coastal Coordinator, Town of Caledonia
Noreen R. Cook ..... Manager, Village of Fox Point
James L. Fonk ..... Chairman, Kenosha County Board
Ruth Hilfiker ..... Natural Resource Agent, Racine County
David A. Kuemmel ..... Commissioner of Public Works, City of Milwaukee
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 ..... Professor, Soil Mechanics, College of Engineering, Marquette University; Engineers and Scientists of Milwaukee
Mary C. Nelson ..... City of South Milwaukee Shoreline Property Owner
C. William Nelson ..... Member, Great Lakes Sports Fisherman's Club
Dr. William T. Painter ..... President, Foundation Engineering, Inc., Milwaukee
James M. Phinney ..... Resident, Village of Fox Point
Ronald J. Rutkowski ..... Director of Public Works, City of Cudahy
Phil Sander ..... Executive Secretary, Southeastern 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

David F. Schulz ..... Director of Parks, Recreation and Culture, Milwaukee County — Chairman
Loren R. Anderson ..... President, Geneva Lake Development Corporation, Village of Williams Bay
Donald B. Brick ..... Recreation Agent, Walworth County
Delbert J. Cook ..... Chairman, Cedar Creek Restoration Council
Norbert H. Dettmann ..... Supervisor, Washington County
Arthur D. Doll ..... Director, Bureau of Planning, Wisconsin Department of Natural Resources
Karl B. Holzwarth ..... Park Director, Racine 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
George L. Schlitz ..... Former Chairman, Kenosha County Park Commission
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

TECHNICAL ADVISORY COMMITTEE MILWAUKEE HARBOR ESTUARY COMPREHENSIVE WATER RESOURCES MANAGEMENT PLAN

Herbert A. Goetsch ..... Former Commissioner, Public Works Department, City of Milwaukee — Chairman
Helen M. Jacobs ..... Member, Milwaukee River Restoration Council — Vice-Chairman
Kurt W. Bauer ..... Executive Director, Southeastern Wisconsin Regional Planning Commission — Secretary
Earl K. Anderson ..... Harbor Engineer, Port of Milwaukee
Jeannette Bell ..... Member, League of Women Voters
Kent B. Fuller ..... Chief of Environmental Planning, Great Lakes National Program Office, U. S. Environmental Protection Agency
John D. Haliday ..... Rear Commodore, Milwaukee Yacht Club
Jay G. Hochmuth ..... Assistant Administrator, Division of Environmental Standards, Wisconsin Department of Natural Resources
Peter E. Hughes ..... Hydrologist, U. S. Geological Survey
Andrew E. Jackson ..... Chairman of the Board, Edward E. Gillen Company
Ronald W. Kazmierczak ..... Assistant District Director, Wisconsin Department of Natural Resources
Orville L. Kurth ..... District Conservationist, U. S. Soil Conservation Service
Dr. Norman P. Lasca ..... Professor, Department of Geological Sciences, University of Wisconsin-Milwaukee
Edwin J. Laszewski, Jr. ..... City Engineer, City of Milwaukee
Patrick Marchese ..... Executive Director, Milwaukee Metropolitan Sewerage District
Jan Marsh ..... Member, Wisconsin Audubon Society
Robert J. Miller ..... President, Miller Compressing Company
William D. Rogan ..... Commissioner, Southeastern Wisconsin Regional Planning Commission
Rudolpho N. Salcedo ..... Environmental Scientist, Department of City Development

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON REGIONAL PARK AND OPEN SPACE PLANNING (continued)

Harout O. Sanasarian ..... Supervisor, Milwaukee County
David F. Schulz ..... Director of Parks, Recreation and Culture, Milwaukee County
Gerald Schwerm ..... Director of Transportation and Public Works, Milwaukee County
Walter T. Woelfle ..... Attorney, Wisconsin Electric Power Company
Dr. Alphonse E. Zanoni ..... Professor, Department of Civil Engineering, Marquette University

OCONOMOWOC RIVER PRIORITY WATERSHED PLAN DEVELOPMENT ADVISORY COMMITTEE

Roland L. Merz ..... Supervisor, Waukesha County
Chairman
John B. Kohl ..... Chairman, Town of Richfield
Vice-Chairman
Robert P. Biebel ..... Chief Environmental Engineer, Southeastern
Secretary Wisconsin Regional Planning Commission
William E. Bartel ..... Supervisor, Town of Ixonia
Lisa L. Conley ..... Representative, Village of Lac La Belle and Lac La Belle Management District
Fern Dickson ..... Supervisor, Town of Summit
Bruce Haukom ..... Zoning Administrator, Jefferson County
Raymond E. Hollatz ..... Supervisor, Town of Concord
Martha J. Ibach ..... Citizen Member, Village of Oconomowoc Lake
Carl F. Jaeger ..... Supervisor, Jefferson County
K. M. Kerstein ..... Senior Zoning Specialist, Waukesha County
Donald M. Marz ..... Alderman, City of Delafield
Katherine C. Matschnig ..... Secretary, Okauchee Lake Management District
Peter J. Mihelich ..... Citizen Member, Town of Merton
George A. Morris ..... Director of Environmental Health, Waukesha County
Paul E. Mueller ..... Administrator, Washington County Land Use and Park Department
George L. Oncken ..... Acting Project Manager, Oconomowoc River Priority Watershed; Chairman, University of Wisconsin-Extension, Waukesha County
Dean A. Otte ..... Clerk, Village of Slinger
Robert E. Roskopf ..... Supervisor, Town of Erin
Bernard G. Schultz ..... Director of Public Works, City of Oconomowoc; Representative, Fowler Lake Management District
Harold Westerman ..... Supervisor, Washington County
Carol A. Wilson ..... Supervisor, Town of Oconomowoc

ADVISORY COMMITTEE ON STORMWATER DRAINAGE AND FLOOD CONTROL PLANNING FOR THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT AND DISTRICT SERVICE AREAS

Robert J. Mikula ..... Citizen Member
Chairman
Ted B. Prawdzik ..... Citizen Member
Vice-Chairman
Kurt W. Bauer ..... Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
John M. Bennett ..... City Engineer, City of Franklin
Dr. Clifford Crandall ..... Professor of Civil Engineering, Marquette University
John M. Fredrickson ..... Manager, Village of River Hills
Richard H. Halfman ..... Director of Public Works, Village of Brown Deer
Edwin J. Laszewski, Jr. ..... City Engineer, City of Milwaukee; and Commissioner, Milwaukee Metropolitan Sewerage District
Patrick Marchese ..... Executive Director, Milwaukee Metropolitan Sewerage District
Gloria L. McCutcheon ..... District Director, Southeast District, Wisconsin Department of Natural Resources
Dr. James Papandrea ..... Citizen Member
David F. Schulz ..... Director of Parks, Recreation and Culture, Milwaukee County
John E. Schumacher ..... City Engineer, City of West Allis
Gerald Schwerm ..... Director of Transportation and Public Works, Milwaukee County
S. Howard Young ..... Engineering and Operations Administrator, City of Wauwatosa

MILWAUKEE HIGH LAKE LEVEL IMPACT STUDY PROSPECTUS ADVISORY COMMITTEE

Harout O. Sanasarian ..... Commissioner, Southeastern
Chairman Wisconsin Regional Planning Commission, and Supervisor, Milwaukee County
Kurt W. Bauer ..... Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
Frank R. Boucher ..... Director-Environmental Department, Wisconsin Electric Power Company
William R. Drew ..... Commissioner, Department of City Development, Milwaukee
John A. Erickson ..... City Engineer, City of Milwaukee
Mark S. Grazioli ..... Chief, Construction Operations Division, Detroit District, U. S. Army Corps of Engineers
Lee C. Jensen ..... Commissioner of Building Inspection, City of Milwaukee
J. Philip Keillor ..... Coastal Engineer, Sea Grant Institute, University of Wisconsin-Madison
Dr. Norman P. Lasca ..... Professor, Department of Geological Sciences, University of Wisconsin-Milwaukee
Patrick Marchese ..... Executive Director, Milwaukee Metropolitan Sewerage District
Gary L. Nelson ..... Supervisor, Water Regulation and Zoning Program, Wisconsin Department of Natural Resources
David F. Schulz ..... Director of Parks, Recreation and Culture, Milwaukee County
Gerald Schwerm ..... Director of Transportation and Public Works, Milwaukee County
Kenneth J. Szallai ..... Director, Port of Milwaukee
Jean B. Tyler ..... Commissioner, Southeastern Wisconsin Regional Planning Commission; Executive Director, Public Policy Forum
William P. Wenzler ..... Architect, Wenzler & Associates

REGIONAL INFRASTRUCTURE STUDY PROSPECTUS STEERING COMMITTEE

Patrick Marchese ..... Executive Director, Milwaukee
Chairman Metropolitan Sewerage District
Gerald Schwerm ..... Director of Transportation and
Vice-Chairman Public Works, Milwaukee County
Kurt W. Bauer ..... Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission
Richard A. Bolte ..... Highway Commissioner, Waukesha County
John B. Capelle ..... Planner, City of West Bend
Richard Farrenkopf ..... Manager, Village of Menomonee Falls
George Gundersen ..... Director, Bureau of Systems Planning, Wisconsin Department of Transportation
Lester O. Hoganson ..... General Manager, Wastewater Utility, City of Racine
Joseph H. Kuranz ..... Former General Manager, Waukesha Water Utility (retired); Former President, American Water Works Association
Edwin J. Laszewski, Jr. ..... City Engineer, City of Milwaukee
William J. Mielke ..... Ruekert & Mielke, Inc., Consulting Engineers
O. Fred Nelson ..... General Manager, Kenosha Water Utility
Donald A. Roensch ..... Administrator/Engineer, City of Mequon
David F. Schulz ..... Director of Parks, Recreation and Culture, Milwaukee County
John E. Schumacher ..... City Engineer, City of West Allis
Randall E. Wade ..... Director, Bureau of Research, Wisconsin Department of Development
S. Howard Young ..... Engineering Administrator, City of Wauwatosa

TECHNICAL ADVISORY COMMITTEE FOR THE MILWAUKEE COUNTY NORTH SHORE EROSION STUDY

Lucia Petrie ..... Trustee, Village of Shorewood
Chairman

Michael C. Harrigan ..... Manager, Village of Whitefish Bay
Vice-Chairman

Kurt W. Bauer ..... Executive Director, Southeastern
Secretary Wisconsin Regional Planning Commission

Shirl C. Abbey ..... Manager, Village of Shorewood

Dr. Arthur S. Brooks ..... Resident, Village of Whitefish Bay;
Professor, Department of Biological
Sciences, University of Wisconsin-Milwaukee

Leonard C. Engelhardt ..... County Landscape Architect,
Milwaukee County Department of Parks,
Recreation and Culture

Roberta Hazlett ..... Lakeshore Property Owner,
Village of Shorewood

Ralph P. Knoernschild ..... Trustee, Village of Whitefish Bay

Edwin J. Laszewski, Jr. ..... City Engineer, City of Milwaukee

Dr. James F. Lubner ..... Environmental Specialist, Sea Grant
College Program, University of Wisconsin

Kristine Nelson ..... Trustee, Village of Fox Point

Neal T. O'Reilly ..... Environmental Specialist, Wisconsin
Department of Natural Resources

Louise Petering ..... Citizen Member, Village of Fox Point

Dr. Howard J. Pincus ..... Professor, Department of Geological
Sciences, University of Wisconsin-Milwaukee

Penny E. Podell ..... Supervisor, Milwaukee County

Henry A. Scholz ..... Manager, Village of Fox Point

Appendix C

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION STAFF: 1986

EXECUTIVE DIVISION

Kurt W. Bauer, PE, RLS, AICP
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 I

INFORMATION SYSTEMS DIVISION

John W. Ernst
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 L. Henley
Bruce W. Lecus
Richard A. Runte
Martin E. Staszak
Senior Systems Analysts

Victor J. Janka, Jr.
Donald S. Johnson
Michael J. Miller
Senior Programmer/Analysts

Robert J. Burnell
Lewis W. Snyder, Jr.
Programmers

Robert J. Baier
Lawrence D. Langowski
Community Services Representatives

Michael J. Soyck
Operations Supervisor

Heather W. Kluth
Lead Computer Operator

Kenneth B. Long, Jr.
Computer Operator

Kristine M. Engelhardt
Melody M. Patrie
Communications Specialists

Karen J. Goralski
Lead Digitizer Operator

Ulysses L. Madison
Jeanne M. Rau
Carol M. Salvadori
Lon M. Scott
Digitizer Operators

INFORMATION SYSTEMS DIVISION (continued)

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

Robert S. McGonigal
Planner

ECONOMIC DEVELOPMENT PLANNING DIVISION

Gordon M. Kacala
Chief Economic Development Planner

John R. Meland
Principal Planner

Jean M. Plum
Senior Planner

Sherry L. Jones
Research Analyst

ADMINISTRATIVE SERVICES DIVISION

Joan A. Zenk
Administrative Officer

Rita L. Rolfson
Bookkeeper

Kari L. Lurvey
Bookkeeping Clerk

Luella M. Fredrickson
Secretary II

Gretel S. Weltmer
Receptionist

ENVIRONMENTAL PLANNING DIVISION

Robert P. Biebel, PE
Chief Environmental Engineer

Richard S. Grant
Curtis R. Hulterstrum, PE
Principal Engineers

Donald M. Reed
Principal Specialist

Ronald J. Printz
Senior Engineer

David B. Kendziorski
Principal Planner

James R. D'Antuono
Senior Planner

David J. Ostrowski
Engineer

Judy K. Musich
Planner

Craig D. Thompson
Research Analyst

Irene A. Brown
Secretary I

CARTOGRAPHIC AND GRAPHIC ARTS DIVISION

Leland H. Kreblin
Chief Planning Illustrator

Ronald H. Heinen
B. Lynn Nowak
Donald P. Simon
Principal Planning Draftsmen

Jacqueline B. Hartig
Jean C. Johnson
Bergetta J. Ruehmer
Planning Draftsmen

Ruth D. Jaeger
Word Processor

Wendy A. Koeppl
Office Equipment Operator

TRANSPORTATION PLANNING DIVISION

Donald R. Martinson
Chief Transportation Engineer

Robert E. Beglinger
Kenneth H. Voigt, PE
Principal Engineers

Albert A. Beck
Otto P. Dobnick
Principal Planners

Andrew L. Schwartz, AICP
Senior Planner

LAND USE PLANNING DIVISION

Bruce P. Rubin
Chief Land Use Planner

Gerald H. Emmerich, Jr.
William J. Stauber, AICP
Principal Planners

Donald G. Dittmar
Timothy G. Ritten
Todd L. Turzinski
Senior Specialists

David A. Schilling
Specialist

Dennis K. Lefevre
Planner

Joyce G. Pariseau
Research Aide

Shelly A. Swanson
Secretary I

INTERAGENCY STAFF ASSIGNMENTS

Gary K. Korb
Natural Resources Agent
University of Wisconsin-Extension

Jeffrey L. Kiefer
Project Specialist
Wisconsin Department of Natural Resources

Appendix D

PUBLICATIONS OF THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION: 1962-DECEMBER 1986

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
Overall Work Program—1979 Southeastern Wisconsin Regional Planning Commission, October 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
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
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

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
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

PLANNING REPORTS—continued

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

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: 2nd Edition, 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, 2nd Edition, 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
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 the 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

TECHNICAL REPORTS—continued

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, October 1976
No. 10 - The Land Use and Arterial Street System Plans, Village of Jackson, Washington County, 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, 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, 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

COMMUNITY ASSISTANCE PLANNING REPORTS—continued

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
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
No. 48 - A Water Quality Management Plan for Ashippun Lake, Waukesha County, Wisconsin, January 1982
No. 49 - A Land Use and Traffic Circulation Plan for the Village of Hartland: 2000, Waukesha County, Wisconsin, July 1981
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: 2000, January 1982
No. 52 - Housing Opportunities Guide for the Southeastern Wisconsin Region, December 1980

COMMUNITY ASSISTANCE PLANNING REPORTS—continued

No. 53 - A Water Quality Management Plan for Okauchee Lake, Waukesha County, Wisconsin, August 1981
No. 54 - A Water Quality Management Plan for North Lake, Waukesha County, Wisconsin, July 1982
No. 55 - A Land Use Plan for the Village of Darien: 2000, Walworth County, Wisconsin, December 1981
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
No. 58 - A Water Quality Management Plan for Pewaukee Lake, March 1984
No. 59 - A Development Plan for the Whitnall Neighborhood, City of Franklin, Milwaukee County, Wisconsin, September 1985
No. 60 - A Water Quality Management Plan for Geneva Lake, Walworth County, Wisconsin, October 1985
No. 61 - A Public Transportation Service Plan for Washington County, October 1981
No. 62 - A Traffic Circulation Plan for the West Bend Central Business District, August 1981
No. 63 - A Development Plan for Echo Lake Neighborhood, City of Burlington, Racine County, Wisconsin, August 1982
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
No. 64 - 2nd Edition, Sanitary Sewer Service Area for the City of Muskego, Waukesha County, Wisconsin, March 1986
No. 65 - A Public Transportation Service Plan for Walworth County, January 1982
No. 66 - A Park and Open Space Plan for the City of New Berlin, Waukesha County, Wisconsin, October 1981
No. 67 - A Traffic Circulation Plan for Lac La Belle, Waukesha County, Wisconsin, March 1982
No. 68 - Upland Disposal Area Siting Study for Dredged Materials from the Port of Milwaukee, December 1981
No. 69 - A Land Use and Urban Design Plan for the City of Elkhorn: 2000, City of Elkhorn, Walworth County, Wisconsin, January 1985
No. 70 - Sanitary Sewer Service Area for the Village of Germantown, Washington County, Wisconsin, July 1983
No. 73 - A Shoreland Development Management Study for Racine County, Wisconsin, January 1982
No. 74 - Kenosha County Overall Economic Development Program (OEDP) Update—1981, April 1982
No. 74 - 2nd Edition, Kenosha County Overall Economic Development Program (OEDP) Plan—1986 Update, September 1986
No. 75 - A Solid Waste Management Plan for Walworth County, Wisconsin, September 1982
No. 76 - A Land Use Plan for the Town and Village of Pewaukee: 2000, December 1982
No. 77 - A Wetland Protection and Management Plan for the City of Waukesha and Environs, February 1983
No. 78 - Sanitary Sewer Service Area for the City of Burlington, April 1986
No. 79 - Racine Area Transit System Plan and Program: 1984-1988, May 1984
No. 80 - A Lake Michigan Public Access Study for Racine County, Wisconsin, September 1982
No. 81 - Hartford Area Traffic Management Plan, June 1983
No. 82 - A Central Transfer Site Location and Design Analysis for the City of Waukesha Transit System, December 1982
No. 83 - A Transit System Operations Analysis for the City of Waukesha Transit System, February 1983
No. 84 - Sanitary Sewer Service Area for the Village of Sussex, Waukesha County, Wisconsin, February 1983
No. 85 - A Land Use Plan for the Village of Eagle: 2000, Waukesha County, Wisconsin, September 1983
No. 86 - A Lake Michigan Coastal Erosion Management Study for Racine County, Wisconsin, October 1982

COMMUNITY ASSISTANCE PLANNING REPORTS—continued

No. 87 - A Farmland Preservation Plan for Ozaukee County, Wisconsin, May 1983
No. 88 - A Land Use Management Plan for the Chiwaukee Prairie-Carol Beach Area of the Town of Pleasant Prairie, Kenosha County, Wisconsin, February 1985
No. 89 - A Stormwater Management Plan for the Village of Sussex, Waukesha County, Wisconsin, October 1983
No. 90 - Sanitary Sewer Service Area for the Village of Saukville, Ozaukee County, Wisconsin, September 1983
No. 92 - Sanitary Sewer Service Area for the City of Hartford, Washington County, Wisconsin March 1984
No. 93 - Sanitary Sewer Service Area for the Village of Hartland, Waukesha County, Wisconsin, April 1985
No. 95 - Sanitary Sewer Service Area for the City of Port Washington, Ozaukee County, Wisconsin, September 1983
No. 96 - Sanitary Sewer Service Area for the Village of Fredonia, Ozaukee County, Wisconsin July 1984
No. 97 - Sanitary Sewer Service Area for the Village of Belgium, Ozaukee County, Wisconsin, November 1984
No. 98 - A Water Quality Management Plan for Friess Lake, Washington County, Wisconsin, August 1983
No. 99 - Sanitary Sewer Service Area for the Village of Butler, Waukesha County, Wisconsin, February 1984
No. 100 - Sanitary Sewer Service Area for the City of Waukesha and Environs, Waukesha County, Wisconsin, June 1985
No. 101 - Kenosha Area Transit System Plan and Program: 1984-1988, June 1984
No. 102 - City of Whitewater Overall Economic Development Program Plan, January 1985
No. 103 - Sanitary Sewer Service Area for the Allenton Area, Washington County, Wisconsin, September 1984
No. 104 - A Park and Open Space Plan for the City of West Bend, Washington County, Wisconsin, June 1985
No. 106 - Sanitary Sewer Service Areas for the City of Kenosha and Environs, Kenosha County, Wisconsin, November 1985
No. 107 - East Moreland Boulevard Short-Range and Long-Range Highway Improvement Plan, April 1984
No. 110 - A Lake Michigan Coastal Erosion and Related Land Use Management Study for the City of St. Francis, Wisconsin, August 1984
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
No. 114 - Village of Shorewood Comprehensive Traffic Plan, Milwaukee County, Wisconsin, September 1984
No. 115 - A Fire Station Building Program and Site Analysis, Village of Sturtevant, Racine County, Wisconsin, September 1984
No. 116 - Milwaukee County Overall Economic Development Program Plan, October 1985
No. 117 - Washington County Overall Economic Development Program Plan, December 1985
No. 118 - Waukesha County Overall Economic Development Program Plan, December 1985
No. 121 - A Stormwater Management Plan for the Village of Hales Corners, Milwaukee County, Wisconsin, March 1986
No. 122 - A Park and Open Space Plan for the Town of Vernon, Waukesha County, Wisconsin, March 1985
No. 124 - Sanitary Sewer Service Area for the Village of Jackson, Washington County, Wisconsin, May 1985
No. 125 - A Transportation Plan for the Village of Germantown: 2000, Washington County, Wisconsin, October 1985

COMMUNITY ASSISTANCE PLANNING REPORTS—continued

No. 127 - Sanitary Sewer Service Area for the City of Delafield and the Village of Nashotah and Environs, Waukesha County, Wisconsin, October 1985
No. 128 - Sanitary Sewer Service Area for the Village of Slinger, Washington County, Wisconsin, November 1985
No. 130 - A Stormwater Drainage and Flood Control Policy Plan for the Milwaukee Metropolitan Sewerage District, March 1986
No. 140 - A Park and Open Space Plan for the Town of Jackson, Washington County, Wisconsin, September 1986
No. 141 - Sanitary Sewer Service Area for the Waterford/Rochester Area, Racine County, Wisconsin, May 1986
No. 143 - Sanitary Sewer Service Area for the Town of Salem Utility District No. 2, Kenosha County, Wisconsin, February 1986
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, October 1986
No. 146 - A Wildlife Habitat Management Plan for the Nicholson Wildlife Center, Town of Caledonia, Racine County, Wisconsin, May 1986
No. 147 - Sanitary Sewer Service Area for the City of Racine and Environs, Racine County, Wisconsin, November 1986
No. 148 - A Park and Open Space Plan for the Village of Walworth, Walworth County, Wisconsin, November 1986

MEMORANDUM REPORTS

No. 1 - Cedarburg Central Business District Parking Study, City of Cedarburg, Ozaukee County, Wisconsin, December 1986
No. 2 - Courthouse Parking Study, Ozaukee County, Wisconsin, December 1986
No. 3 - Alternative Industrial Park Site Location and Cost Estimate Analysis, City of Oconomowoc, Waukesha County, Wisconsin, December 1986
No. 4 - Pilgrim Parkway Traffic Study, Village of Elm Grove, Waukesha County, Wisconsin, December 1986
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. 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

ECONOMIC DEVELOPMENT PROFILES

Economic Development Profiles have been prepared for the Southeastern Wisconsin Region, for each of the seven counties in the Region, 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

Milwaukee County
- 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 Burlington
- Town of Caledonia
- Town of Dover
- Town of Mt. Pleasant
- Town of Norway

ECONOMIC DEVELOPMENT PROFILES—continued

Racine County
- Town of Raymond
- Town of Rochester
- Town of Waterford
- Town of Yorkville

Walworth County
- City of Elkhorn
- City of Lake Geneva
- City of Whitewater

Washington County
- City of Hartford
- City of West Bend
- Village of Germantown
- Village of Slinger

Waukesha County
- City of Brookfield
- City of Delafield
- City of Muskego

Waukesha County
- City of New Berlin
- City of Oconomowoc
- City of Waukesha
- Village of Butler
- Village of Elm Grove
- Village of Hartland
- Village of Menomonee Falls
- Village of Mukwonago
- Village of Pewaukee
- Village of Sussex

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, Lake Geneva
- 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

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

LAKE USE REPORTS—MILWAUKEE RIVER WATERSHED—continued

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
No. ML-15, Barton Pond
No. ML-1, Big Cedar Lake
No. ML-8, Silver Lake
No. ML-16, West Bend Pond

TECHNICAL RECORDS

Volume 1 - No. 1, October-November 1963

Regional Planning in Southeastern Wisconsin
by Kurt W. Bauer, Executive Director
The SEWRPC Land Use-Transportation Study
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

Volume 1 - No. 2, December 1963-January 1964

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
Aerial Photographs and Their Use in the Land Use Inventory
by Harlen E. Clinkenbeard, Land Use Planning Chief
A Backward Glance: The U. S. Public Land Survey in Southeastern Wisconsin
by Richard E. Rehberg, Editor

Volume 1 - No. 3, February-March 1964

Conducting the Truck and Taxi Survey
by Sheldon W. Sullivan, Administrative Officer
Conducting the Truck and Taxi Postal Questionnaire Survey
by Wade G. Fox, Cartography and Design Supervisor
Conducting the External Survey
by William E. Creger, P.E., Traffic Operations Engineer
Rail and Transit Inventory and Design of the Transit Network
by David A. Kuemmel, P.E., Transportation Planning Engineer
A Backward Glance: The Man-Made Ice Age
by Richard E. Rehberg, Editor

TECHNICAL RECORDS—continued

Volume 1 - No. 4, April-May 1964

The Application of Soil Studies to Regional Planning
by Kurt W. Bauer, Executive Director
Coding
by Wade G. Fox, Cartography and Design Supervisor and
Robert L. Fisher, Coding Supervisor
Inventory of Existing Outdoor Recreation Facilities
and Historic Sites in Southeastern Wisconsin
by Theodore F. Lauf, Research Analyst
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Orlando E. Delogu, Financial Resources and Legal Analyst
O & D Surveys Accuracy Checks
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A Backward Glance: Railroad Transportation in Southeastern Wisconsin
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A Backward Glance: The Street Railway in Milwaukee
by Henry M. Mayer, Administrative Assistant,
Milwaukee & Suburban Transport Corporation

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Determination of Runoff for Urban Storm Water Drainage System Design
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Inventory of Land Development Regulations in Southeastern 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
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Transit System Development Standards
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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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Sheldon W. Sullivan, Administrative Officer

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Characteristics of Travel in the Milwaukee Central Business District
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A Backward Glance: Downtown Yesterdays
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by Martha J. Ketelle, Department of Geology and Geophysics,
University of Wisconsin-Madison, Wisconsin

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United States, Wisconsin, and the Southeastern Wisconsin Region: 1896-1970
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Jean Lusk, SEWRPC Research Analyst
The Changing Factorial Ecology of Milwaukee's Black Ghetto
by Harold McConnell, Richard A. Karsten, and Marilyn Ragusa
A Backward Glance: Environmental Corridors of Yesterday and Today
by Dr. Jeremy M. Katz, Research Psychologist and Jeanne Sollen, Editor

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Is There a Groundwater Shortage in Southeastern Wisconsin?
by Douglas A. Cherkaver and Vinton W. Bacon,
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Water Quality Management Planning Program for Southeastern Wisconsin
by Thomas R. Sear, P.E., Senior Water Resources Engineer, SEWRPC
Evaluation of a Water Quality Standard for Total Phosphorus in
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by David B. Kendziorski, Senior Planner, SEWRPC
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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in Milwaukee County, Wisconsin
by Donald G. Mikulic, Staff Geologist, Illinois State Geological Survey; and
Joanne Kluessendorf, Geologic Research Assistant, Illinois State Geological Survey,
Champaign, Illinois
Inventory of Solid Waste Management Facilities in Southeastern Wisconsin: 1980
by Robert P. Biebel, Principal Engineer, SEWRPC, and
Joseph E. Stuber, Senior Engineer, SEWRPC
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by Jean M. Lusk, SEWRPC Planner
A Backward Glance—Historic Evolution of the Local Governmental Structure
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University of Wisconsin-Milwaukee,
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Characteristics of Travel in Six Major Attractors
in the Southeastern Wisconsin Region
by Jean M. Lusk, SEWRPC Planner and
John L. Zastrow, SEWRPC Senior Specialist
Shopping Centers: Characteristics of Travel—1963-1972
by Jean M. Lusk, SEWRPC Planner and
John L. Zastrow, SEWRPC Senior Specialist
A Backward Glance—Historic Evolution of the Local Governmental Structure
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by Eileen Hammer

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Appendix E

VICTOR L. YOUNG, S.C.
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MEMBER
WISCONSIN INSTITUTE CPA'S
AMERICAN INSTITUTE OF
CERTIFIED PUBLIC ACCOUNTANTS

August 14, 1987

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, 1986, 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, 1986, 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, 1986

Assets	Governmental Fund Types		Account Groups	Totals (Memorandum Only)	
	General	Special Revenue	General Fixed Assets	1986	1985
Treasurer's cash	$ 223,587.76	$ 64,471.55	$	$ 288,059.31	$ 310,716.47
Due from service agreements	349,983.83			349,983.83	503,352.64
Grants receivable		113,945.27		113,945.27	137,541.75
Contracts receivable	90,620.48	168,141.99		258,762.47	80,182.19
Service agreements receivable	214,528.72			214,528.72	173,203.15
Fixed assets			289,573.55	289,573.55	235,339.65
Total Assets	$ 878,720.79	$ 346,558.81	$ 289,573.55	$1,514,853.15	$1,440,335.85
Liabilities					
State sales tax	$ 211.06			$ 211.06	$ 203.79
Accounts payable	42,209.83	346,558.81		388,768.64	362,713.31
Annuity charge reserve	4,856.66			4,856.66	4,856.66
Vacation accrual	100,150.23			100,150.23	88,485.23
Advanced billings					217,747.00
Total Liabilites	147,427.78	346,558.81		493,986.59	674,005.99
Fund Equity					
Investment in fixed assets			289,573.55	289,573.55	235,339.65
Fund balances - designated					189,652.40
- undesignated	731,293.01			731,293.01	341,337.81
Total Fund Equity	731,293.01		289,573.55	1,020,866.56	766,329.86
Total Liabilities and Fund Equity	$ 878,720.79	$ 346,558.81	$ 289,573.55	$1,514,853.15	$1,440,335.85

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, 1986

	Governmental Fund Types		Total (Memorandum Only)	
	General	Special Revenue	1986	1985
Revenues				
Contributions from counties	$ 875,910.00	$	$ 875,910.00	$ 834,200.00
Grant revenues		1,155,148.69	1,155,148.69	1,579,065.27
Contract revenues	648,773.02	895,758.67	1,544,531.69	917,616.71
Service grants	2,898,868.01		2,898,868.01	2,875,922.90
Interest on invested funds	50,818.50		50,818.50	32,962.15
Other income	66,437.66		66,437.66	72,870.98
Total Revenues	4,540,807.19	2,050,907.36	6,591,714.55	6,312,638.01
Expenditures				
Salaries and fringe benefits	1,904,729.82	1,005,817.04	2,910,546.86	2,267,647.71
Office and other expenses				
Technical consultants	242,482.74	823,649.64	1,066,132.38	711,776.85
Office supplies	74,316.78	6,881.90	81,198.68	95,596.28
Insurance, audit, legal fees	18,115.72	9,176.28	27,292.00	
Library acquisition and dues	3,988.85	6,926.83	10,915.68	1,333.47
Reprographics and publication	62,833.27	51,607.86	114,441.13	34,452.84
Newsletter	5,595.02	2,834.05	8,429.07	
Postage expense	5,638.79	7,594.96	13,233.75	22,665.18
Travel expense	22,757.87	13,337.25	36,095.12	22,426.00
Telephone expense	29,403.68	14,750.24	44,153.92	24,484.49
Rent	101,246.17	47,996.80	149,242.97	52,866.00
D.P. computer graphics/equipment supplies	1,559,614.24	234,510.00	1,794,124.24	1,974,598.60
Annual report	1,620.21	820.67	2,440.88	
Other operating expenses	15,161.09	15,002.30	30,163.39	36,933.67
Unemployment compensation expense	817.57	968.68	1,786.25	1,723.04
Auto/office equipment maintenance	9,484.62	33,799.71	43,284.33	8,637.88
Capital outlay	57,931.10		57,931.10	
Indirect expense				918,604.79
Total Expenditures	4,115,737.54	2,275,674.21	6,391,411.75	6,173,746.80
Excess Revenues Over (Under) Expenditures	425,069.65	(224,766.85)	200,302.80	138,891.21
Operating Transfers in (out)	(35,114.45)	35,114.45	-	-
Fund Balance - Beginning of Year	341,337.81	189,652.40	530,990.21	392,099.00
Fund Balance - End of Year	$ 731,293.01	$ -0-	$ 731,293.01	$ 530,990.21

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 - Budget and Actual - All Governmental Fund Types

For the Year Ended December 31, 1986

	Budget	Actual All Governmental Fund Types	Variance Favorable (Unfavorable)
Revenues			
Contributions from counties	$ 875,910.00	$ 875,910.00	$
Grant revenues	1,358,640.00	1,155,148.69	(203,491.31)
Contract revenues	360,000.00	1,544,531.69	1,184,531.69
Service grants	2,157,250.00	2,898,868.01	741,618.01
Interest on invested funds		50,818.50	50,818.50
Other income		66,437.66	66,437.66
Total Revenues	4,751,800.00	6,591,714.55	1,839,914.55
Expenditures			
Salaries and fringe benefits	3,021,650.00	2,910,546.86	111,103.14
Office and other expenses			
Technical consultants	20,700.00	1,066,132.38	(1,045,432.38)
Office supplies	87,600.00	81,198.68	6,401.32
Insurance, audit, legal fees	19,200.00	27,292.00	(8,092.00)
Library acquisition and dues	12,400.00	10,915.68	1,484.32
Reprographics and publication	113,500.00	114,441.13	(941.13)
Newsletter	6,900.00	8,429.07	(1,529.07)
Postage expense	16,000.00	13,233.75	2,766.25
Travel expense	54,200.00	36,095.12	18,104.88
Telephone expense	41,600.00	44,153.92	(2,553.92)
Rent	152,500.00	149,242.97	3,257.03
D.P. computer graphics/equipment and supplies	1,134,800.00	1,794,124.24	(659,324.24)
Annual report	5,200.00	2,440.88	2,759.12
Other operating expenses	40,000.00	30,163.39	9,836.61
Unemployment compensation expense	1,500.00	1,786.25	(286.25)
Auto/office equipment/maintenance	74,050.00	43,284.33	30,765.67
Capital outlay		57,931.10	(57,931.10)
Total Expenditures	4,801,800.00	6,391,411.75	(1,589,611.75)
Excess Revenues Over (Under) Expenditures	(50,000.00)	200,302.80	250,302.80
Fund Balance - beginning of year		530,990.21	
Fund Balance - end of year	$ -	$ 731,293.01	$ -

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, 1986

The accompanying summary of Southeastern Wisconsin Regional Planning Commission 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 group 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, 1986

Note 1 - Summary of Significant Accounting Policies (Cont'd)

Account Group

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 group 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. Since the budget basis differs from generally accepted accounting principles (GAAP), actual amounts in the accompanying budgetary comparison statement are presented on the budgetary 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 recorded 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, 1986 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, 1986

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:

Reserve Fund Balances - indicates that portion of fund equity, which has been legally 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 of December 31, 1986 are as follows:

	1986	1985
Desks	$ 14,205.60	$ 14,205.60
Chairs	11,696.91	10,979.74
Calculators and adding machines	12,969.86	12,728.01
Filing cabinets	37,270.66	33,957.86
Typewriters	18,702.12	18,702.12
Book cases	16,563.77	15,653.67
Tables	7,758.84	6,912.42
Data processing equipment	33,492.42	11,564.02
Major equipment	59,016.40	59,016.40
Automobiles	55,955.58	32,757.00
Miscellaneous	21,941.39	18,862.81
	$ 289,573.55	$ 235,339.65

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 1986 were $237,446.87.

Southeastern Wisconsin Regional Planning Commission

Combined Notes to the Financial Statements

For the Year Ended December 31, 1986

Note 4 - Cash and Temporary Investments

Cash and temporary investment balance as disclosed on the accompanying financial statements are comprised of the following:

Cash on hand and on deposit	$ (124,540.39)
Temporary cash investments	412,599.70
Total	$ 288,059.31

Note 5 - Cognizant Agency

The cognizant agency for the Single Audit report is the Wisconsin Department of Transportation.

Note 6 - Lease Commitments

Rent

The Commission leases space from Waukesha County under a lease agreement that runs through December 31, 1988. The commission has the option of extending the lease for an additional three years. The minimum lease payments are as follows:

1987	$ 147,851.00
1988	147,851.00

Copy Machine

The Commission leases a copier from American Industrial Leasing Company for $341.92 per month which extends until May 1988. The minimum lease payments are as follows:

1987	$ 4,103.04
1988	1,709.60

Data Processing Equipment

The Commission leases various data processing equipment. The minimum lease payments are as follows:

1987	$ 312,993.81
1988	92,699.97
1989	31,308.48
1990	31,308.48
1991	5,218.08

KURT W. BAUER
EXECUTIVE DIRECTOR

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