Twentieth annual report. July 1981

Waukesha, Wisconsin: Southeastern Wisconsin Regional Planning Commission, July 1981

SEWRPC - ANN REPT.

1980 ANNUAL REPORT

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

KENOSHA · MILWAUKEE · OZAUKEE · WAUKESHA · WASHINGTON · WALWORTH · RACINE

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Philip C. Evenson . . . . . Assistant Director
John W. Ernst . . . . . Data Processing Manager
Leland H. Kreblin . . . . . Chief Planning Illustrator
Donald R. Martinson . . . . . Chief Transportation Engineer
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Kenneth R. Yunker, P.E. . . . . Chief Special Projects Engineer

TWENTIETH ANNUAL REPORT

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Commission Offices
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July 1981

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Outside Region $4.00

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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Serving the Counties of: KENOSHA
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July 31, 1981

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, the Commission each calendar year prepares, publishes, 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 20th annual report of the Commission, summarizes the accomplishments of the Commission in calendar year 1980 and contains a statement of financial position of the Commission certified by an independent auditor.

While the Commission annual report is prepared to meet the specific legislative requirement noted above, the document also serves as an annual report to the federal and state Departments of Transportation concerning activities conducted during the year under the continuing regional transportation study. Similarly, the document is intended to report on activities conducted under other work programs to such federal and state grantor agencies as the U. S. Department of Housing and Urban Development, the U. S. Environmental Protection Agency, the Wisconsin Department of Natural Resources, the Wisconsin Department of Development, and the Wisconsin Department of Administration. Most importantly, however, the Commission annual report is intended to provided state, county, and local public officials and interested citizens with a comprehensive overview of current and proposed Commission activities and thereby provide a focal point for the active participation of interested and concerned parties in regional plan preparation and implementation.

During 1980, the Commission adopted one new major regional plan element, that being the regional air quality attainment and maintenance plan. This plan is significant in that it identifies the actions needed to achieve the air quality objectives and standards set forth in the federal Clean Air Act of 1977, and, importantly, provides, for the first time, an estimate of the cost of meeting those objectives in the Region.

In addition during 1980, the Commission adopted several amendments to existing plan elements, including the first of potentially several detailed nonpoint source water pollution abatement plans, that for the Root River watershed. Such nonpoint source abatement plans refine and detail the adopted areawide water quality management plan and are prepared cooperatively with the county soil and water conservation districts concerned. The Commission also adopted amendments to the regional transportation plan for the transportation handicapped designed to ensure that the public transit operators in the Region do not discriminate against handicapped persons in the provision of transit services in the Kenosha, Milwaukee, Racine, and Waukesha areas and thus meet requirements of Section 504 of the federal Rehabilitation Act of 1973.

In addition, significant progress was made during the year on two major transportation studies. The Milwaukee Northwest Side/Ozaukee County transportation improvement study proceeded to the point where alternative short-range traffic management-type solutions to existing and probable future traffic problems were fully evaluated. Importantly, agreement was reached during the year on the best way in which to complete the Hillside Interchange on IH 43 and connect the "stub ends" of that Interchange into the surface arterial system. The Milwaukee area primary transit systems alternative analysis study proceeded to the point where the advisory committee concerned had begun at year's end to evaluate the results of extensive analyses of alternative rapid transit systems under four alternative future scenarios for the Region. Both of these major transportation studies should be completed in 1981.

While we note with pleasure the manner in which the Commission was able to perform its statutory duties and functions in 1980, we also must note with regret the retirement of two Commissioners who served the Commission in an exemplary manner for a period of over two decades: Commissioner George C. Berteau and Commissioner Lyle L. Link. Both of these men were originally appointed to the Commission upon its creation in 1960, and both made major contributions to the work of the Commission over the years. Mr. Berteau served as Chairman of the Commission for a period of 20 years, providing a degree of commitment, dedication, and leadership which is unusual in any organization today. Mr. Link also served as a Commission officer for many years, and his strong commitment to environmental protection and natural resource conservation long before those objectives became common served the Commission well. Both of these able men will be sorely missed on the Commission. All the remaining Commissioners will now have to work all the harder to ensure that the Commission remains a constructive force for the creation of a more healthful and attractive, as well as more efficient, environment within the Region.

Very truly yours,

Alfred G. Raetz

Alfred G. Raetz
Chairman

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ABOUT THE COMMISSION

AUTHORITY

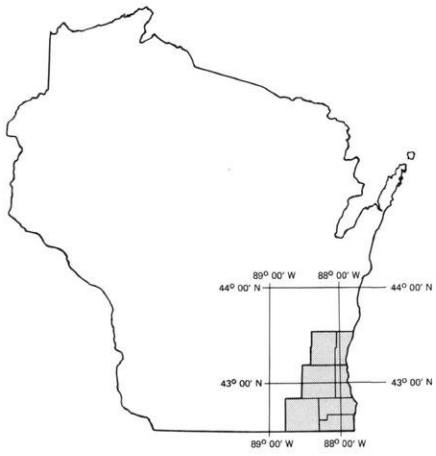
The Southeastern Wisconsin Regional Planning Commission was established in 1960 under Section 66.945 of the Wisconsin Statutes as the official areawide planning agency for the highly urbanized southeastern region of the State. The Commission was created to provide the basic information and planning services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

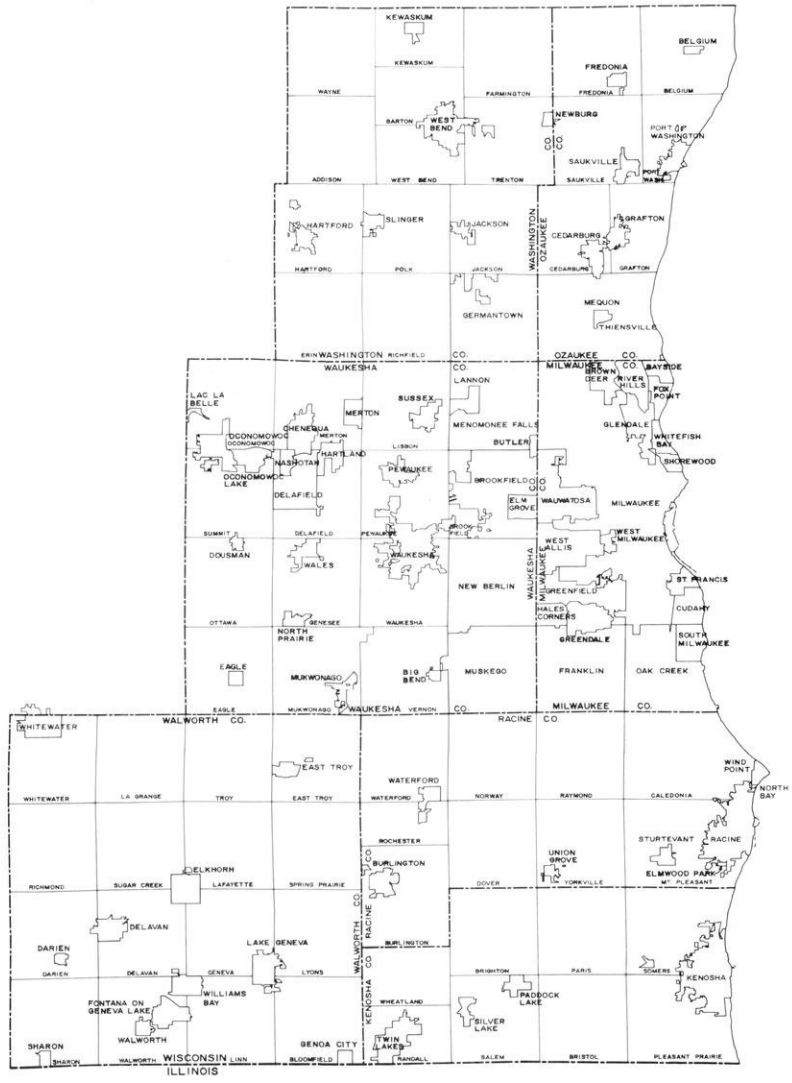
AREA SERVED

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 1.76 million persons, or about 38 percent of the total population of the State. The seven counties provide about 875,000 jobs, or about 39 percent of the total employment

Map 1

THE SOUTHEASTERN WISCONSIN REGION





of the State, and contain real property worth about $41.2 billion as measured in equalized valuation, or about 38 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, of which all but two—the Town of Vernon in Waukesha County and the Town of Saukville in Ozaukee County—participate in the work of the Commission.

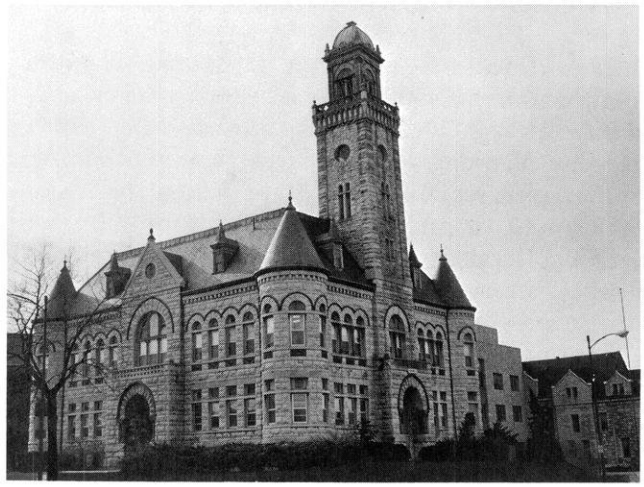
BASIC CONCEPTS

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.

OLD COURTHOUSE
COMMISSION OFFICES
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 the 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 36 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 782 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 1980, the staff totaled 121, including 99 full-time and 22 part-time employees. Interagency staff assignments during the year involved three professional personnel from the City of Milwaukee, the Wisconsin Department of Transportation, and the University of Wisconsin-Extension.

As shown in Figure 1, the Commission is organized into nine divisions. Five of these divisions—Transportation Planning, Environmental Planning, Land Use and Housing Planning, Community Assistance Planning, and Special Projects Planning—have direct responsibility for the conduct of the Commission's major planning programs. The remaining four divisions—Planning Research, Administrative Services, Data Processing and Systems Engineering, 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 1980 totaled about $3.6 million. County tax levies in 1980 totaled $615,000, or about $0.36 per capita. The sources of this revenue for 1980 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.

The Commission has a complete financial audit performed each year by a certified public accountant. The report of this audit for 1980 is set forth

Figure 1

SEWRPC ORGANIZATIONAL STRUCTURE: 1980

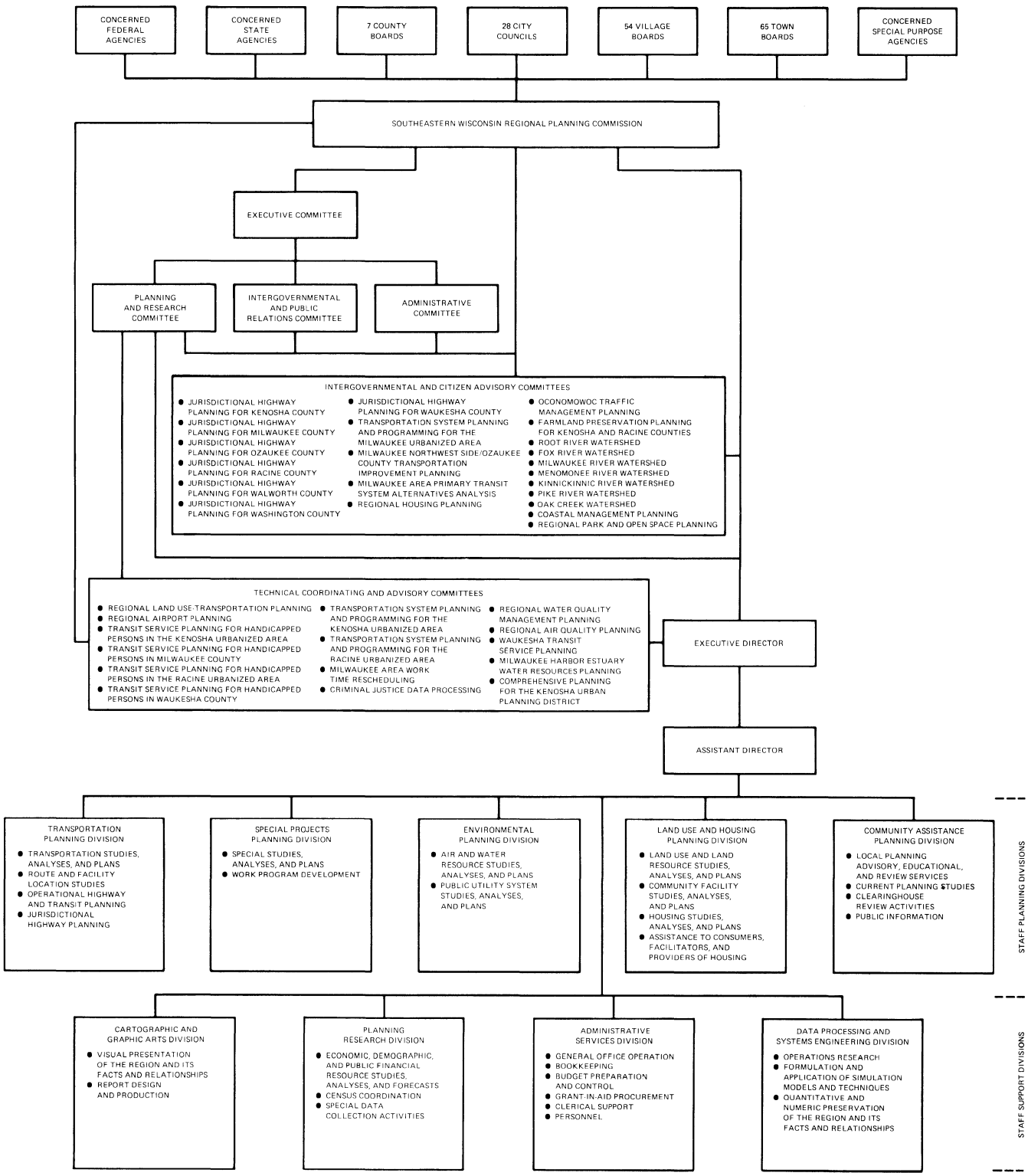


Figure 2

FUNDING TREND: 1961-1980

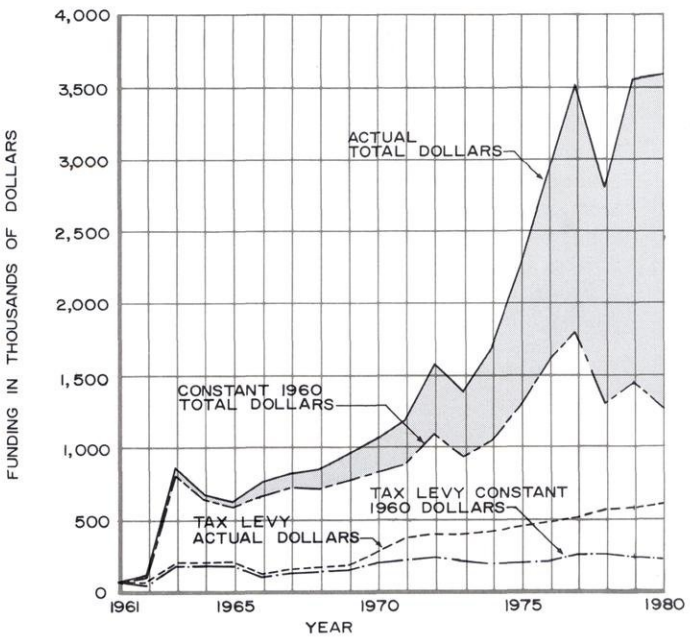


Figure 3

SOURCE OF REVENUES TREND: 1961-1980

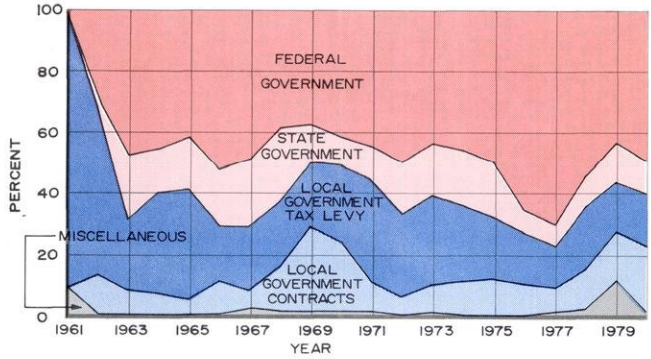


Figure 4

EXPENDITURES TREND: 1961-1980

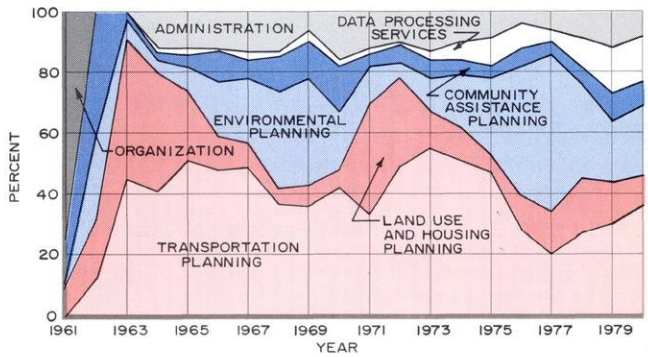
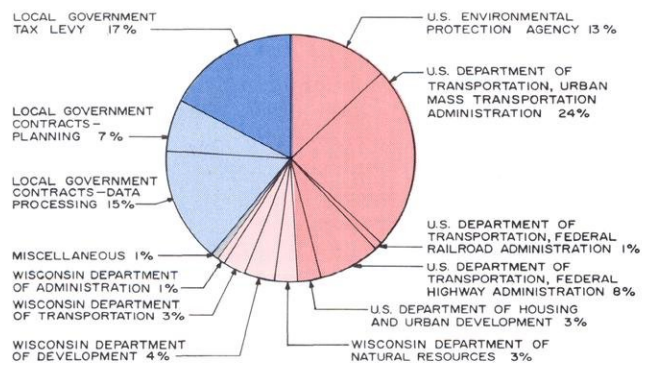


Figure 5

REVENUES AND EXPENDITURES

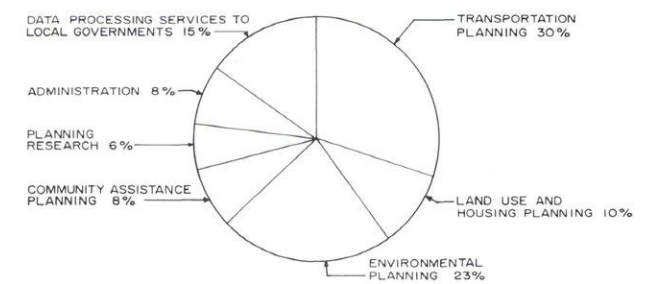
REVENUES

Federal Government	$1,762,239	49%
State Government	399,811	11%
Local Government Tax Levy	615,000	17%
Local Government Contracts	768,381	22%
Miscellaneous	43,593	1%
Total	$3,589,014	100%



EXPENDITURES

Transportation Planning	$1,086,412	30%
Land Use and Housing Planning	347,359	10%
Planning Research	232,560	6%
Environmental Planning	824,901	23%
Community Assistance Planning	284,352	8%
Data Processing Services to Local Governments	548,076	15%
Administration	265,354	8%
Total	$3,589,014	100%



1980 MEETINGS

COMMISSION AND ADVISORY COMMITTEE MEETINGS

Full Commission	5
Executive Committee	11
Administrative Committee	11
Planning and Research Committee	3
Intergovernmental and Public Relations Committee	0
Technical Coordinating and Advisory Committee on Regional Land Use-Transportation Planning	
Land Use Subcommittee	0
Highway Subcommittee	0
Transit Subcommittee	0
Socioeconomic Subcommittee	1
Utility 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	0
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
Intergovernmental Coordinating and Advisory Committees on Transportation System Planning and Programming	
Kenosha Urbanized Area	2
Milwaukee Urbanized Area	2
Racine Urbanized Area	2
Milwaukee Northwest Side/Ozaukee County Transportation Improvement Study Citizens, Intergovernmental, and Technical Coordinating and Advisory Committee	4
Milwaukee Area Primary Transit System Alternatives Analysis Citizens Intergovernmental and Technical Coordinating and Advisory Committee	10
Milwaukee Area Work Time Rescheduling Study Advisory Committee	1
Citizens and Technical Advisory Committee for the City of Oconomowoc Traffic Management Study	1
Waukesha Mass Transit Citizens and Technical Coordinating and Advisory Committee	3
Citizens and Technical Advisory Committees on Transit Service Planning for Handicapped Persons	
Kenosha Urbanized Area	3
Milwaukee County	7
Racine Urbanized Area	2
Waukesha County	3
Technical Coordinating and Advisory Committee on Farmland Preservation for Kenosha and Racine Counties	3
Watershed Committees	
Root River	0
Fox River	0
Milwaukee River	0
Menomonee River	0
Kinnickinnic River	0
Pike River	7
Oak Creek	0
Technical Advisory Committee on Areawide Water Quality Management Planning	0
Ad Hoc Technical Task Force for the Milwaukee Harbor Estuary Study Design	0
Technical Coordinating and Advisory Committee on Regional Air Quality Planning	5
Technical and Citizen Advisory Committee on Coastal Management in Southeastern Wisconsin	1
Technical and Citizen Advisory Committee on Regional Park and Open Space Planning	0
Technical and Citizen Advisory Committee on Regional Housing Studies	0
Technical Coordinating and Advisory Committee on Comprehensive Planning for the Kenosha Planning District	3

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Executive Director	326
Assistant Director	226
Administrative Services Division	6
Cartographic and Graphic Arts Division	34
Community Assistance Planning Division	190
Environmental Planning Division	345
Land Use and Housing Planning Division	215
Planning Research Division	84
Transportation Planning Division	113

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Executive Director	63
Assistant Director	13
Administrative Services Division	3
Community Assistance Planning Division	4
Environmental Planning Division	64
Land Use and Housing Planning Division	14
Planning Research Division	5
Transportation Planning Division	11

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 to local public officials and interested citizens a comprehensive overview of the Commission's activities and thereby to provide a focal point for the promotion of regional plan implementation.

In addition to the seven 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 internal staff memoranda.

While many of the Commission's publications are relatively long and are, necessarily, written in 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 with respect to 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

As already noted, 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 this 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—1980

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 1980, the adopted regional plan consisted of 20 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—1980

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
	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
	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 Development Plan	Community Assistance Planning Report No. 7, Kenosha Area Transit Development Program: 1976-1980	June 3, 1976
	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
	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
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

Table 1 (continued)

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	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
	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
	Regional Water Quality Management Plan[c]	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
	Regional Air Quality Plan	Planning Report No. 28, A Regional Air Quality Attainment and Maintenance Plan for Southeastern Wisconsin: 2000	June 20, 1980
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 represents 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 represents a second generation plan. The initial regional transportation plan was adopted by the Commission on December 1, 1966, and documented in SEWRPC Planning Report No. 7, Regional Land Use-Transportation Study, Volume Three, Recommended Regional Land Use and Transportation Plans—1990, and was subsequently amended by the adoption on June 4, 1970, of the Milwaukee County jurisdictional highway system plan documented in SEWRPC Planning Report No. 11, A Jurisdictional Highway System Plan for Milwaukee County; the adoption on March 2, 1972, of the Milwaukee area transit plan set forth in the document entitled, Milwaukee Area Transit Plan; the adoption on March 4, 1973, of the Walworth County jurisdictional highway system plan documented in SEWRPC Planning Report No. 15, A Jurisdictional Highway System Plan for Walworth County; the adoption on March 7, 1974, of the Ozaukee County jurisdictional highway system plan documented in SEWRPC Planning Report No. 17, A Jurisdictional Highway System Plan for Ozaukee County; the adoption on June 5, 1975, of the Waukesha County jurisdictional highway system plan documented in SEWRPC Planning Report No. 18, A Jurisdictional Highway System Plan for Waukesha County; the adoption on September 11, 1975, of the Washington County jurisdictional highway system plan documented in SEWRPC Planning Report No. 23, A Jurisdictional Highway System Plan for Washington County; the adoption on September 11, 1975, of the Kenosha County jurisdictional highway system plan documented in SEWRPC Planning Report No. 24, A Jurisdictional Highway System Plan for Kenosha County; and the adoption on December 4, 1975, of the Racine County jurisdictional highway system plan documented in SEWRPC Planning Report No. 22, A Jurisdictional Highway System Plan for Racine County.*

[c] *The regional 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.

Eight 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, and Kinnickinnic River watersheds. The regional air quality plan was completed and adopted in 1980.

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

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 new 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 new 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 new 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 new 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 pollu-

tion from point sources which was the focus of the first systems level planning effort.

PLAN ELEMENTS UNDER PREPARATION

At the end of 1980, the Commission had underway several programs designed to prepare new plan elements or to refine, detail, and amend existing plan elements. A new regional plan element will be provided by the Pike River watershed study, with completion and plan adoption scheduled for late 1981. A major work effort was underway in 1980 involving the reconsideration of the mode by which rapid transit services may be best provided in the Region. This effort, termed the Milwaukee area primary transit system alternatives study, should be completed late in 1981 and may result in the amendment of the adopted regional transportation system plan. At the present time, rapid transit service in the Milwaukee area is provided by operating buses—called freeway flyers—in mixed traffic on the regional freeway system. The study effort now underway is reexamining the possibility of reestablishing rail rapid transit in the Region, including consideration of commuter rail service provided over existing railroad rights-of-way; of "heavy" rail rapid transit service, similar to the systems built in recent years in Atlanta, Washington, D.C., and San Francisco; and of "light" rail transit similar to the systems built in recent years in Buffalo, Edmonton, and San Diego. Additional bus alternatives are also being considered along with the rail alternatives, including the construction of exclusive "busways" in certain travel corridors, as well as the operation of buses in mixed traffic on freeways that are monitored and controlled so as to assure free-flowing freeway conditions and thereby a high level of rapid transit service.

Another major study was underway at the end of 1980 that has also been designed to refine, detail, and possibly amend the regional transportation system plan. This study, termed the Milwaukee Northwest Side/Ozaukee County transportation improvement study, was initiated by the Commission in response to a decision made in the adoption of the regional transportation plan in 1978, that decision involving removing the Park Freeway-West and Stadium Freeway-North from the previously adopted plan. The study now underway will determine what additional arterial street and highway improvements, if any, should be included in the plan in lieu of the previously planned freeways. The study will also examine in detail the extent to which short-range traffic engineering and related transportation system management actions can cope with existing and potential traffic problems in this urbanizing portion of the Region. Finally, with respect to transportation planning, the Commission also had underway in 1980 a work time rescheduling study designed to investigate the potential for reducing peak travel demand—and thereby easing traffic congestion and forestalling capital investment in transportation facilities—by rescheduling work hours in the Milwaukee area.

Studies were also underway at the end of 1980 in the water quality management planning area designed to refine, detail, and amend the regional water quality management plan. That plan recommended that detailed planning efforts be mounted in cooperation with local communities to prepare community-level sanitary sewer service area plans. By the end of 1980, such localized planning efforts were underway for the communities of Delavan, Delavan Lake, Elkhorn, Hartford, Mequon, Muskego, Somers, and West Bend. In addition, the regional water quality management plan recommended that more detailed lake management plans be prepared for major lakes within the Region. By the end of 1980, such lake management plans were underway for 13 major lakes in the Region. These include Lac La Belle and Ashippun, Oconomowoc, Okauchee, North, and Pewaukee Lakes in Waukesha County; Geneva and Wandawega Lakes in Walworth County; George and Paddock Lakes in Kenosha County; Eagle Lake in Racine County; and Pike and Friess Lakes in Washington County.

POSSIBLE 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. In addition, the Commission follows an established policy of preparing prospectuses and/or study designs prior to the undertaking of any new major regional or subregional planning programs. By the end of 1980, a prospectus had been completed relating to the study of the flooding, water pollution, and related land use development problems in the Oak Creek watershed. In addition, a prospectus/study design was under preparation for a comprehensive water resources study of the Milwaukee Harbor estuary. This study, which had been requested in the mid-1970's by the City of Milwaukee and which has become increasingly important in light of certain issues raised in the preparation of the master sew-

erage facilities plan by the Milwaukee Metropolitan Sewerage District, is intended to address the existing and historic water quality and flooding conditions and 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 in that regard 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 the terms of the frequency with which the old combined sewers can be allowed to overflow without causing the water quality standards to be violated.

One additional prospectus—that relating to a feasibility study of a comprehensive freeway traffic management system in the Milwaukee urbanized area—had been completed prior to 1980. At year's end, however, this study had not been funded. Finally, at year's end the Commission had completed study proposals for consideration by the County Boards of Walworth and Washington Counties that relate to the conduct of rural public transit feasibility studies in those counties.

LAND USE AND HOUSING PLANNING DIVISION

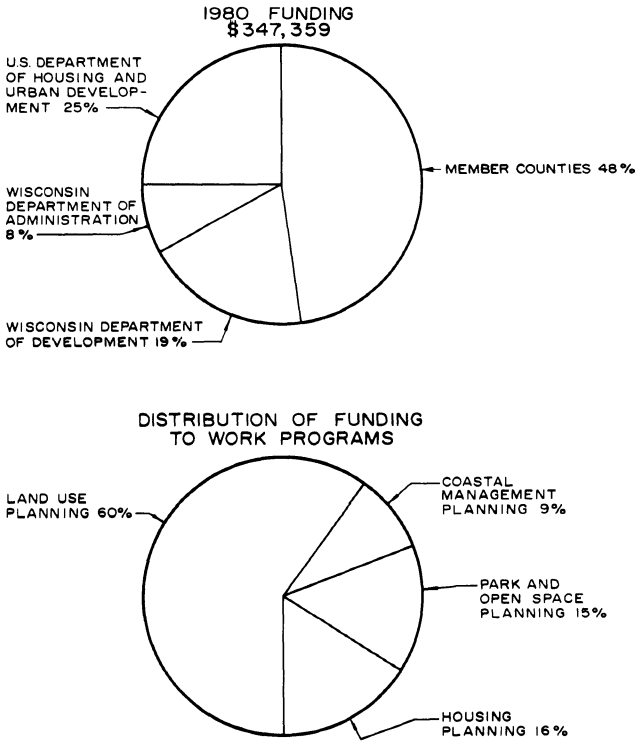
DIVISION FUNCTIONS

The Land Use and Housing Planning Division conducts studies and prepares plan recommendations concerning the physical aspects of land use development. The kind of basic questions addressed by this Division include:

- What is the existing pattern of land use development in the Region? How is this pattern changing over time?
- Where are the sensitive natural resource areas of the Region located, including the wetlands, woodlands, 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?
- What is the need for housing in physical and economic terms?
- How much publicly assisted housing is needed in the Region and where should it be located?

Figure 6

LAND USE AND HOUSING PLANNING DIVISION



In an attempt to find answers to these and similar questions, the Land Use and Housing Planning Division during 1980 conducted a number of activities in four identifiable areas: land use planning, park and open space planning, housing planning, and coastal management planning.

LAND USE PLANNING

During 1980 Division staff efforts in land use planning were directed toward implementation of the regional land use plan for the year 2000. A major effort in this regard involved preparing farmland preservation plans for Kenosha and Racinc Counties, scheduled for completion in 1981. In addition, an inventory was conducted of subdivision platting activity during 1980.

Regional Land Use Plan—An Overview

The new regional land use plan for the year 2000, 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 2. The basic concepts underlying the land use plan are essentially the same as those underlying the regional land use plan for the year 1990. That plan had been adopted by the Commission in 1966. Like the adopted 1990 land use plan, the recommended land use plan for the year 2000 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 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 further 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 objectives.

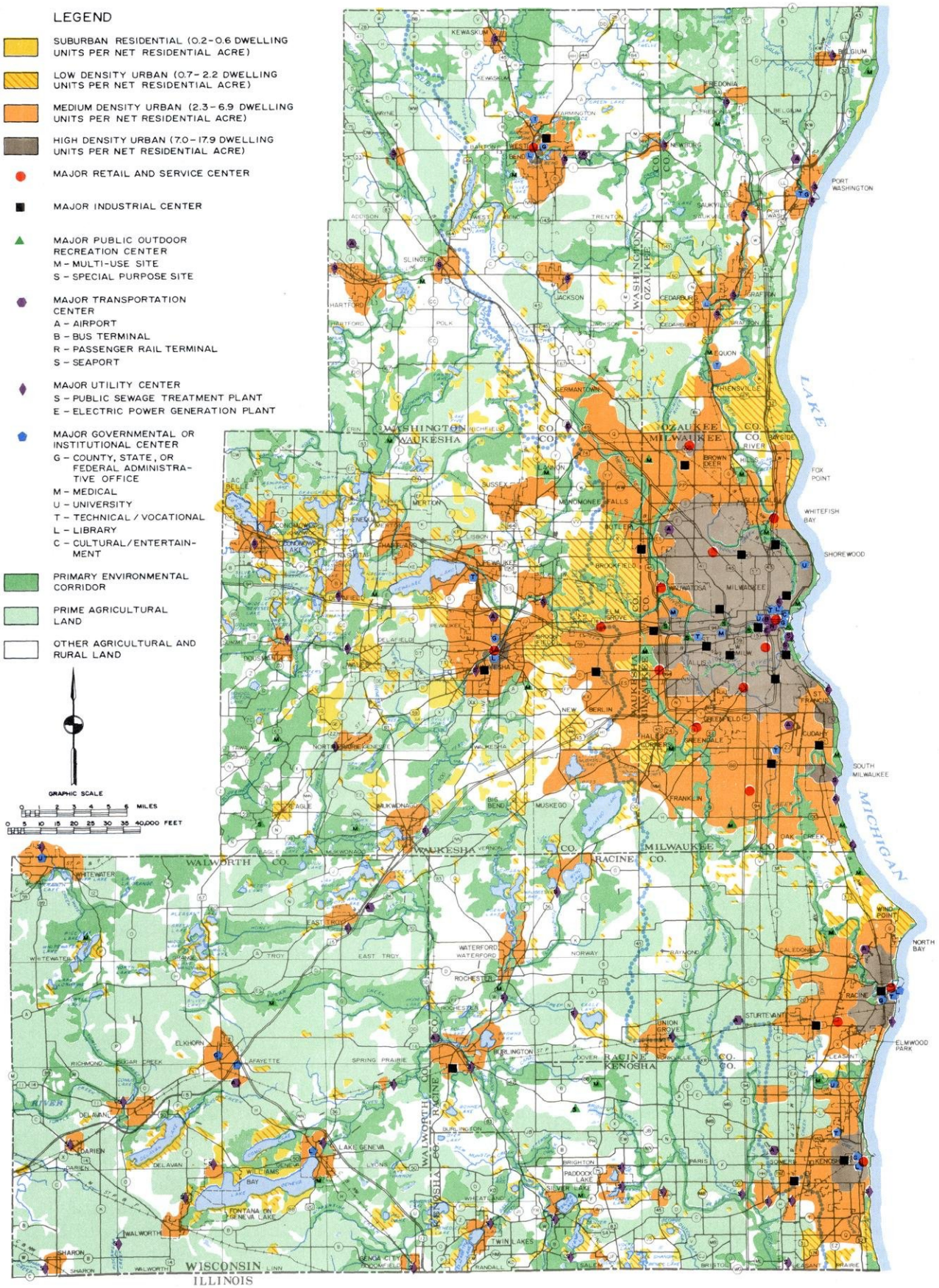
The recommended regional land use plan envisions converting about 113 square miles of land from rural to urban use over the period 1970 through 2000, less than half of the approximately 235 square miles that would have to be converted if decentralization of urban development were allowed to continue unrestrained, and seeks to encourage new urban development to occur primarily in planned neighborhood development units at medium-density population levels; that is, at 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 about 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 the best remaining potential park and related open space sites, have been found to occur largely together in linear patterns and have been termed primary environmental corridors. Like the 1990 regional land use plan, the year 2000 regional land use plan proposes that these environmental corridors be protected and preserved in essentially natural, open space 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, and the intensification of existing, environmental 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. Together, the primary environmental corridors encompass about 503 square miles, or 20 percent, of the area of the Region.

Also like the 1990 regional land use plan, the design year 2000 regional land use plan proposes to preserve to the greatest extent practicable those areas identified as prime agricultural lands. In 1970 these lands totaled about 746 square miles, or 28 percent of the area of the Region. The year 2000 plan proposes that only those prime agricultural lands that have already been, in effect, committed to urban development because of the 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.

Map 2

REGIONAL LAND USE PLAN: 2000



By the end of 1980, the year 2000 regional land use plan had been adopted by the Kenosha, Racine, 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 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 Agriculture, Soil Conservation Service; the U. S. Department of Housing and Urban Development; the U. S. Department of Transportation, Federal Highway Administration and Urban Mass Transportation Administration; the Wisconsin Department of Transportation; and the Wisconsin State Board of Soil and Water Conservation Districts.

Preservation of Farmland

During 1980 the Land Use and Housing Planning Division continued to monitor applications for tax credit eligibility pursuant to the Wisconsin Farmland Preservation Act, which became law on June 29, 1977. The Act was created to help county and local units of government preserve agricultural lands by providing tax relief to farmland owners who participate in a farmland preservation program. Under the Act, a farmland owner may agree not to develop his land for urban uses and in return becomes eligible for tax relief in the form of a state income tax credit. The income tax credit is based on a formula which takes into account the household income and the property taxes. Basically, the higher the property tax and the lower the household income, the higher the tax credit. The maximum property tax eligible for tax credit is $6,000, and the maximum tax credit is $4,200. The farmland owner is also exempt from special tax assessments levied to provide sewer, water, or other public facilities and services.

Wisconsin's farmland preservation program is divided into two parts—an initial, temporary program and a permanent program. The duration of the initial program extends from October 1, 1977 to September 30, 1982. Under the initial program, an owner residing in a county with an exclusive agricultural zoning ordinance approved by the Wisconsin Agricultural Lands Preservation Board is automatically eligible for an income tax credit. A farmland owner residing in a county that does not have an approved exclusive agricultural zoning ordinance must apply to the county board for a farmland preservation contract. Upon county board approval of the application, the owner signs a contract which states that the farmland will remain in agricultural use through September 30, 1982. The owner then becomes eligible for an income tax credit. In order for a farmland owner to receive the maximum tax credit, the county must have adopted a farmland preservation plan and an exclusive agricultural zoning ordinance.

The second part of the farmland preservation program—the permanent program—will begin on October 1, 1982. After this date, farmland owners within southeastern Wisconsin will be eligible for tax credits only if their land is within an exclusive agricultural zoning district. Maximum tax credits will again be contingent upon county adoption of a farmland preservation plan and exclusive agricultural zoning.

Of the seven counties in southeastern Wisconsin, only Walworth County—following recommendations set forth in the initial SEWRPC regional land use plan adopted in 1966—has adopted both an exclusive agricultural zoning ordinance and an agricultural land preservation plan. All towns in Walworth County except the Town of Lafayette have adopted the county zoning ordinance, making farmland owners eligible for the maximum tax credit. In the Town of Lafayette, where town-exclusive agricultural zoning has been enacted, farmers are eligible for 70 percent of the maximum credit. In addition, Washington County has prepared and adopted the text of an exclusive agricultural zoning ordinance meeting state program standards. The Towns of Barton and Trenton are to date the only towns in Washington County which have prepared a zoning district map based on the county ordinance and which have obtained state certification. Farmers in the Towns of Barton and Trenton are eligible for 70 percent of the maximum tax credit. Farmland owners in the remaining areas of the Region are presently eligible for only 50 percent of the maximum tax credit, or a maximum of $2,100.

As indicated in Table 2 and Figure 7, a total of 689 farmland owners in southeastern Wisconsin participated in the Wisconsin farmland preservation program in 1980. Participants in the farmland preservation program owned a total of about 99,900 acres, or 156 square miles, of agricultural land, which represents about 10 percent of the 1,557 square miles of agricultural land in the Region. About 129 square miles, or 83 percent of this total, have been designated as prime agricul-

tural land by the Commission (see Map 3). This represents about 20 percent of the total prime agricultural land in the Region.

Among the seven counties in the Region, Walworth County accounted for the largest number of participants in the state farmland preservation program in 1980 with 560 participants, or 81 percent of the total. Participants in the program in Walworth County owned about 77,800 acres of agricultural land, accounting for 78 percent of the regional total. The high level of program activity in Walworth County may be attributed to at least two factors. First, most farmland in Walworth County has been placed in an exclusive agricultural district under the county zoning ordinance. It is, therefore, automatically eligible for tax relief assuming that the program eligibility requirements regarding farm size and farm income are met. Second, since Walworth County has adopted both a farmland preservation plan and exclusive agricultural zoning, farmers in Walworth County are eligible for the maximum tax credit available under the program, while farmers in the rest of the Region—except those in Towns of Barton and Trenton—are currently eligible for only 50 percent maximum credit.

In an effort to ensure the preservation of farmland and to provide for the continued program eligibility of farmland owners after 1982, Racine and Kenosha Counties, in conjunction with the Regional Planning Commission, initiated a joint farmland preservation planning program in 1978. This planning program, partially funded through a planning grant from the Wisconsin Agricultural Lands Preservation Board, is being carried out under the guidance of the Technical Coordinating and Advisory Committee on Farmland Preservation for Kenosha and Racine Counties, whose membership includes a farmland owner from each town in Racine and Kenosha Counties, county agricultural agents, and representatives from the U. S. Department of Agriculture, Soil Conservation Service and Agricultural Stabilization and Conservation Service. The planning program will result in farmland preservation plans for Racine and Kenosha Counties, which, in turn, will serve as a basis for the application of exclusive agricultural zoning within each county. While the focus of the planning program is on the preservation of agricultural lands, the plans will be comprehensive, addressing urban land use development and natural resource preservation objectives as well. Such a comprehensive approach is required for approval of the plan by the Wisconsin Agricultural Lands Preservation Board. By the end of 1980, work had been completed on the inventory phase of the study; the preparation of farmland preservation objectives, principles, and standards; and the preparation of preliminary farmland preservation plans. The Kenosha and Racine County plans are scheduled to be completed in 1981. Similar efforts were underway in 1981 in Washington and Waukesha Counties, utilizing consultants and local staffs to perform the necessary work.

RESIDENTIAL SUBDIVISION PLATTING ACTIVITY

The Division staff annually monitors land subdivision activity in the Region. A total of 1,980 residential lots were created in the Region during 1980 through subdivision plats, compared with 3,869 lots platted in 1979. Of this total, 1,418 lots, or about 72 percent, were served by public sanitary sewers, with the remaining 562 lots, or 28 percent, designed to be served by onsite septic tank sewage disposal systems (see Table 3 and Map 4). In comparison, in 1979 about 20 percent of the lots platted were to be served by onsite sewage disposal systems, representing a total of 760 lots. Waukesha County accounted for the greatest number of lots platted in 1980. Of the 651 lots created in Waukesha County, about 44 percent were designed to be served by septic tanks. The greatest proportion of lots to be served by septic tanks was found in Walworth County, where more than 75 percent of the 123 lots platted were designed for septic tank use. The historic trend in residential platting activity since 1960 is shown for the Region and by county in Figures 8 through 15. Total residential platting activity in 1980 was the lowest in the Region since 1949.

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 includes recommendations for the number and location of large parks, proposed recreation corridors to accommodate trail-oriented activities, and water access

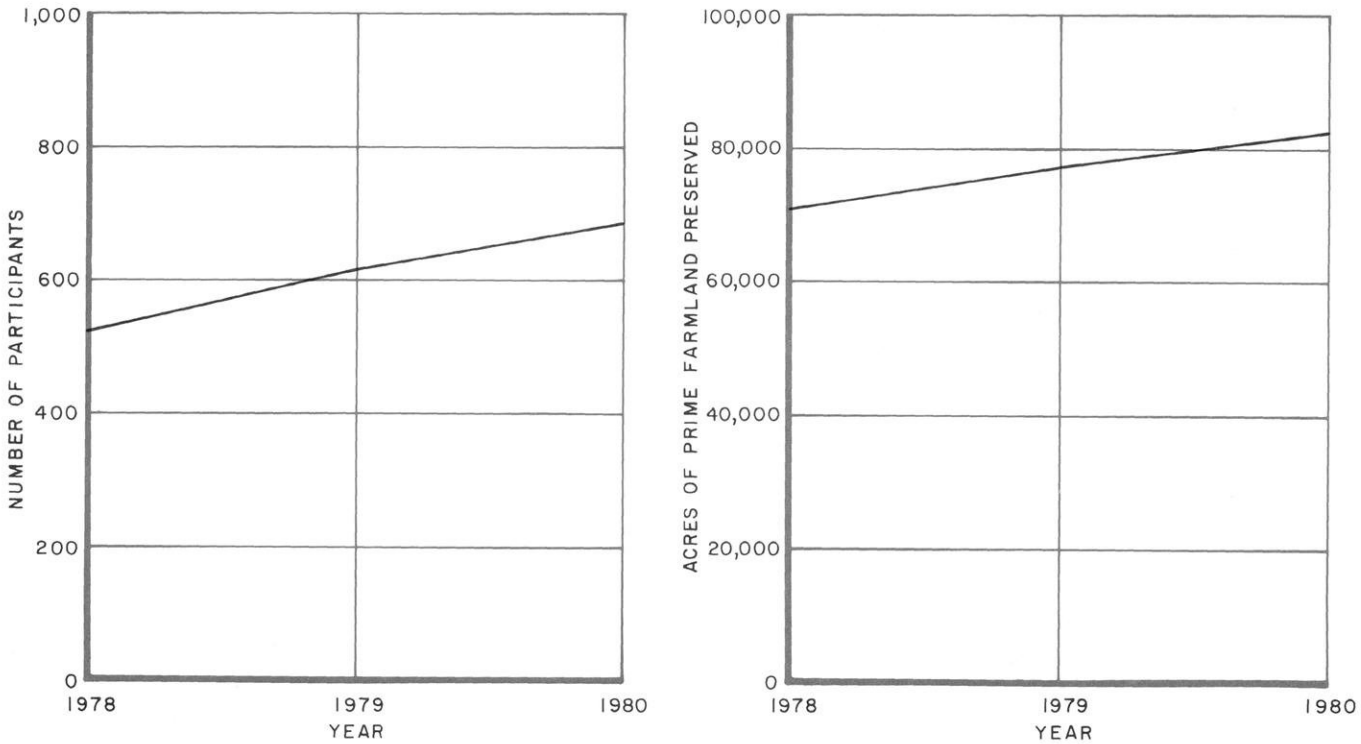
Table 2

PARTICIPATION IN THE WISCONSIN FARMLAND PRESERVATION PROGRAM: 1980

County	Participants		Total Farmland Preserved		Prime Agricultural Land Preserved	
	Number	Percent of Region	Acres	Percent of Region	Acres	Percent of Region
Kenosha	27	3.9	4,870	4.9	3,906	4.7
Milwaukee	5	0.7	366	0.4	316	0.4
Ozaukee	9	1.3	1,524	1.5	1,270	1.5
Racine.	34	5.0	6,170	6.2	2,115	2.6
Walworth.	560	81.3	77,812	77.8	70,629	85.5
Washington . . .	29	4.2	3,722	3.7	1,841	2.2
Waukesha.	25	3.6	5,500	5.5	2,532	3.1
Region	689	100.0	99,964	100.0	82,609	100.0

Figure 7

PARTICIPATION IN THE WISCONSIN FARMLAND PRESERVATION PROGRAM: 1978-1980



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 recreation 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 5.

Map 3

PARTICIPATION IN THE WISCONSIN FARMLAND PRESERVATION PROGRAM 1980

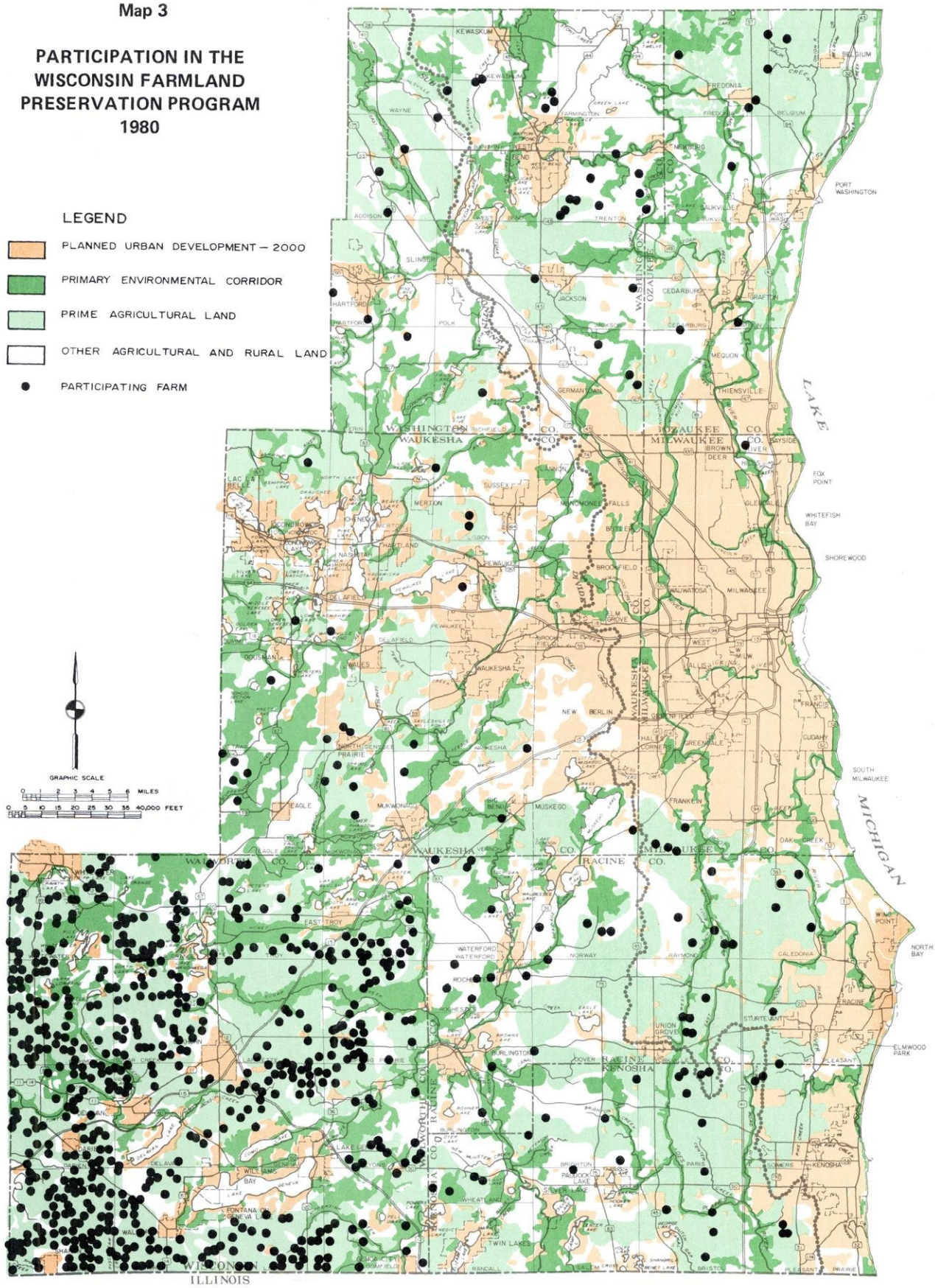


Table 3

RESIDENTIAL SUBDIVISION PLATTING ACTIVITY IN THE REGION: 1980

County	Sewered Lots		Unsewered Lots		Total	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Regional Total
Kenosha	43	51.8	40	48.2	83	4.2
Milwaukee	146	100.0	- -	- -	146	7.4
Ozaukee	137	100.0	- -	- -	137	6.9
Racine.	524	95.3	26	4.7	550	27.8
Walworth.	30	24.4	93	75.6	123	6.2
Washington . . .	175	60.3	115	39.7	290	14.6
Waukesha.	363	55.8	288	44.2	651	32.9
Region	1,418	71.6	562	28.4	1,980	100.0

Map 4

RESIDENTIAL PLATTING ACTIVITY IN THE REGION: 1980

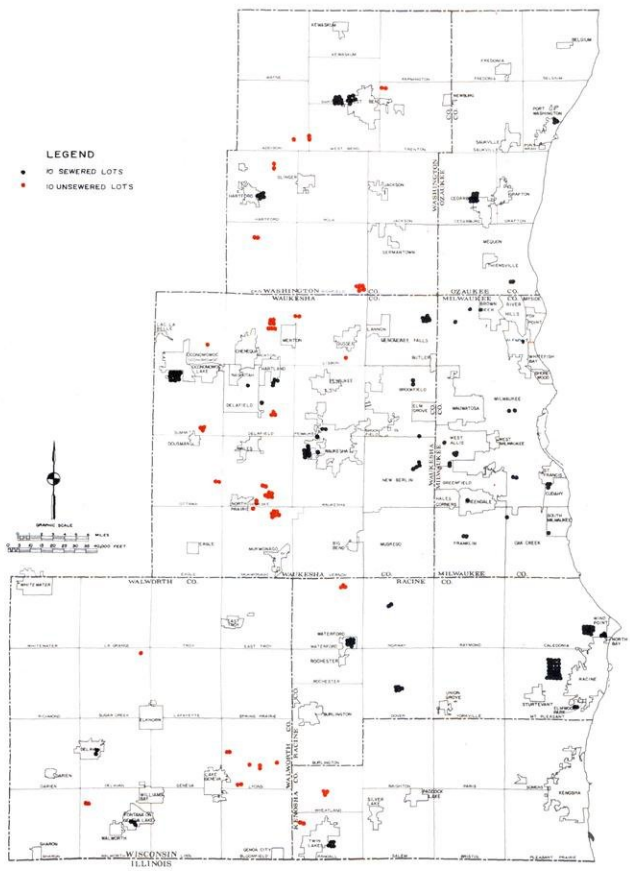


Figure 8

RESIDENTIAL LOTS PLATTED IN THE REGION: 1960-1980

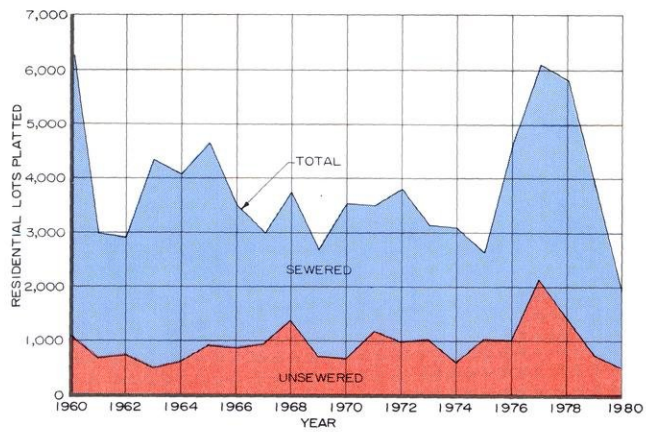


Figure 9

RESIDENTIAL LOTS PLATTED IN KENOSHA COUNTY: 1960-1980

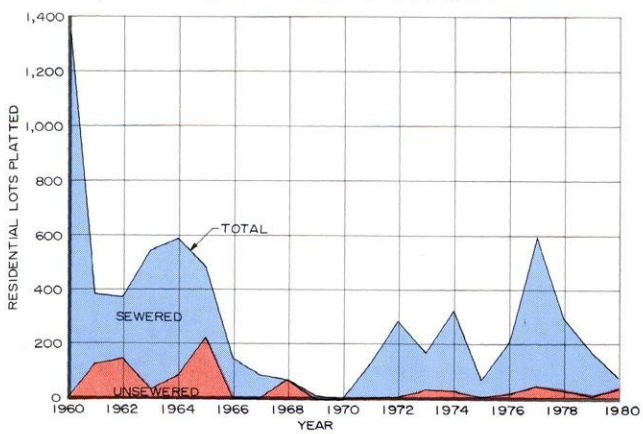


Figure 10

RESIDENTIAL LOTS PLATTED
IN MILWAUKEE COUNTY: 1960-1980

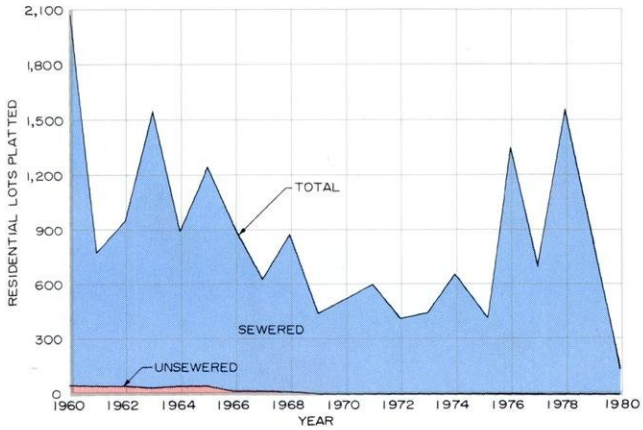


Figure 11

RESIDENTIAL LOTS PLATTED
IN OZAUKEE COUNTY: 1960-1980

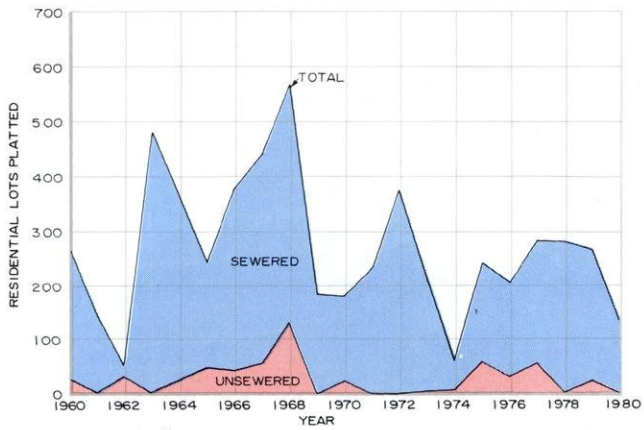


Figure 12

RESIDENTIAL LOTS PLATTED
IN RACINE COUNTY: 1960-1980

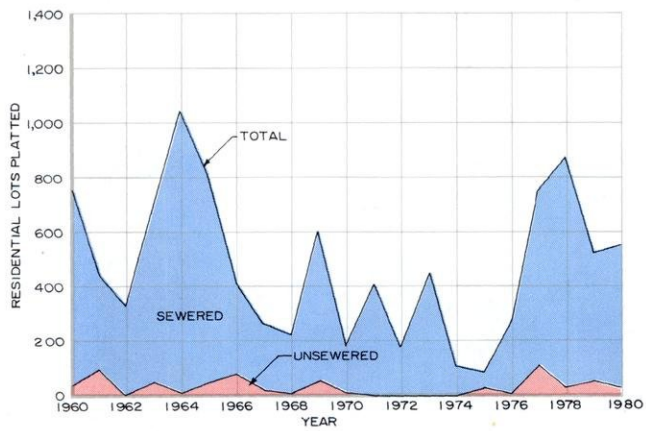


Figure 13

RESIDENTIAL LOTS PLATTED
IN WALWORTH COUNTY: 1960-1980

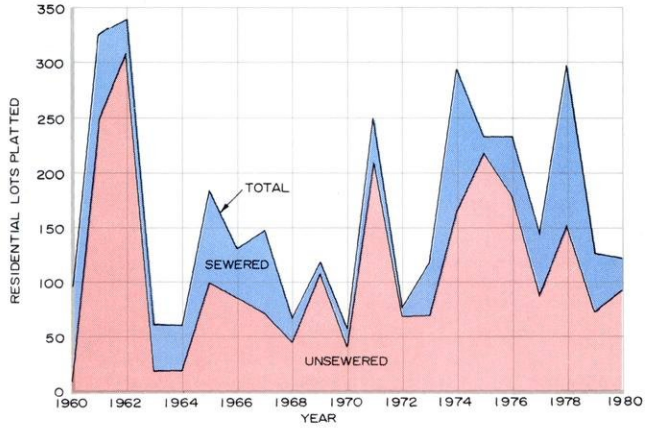


Figure 14

RESIDENTIAL LOTS PLATTED
IN WASHINGTON COUNTY: 1960-1980

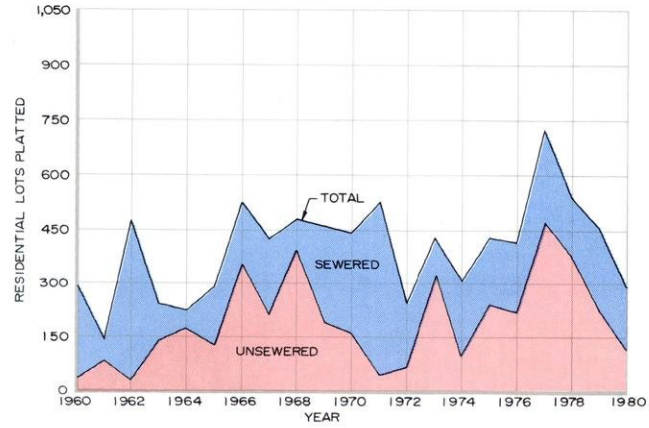
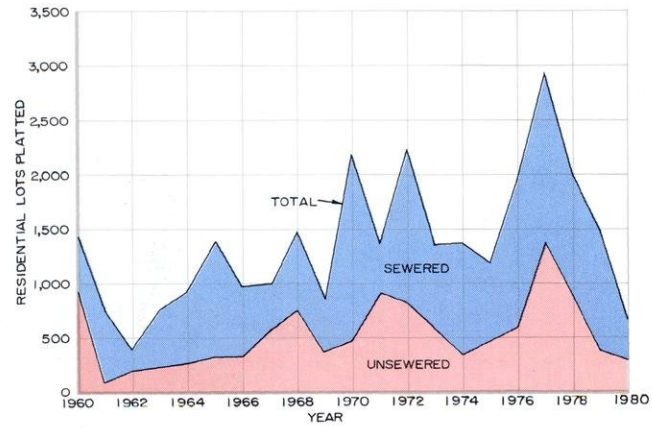


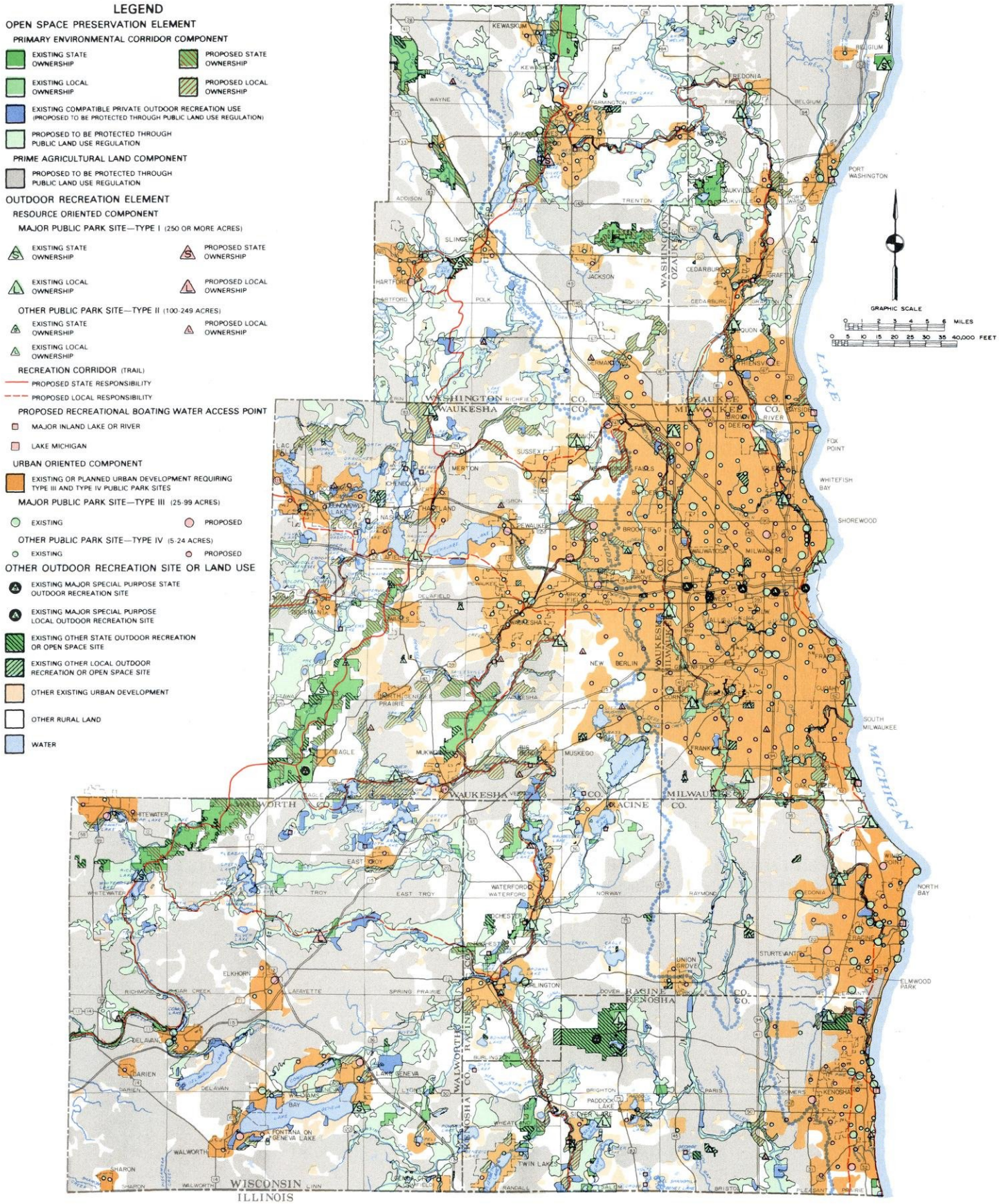
Figure 15

RESIDENTIAL LOTS PLATTED
IN WAUKESHA COUNTY: 1960-1980



Map 5

REGIONAL PARK AND OPEN SPACE PLAN: 2000



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 related 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.

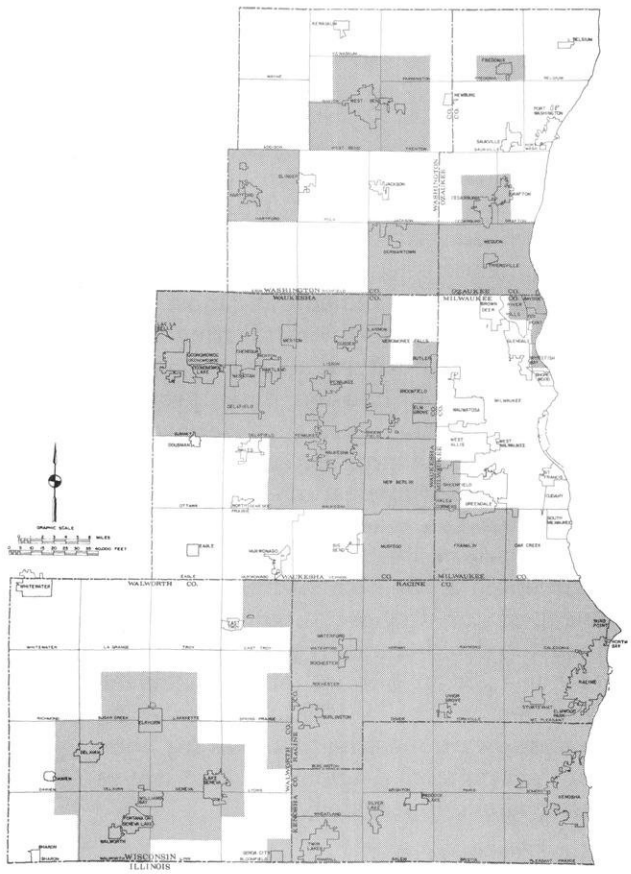
During 1980, staff efforts on park and open space planning were directed primarily toward the implementation of the regional park and open space plan. Implementation activities consisted of assisting local units of government in refining and detailing primary and secondary environmental corridors and important natural resource features on large-scale 1" = 400' aerial photographs and in preparing detailed local park and open space plans consistent with the guidelines provided by the regional plan. During 1980 such local plans were prepared for the Kenosha Planning District, which encompasses the City of Kenosha and the Towns of Somers and Pleasant Prairie, and the Pewaukee joint community planning area, which encompasses the Village and Town of Pewaukee.

Primary Environmental Corridor Refinement

One of the key recommendations of the adopted regional land use, the regional water quality management, and the regional park and open space plans is the protection and preservation of environmental corridors in essentially natural open uses. Such corridors in southeastern Wisconsin lie along the major stream valleys, around major lakes, and in the Kettle Moraine area. The corridors contain the best remaining elements of the natural resource base of southeastern Wisconsin and have immeasurable environmental and recreational value. During 1980, the Commission continued the environmental corridor refinement process initiated in 1979. This process was developed to meet plan implementation needs for a detailed delineation of environmentally significant land. By the end of 1980, the corridor refinement process had been completed for about 1,460 square miles of area, or about 54 percent of the total area of the Region. The areas for which this process has been completed are distributed throughout the Region, as shown on Map 6.

Map 6

PORTIONS OF THE REGION FOR WHICH THE ENVIRONMENTAL CORRIDOR REFINEMENT PROCESS HAS BEEN COMPLETED: 1980



Local Park and Open Space Plans

As already noted, during 1980 the commission completed local park and open space plans for both the Kenosha Planning District and the Pewaukee joint community planning area. These plans are documented, respectively, in SEWRPC Community Assistance Planning Report No. 41, A Park and Open Space Plan for the Kenosha Planning District, and SEWRPC Community Assistance Planning Report No. 42, A Park and Open Space Plan for the Town and Village of Pewaukee. These reports each 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. It is important to note that the adoption of these plans by the local communities and the approval of the plans by the Wisconsin

Department of Natural Resources make the local units of government eligible for up to 50 percent assistance for the acquisition and development of outdoor recreation and open space sites and related facilities proposed in the plans. These plans are summarized graphically on Maps 7 and 8.

HOUSING PLANNING

The Commission adopted a housing plan for southeastern Wisconsin in 1975. This plan addresses the unmet housing needs in the Region and includes a recommended geographic allocation of publicly assisted housing to remedy the most serious of the identified housing problems. During 1980 the Division staff continued its efforts to implement the adopted regional housing plan through the provision of housing assistance services under the housing outreach program. Moreover, in an effort to expand the awareness of existing housing opportunities for the elderly and low-income families in southeastern Wisconsin, the staff prepared and disseminated a directory of federally assisted rental housing in the Region. In addition, the staff continued to provide housing planning data in response to requests from public housing agencies and the private sector. The staff also continued to monitor progress toward meeting the goals for housing assistance recommended under the regional subsidized housing allocation strategy.

Housing Outreach Program

Even before the adoption of the regional housing plan, the Commission, recognizing the urgency of the need to address serious existing housing problems, initiated a housing outreach program. The Commission continued the housing outreach program in 1980, retaining one staff member whose primary responsibility is to work with communities, public housing agencies, and private housing interest groups in initiating activities that will influence the housing market to meet the adopted regional housing objectives. To a large extent, the outreach efforts are channeled through agencies and committees served by the Commission in an advisory capacity, including the Milwaukee Urban League, the Milwaukee County Community Relations-Social Development Commission, the Housing and Transportation Committee of the Milwaukee County Commission on Aging, the East Side Housing Action Coalition, Inc. (ESHAC), and the Walnut Area Improvement Council (WAICO).

The following are examples of the type of housing assistance services provided under the housing outreach program in 1980:

- Provision of assistance on an ongoing basis to the Milwaukee County Community Relations-Social Development Commission in the administration of its energy relief and home weatherization programs.

- Preparation of a memorandum-report on housing needs and the existing supply of subsidized housing in Waukesha County at the request of the Mayor of the City of Waukesha.

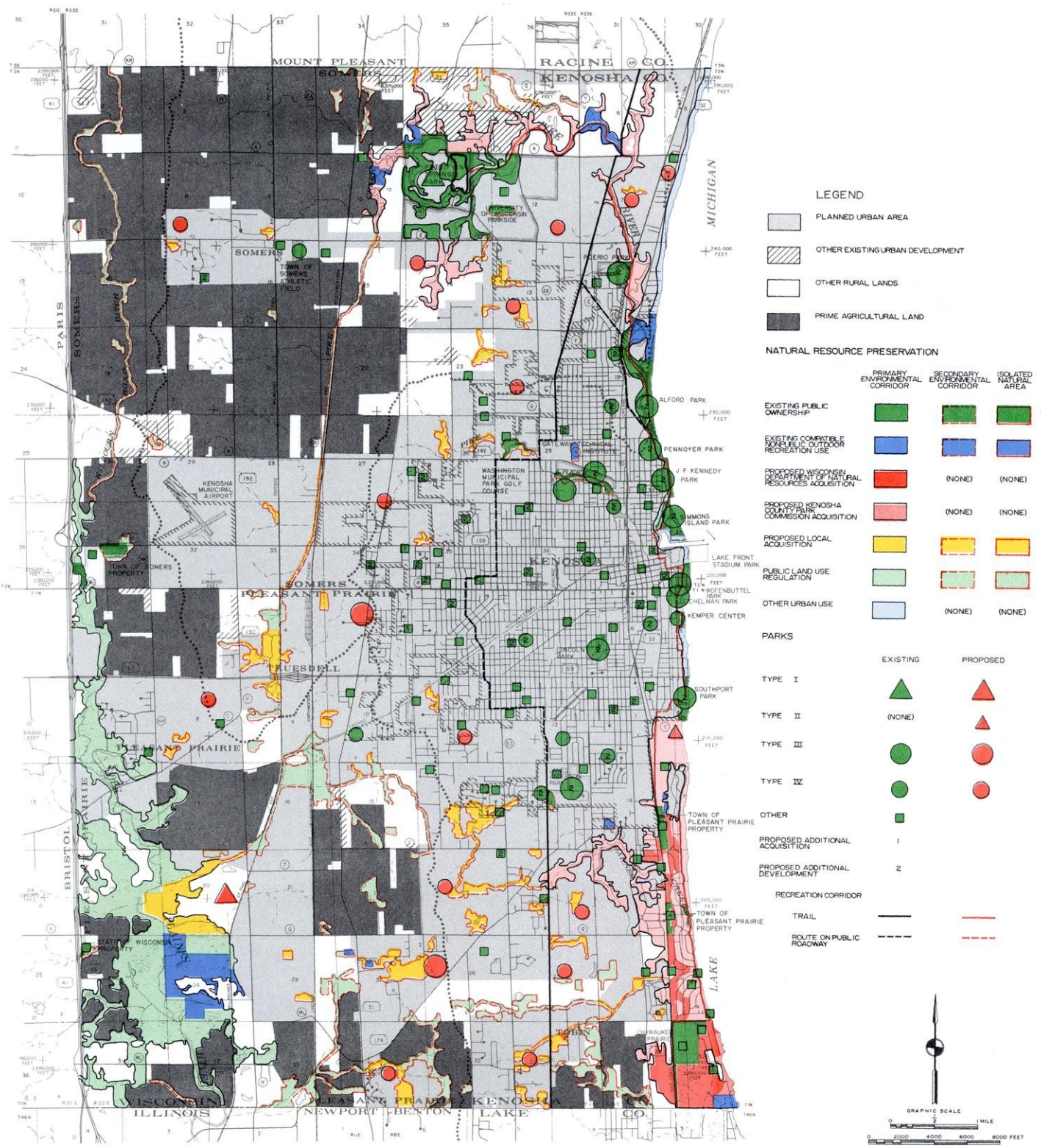
- Provision of technical assistance to the Walnut Area Improvement Council in its effort to provide 36 additional subsidized rental housing units at the WAICO development site on the near north side of the City of Milwaukee.

Housing Opportunities Guide

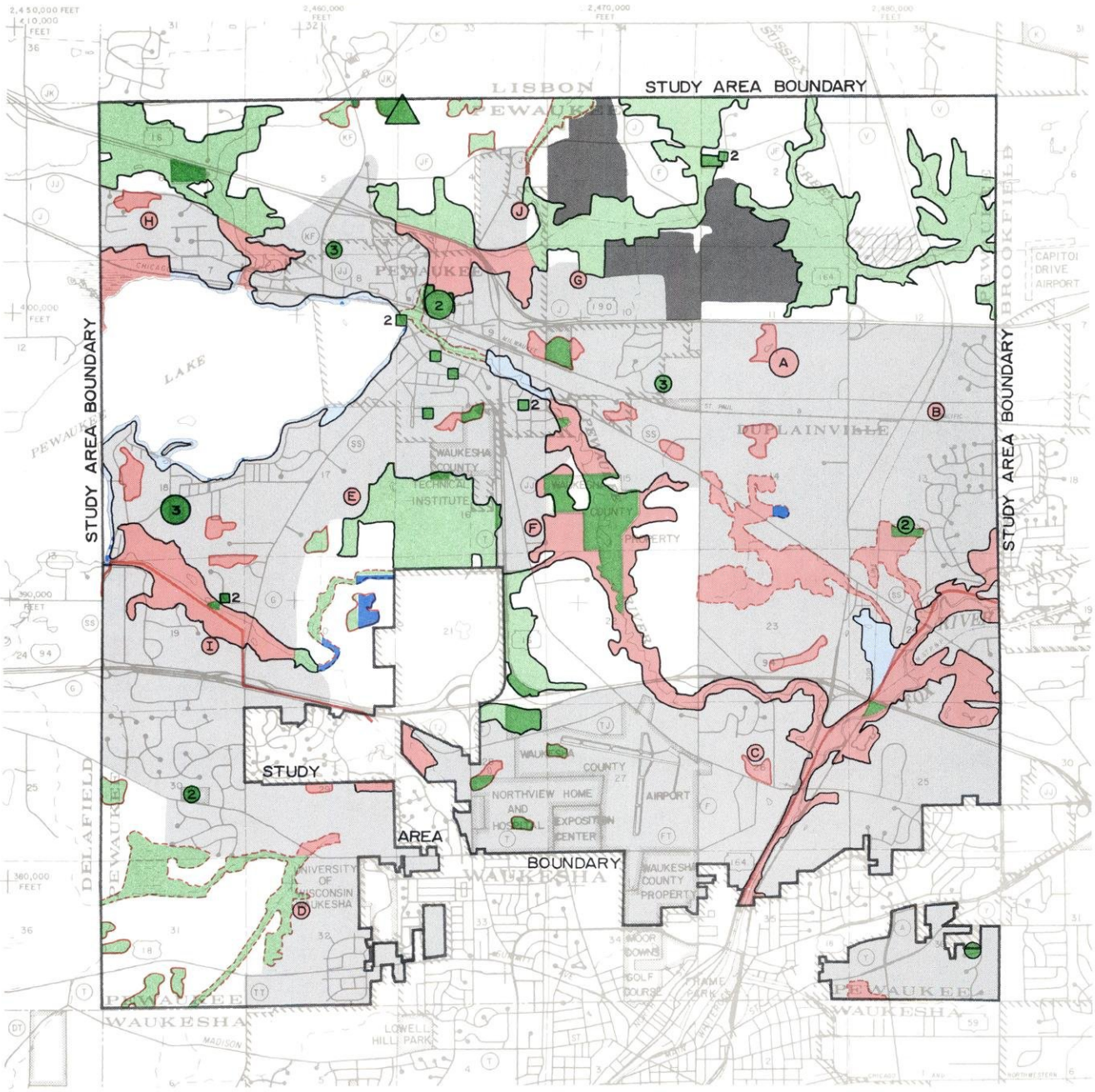
During 1980 the Division staff prepared and published SEWRPC Community Assistance Planning Report No. 52, Housing Opportunities Guide for the Southeastern Wisconsin Region. This report, which constitutes a directory of federally subsidized rental housing in southeastern Wisconsin, was prepared in order to increase the awareness of existing housing opportunities in the Region for the elderly and handicapped and low-income families. This report provides information on the number and location of subsidized rental housing units provided within southeastern Wisconsin under housing assistance programs administered by the U. S. Department of Housing and Urban Development (HUD) and the U. S. Department of Agriculture, Farmers Home Administration (FmHA). Included is housing assisted under the HUD Section 8, Section 236, Section 221(d)(3) Rent Supplement, Section 221(d)(3) Below Market Interest Rate, and Public Housing Programs, as well as under the FmHA Section 515 Rental Housing Program. Also provided in the guide are the eligibility requirements for each program, including the types of households which are eligible for the program and attendant income and asset limits. The housing opportunities guide was prepared primarily as an informational resource for public housing authorities and housing counseling agencies which deal with the housing problems of individual house-

Map 7

RECOMMENDED PARK AND OPEN SPACE PLAN FOR THE KENOSHA PLANNING DISTRICT: 2000



RECOMMENDED PARK AND OPEN SPACE PLAN FOR THE TOWN AND VILLAGE OF PEWAUKEE: 2000



LEGEND

- PLANNED URBAN AREA – SEWERED
- OTHER URBAN AREA – UNSEWERED
- PRIME AGRICULTURAL LAND
- OTHER RURAL LAND
- PROPOSED RECREATION CORRIDOR

GRAPHIC SCALE

0 1/2 1 MILE

0 2000 4000 6000 8000 FT

NATURAL RESOURCE AREAS

	PRIMARY ENVIRONMENTAL CORRIDOR	SECONDARY ENVIRONMENTAL CORRIDOR	ISOLATED NATURAL AREAS
EXISTING PUBLIC OWNERSHIP			
EXISTING COMPATIBLE NONPUBLIC OUTDOOR RECREATION USE			
PROPOSED WAUKESHA COUNTY PARK AND PLANNING COMMISSION ACQUISITION		(NONE)	(NONE)
PROPOSED LOCAL ACQUISITION	(NONE)		
PUBLIC LAND USE REGULATION			
URBAN USE		(NONE)	(NONE)

PARKS

	EXISTING	PROPOSED
TYPE II		(NONE)
TYPE III		
TYPE IV		
OTHER		
PROPOSED ADDITIONAL ACQUISITION	1	
PROPOSED ADDITIONAL DEVELOPMENT	2	
PROPOSED ADDITIONAL ACQUISITION AND DEVELOPMENT	3	
PROPOSED SITE IDENTIFICATION LETTER – SEE TEXT		A

holds on a day-to-day basis. Copies of the housing opportunities guide are available from the Commission offices.

Subsidized Housing Activity

The adopted regional housing plan recommends the provision of about 17,800 publicly assisted housing units during the six-year period 1975 through 1980. An integral part of the adopted regional housing plan is the subsidized housing allocation strategy, which recommends the geographic distribution of the 17,800 housing units to 49 allocation areas in the Region, each consisting of a community or a group of communities (see Map 9). Included in the allocation system are measures relating to each area's need, suitability, and past performance in the provision of low-cost housing. The Commission staff monitors the provision of federally assisted housing in southeastern Wisconsin to measure progress toward meeting the goals of the housing allocation strategy for housing assistance.

To monitor progress toward meeting the recommended goals, information concerning the use of housing assistance programs is collected from federal agencies that are instrumental in administering housing assistance programs—namely, the U. S. Department of Housing and Urban Development and the U. S. Department of Agriculture, Farmers Home Administration. Included in the inventory of assisted housing shown on Map 9 are housing units authorized since the adoption of the regional housing plan under the HUD Section 8, HUD Section 235, HUD Section 236, HUD Section 221(d)(3), FmHA Section 515, and FmHA Section 502 housing assistance programs.

Between the time of the adoption of the regional housing plan and the end of 1980, a total of 14,511 units of publicly assisted housing had been provided in the Region. These 14,511 units represent 82 percent of the total number of units recommended in the plan to be provided in the Region through 1980. As indicated on Map 9, 41 of the 49 allocation areas have shown some progress toward meeting the allocation and 23 areas have met more than half of their goals, with 11 having met or surpassed their recommended allocations.

It is important to recognize that the regional housing allocation strategy was intended to address only a portion of the total housing need identified under the regional housing study. The regional housing study found that approximately 96,100 households, representing about 18 percent of all households in the Region, were in housing need in 1970, indicating that they experienced some type of housing problems. Of this total, 26,500 households, or 28 percent, experienced serious housing problems as reflected by substandard or overcrowded living conditions. The remaining 72 percent were in economic need; i.e., they occupied uncrowded, standard housing but paid a disproportionate share of their income to do so.

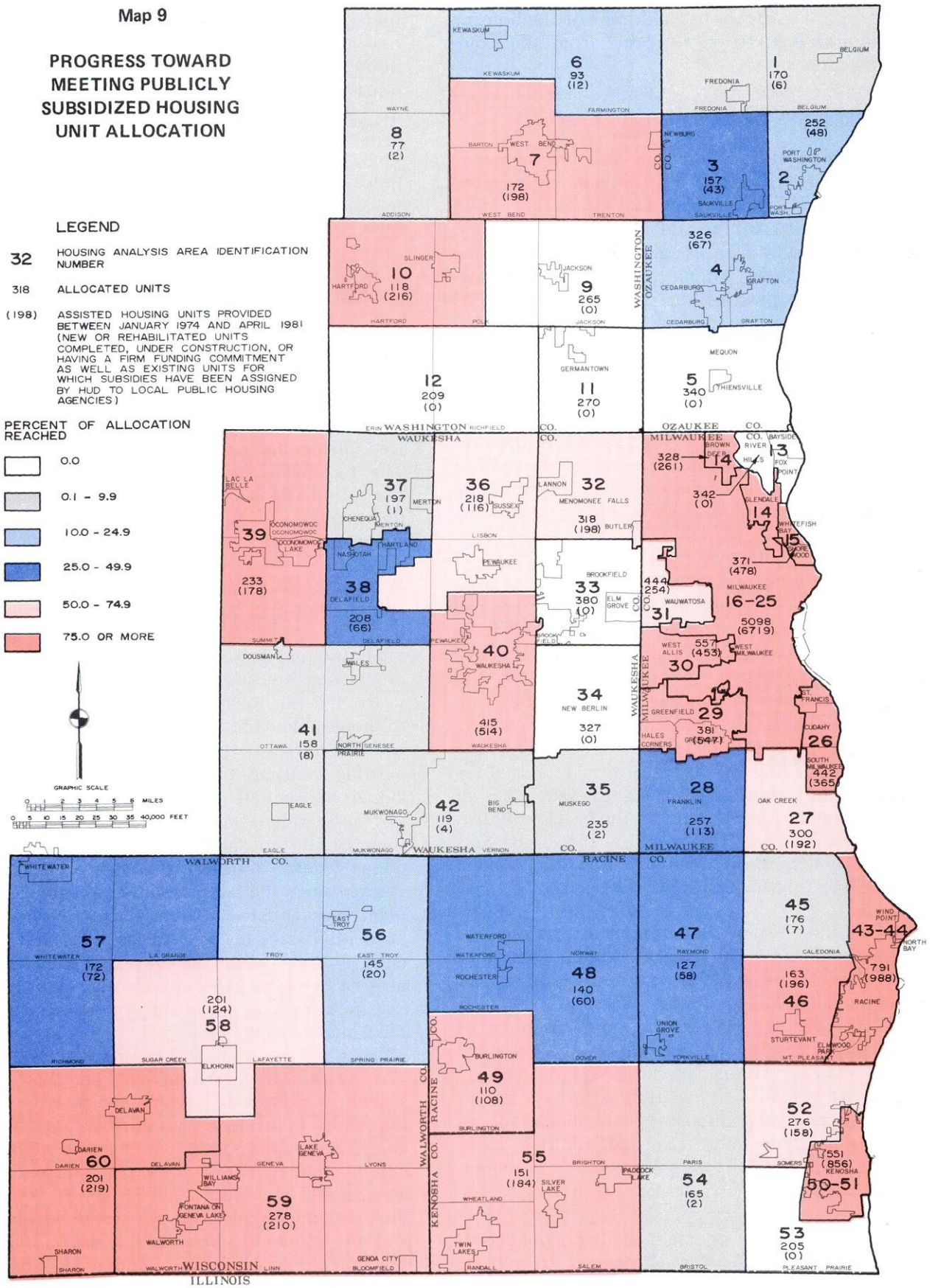
The regional housing allocation strategy sought to provide subsidized housing units so as to eliminate physical housing problems as evidenced by substandard and overcrowded living conditions. It was determined that the proper use of 17,800 subsidized units could substantially achieve this objective. The regional housing plan gave lower priority to the subsidization of those households that occupy uncrowded, standard housing but pay a disproportionate share of their income to do so.

It is important to recognize that, according to federal housing assistance program regulations, eligibility for housing assistance is based primarily on household income rather than on the severity of existing housing problems. During the past six years, federal housing subsidies have been granted to households on the basis of income eligibility, without direct consideration of the severity of existing housing problems experienced by individual households as evidenced by overcrowded and substandard housing conditions. While more than 14,500 housing subsidies have been provided under federal housing assistance programs in the Region since the adoption of the regional housing plan, it is apparent that a substantial number of households still occupy overcrowded and substandard housing, while others experience economic need in that they occupy decent, safe, and sanitary housing but pay a disproportionate share of their income to do so.

The foregoing discussion suggests that there is a need to reassess the extent and severity of existing housing problems in southeastern Wisconsin and to revise and extend the regional housing allocation strategy over a new planning period. The assessment of housing needs—which would take into account changes in the total housing stock and the stock of subsidized housing, changes in the number of households and related household characteristics, and changes in general economic

Map 9

PROGRESS TOWARD MEETING PUBLICLY SUBSIDIZED HOUSING UNIT ALLOCATION



conditions since 1970—could be accomplished on the basis of housing-related data available from the 1980 census. The revised allocation strategy would, in turn, reflect the housing needs identified through this process and recommend housing assistance goals for subareas of the Region over a new planning period.

COASTAL MANAGEMENT PLANNING

During 1980 the Division staff continued to provide assistance to the Wisconsin Department of Administration's Office of Coastal Management in the conduct of the Wisconsin coastal management program. This program is intended to coordinate governmental activities in order to achieve the objective of better management of the resources of Wisconsin's Lake Michigan and Lake Superior coastal zones. 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. The SEWRPC chairman serves as a member of that Council.

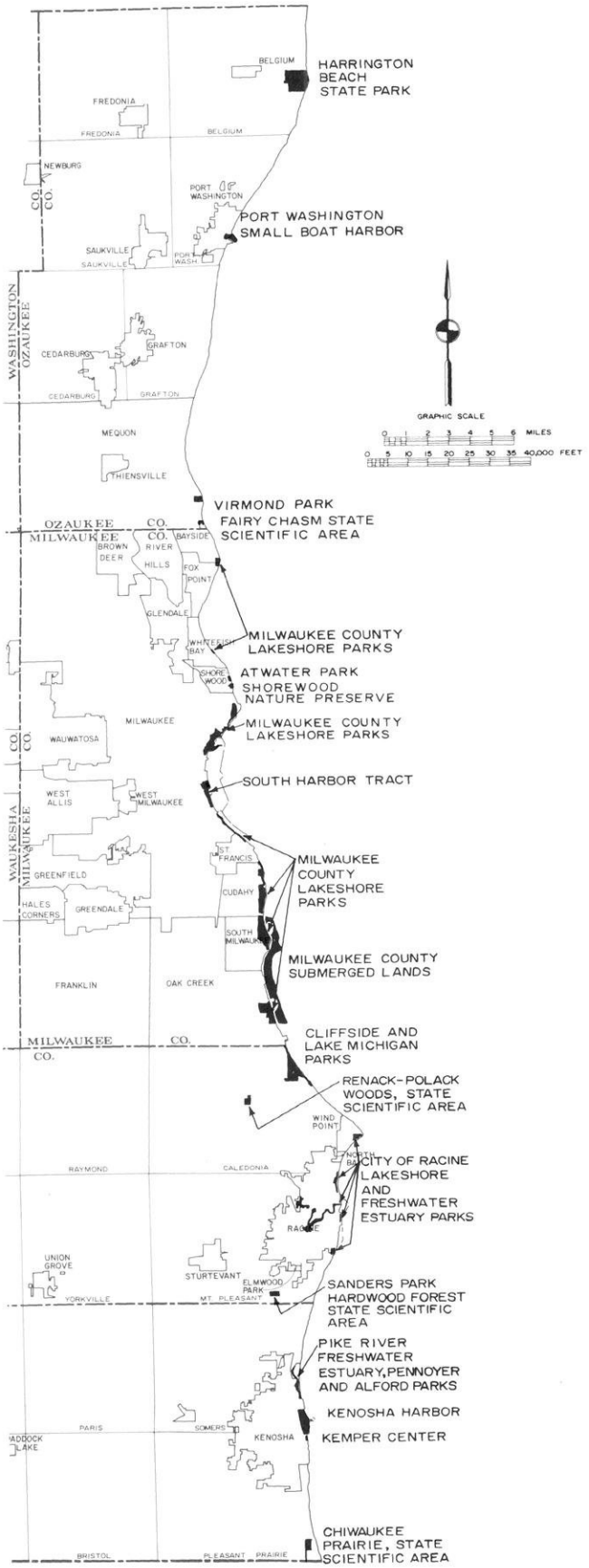
Under an agreement with the Wisconsin Department of Administration, Office of Coastal Management, the Commission has formed and staffed a Technical and Citizens Advisory Committee on Coastal Management in Southeastern Wisconsin. This 29-member Committee represents a variety of interests, including local elected officials, the University community, and recreational, navigational, and environmental interest groups. The primary function of this Committee is to review and comment on 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 geographic areas of management concern. In 1980 two additional areas in the Region were formally designated as geographic areas of management concern—the Shorewood Nature Preserve and Atwater Beach Park in the Village of Shorewood. These two areas, along with other, previously certified, Lake Michigan shoreline geographic areas of management concern, are shown on Map 10.

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-related projects for funding under the coastal management program. In 1980, 13 such projects were submitted from the four coastal counties in the Region. Of those, three projects were approved and funded by the Wisconsin Coastal Management Council in 1980: the iden-

Map 10

COASTAL GEOGRAPHIC AREAS OF MANAGEMENT CONCERN IN SOUTHEASTERN WISCONSIN: 1980



tification of potential dredge disposal sites for the Port of Milwaukee; a shoreline conflict resolution study for Racine County; and improvements to the existing trail system in the Village of Shorewood Nature Preserve.

DATA PROVISION AND ASSISTANCE

The land use, park and open space, and housing data files are extensively used by local governmental units and agencies and by private interests. Examples of the provision of land use, park and open space, and housing related data during 1980 include the following:

- Provision of assistance to the East Side Housing Action Coalition (ESHAC) in the conduct of an exterior housing condition sample survey to identify the physical condition of housing in the ESHAC service area.

- Provision of building permit data to the Marine National Exchange Bank for use in determining the location of future branch banks in the Southeastern Wisconsin Region.

- Provision of existing land use and existing and proposed population data to a private consultant for its use in the preparation of a solid waste management plan for Ozaukee County.

- Provision of detailed demographic, economic, and natural resource data to the Town of West Bend for its use in local planning efforts. The Land Use Committee of the Town requested the data to facilitate the identification and preservation of environmental corridors within the Town.

- Provision of detailed primary and secondary environmental corridor delineations within the Geneva Lake watershed to the Geneva Lake Watershed Environmental Agency for its use in planning for the preservation of environmental corridors in the watershed.

- Provision to the Governor's Office of plant community inventory data, including the delineation of the areal extent of wetland and wildlife habitat area, on the Pike Lake State Park beach located in the Town of Hartford, Washington County.

- Provision of plant inventory and wildlife habitat data to the Wisconsin Department of Natural Resources for use in evaluating the alignment of a proposed trunk sewer in the City of Oconomowoc. The data provided by the Commission were needed by the Department to determine the environmental impacts of the trunk sewer construction.

- Provision of plant inventory and wildlife habitat data on the ash disposal site access road wetland complex of the Wisconsin Electric Power Company located in the Town of Pewaukee, Waukesha County, to the Pewaukee Town Board for its use in considering the desirability of approving secondary or auxiliary road access to the site from CTH SS.

- Provision of technical assistance, including the delineation in the field by staking, in locating wetland boundaries on a development parcel located in the Village of Saukville, Ozaukee County, to the Village of Saukville administrator's office.

- Provision to the City of Milwaukee, Department of City Development, of plant community inventory data, including the delineation of the areal extent of wetland and wildlife habitat areas, on the Milwaukee northwest side between N. 107th Street, W. Fond du Lac Avenue, W. Bradley Road, and W. Good Hope Road.

TRANSPORTATION PLANNING DIVISION

DIVISION FUNCTIONS

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

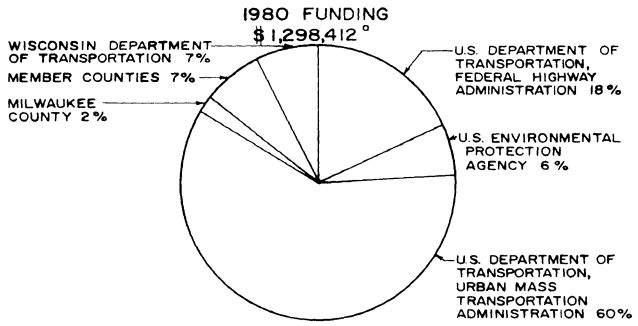
- What are the travel habits and patterns in the Region? How are these changing over time?
- What is the existing supply of transportation facilities?
- How much travel in the future will likely be accommodated by the various travel modes, particularly the private automobile and public transit?
- How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

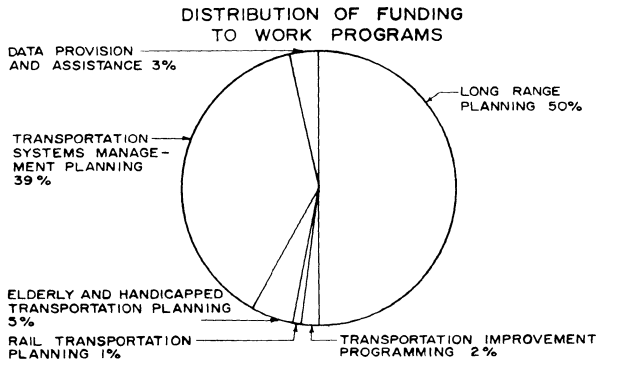
In attempting to find sound answers to these and other questions, to make plans containing recommendations concerning these questions, and to monitor transportation system development activities in the Region, the Transportation Planning Division during 1980 conducted a number of activities in eight identifiable areas: data collection, collation, and development; long-range planning; transportation systems management planning; elderly and handicapped transportation planning; transportation improvement programming; rail transportation planning; air transportation planning; and data provision and assistance. It should be noted that during 1980 the efforts of the Commission's Special Projects Planning Division were also totally devoted to carrying out work projects in these various transportation planning areas. Accordingly, for reporting purposes the work efforts of the Special Projects Division are discussed within this section of the annual report.

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 many cases federal funds for the conduct of these subregional

Figure 16

TRANSPORTATION PLANNING DIVISION





[a] *Includes $212,000 for agencies other than SEWRPC to conduct subregional transportation planning activities identified in the 1980 SEWRPC Overall Work Program.*

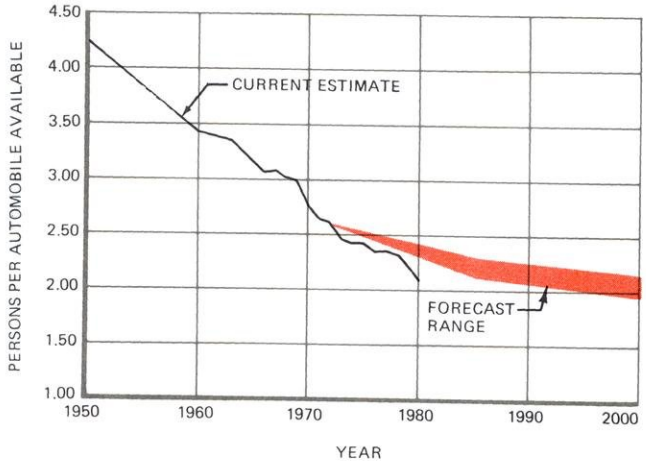
Table 4

AUTOMOBILE AVAILABILITY

County	1963	1979	1980
Kenosha	35,162	56,669	57,686
Milwaukee . . .	304,123	426,334	446,112
Ozaukee	14,319	32,968	35,222
Racine	47,583	79,556	82,892
Walworth. . . .	19,437	31,927	33,193
Washington . .	16,235	36,914	40,198
Waukesha . . .	61,899	137,702	147,182
Total	498,758	802,070	842,485

Figure 17

PERSONS PER AUTOMOBILE AVAILABLE



planning efforts "pass through" the Commission to other agencies. Through monitoring of work progress and service on task forces and advisory committees, the Commission is ultimately responsible for all of this transportation-related planning work. 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 1980 the Division staff continued to monitor secondary data sources for changes in automobile and truck availability, mass transit ridership, carpool parking facilities, and traffic volumes.

Automobile and Truck Availability

The number of automobiles available to residents in the Region in 1980 totaled 842,500. This represents an increase of 40,400 or about 5 percent, over the 1979 level of 802,100 (see Table 4). It continues the departure from nearly stable automobile availability observed over the period 1974 through 1978, when the increase in automobile availability averaged only 0.4 percent per year. The 5.0 percent 1980 rate of growth and the 5.7 percent rate of growth observed in 1979 represent sharp increases over the 3.7 percent average annual rate of growth observed between 1963 and 1974. The average annual rate of growth in automobile availability between 1963 and 1980 was 4.1 percent. The number of persons per automobile is estimated to be 2.09 in 1980, considerably lower than the estimate of 2.22 in 1979 (see Figure 17). This decrease is due to the higher number of automobiles available and the fewer number of persons in the Region as enumerated by the 1980 Census.

The estimated number of automobiles available in 1980 can be compared to the forecast range of automobile availability as developed under the long-range regional transportation system plan, and as shown in Figure 18, which depicts the historical growth in automobile availability. The forecast range of availability is 788,300 to 816,500 automobiles for the adopted transportation plan and the "no build" alternative, respectively. The 1980 regional automobile availability level of 842,500 is higher than the "no build" forecast by 3.2 percent, and is 6.9 percent higher than automobile availability envisioned under the adopted transportation plan.

The number of motor trucks available in the Region increased during the year to a total of about 132,500, an increase of 6,900 trucks, or 5.5 percent, over the 1979 level of 125,600 trucks (see Table 5). As shown in Figure 19, the increase in trucks over time is due almost entirely to the increase in light-duty trucks, which now comprise about 74 percent of total trucks available. Light trucks accounted for about 60 percent of all trucks in 1970 and for about 57 percent of all trucks in 1960. The number of light trucks increased from 90,900 in 1979 to 97,800 in 1980, an increase of 6,900, or 7.6 percent, substantially exceeding the 5.0 percent increase in automobile availability. In contrast, the number of heavy trucks and municipal trucks increased slightly from 34,700 in 1979 to 34,000 in 1980.

Figure 18

AUTOMOBILE AVAILABILITY

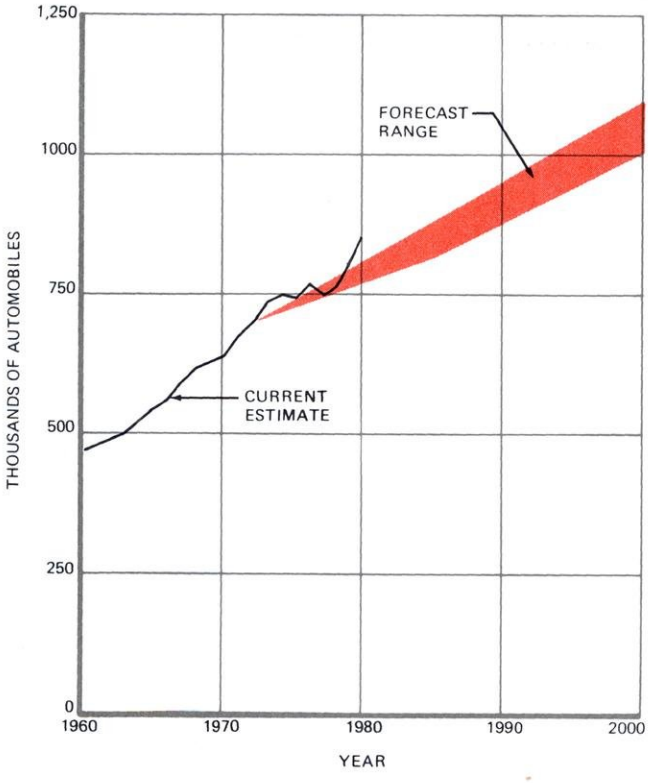
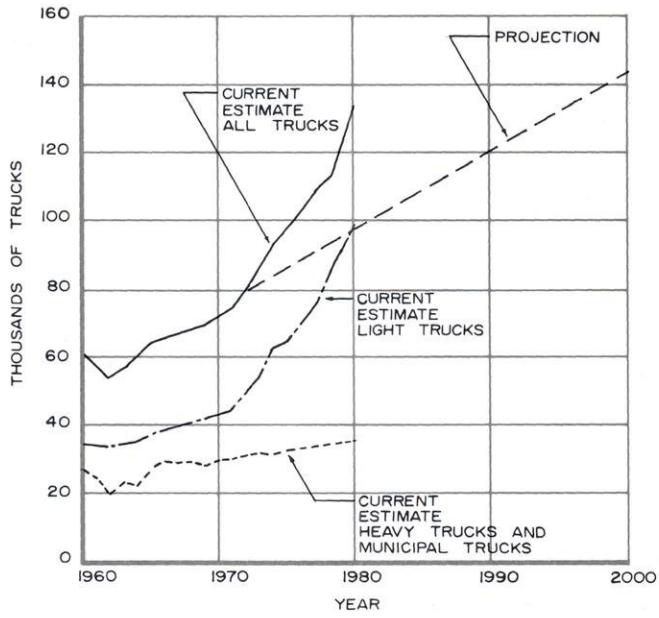


Figure 19

TRUCK AVAILABILITY



Public Transit Ridership

In 1980 there were modest increases in the utilization of the publicly owned fixed-route transit services provided in the Kenosha, Milwaukee, and Racine urbanized areas of the Region (see Table 6 and Figure 20). In the Kenosha urbanized area, ridership on the public transit system serving the City of Kenosha continued to grow during 1980, maintaining a trend which began in September 1971 with the reestablishment of the Kenosha transit system under public ownership. In April 1980, a significant change was made in the level of service provided in the City. At that time operating headways were reduced to provide for 30-minute headways between the hours of 6:00 a.m. and 9:30 a.m. and between the hours of 11:30 a.m. and 6:00 p.m. on all routes. The number of bus miles operated in revenue service during the year totaled 871,900, an increase of about 23 percent over the 706,200 bus miles operated during 1979. This increase in bus miles operated reflects the improvement in the level of transit service provided with the reduced operating headways. Despite this improvement in transit service, total transit ridership increased only by about 1 percent, from the 1979 ridership level of 1,332,300 revenue passengers to 1,342,900 revenue passengers in 1980 (see Figure 21).

Table 5

TRUCK AVAILABILITY

County	1963	1979	1980
Kenosha	4,855	11,499	12,128
Milwaukee . . .	25,867	47,803	50,629
Ozaukee	2,286	5,481	5,867
Racine	6,201	15,080	15,812
Walworth. . . .	4,490	9,823	10,169
Washington . .	3,413	9,516	10,041
Waukesha . . .	8,283	26,431	27,888
Total	55,395	125,633	132,534

In the Racine urbanized area, ridership levels on the public transit system serving the City of Racine increased substantially over 1979 levels. Public transit ridership increased during 1980 to approximately 2,313,200 revenue passengers—an increase of about 240,500 revenue passengers, or 12 per-

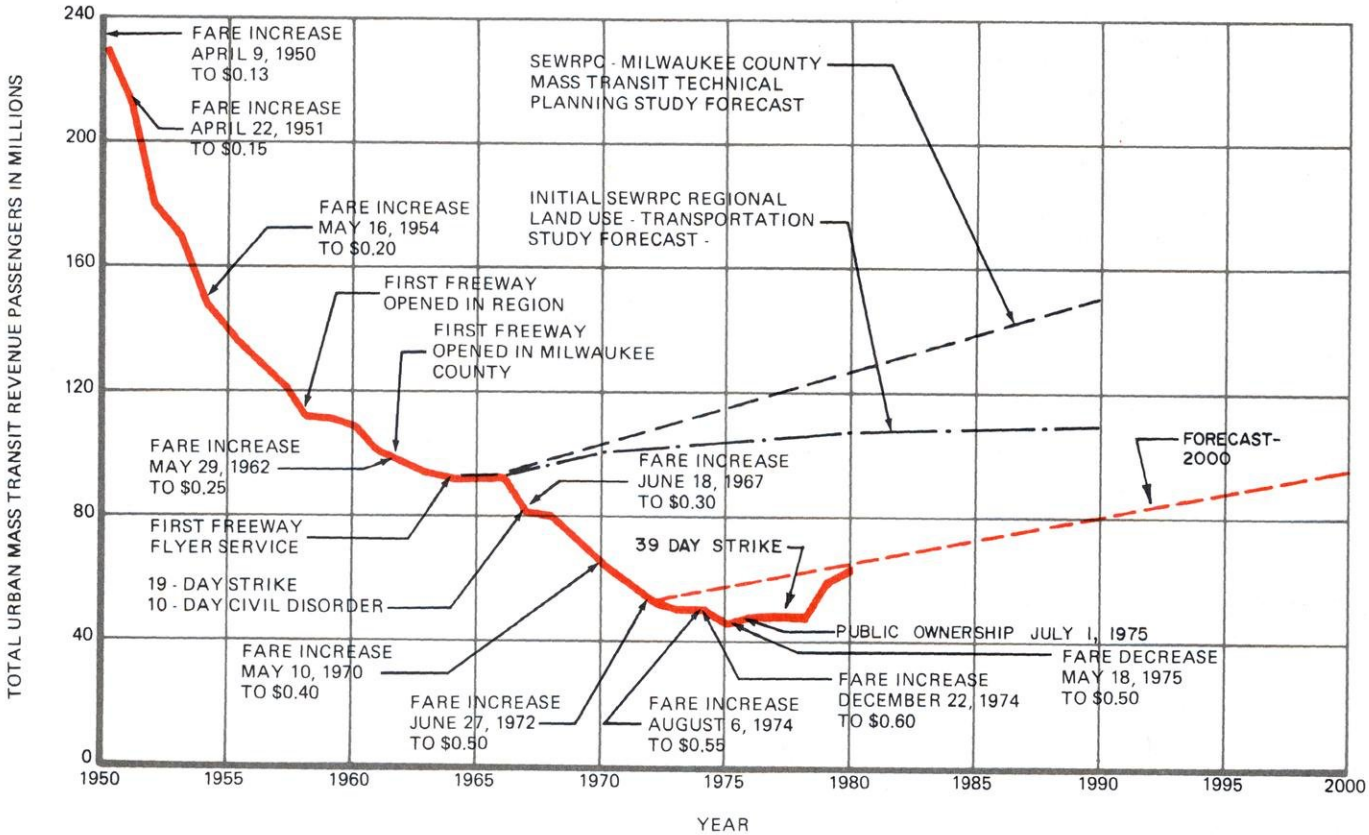
Table 6

PUBLIC TRANSIT RIDERSHIP

Urbanized Area	1979	1980	Percent Change
Kenosha	1,332,300	1,342,900	1
Milwaukee			
Milwaukee County	55,435,000	57,680,000	4
Waukesha County	206,200	222,200	8
Wisconsin Coach Lines, Inc.	146,900	156,900	7
Subtotal	55,788,100	58,061,100	4
Racine	2,072,700	2,313,200	12
Total	59,193,100	61,717,200	4

Figure 20

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.

Figure 21

MASS TRANSIT RIDERSHIP–KENOSHA

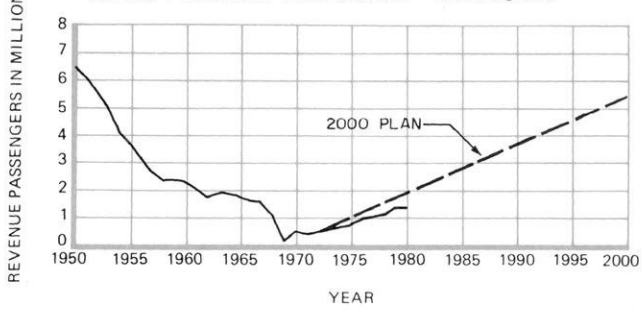
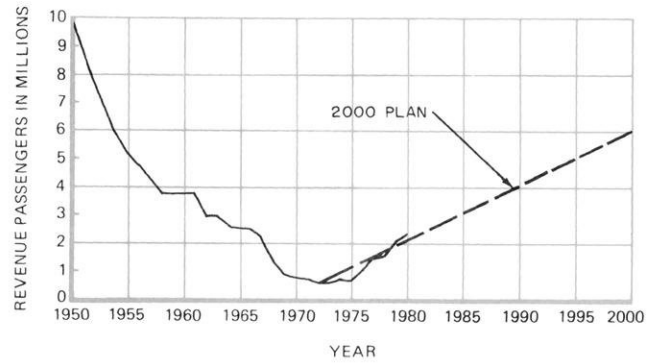


Figure 22

MASS TRANSIT RIDERSHIP–RACINE



cent, over the 1979 level of 2,072,700 passengers (see Figure 22). This increase in total transit ridership may be attributed in part to increased ridership resulting from a new route which was added to the system to provide service to the eastern portion of the Town of Caledonia, located north of the City of Racine. The number of bus revenue miles operated during 1980 totaled 1,013,500, an increase of less than 4 percent over the 978,200 bus miles operated during 1979.

During 1980 public transit service in the Milwaukee urbanized area was provided primarily by the Milwaukee County Transit System, with commuter-oriented transit service from Oconomowoc and Waukesha to the Milwaukee central business district provided by Waukesha County. In addition, transit service was provided by Wisconsin Coach Lines, Inc., a private transit operator, between the Milwaukee central business district and the Cities of Racine and Kenosha. Transit ridership on these three services increased by about 4 percent during the year—from a 1979 level of about 55.8 million to a 1980 level of about 58.1 million (see Figure 23). The number of bus miles operated during 1980 totaled about 21.6 million, representing an increase of about 7 percent over the 20.2 million bus miles operated during 1979.

During 1980 primary transit service in the Milwaukee urbanized area was provided by Freeway Flyer bus service from 13 outlying parking terminals to the Milwaukee central business district. Ridership on the Freeway Flyer bus service totaled about 1,980,000 passengers in 1980, representing an increase of 30 percent over the 1,525,000 passengers carried in 1979 (see Figure 24).

Figure 23

MASS TRANSIT RIDERSHIP–MILWAUKEE

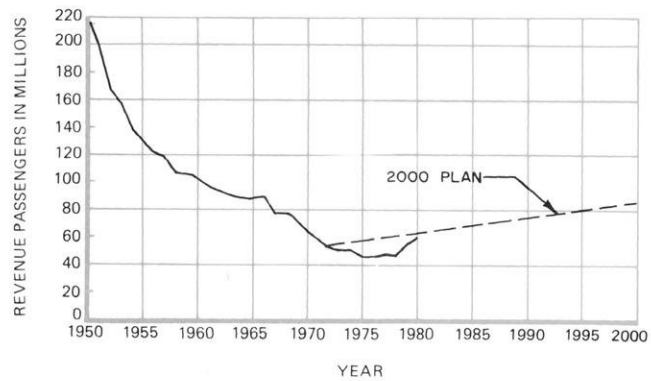
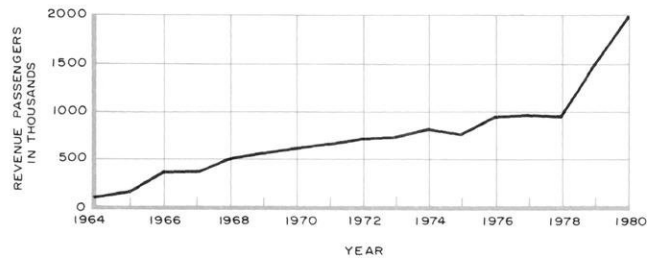


Figure 24

MILWAUKEE AREA FREEWAY FLYER RIDERSHIP



Progress in providing the public transit stations recommended in the adopted year 2000 transportation plan is summarized on Map 11. During 1980 this progress included the construction and opening of the Whitnall public transit station at the

Map 11

PRIMARY TRANSIT SYSTEM PLAN FOR THE MILWAUKEE URBANIZED AREA

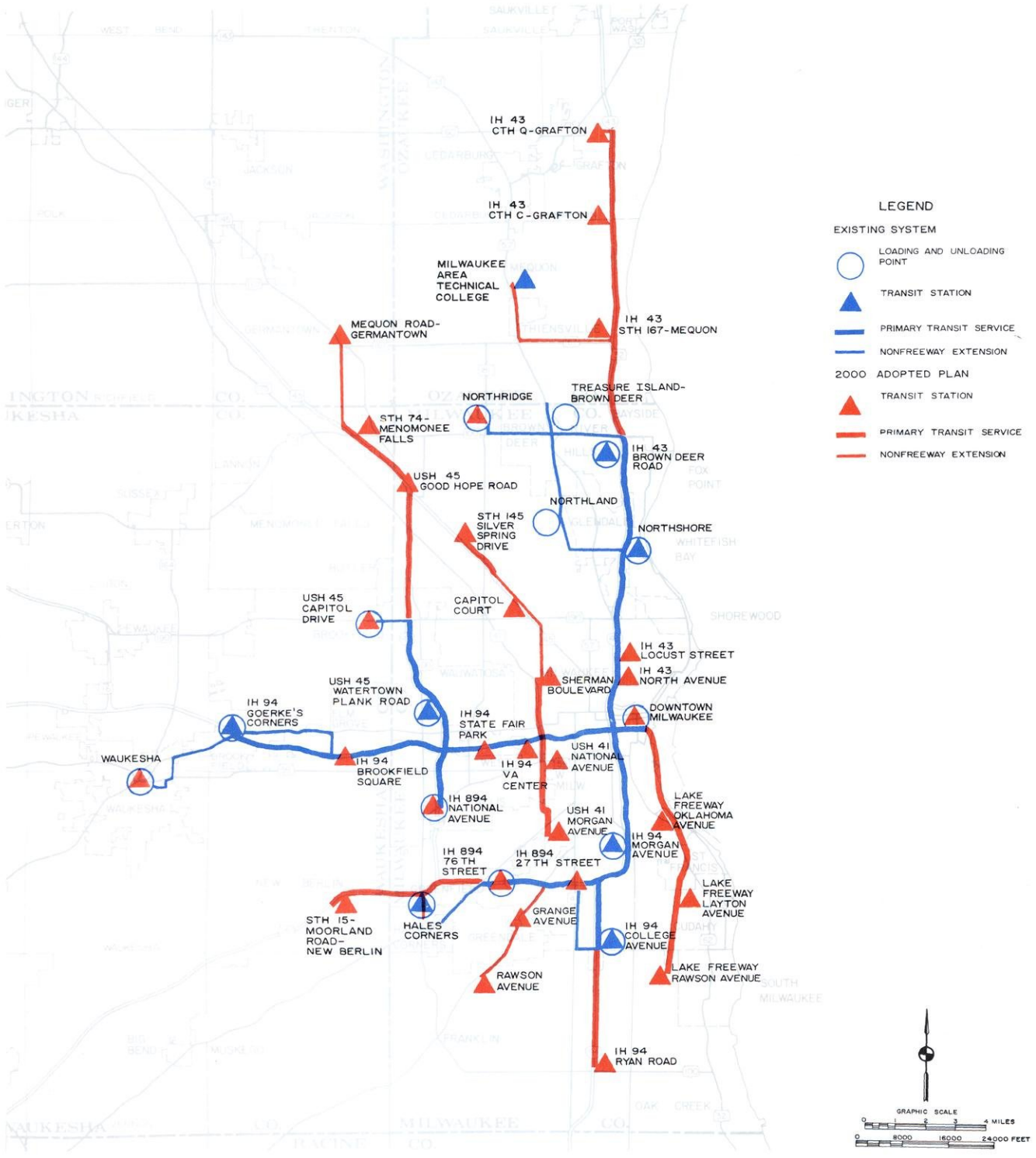


Table 7

USE OF PARKING AT FREEWAY FLYER TERMINALS

Location	Available Parking Spaces	Autos Parked on an Average Weekday—Fourth Quarter: 1980	Percent of Spaces Used[a]
Public Transit Stations			
W. College Avenue (Milwaukee)	530	405	76
W. Watertown Plank Road (Wauwatosa)	200	206	103
North Shore (Glendale)	190	186	98
Brown Deer (River Hills)	250	209	84
Goerkes Corners (Brookfield)	250	133	53
Milwaukee Area Technical College (Mequon)[b]	200	5	3
W. Holt Avenue (Milwaukee)	240	131	55
Whitnall (Hales Corners)	360	210	58
Subtotal	2,220	1,485	67
Shopping Center Lots			
Northland (Milwaukee)	100	44	44
Treasure Island (West Allis)	210	268	128
Treasure Island (Brookfield)	260	242	93
Spring Mall (Greenfield)	300	346	115
Northridge (Milwaukee)	100	79	79
Treasure Island (Brown Deer)	125	112	90
Subtotal	1,095	1,091	100
Total	3,315	2,576	78

[a] *In some cases the number of autos parked on an average weekday exceeds the available parking spaces. At public transit stations, this indicates that cars are being parked in aisles and on adjacent grass areas. At shopping center lots, this means that autos are being parked in areas not designated for all-day commuter parking.*

[b] *Public transit service to this station was terminated by the Ozaukee County Board of Supervisors on June 10, 1978.*

interchange of the Rock Freeway (STH 15) with S. 108th Street (STH 100) in the City of Greenfield to replace the park-ride lot located at the K Mart store in the Village of Hales Corners. Table 7 and Figure 25 shows both the number of parking spaces available and the number of parking spaces used on an average weekday in 1980 by patrons of Freeway Flyer bus service and carpoolers. As shown in the table, transit service was provided at seven of the eight public transit/park-ride stations and at six shopping center lots. The use of a seventh shopping center lot to provide off-street parking—K Mart in Hales Corners—was discontinued in December 1980 with the opening of the Whitnall public transit/park-ride station. The number of parking spaces available in 1980 at public transit/park-ride stations increased to a total of 2,220 spaces with the addition of 360 spaces at the Whitnall (Hales Corners) transit station and the construction of 230 additional spaces at the W. College Avenue transit station. The number of spaces provided at the shopping center lots conversely decreased by a total of 415 spaces with the discontinuance of the K Mart (Hales Corners) lot

Figure 25

FREEWAY FLYER PARKING LOT USE

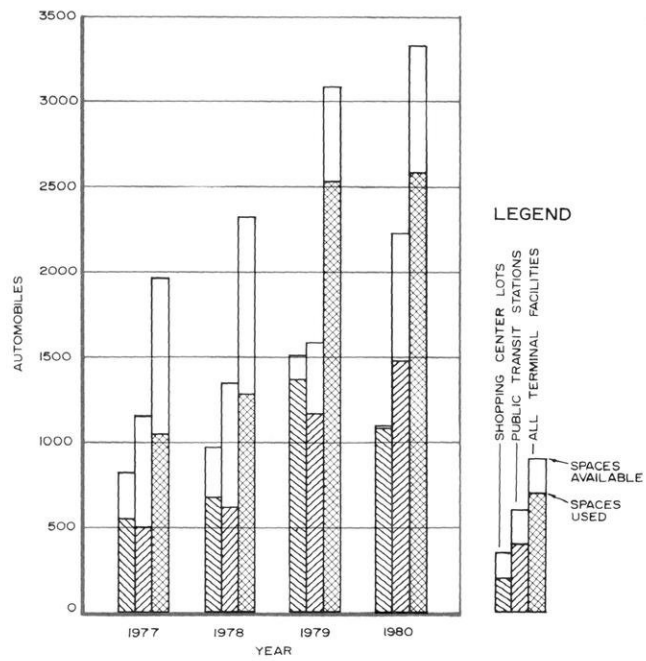


Table 8

PUBLIC TRANSIT OPERATING SUBSIDIES

Urbanized Area	Public Operating Assistance (dollars)							
	1979				1980			
	Federal	State	Local	Total	Federal	State	Local	Total
Kenosha . . .	418,113	209,753	82,558	710,424	712,000	415,450	296,865	1,425,821
Milwaukee . .	10,256,938	5,950,386	2,314,039	18,521,363	10,702,000	11,225,568	5,567,171	27,494,739
Racine	481,846	288,708	112,276	882,830	619,000	362,000	257,300	1,238,300
Total	11,156,897	6,448,847	2,508,873	20,114,617	12,033,000	12,003,018	6,121,336	30,158,860

Urbanized Area	Operating Subsidy per Ride (cents)							
	1979				1980			
	Federal	State	Local	Total	Federal	State	Local	Total
Kenosha . . .	31.4	15.7	6.2	53.3	53.0	31.0	22.1	106.1
Milwaukee . .	18.4	10.7	4.2	33.3	18.5	19.4	9.6	47.5
Racine	23.3	13.9	5.4	42.6	26.8	15.6	11.1	53.5

NOTE: 1979 figures are post-audit; 1980 figures are pre-audit.

and a reduction in the number of spaces allocated for Freeway Flyer patrons at the Treasure Island (West Allis) lot.

Of the 2,220 spaces available at the eight public transit stations, 1,485 spaces were used on an average weekday during the fourth quarter of 1980, representing a utilization rate of 67 percent. Of the 1,095 spaces available at the six shopping center lots, 1,091 spaces were utilized on an average weekday during the last quarter of 1980, representing a utilization rate of almost 100 percent. Use of parking facilities at two of the public transit stations—the W. Watertown Plank Road lot in Wauwatosa and the North Shore lot in Glendale—and at two shopping center lots—the Treasure Island lot in West Allis and the Spring Mall lot in Greenfield—nearly equaled, and in several cases actually exceeded, the available parking supply, the latter indicating that cars were being parked in aisles and on adjacent grass areas or in unauthorized spaces in shopping center lots. In total, about 78 percent of all available parking spaces were used on an average weekday during the last quarter of 1980.

Transit operating subsidies during 1980 totaled more than $30 million, as compared with about $20 million in 1979. This large increase in subsidy was caused by the relatively large increases in the cost of providing transit service, which were not offset by increases in transit fares or the increases in transit ridership. The operating subsidies were distributed by urbanized area, as shown in Table 8. In the Kenosha urbanized area, the operating subsidy per ride increased from about $0.53 to about $1.06 (see Figure 26). This increase may be attributed to the minor increase in transit ridership experienced which did not offset the increased cost of operation brought about by price inflation and the service improvements noted above. The overall public operating subsidy per ride in the Milwaukee and Racine urbanized areas increased from about $0.33 in 1979 to about $0.48 in 1980, and from about $0.43 in 1979 to about $0.54 in 1980, respectively (see Figures 27 and 28).

Carpool Parking Facilities

During 1980 the Commission collected data on the use of available parking supply at carpool parking facilities within the Region. As shown in Table 9 and Figure 29, 11 publicly owned carpool parking facilities were in operation at key freeway interchanges in the outlying areas of the Region in 1980. Of the 11 lots in operation, one lot is a new carpool facility located at STH 57 and STH 84 in Ozaukee County completed and placed into ser-

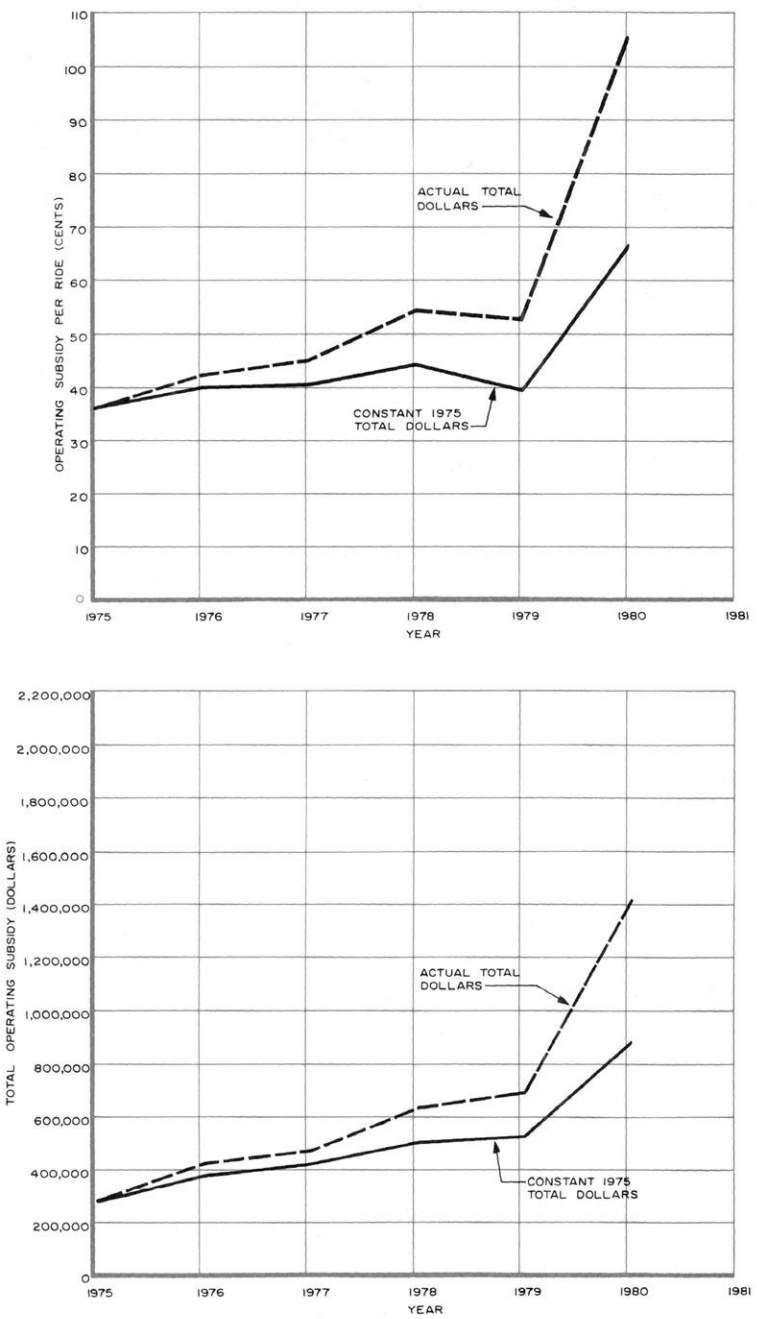
vice during 1980. The completion of this lot and the expansion of the lot at STH 15 and STH 83 added 70 parking spaces to the available supply. During the fourth quarter of 1980, about 376 of the total 652 parking spaces available were used on an average weekday. This represents a utilization rate of 58 percent, and, more significiantly, an increase of about 29 percent in the number of parked vehicles from 1979 to 1980. The progress in providing the carpool parking lots recommended in the adopted year 2000 regional transportation plan is summarized on Map 12.

Traffic Count Data

The Commission collated 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 calculating estimates of levels of, and trends in, vehicle miles of travel. During 1980 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. These data will be used in 1981 to develop estimates of vehicle miles of travel and to measure the level of congestion occurring on the arterial street and highway system. In addition, during the year the Commission staff conducted specialized traffic counts for use in the analysis and planning activities related to 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.

Figure 26

MASS TRANSIT OPERATING SUBSIDIES IN THE KENOSHA URBANIZED AREA: 1975-1980



LONG-RANGE PLAN

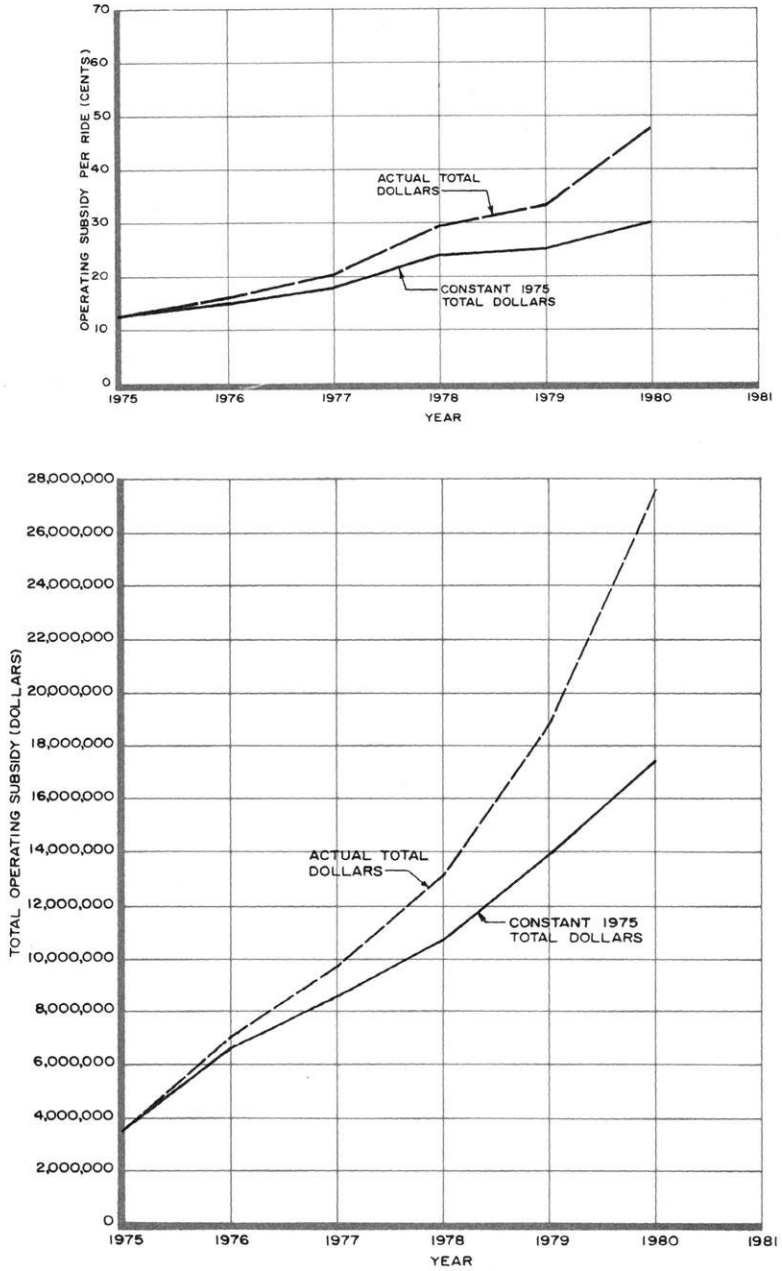
Long-Range Transportation System Plan

On June 1, 1978, the Commission adopted a new 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, which extends and amends the regional transportation system plan for the design year 1990, adopted in 1966. The newly adopted plan is graphically summar-

ized on Map 13. The new long-range regional transportation system plan was prepared to accommodate the existing and probable future travel demand in the Region, which is expected to increase by about 28 percent—from a total of about 4.5 million person trips per average weekday in 1972 to about 5.7 million such trips by the year 2000. Total vehicle miles of travel on an average weekday is anticipated to increase by more than 49 percent—from about 20.1 million to about 30.1 million. The new 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.

Figure 27

MASS TRANSIT OPERATING SUBSIDIES IN THE MILWAUKEE URBANIZED AREA: 1975-1980

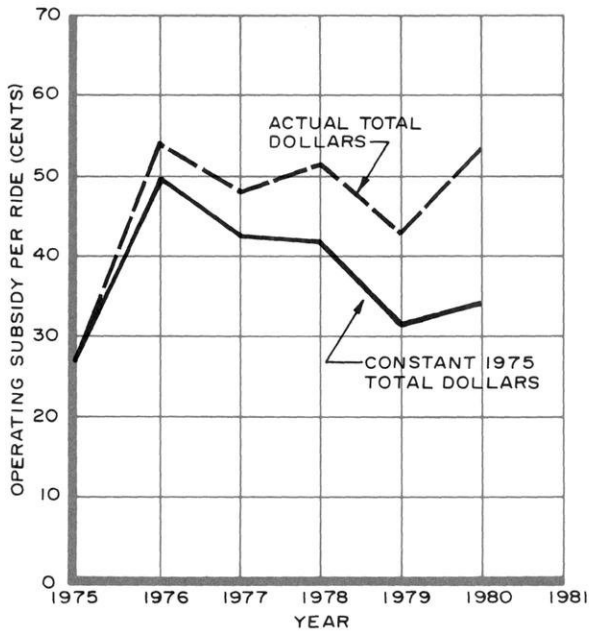


With respect to freeways, the plan does not include a number of previously planned freeways, including the Metropolitan Belt Freeway, the Bay Freeway from Pewaukee to Whitefish Bay, the Stadium FreewayNorth, the Park Freeway-West, and the Racine Loop Freeway. The remaining previously proposed freeways were included in the new plan in one of two tiers. In the lower tier are the following freeways recommended for construction in the relatively near-term future: the Stadium Freeway-South to W. Lincoln Avenue, the Lake Freeway-South to E. Layton Avenue, the West Bend Freeway (USH 45), the USH 41 Freeway conversion in Washington County, the USH 16 Freeway in Waukesha County, and the USH 12 Freeway in Walworth County. The remaining proposed freeways in Milwaukee County, including the Stadium Freeway-South From W. Lincoln Avenue to the Airport Freeway (IH 894), the Downtown Loop Freeway, and the Lake Freeway-South from E. Layton Avenue to the Illinois state line, were placed in the upper tier of the plan. These proposed freeways represent facilities which Commission studies indicate will be needed if regional population, employment, urban development, and travel demand increase in accordance with the forecasts on which the long-range system plan is, in part, based.

In the meantime, the plan recommends that attempts be made to reduce vehicular travel demand through transportation system manage-

Figure 28

MASS TRANSIT OPERATING SUBSIDIES IN THE RACINE URBANIZED AREA: 1975-1980



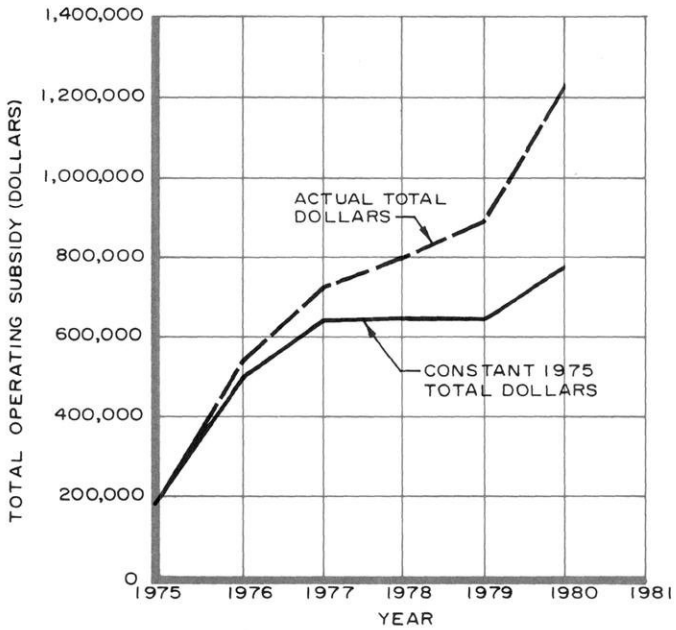
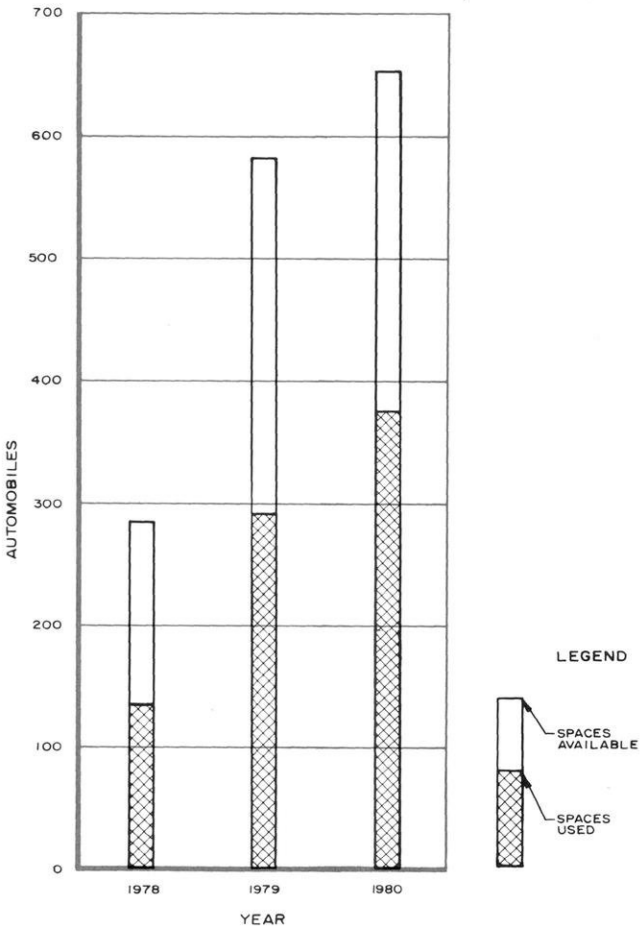


Figure 29

CARPOOL PARKING LOT USE



ment actions, including the institution of auto use disincentives, particularly in terms of the parking rate structure in downtown Milwaukee, extensive freeway ramp metering, increased carpooling and vanpooling, work time rescheduling, and improved mass transit service. The plan envisions that if such management measures encourage a sufficient shift from the automobile mode to transit and other high-occupancy vehicle modes of travel, it may never be necessary to construct those freeway segments placed in the upper tier of the plan. Along with these recommendations, the adopted regional transportation plan recommends that minor freeway modifications and ramp improvements be made to effect better transitions between existing "stub ends" of the freeway system and the surface arterial system.

The adopted regional transportation plan also contains extensive recommendations relative to the maintenance and improvement of the standard surface arterial streets and highways in the Region, as well as recommendations directed at improving public transit facilities and services. The adopted plan envisions undertaking a series of extensive

Table 9

USE OF PARKING SUPPLY AT CARPOOL PARKING LOTS

Location	Available Parking Spaces	Autos Parked on an Average Weekday—Fourth Quarter: 1980	Percent of Spaces Used[a]
Ozaukee County			
IH 43 and STH 57	100	31	31
IH 43 and CTH C	50	27	54
STH 57 and STH 84	20	12	60
Waukesha County			
Nashotah			
STH 16 and CTH C	50	22	44
Chenequa			
STH 16 and STH 83	65	11	17
Oconomowoc			
IH 94 and STH 67	35	37	106
Delafield			
IH 94 and CTH CC	30	11	37
Pewaukee			
IH 94 and STH 164	77	54	70
Mukwonago			
STH 15 and STH 83	95	75	79
Big Bend			
STH 15 and CTH F	70	57	81
New Berlin			
STH 15 and CTH Y	60	39	65
Total	652	376	58

[a] *In some cases the number of autos parked on an average weekday exceeds the number of available parking spaces. This indicates that autos are being parked in aisles and on adjacent grass areas.*

transportation system management actions, including the institution of a freeway traffic management system, work time rescheduling, the elimination of curb parking facilities, changing the parking rate structure in downtown Milwaukee, and the promotion of ride-sharing. These management recommendations would be designed to accomplish five objectives: to ensure that maximum use is made of existing transportation facilities before commitments are made to new capital investment; to encourage the use of high-occupancy vehicles, including buses, vans, and carpools; to reduce vehicle use in congested areas; to effect motor fuel savings; and to reduce air pollutant emissions.

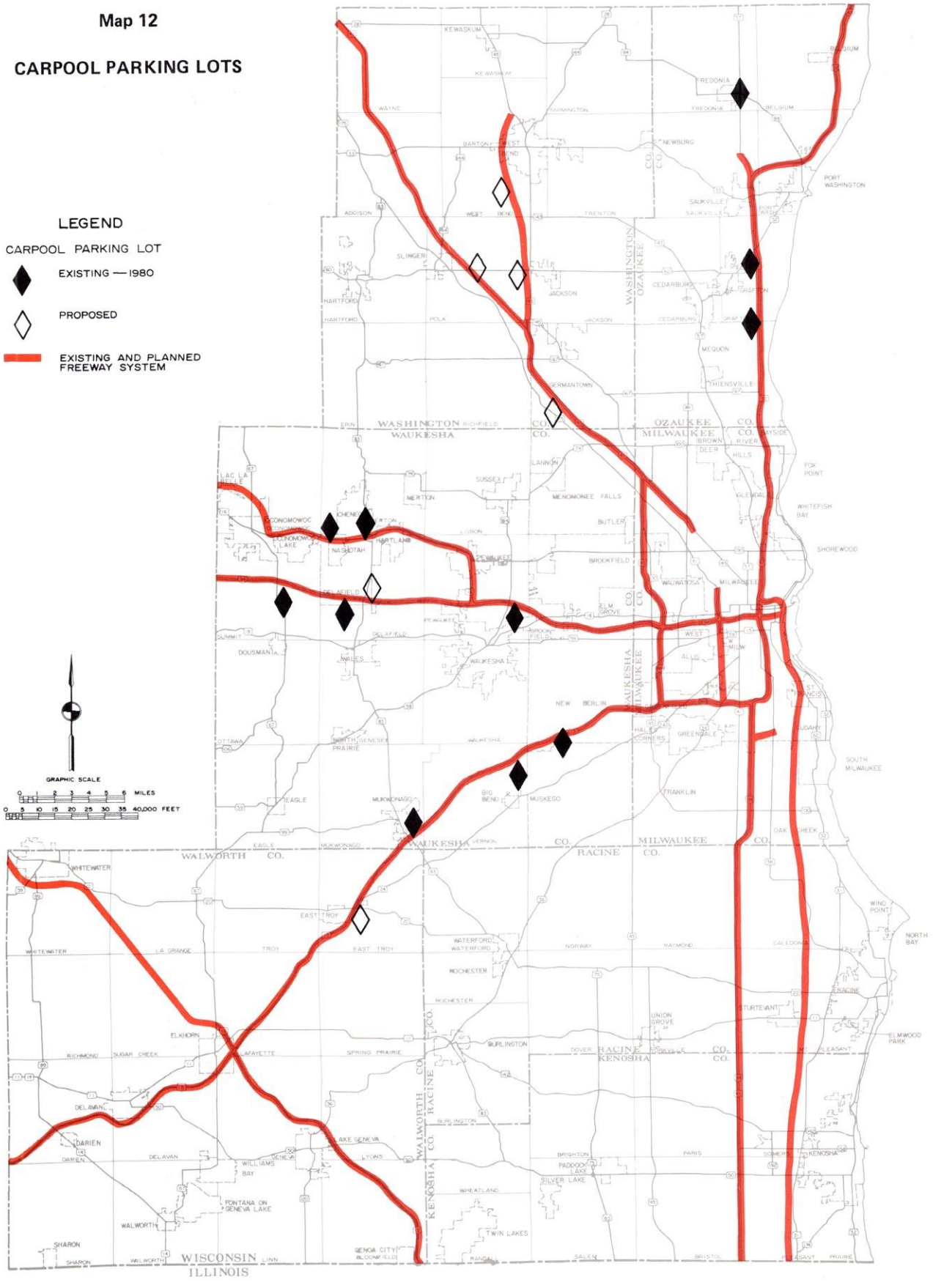
A more complete description of the adopted year 2000 regional transportation plan is set forth in the Commission 1978 Annual Report. By the end of 1980, this new plan had been adopted by the Kenosha, Ozaukee, Racine, and Waukesha Boards of Supervisors; by the Common Councils of the Cities of Burlington and Milwaukee; by the Village Board of the Village of River Hills; and by the Plan Commissions of the City of Oconomowoc and the Town of Dover. In addition, the new plan had been accepted and/or endorsed by the U. S. Department of Transportation, Federal Highway Administration and Urban Mass Transportation Administration, and by the Wisconsin Department of Transportation, with the latter agency indicating that funding constraints will likely preclude construction of the Lake Freeway-South for at least the next decade.

Milwaukee Northwest Side/Ozaukee County Transportation Improvement Study

When the Commission deleted the Park Freeway-West and the Stadium Freeway-North from the regional transportation system plan in 1978, it directed that a special study be undertaken in cooperation with the Wisconsin Department of Trans-

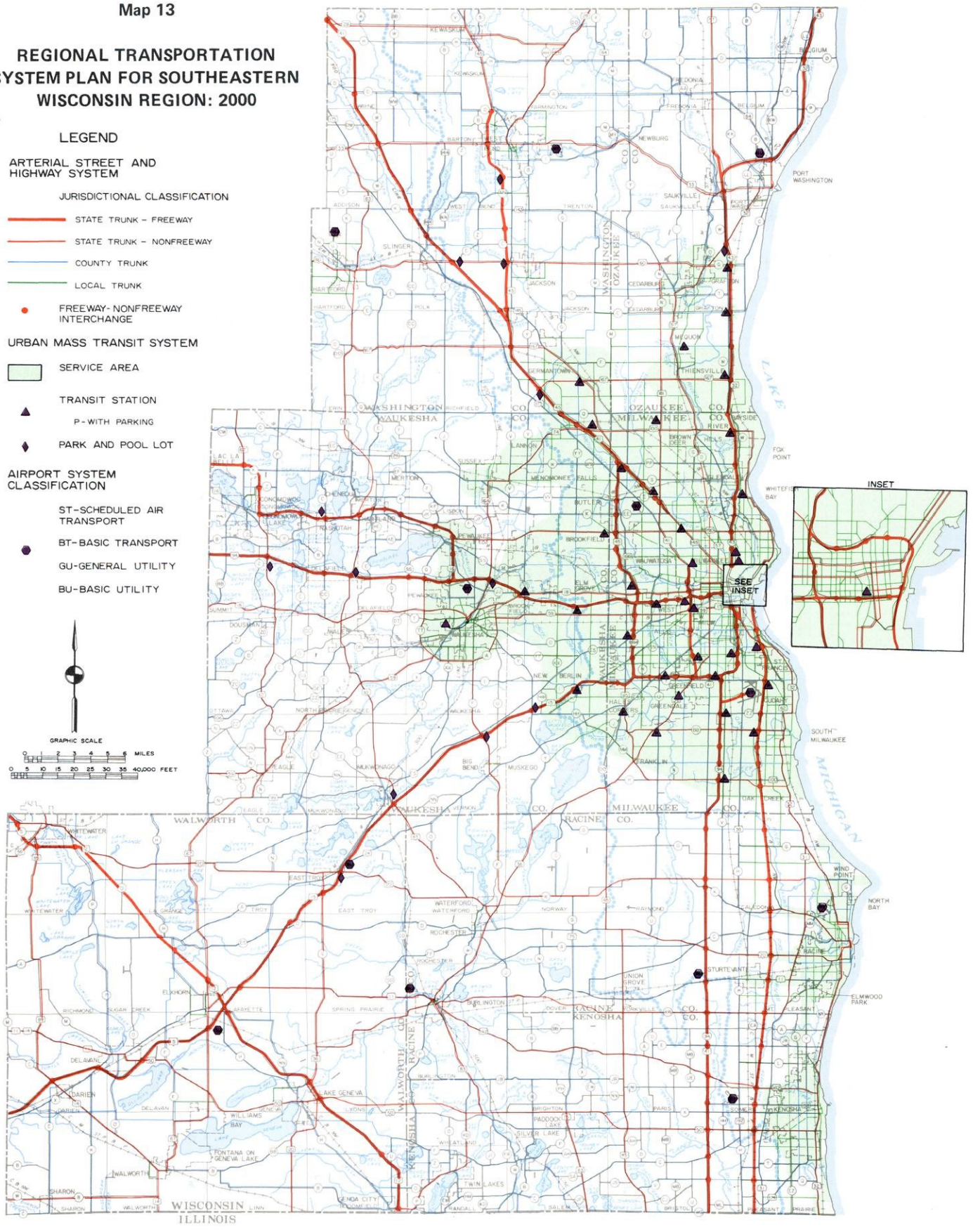
Map 12

CARPOOL PARKING LOTS



Map 13

REGIONAL TRANSPORTATION SYSTEM PLAN FOR SOUTHEASTERN WISCONSIN REGION: 2000



portation, Ozaukee County, Milwaukee County, the concerned local units of government within those two counties, and concerned citizens of the best way to meet the existing and probable future transportation needs of the subarea of the Region proposed to have been served by these two freeways in the absence of those freeways. Such a study would have two distinct and related purposes: first, to identify in a definitive manner the effect of the removal of the two freeways from the long-range plan on the northwestern quadrant of the Milwaukee urbanized areas of Ozaukee and Milwaukee Counties; and second, to explore alternative means, including low-capital intensive systems management measures and more capital-intensive surface arterial improvements, of providing an improved level of transportation service to the affected area within acceptable limits of cost and negative social, economic, and environmental impacts.

The Milwaukee Northwest Side/Ozaukee County transportation improvement study, undertaken pursuant to the Commission's direction, was begun during 1979 and continued during 1980. With the help of an 18-member technical and citizens advisory committee, whose membership is set forth in Appendix B, a study area was defined in 1979, as shown on Map 14. Basic transportation system development and management objectives for the study area were defined and all study inventories were completed. Also completed in 1979 was the determination, based upon analyses of the study inventories, of the extent to which each of these objectives was currently being met in the study area. Specific existing transportation system deficiencies of the study area were identified in terms of problem arterial street and highway reaches and public transit system service problems.

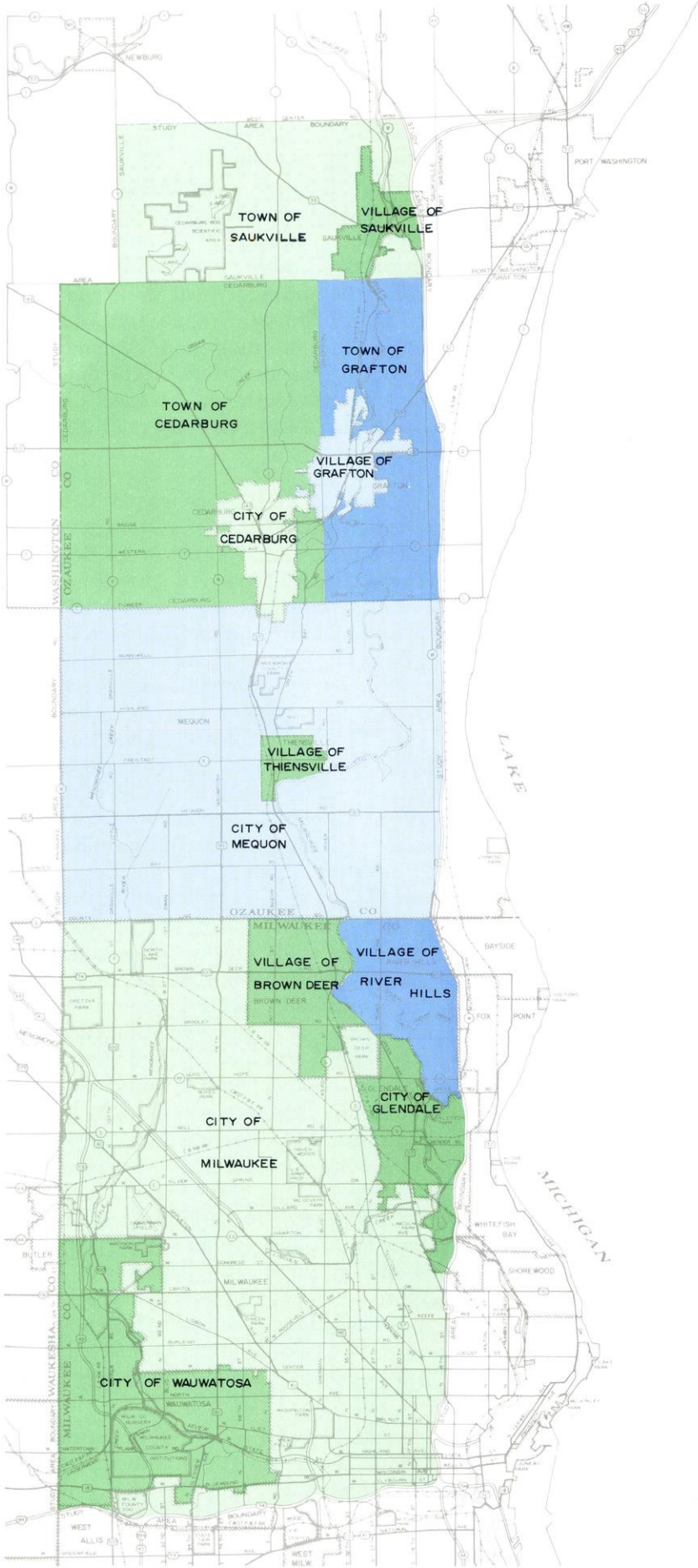
During 1980, alternative short-range traffic management actions were developed and evaluated for each congested intersection along 10 of the 22 problem arterial street reaches identified in 1979, and actions to abate the congestion were selected from among the alternatives considered. At each congested intersection, the least costly and least disruptive traffic management actions were considered first for implementation. Traffic management actions were recommended to abate congestion at 70 intersections along the 10 arterial street reaches analyzed in 1980, and to abate either inefficient signal timing or inadequate turn-lane storage capacity problems at 20 other intersections. These recommended actions include traffic signal retiming, the addition of separate signal phases, modification of the traffic signal cycle, prohibition of on-street parking, construction of new or additional through or exclusive turn lanes, and installation of new traffic signals. Through implementation of these recommended actions, it was determined that traffic congestion could be abated at all but two of the 70 intersections—the intersection of N. 60th Street and W. Appleton Avenue during the morning peak hour, and the intersection of W. Lisbon Avenue and W. North Avenue during the morning and evening peak hours. Each of the 20 identified inefficient signal timing or inadequate turn-lane storage capacity problems could also be resolved by relatively low-cost measures.

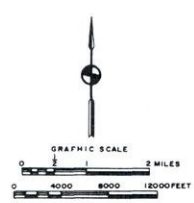
Also in 1980, alternative short-range plans addressing the identified public transit system problems in the northwest side study area were designed, tested, and evaluated as part of the concurrent Milwaukee County transit system service improvement study for the entire public transit system of Milwaukee County. The alternative transit system plans were developed to include as alternatives those improvements necessary to address the major identified public transit problems of the study area, principally the lack of freeway flyer or express transit service in the most intensively developed parts of the study area. Four alternative short-range plans were developed for the public transit system of the study area. Two of these plans, a "status quo" plan and an "augmented" system plan, served as benchmark plans against which the transit needs of the study area could be compared. The other two plans, which were developed were designed to specifically address the identified public transit system deficiencies within the study area, were a "timed transfer" system plan under which transit or transfer centers would be established at which a number of routes would meet at common arrival times, and an "extended grid" plan which would involve the expansion of all elements of the system. After the test and evaluation of these four plans, a plan for public transit within the study area was recommended which combined certain elements of these latter two plans. Under this plan, two additional freeway flyer routes, including two additional park-ride lots and two new express routes, plus one new transfer center, were recommended for the study area.

Another important element of the short-range transportation system plan for the northwest side study area completed in 1980 was the consideration of the "stub end" of the Park Freeway-West

Map 14

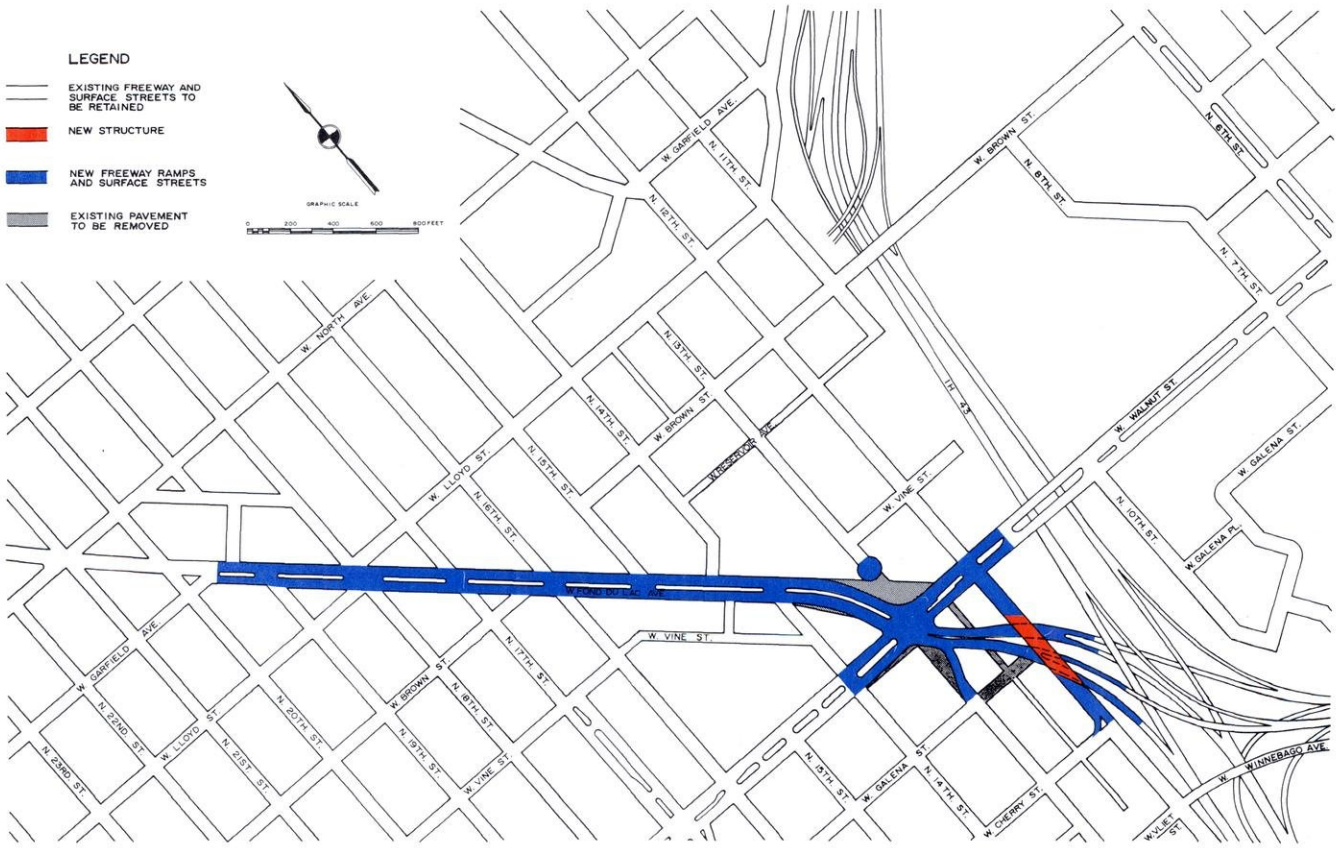
THE MILWAUKEE NORTHWEST SIDE/ OZAUKEE COUNTY STUDY AREA





Map 15

HILLSIDE INTERCHANGE "STUB END" CONNECTION ADOPTED PLAN



at the Hillside Interchange. During 1980, five alternative plans for the integration of the Hillside Interchange "stub end" into the surface arterial street system were prepared by the Wisconsin Department of Transportation, District 2, staff. Each of the alternative plans provided access between W. Fond du Lac Avenue and W. Walnut Street to the North-South Freeway (IH 43) and the Park Freeway-East. After consideration of these plans, the study advisory committee, on January 30, 1980, recommended one of these plans for implementation. Under the recommended plan, as shown on Map 15, a freeway on-ramp would be provided to both the southbound lanes of the North-South Freeway (IH 43) and the eastbound lanes of the Park Freeway-East, and a freeway off-ramp would be provided from both the northbound lanes of the North-South Freeway and the westbound lanes of the Park Freeway-East. Both the freeway on- and off-ramps would connect directly to the arterial street system at the intersection of W. Fond du Lac Avenue and W. Walnut Street. The Committee-recommended plan was formally approved during 1980 by the City of Milwaukee Common Council and the Milwaukee County Board of Supervisors.

Also in 1980, the consideration of long-range transportation problems and plans in the study area was initiated. Under the study, long-range transportation planning is to be conducted in a stepwise manner, with each successive alternative plan designed to resolve any transportation system problems and deficiencies which the analyses indicate remain unresolved by the previous plan considered, and with each successive plan having a higher cost than the preceding plan. The first long-range plan was considered in 1980. This plan, a "status quo" or "do-nothing" alternative plan, represents the minimum capital cost plan, as it would entail no further capital investment in transportation system improvements of any kind. The second long-range plan to be considered would consist solely of traffic system management and public transit improvement measures. Consideration of such a plan is

intended to assure that relatively low-capital-cost transportation systems management and public transit improvement measures are considered prior to the consideration of any capital-intensive arterial street improvements. The third long-range plan to be considered would be specifically designed to resolve the transportation system deficiencies which the analyses indicated would remain under the combination transportation system management and transit improvement plan, and would propose actions for expanding the capacity of the arterial street and highway system of the study area.

The most important finding of the test and evaluation of the "status quo" plan was the increased level of traffic congestion which may be expected. Under this plan, it was found that about 23 percent of the arterial street and highway system of the study area may be expected to operate over design capacity and experience traffic congestion by the year 2000—nearly twice the level of 13 percent of the arterial street and highway system experiencing congestion in 1978.

Milwaukee Area Primary Transit System Alternatives Analysis

During 1978, the Commission was asked by the Milwaukee County Executive to examine the feasibility of establishing a light rail transit system in the Milwaukee area. A study was thus designed to examine all reasonable primary transit modes in accordance with requirements for such studies as specified by the U. S. Department of Transportation, Urban Mass Transportation Administration. The Commission first prepared a prospectus outlining the scope and content of the study as well as identifying five factors contributing to the need for such an alternatives analysis study in the Milwaukee area. These five factors are: 1) the need to reconsider the best means of providing primary transit service as a result of the elimination of certain previously planned freeway segments in the Milwaukee area; 2) the potential availability of readily available rights-of-way in the Milwaukee area which may be suitable for the location of primary transit fixed guideways; 3) the need to reconsider the potential serviceability and financial feasibility of the existing and planned future motor bus transit system in the Milwaukee area in light of the rising cost and potential shortages of petroleum-based motor fuels; 4) the public interest in light rail transit as an alternative primary transit technology in the Milwaukee area; and 5) the attractiveness of the potential benefits of any primary transit system which utilizes fixed guideway technologies.

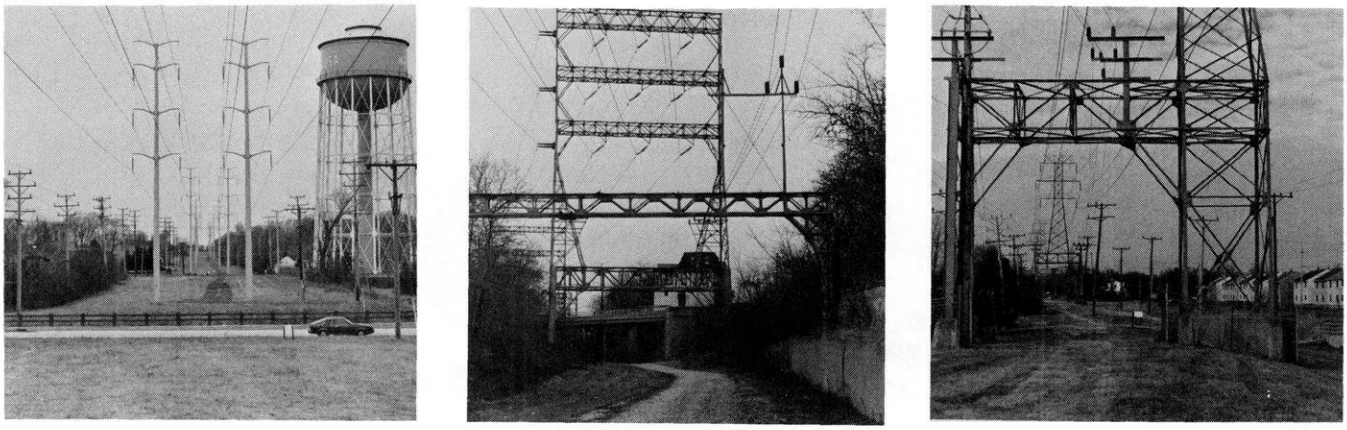
During 1980 the Commission staff was involved in Phase I of the study, one of two major planning phases required prior to the implementation of any fixed guideway primary transit system. Phase I planning work includes the collation of critical transit-related socioeconomic land use and transportation information, along with an assessment of what primary transit modes would work most efficiently and economically in the various corridors of major travel demand in the Milwaukee area. This analysis is designed to result in an identification of any corridors that may have the potential for the development of fixed guideway primary (rapid) transit facilities. Those corridors will then be examined in greater detail in Phase II of the study, which will include a preliminary engineering analysis as well as an environmental and community impact analysis. The findings and recommendations of Phase I of this major transportation planning effort are to be documented in four Commission technical reports and one Commission planning report.

During 1980 two of the four technical reports were completed and published and a third was completed and readied for publication early in 1981. Much of the information developed and presented in these reports represents entirely new work by the Commission and, therefore, constitutes extensive additions to the regional planning data base. This new information will be of use in future Commission planning activities, as well as in the primary transit systems alternatives analysis.

The first technical report, SEWRPC Technical Report No. 23, Transit-Related Socioeconomic, Land Use, and Transportation Conditions and Trends in the Milwaukee Area, was completed and published in 1980. This report summarizes those demographic, economic, and land use characteristics, travel habits and patterns, existing transportation facilities and services, currently planned transportation facilities and services, financial resources, and elements of the natural resource and public utility base of the Southeastern Wisconsin Region which are relevant to primary transit system planning. In addition, an extensive and detailed inventory was performed of readily available rights-of-way in the Milwaukee urbanized area which may have use as potential alignments for primary transit guideways at a minimum of cost and urban disruption (see Figure 30).

Figure 30

EXISTING EXCLUSIVE RIGHTS-OF-WAY IN THE MILWAUKEE AREA



Certain existing rights-of-way within the Milwaukee area offer possible opportunities for the location of primary transit fixed guideway alignments. Active or abandoned railway rights-of-way, former electric interurban railway rights-of-way, active and cleared freeway rights-of-way, and utility rights-of-way may require less capital costs for a fixed guideway facility than a newly developed, right-of-way, and may result in fewer adverse community impacts. Although the Milwaukee area has many such exclusive rights-of-way, those which have good potential are generally located in the outlying suburbs around the City of Milwaukee. These scenes show three segments of former electric interurban railway right-of-way in the Milwaukee area. On the left is the former Milwaukee Electric Lines Local Rapid Transit Line right-of-way near S. Honey Creek Parkway and W. Fairview Avenue. The center photograph shows the same right-of-way just east of N. Hawley Road, and on the right is the former Milwaukee Northern Division right-of-way near N. Dexter and W. Rohr Avenues.

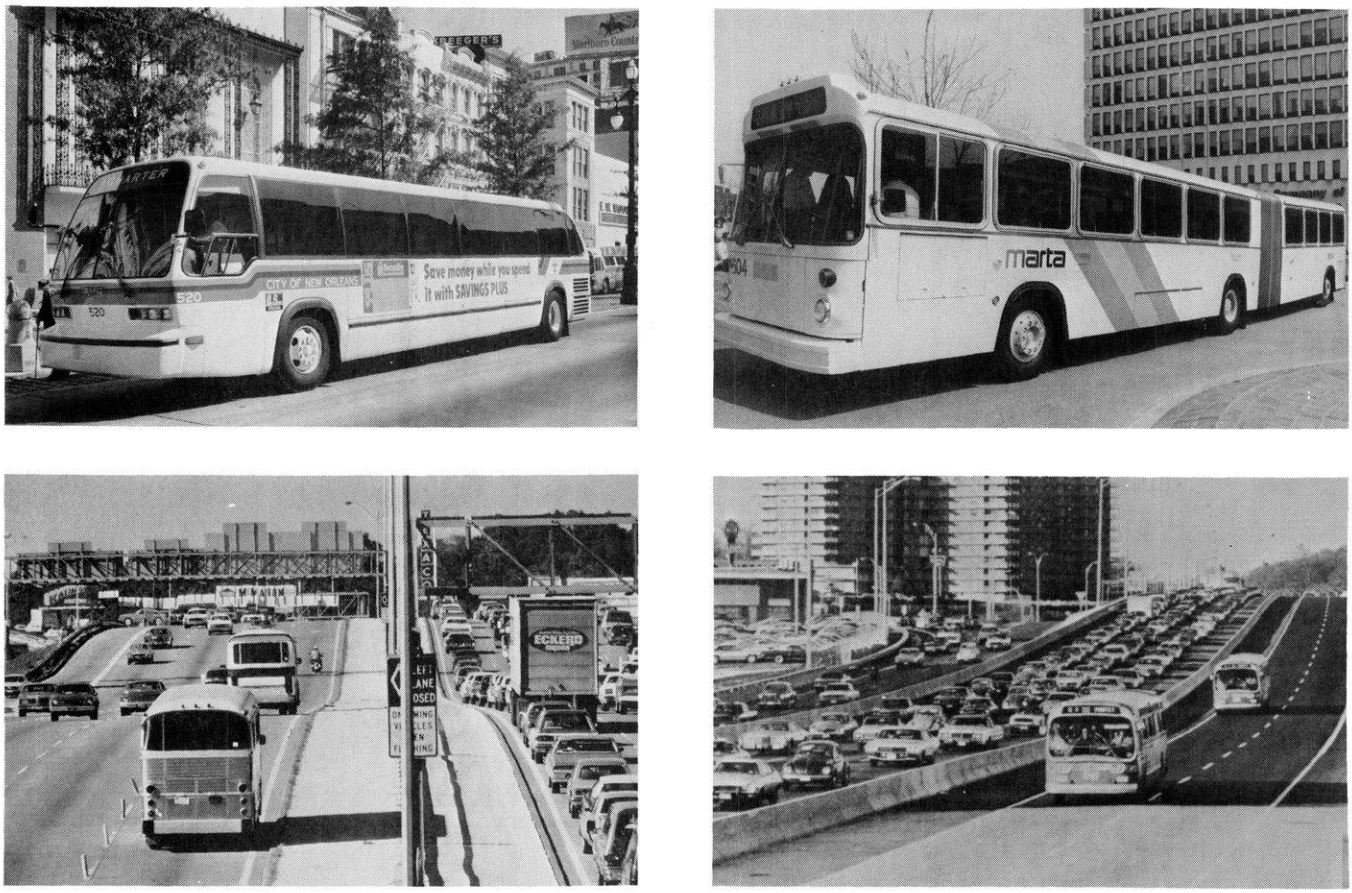
The second technical report is SEWRPC Technical Report No. 24, State-of-the-Art of Primary Transit System Technology. This technical report, which was completed in 1980 but not yet printed at year's end, is an inventory of state-of-the-art physical, operational, and economic characteristics of appropriate primary transit system technologies for the Milwaukee area. It identifies and describes the following eight different urban transportation modes: 1) operation of motor buses on freeways in mixed traffic; 2) operation of motor buses on freeways in reserved lanes; 3) operation of motor buses on busways; 4) operation of motor buses in arterial express service; 5) light rail transit; 6) heavy rail rapid transit; 7) commuter rail; and 8) electric trolley bus technology. All of these primary transit technologies were defined in terms of their application, vehicle characteristics, guideway characteristics, station characteristics, support facilities, performance characteristics, and economic characteristics, as well as in terms of the extent of each mode's operation today (see Figures 31 and 32.

The third technical report, SEWRPC Technical Report No. 25, Alternative Futures for Southeastern Wisconsin, was completed and published in 1980. This report documents a range of four "alternative futures" reflecting a moderate growth scenario and a stable or declining growth scenario, both under a centralized plan and a decentralized plan. These alternative futures are based on a selection of key external factors which reflect energy cost and availability, population lifestyles, and economic conditions (see Table 10). Alternative transit plans for each future will be developed based upon analysis of the travel habits and patterns likely to occur under each of the four futures. The use of the "alternative futures" approach is intended to deal with the high level of uncertainty that exists today about key future conditions which influence public transit needs. The purpose of using this approach is to identify those alternative system plans that perform well under a wide range of future conditions. In addition, those system options which work best only under particular futures can be identified so that actions can be taken to avoid foreclosing those options.

In addition to these three technical reports, work was begun on a fourth report, SEWRPC Technical Report No. 26, Milwaukee Area Alternative Primary Transit System Plan Preparation, Test, and Evaluation, as well as the summary planning report, SEWRPC Planning Report No. 33, A Primary

Figure 31

EXAMPLES OF MOTOR BUS MODES IN PRIMARY TRANSIT SERVICE



Motor bus technology applicable for primary transit service consists of four distinguishable modes: operation on freeways in mixed traffic, operation on freeways in reserved lanes, operation on busways, and express operation on arterial streets. The same motor bus vehicles can be used for any of these four modes, the most common vehicles being a conventional configuration (upper left), or an articulated design (upper right). Articulated motor buses, popular for many years in Europe because of their increased passenger-carrying capacity, have only recently become accepted by transit operators in the United States. Of the four motor bus transit modes, operation in mixed traffic on freeways and arterial express service make predominant use of existing facilities without major modifications. Motor bus operation on reserved freeway lanes does not require major changes to existing facilities, but may require certain traffic engineering measures, especially for reserved contraflow lanes which operate against the direction of travel (lower left). Unlike the other three motor bus modes, operation on busways requires the construction of a separate guideway (lower right). Motor bus technology offers the potential for a no-transfer ride between origins and destinations because of the vehicles' ability to operate both on exclusive guideways or freeways and on arterial or local streets.

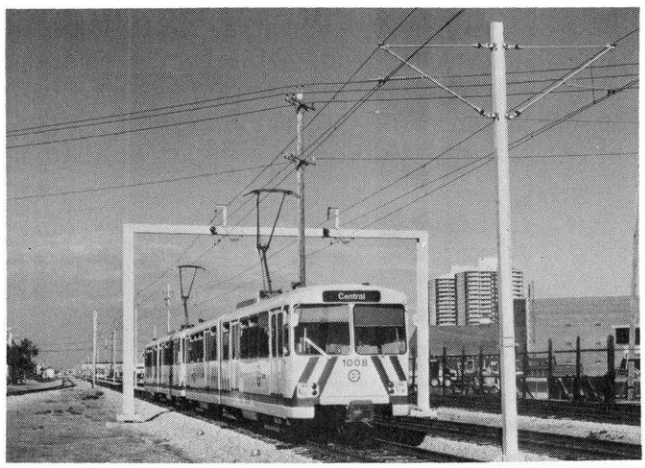
Transit System Plan for the Milwaukee Area. The plan test and evaluation component of the study is designed to set forth the ridership, cost, and other important impacts of the alternative primary transit system plans. The planning report will provide the essential summaries of the study effort and its principal findings, including, importantly, the recommended primary transit system plan for the Milwaukee area. The complexity of this planning effort is such that the recommendations from the study are not expected to be ready for public review before the fall of 1981.

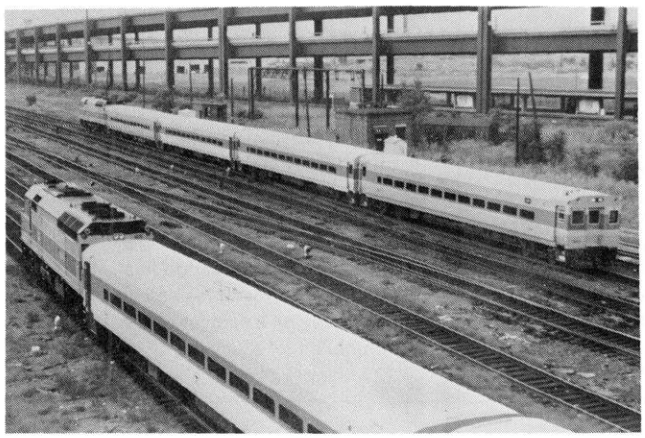
TRANSPORTATION SYSTEMS MANAGEMENT PLANNING

The Commission devoted considerable staff resources during 1980 to a number of planning efforts designed to result in recommendations to better manage the Region's transportation system. The short-term planning and management efforts were carried out not only by the Commission but by other agencies with funds that are granted to the Commission and "passed through" to others.

Figure 32

EXAMPLES OF RAIL TRANSIT AND ELECTRIC TROLLEY BUS MODES IN PRIMARY TRANSIT SERVICE





Rail transit technology applicable for primary transit service consists of three distinguishable modes: light rail transit, heavy rail rapid transit, and commuter rail. Light rail transit is the most flexible and adaptable of the rail transit modes. Because its electric power supply is provided by an overhead wire system, a wide variety of surface configurations can be utilized, thus minimizing such large capital investments as would be necessary, with a fully grade-separated alignment (upper left). Modern heavy rail rapid transit systems are typified by lengthy segments of elevated alignment as well as by expensive subways (upper right). This mode can only operate over an exclusive, fully grade-separated guideway because of the use of a side-running third rail for power collection, high vehicle operating speeds, and semi-automated train operation. The operation of commuter trains involves the use of rolling stock manufactured to mainline railway standards operated over railway trackage shared with intercity freight and passenger train traffic (lower left). Finally, the electric trolley bus represents a special alternative to the diesel motor bus in the application of primary transit service because of certain performance limitations imposed by current vehicle and overhead power distribution system design (lower right). The electric trolley bus today generally operates in mixed traffic over existing arterial streets and highways, providing a local—and in some cases, an express—level of service.

1981 Transportation Systems Management Plan

During 1980 the Commission completed the preparation of an updated 1981 transportation systems management (TSM) plan for the Southeastern Wisconsin Region. This five-year plan covering the period 1981 through 1985 examines the operations and management of the existing transportation systems and proposes projects and studies to improve the efficiency of these systems. The plan also reports on the progress made in implementing transportation projects contained in the Region's previous TSM plans.

The 1981 TSM plan was adopted by the Southeastern Wisconsin Regional Planning Commission on December 2, 1980, such action being taken on the recommendation of the Intergovernmental Coordinating and Advisory Committees on Transportation System Planning and Programming for

the Kenosha, Milwaukee, and Racine Urbanized Areas. The 1981 TSM plan is documented in SEWRPC Community Assistance Planning Report No. 50, A Transportation Systems Management Plan for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1981.

The 1981 TSM plan reports that significant progress has been made in implementing the TSM projects and in undertaking the TSM planning studies recommended in the initial plans. About 49 percent of the 229 TSM projects recommended for full or partial implementation during 1980 were completed or underway. Of the remaining projects recommended for implementation during 1980 about 67 percent were deferred for later implementation, with the remaining 33 percent consisting of 40 projects being dropped from

Table 10

ALTERNATIVE FUTURES: KEY EXTERNAL FACTORS, ATTENDANT REGIONAL CHANGE, AND LAND USE PLANS

Key External Factor	Moderate Growth Scenario	Stable or Declining Growth Scenario
Energy		
The future cost and availability of energy, particularly of petroleum	Oil price to converge with world oil price, which will increase at 5 percent annual rate to $72 per barrel in the year 2000 (1979 dollars) Petroleum-based motor fuel to increase to $2.30 per gallon by the year 2000 (1979 dollars) Assumes some potential for major and continuing disruptions in oil supply	Oil price to converge with world oil price, which will increase at 2 percent annual rate to $39 per barrel in the year 2000 (1979 dollars) Petroleum-based motor fuel to increase to $1.50 per gallon by the year 2000 (1979 dollars) Assumes no major or continued disruptions in oil supply
The degree to which energy conservation measures are implemented, particularly with respect to the automobile	Low degree of conservation in all sectors, resulting in increase in energy use of 3 percent Automobile fuel efficiency of 27.5 miles per gallon	High degree of conservation in all sectors, resulting in increase in energy use of 2 percent or less Automobile fuel efficiency of 32 miles per gallon
Population Lifestyles		
The degree to which the changing role of women affects the composition of the labor force	Female labor force increases to 50 to 55 percent and total labor force participation is 60 to 65 percent	Female labor force increases to 65 to 70 percent and total labor force participation is 70 to 75 percent
The future change in fertility rates	A continuation of below-replacement-level fertility rates during the next decade, followed by an increase to replacement level by the year 2000	A continuation of below-replacement-level fertility rates to the year 2000
The future change in household sizes	Average household size stabilizes	Average household size continues to decline
Economic Conditions		
The degree to which the Region will be able to compete with other areas of the nation for the preservation and expansion of its economic base	Region is considered to have relatively high attractiveness and competitiveness	Region is considered to have relatively low attractiveness and competitiveness
The future change of real income	Per capita and household income increase envisioned as a result of the attractiveness and competitiveness of Region, an increased proportion of the population being of work force age, and increased population labor force participation	Per capita increase likely but no household income increase envisioned as a result of the lack of attractiveness and competitiveness of Region, but increased proportion of the population is of work force age, and there is increased population labor force participation

Table 10 (continued)

Attendant Regional Change	Moderate Growth Scenario	Stable or Declining Growth Scenario
Population of the Region in Year 2000		
Size	2,219,300 persons	1,688,400 persons
Age Distribution	29.2 percent—0-19 years of age 58.5 percent—20-64 years of age 12.3 percent—65 years of age or older	26.8 percent—0-19 years of age 60.6 percent—20-64 years of age 12.6 percent—65 years of age or older
Number of Households	681,100 to 739,400	673,600 to 750,600
Household Size	Average of 2.9 to 3.1 persons	Average of 2.2 to 2.5 persons
Economic Activity of Region in Year 2000		
Employment	1,016,000 jobs	887,000 jobs
Structure	Manufacturing. . . . 32 percent Services. . . . . 40 percent Other . . . . . 28 percent	Manufacturing. . . . 30 percent Services. . . . . 41 percent Other . . . . . 29 percent
Personal Income	$29,600 to $32,000 per household in 1979 dollars (38 to 50 percent increase over 1970, or a 1.1 to 1.4 percent annual rate of increase) $10,000 per capita in 1979 dollars (54 percent increase over 1970, or a 1.4 percent annual rate of increase)	$21,400 to $23,700 per household in 1979 dollars (0 to 11 percent increase over 1970, or a 0.0 to 0.3 percent annual rate of increase) $9,500 per capita in 1979 dollars (46 percent increase over 1970, or a 1.3 percent annual rate of increase)

Land Use Plan Characteristics	Moderate Growth Scenario		Stable or Declining Growth Scenario	
	Centralized Plan	Decentralized Plan	Centralized Plan	Decentralized Plan
Urban Growth and Density				
New Urban Residential Land	Occurs primarily at medium residential densities along the periphery of, and outward from, existing urban centers	Occurs primarily at suburban residential densities in a diffused pattern in areas proximate to, and removed from, existing urban centers	Occurs primarily at medium residential densities along the periphery of, and outward from, existing urban centers	Occurs primarily at suburban residential densities in a diffused pattern in areas proximate to, and removed from, existing urban centers
Urban Density	Existing developed portions of Milwaukee County generally maintain residential density existing in 1970	Existing developed portions of Milwaukee may decrease in residential density between 1970 and 2000	Existing developed portions of Milwaukee County generally maintain residential density existing in 1970	Existing developed portions of Milwaukee may decrease in residential density between 1970 and 2000
Population Distribution				
Milwaukee County	1,049,600 persons	898,500 persons	830,000 persons	700,000 persons
Percent Change from 1970	- 0.4	- 14.8	- 21.3	- 33.6
Percent Change from 1978	10.0	- 5.8	- 13.0	- 26.6
Outlying Counties (Ozaukee, Washington, Waukesha)	677,600 persons	786,700 persons	480,000 persons	605,000 persons
Percent Change from 1970	93.8	125.0	37.2	73.1
Percent Change from 1978	52.8	77.4	8.2	36.4
Employment Distribution				
Milwaukee County	593,600 jobs	523,400 jobs	552,300 jobs	525,300 jobs
Percent Change from 1970	16.2	2.4	8.1	2.8
Percent Change from 1978	5.6	- 6.9	- 1.8	- 6.6
Outlying Counties (Ozaukee, Washington, Waukesha)	231,400 jobs	274,800 jobs	181,900 jobs	206,900 jobs
Percent Change from 1970	119.5	160.7	72.6	96.3
Percent Change from 1978	63.6	94.3	28.6	46.3

further consideration. Of the 35 improved transit service projects recommended for implementation during 1980, 23 were completed or underway.

Progress was made during 1980 toward implementation of one of the "stub end" freeway treatments called for in the 1978 TSM plan. Agreement was reached under the Commission's Milwaukee Northwest Side/Ozaukee County transportation improvement study on the manner in which the uncompleted freeway ramps at the Hillside Interchange on IH 43 should be connected to the surface arterial system. In addition, a design investigation was initiated for the "stub end" treatment at the current terminus of the Stadium Freeway-North.

During 1980, significant progress was also made in completing studies previously recommended under TSM plans. A five-year transit development program, prepared by the SEWRPC, was completed for the City of Waukesha, and approved by the Waukesha electorate in a referendum. It is anticipated that public transit service will be reestablished in the City in 1981. In addition, the Commission completed a transit improvement program for the Waukesha County Board of Supervisors which provides for expanded commuter-oriented transit service between communities in Waukesha County and Milwaukee County, and for the extension of local transit routes from Milwaukee County into Waukesha County. Also during 1980, significant progress was made toward completion of both the Milwaukee Northwest Side/Ozaukee County transportation improvement study mentioned above and the work time rescheduling study. And finally, Milwaukee County completed a transit system study which resulted in the adoption of a five-year program for transit service route improvements and extension throughout the County. More detailed information on these and related studies is provided in following sections.

The 1981 TSM plan recommends the implementation of 245 projects and 11 studies at an estimated total cost of $556.3 million over the five-year period 1981-1985. The 1981 plan represents an increase of about $22.2 million over the total cost of the 1980 TSM plan for a comparable five-year time period. The increase in the 1981 plan costs occurs largely in the Milwaukee and Racine urbanized areas, where substantial increases in costs—nearly $110 million, up from $81 million—for improved transit service actions are included in the 1981 plan. In addition in the Milwaukee urbanized area, the freeway traffic management system, consisting of an expanded system of freeway ramp meters and a central controller, has increased in cost from $6.4 million to $7.8 million. Park-ride and park-and-pool lot projects are up from $10.7 million in 1980 to $11.7 million in the 1981 plan. It is estimated that $136 million of the total plan cost will be spent on 180 of the 245 recommended projects and on 11 studies during the annual element of the 1981-1985 transportation improvement program for the Region, which is, in general, 21 months for all federal highway projects and 12 months for all other projects and studies.

In the 1981 TSM plan, the individual TSM projects are grouped into 23 categories of TSM actions which are presented in approximate order of priority. Table 11 presents in summary form the 1981 TSM plan recommendations, including implementing agency responsibility, sources of funding, and implementation schedule.

While the costs of the 1981 TSM plan may seem large, it must be realized that much of the TSM plan is a catalogue of actions that currently are being, and for many years have continuously been, implemented in the Region. There are, however, a number of new initiatives that have grown partially or wholly out of the TSM planning process, some of the more important of which include a recommendation for a detailed planning study of a freeway traffic management system, a recommendation for examining alternatives to improve the efficiency of the "stub end" freeways in Milwaukee County, and a recommendation for a study of the Milwaukee downtown parking rate structure.

The 1981 TSM plan recommendations include a wide variety of operations, management, construction, design, and planning activities that will require the continued close cooperation and involvement of all large and many small transportation system operating and implementing agencies in southeastern Wisconsin.

Work Time Rescheduling Study

Work time rescheduling—flexible work hours, staggered work hours, shifted work hours, and shortened work hours—represents one way to reduce peak travel demands on the transportation system. Accordingly, a study of the potential of work time rescheduling to reduce peak travel demands, including the development of a plan for its most effective implementation, is recommended in the regional transportation systems management plan.

Table 11

SUMMARY OF 1981 TRANSPORTATION SYSTEMS MANAGEMENT RECOMMENDATIONS FOR THE SOUTHEASTERN WISCONSIN REGION

TSM Action (listed in approximate order of priority)	Total Projects and Studies in Region in TSM	Lead Agency	Source of Federal Funds if Required	Estimated Total Project Costs/1981 Annual Element Costs in TIP if Different from Total (in $1000)	Recommended Implementation
Freeway Traffic Management System	10 Projects	Wisconsin Department of Transportation (WisDOT)/SEWRPC	Federal Aid Interstate and Federal Primary Highway Funds (FAI/FAP)	$ 662.3/60.0	Continued implementation
	1 Study	(WisDOT)/SEWRPC	FAI/FAP	728.8/304.0	Undertake study
"Stub End" Freeway Treatments	3 Projects	WisDOT/Milwaukee County/City of Milwaukee	FAI/FAP	6,180.0/3,150.0	Continued implementation and design studies
Improved Transit Service	51 Projects	Various	Urban Mass Transportation Administration (UMTA), Section 3, Section 5	493,396.8/112,158.6	Continued implementation
Traffic Signing, Pavement Marking, and Signalization	89 Projects	Various	Various—Identified in TIP	9,989.3/5,283.3	Continued implementation
Park-Ride Lots with Express Transit Service and Park-and-Pool Lots	28 Projects	WisDOT/Milwaukee County/Ozaukee County	FAI/FAP	11,860.0/2,382.0	Continued implementation
Transit Route Evaluation	2 Studies	SEWRPC	UMTA, Section 8	--	Updated Milwaukee Transit System Planning Program (TSPP) by 12/31/80; Kenosha TSPP by 12/31/81; Racine TSPP by 12/31/81;
Spot Street and Highway Improvements	49 Projects	Various	Various—Identified in TIP	17,907.7/3,222.0	Continued implementation
UBUS/UPARK	Included under Action 3	Milwaukee County/University of Wisconsin-Milwaukee (UWM)	Included under Action 3	Included under Action 3	Continued implementation
Arterial Studies	2 Studies	WisDOT/City of Milwaukee	UMTA Section 8/Federal Highway Administration, Urban Planning (FHwA PL)	826.0	Continued implementation
Downtown Shuttle Services	Included under Action 18	Milwaukee County	UMTA Section 3	Included under Action 18	Continued implementation
Transit Shelters	3 Projects	City of Kenosha/ Milwaukee County/ Shorewood	UMTA Section 3, Section 5	1,200.0/640.0	Continued implementation
Carpool and Vanpool Promotion	3 Projects	WisDOT/Milwaukee County	Federal Aid Urban System (FAU) and Vanpool	245.0	Continued implementation
Pedestrian and Bicycle Provisions	5 Projects	Various	Various—Identified in TIP	418.0/358.0	Continued implementation
Miscellaneous Low-Capital Actions	1 Project 1 Study	City of Milwaukee	Various—Identified in TIP	285.8/131.1	Continued implementation
Bus Stop Location Study	1 Project	Milwaukee County/ City of Milwaukee	FHwA, Safer Off System (SOS), UMTA Section 3, Section 8	460.0	Continued implementation
Downtown Parking Rate Structure Study	1 Study	City of Milwaukee	Local Funds	15.0	Completion by 12/31/81
Taxi Fare and Regulation Study	--	City of Milwaukee	UMTA Section 8	--	Continued implementation
Exclusive Bus Lanes	1 Project	City of Milwaukee	UMTA Section 3	12,000.0	Implementation as part of downtown transportation center and arterials study
Commuter-Impacted Permit Parking	1 Project	City of Milwaukee	Local Funds	10.0	Continued implementation
Community Assistance Traffic Engineering and Transit Planning	4 Studies	SEWRPC	UMTA, Section 18/ FHwA 402 Safety Funds	113.2	Continued implementation
Work Time Rescheduling Study	1 Study	SEWRPC	UMTA Section 8/FHwA PL/Environmental Protection Agency (EPA) Section 175	Depends on decision to conduct second phase of study	Completion by 12/1/81
Energy Emergency Contingency Plan	1 Study	SEWRPC	UMTA, Section 8/FHwA PL	Depends on scope of study recommended by prospectus	Completion of prospectus by 5/1/80; study to follow
Weekend and Special Event Traffic Planning	--	SEWRPC	UMTA, Section 3/FHwA PL	--	Completion of prospectus as funding and staff time became available; study to follow
Total	245 Projects 13 Studies	--	--	$556,297.9/ 141,358.2	--

In accordance with a prospectus published in 1978, the Commission continued the conduct of a Milwaukee area work time rescheduling study during 1980. Surveys to assess employer work schedules and work time rescheduling attitudes were conducted and analyses of the survey results begun. Toward the end of 1980 work had progressed to the point where existing peak-hour transportation problems had been documented and an analysis begun of the potential of work time rescheduling to help resolve such problems. It is anticipated that the study will be completed in 1981.

Freeway Traffic Management Study

As reported in the 1979 Annual Report, the Commission, in cooperation with the Wisconsin Department of Transportation, has completed a prospectus for a proposed Milwaukee area freeway traffic management planning and preliminary engineering study. The study was recommended in both the new design year 2000 regional transportation system plan and the regional transportation systems management plan. A freeway traffic management system would control access to the freeway system in the Milwaukee urbanized area in order to maximize and smooth traffic flow and thereby avoid the inefficiencies attendant to breakdowns in flow. Controlled access would also be beneficial in that it would provide reasonable operating speeds for buses providing modified transit service and other high-occupancy vehicles that would be accorded preferential access to the freeway system.

It was proposed in the prospectus that the study prepare, test, and evaluate alternative plans for the six major elements of a freeway traffic management system. These six elements are: 1) the freeway operational control strategy specifying the degree to which freeway volumes are to be maintained below capacity on all parts of the freeway system through ramp metering; 2) the number and location of freeway ramp meters and high-occupancy vehicle preferential access lanes; 3) the freeway ramp-meter control strategy; 4) the freeway ramp-meter control and intercommunication system, or the physical system to be used to control the ramp meters—in particular, the central operational control system which would utilize a preprogrammed digital computer to establish and continuously assess and, if necessary, modify ramp-meter entry rates; 5) the freeway advisory information systems, including changeable message signs, special highway advisory radio frequencies, or information provision to existing commercial radio stations; and 6) the freeway incident management and surveillance strategy.

Discussion continued during 1980 between the Commission, the Federal Highway Administration, and the Wisconsin Department of Transportation on securing both planning and engineering funds to conduct the freeway traffic management study. Because of a shortage of planning funds, however, the study was postponed indefinitely with the understanding that should additional funds become available in subsequent years, the study would be mounted and completed.

Waukesha Area Transit Development Program

In 1979 the Commission was asked by the Mayor of the City of Waukesha and the Waukesha Mass Transit Citizens and Technical Coordinating and Advisory Committee to prepare a report which would review and revise the transit development program prepared by the Commission for the Committee in 1976. The new report, SEWRPC Community Assistance Planning Report No. 31, Waukesha Area Transit Development Program: 1981-1985, was completed in 1980. The report sets forth the Committee's recommendations for the reestablishment of transit service in the City of Waukesha during calendar year 1981. Put to a citywide referendum on April 1, 1980, the Committee's recommendations were accepted by 69 percent of the City of Waukesha electorate—an 8,979 to 4,080 vote—and adopted on May 6, 1980, by the Waukesha Common Council.

The transit development program is a five-year action plan designed to provide the maximum practicable level of transit service in the Waukesha area and thereby provide a viable alternative to the private automobile and increased mobility to those special population groups that must rely on public transportation. The recommended plan was selected from among six alternative transit service options, including a "do nothing" alternative; three fixed route, cycle scheduled alternatives differing only with respect to the number of routes to be provided; a fixed route, noncycle scheduled alternative featuring loop routing; and a demand responsive "dial-a-ride" alternative. This last alternative was similar in nature to the recommended transit development plan set forth in 1976 in the report noted above, which was defeated by a two-to-one margin in a vote of the City of Waukesha electorate in 1977.

The transit system recommended under the new plan, after careful consideration of the alternatives, noted above, consists of nine radial fixed routes originating at the outer limits of the City of Waukesha and terminating at a common transfer point in the Waukesha central business district. The nine routes that constitute the recommended transit system, along with the three county-subsidized commuter bus routes serving the study area, are shown on Map 16. The total capital project costs for the proposed system approximate $680,100 in 1980 dollars, of which 80 percent, or $544,100, represents the federal share, and 20 percent, or $136,000, represents the local share.

In order to initiate transit service in the City of Waukesha during calendar year 1981, the study calls for the retention of a qualified transit management firm to oversee the daily operation of the proposed system, and the creation of a new city staff position, Transit Coordinator. The Transit Coordinator would work with the management firm in coordinating all efforts necessary for initiating the proposed transit service, including equipment and labor procurement, and would also assume responsibilities associated with operation of the transit system, including planning, budget preparation, and preparation of grants, agreements, and documents required to secure state and federal transit assistance funds. At year's end the City of Waukesha was working toward completing these tasks in order to begin operation of the proposed system in 1981.

Waukesha County Public Transit Service Improvements

At the request of the Waukesha County Transportation Coordinating Committee, a Committee created by the County Board, the Commission undertook in 1980 an analysis of additional public transit services which could be readily implemented to serve the residents of Waukesha County. The results of that analysis were documented in SEWRPC Community Assistance Planning Report No. 44, Proposed Public Transit Service Improvements: 1980, Waukesha County, Wisconsin.

Seven potential bus routes which could be utilized to provide public transit service between Waukesha and Milwaukee Counties, and which are supported by recommendations contained in the Commission's adopted long-range transportation plan, were presented to members of the Committee in February 1980 and, subsequently, analyzed by the Commission staff. In completing the initial analysis and preparing the initial transit service proposal for the Committee's review, the Commission also included a bus route not presented at the February meeting, but considered to have potential for generating significant levels of transit ridership. Of the eight potential fixed bus routes contained in the initial proposal, five were proposed to provide modified rapid or "Freeway Flyer" transit service between the Milwaukee Central Business District and the Village of Menomonee Falls, the City of Brookfield, the City of New Berlin, the City of Oconomowoc, and the Village of Mukwonago. The other three routes were proposed to provide local bus service from Milwaukee County to the Village of Butler, the Brookfield Square Shopping Center, and the New Berlin Industrial Park.

In order to obtain public reaction and comment on the proposal for the improvement and expansion of public transit service in Waukesha County, the Committee held a series of four public informational meetings at the various communities affected by the proposed transit services, followed by a formal public hearing. All four meetings and the hearing were held late in the spring of 1980. Based upon a review and analysis of the public comments concerning suggested route changes and the provision of additional local transit service, the Commission staff recommended that certain modifications be incorporated into the original transit service proposal. The amended recommended plan is shown on Map 17.

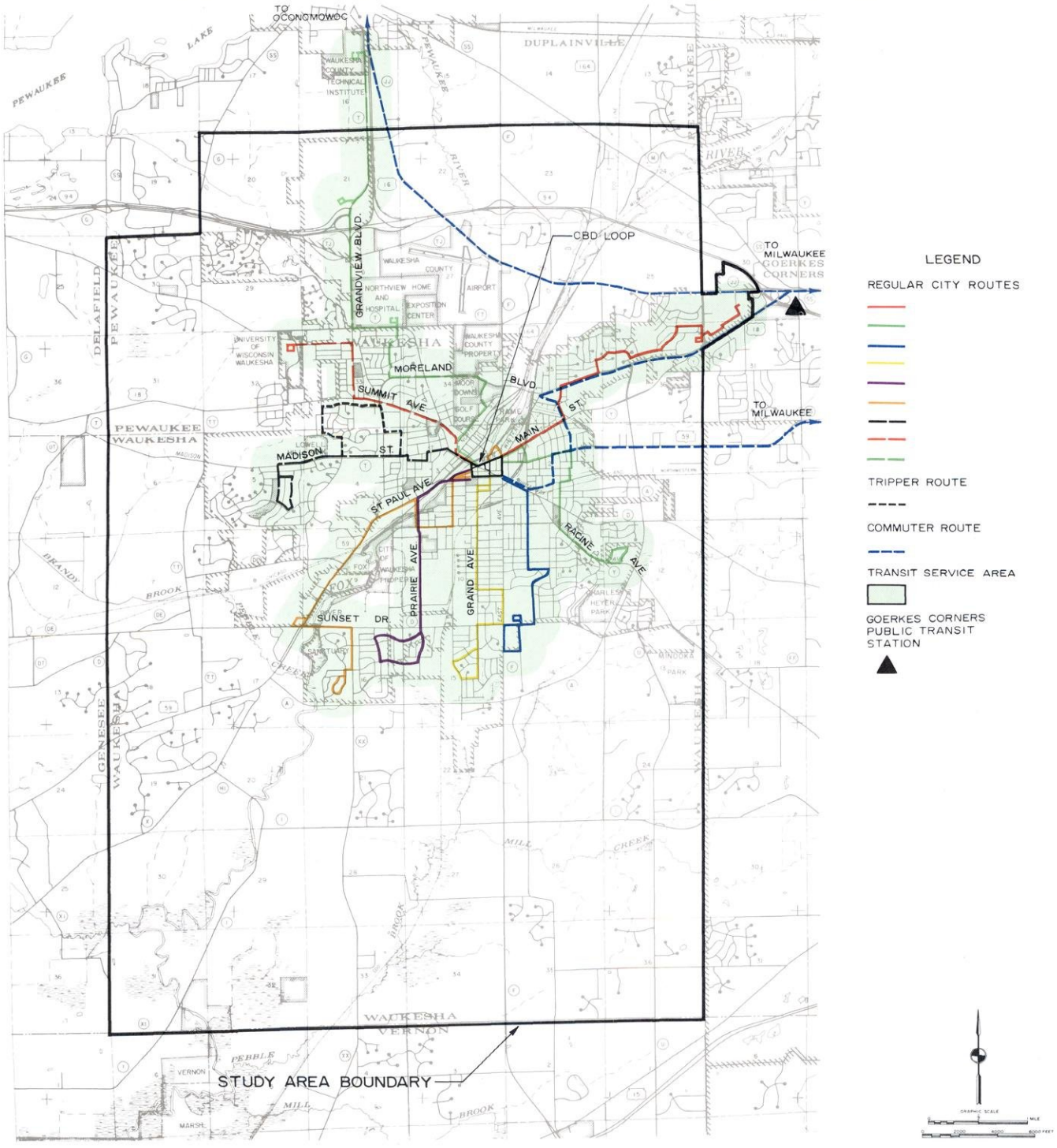
At year's end the Waukesha County Board had approved the transit service improvements program and was in the process of negotiating with the Milwaukee County Transit System and Wisconsin Coachlines, Inc., for the provision of the proposed services in 1981.

Ride-Sharing Programs

As noted earlier in this report, one of the recommendations of the regional transportation plan is the continued promotion of ride-sharing. A formal Milwaukee area carpooling program had been conducted by Milwaukee County over a three-year period in the mid-1970's. The Commission assisted in that effort, including 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 published in SEWRPC Technical

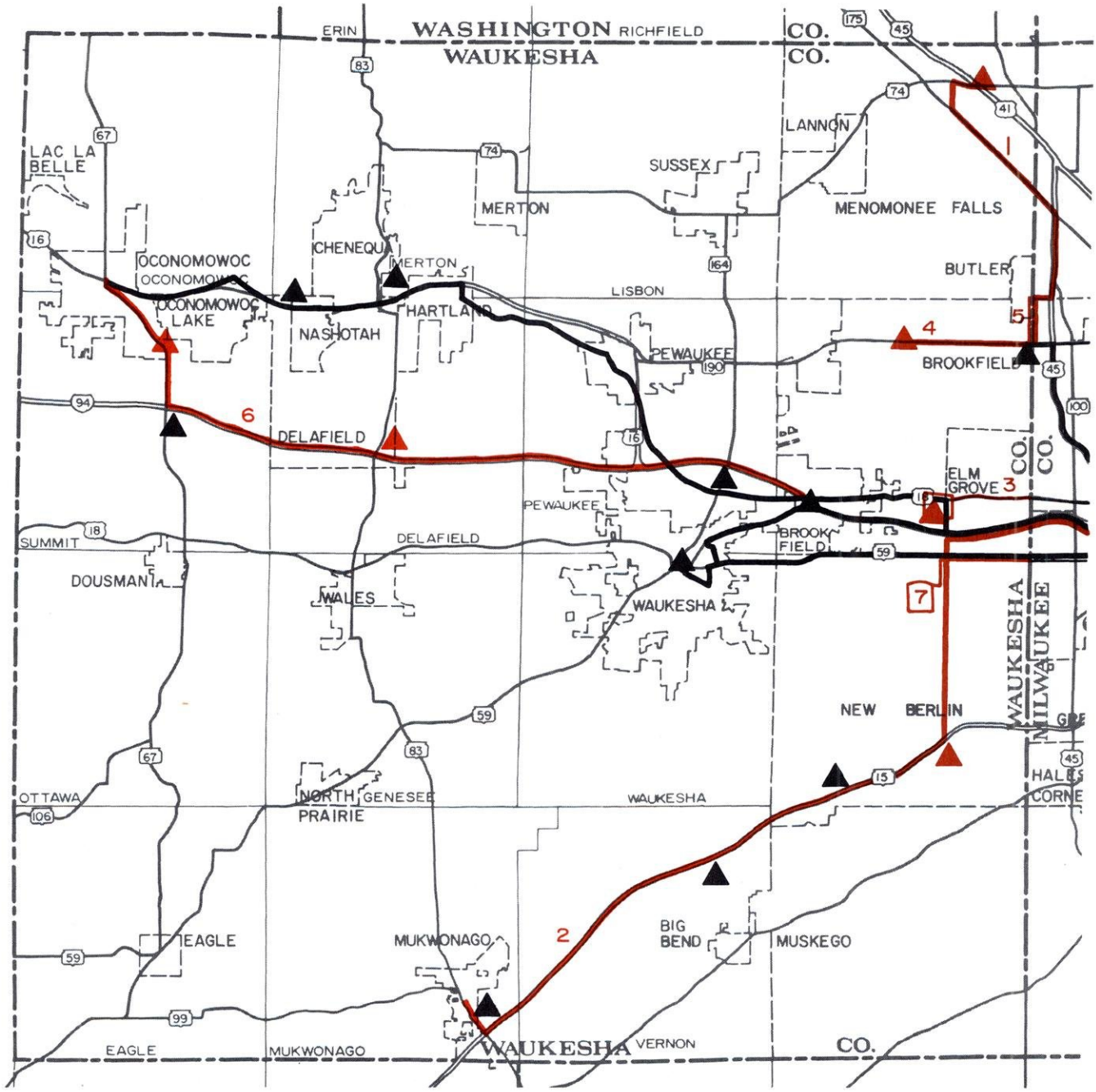
Map 16

RECOMMENDED NINE-ROUTE TRANSIT SYSTEM FOR THE CITY OF WAUKESHA



Map 17

FINAL RECOMMENDED BUS ROUTES FOR WAUKESHA COUNTY



LEGEND

BUS ROUTES

EXISTING

LOCAL

COMMUTER/FREEWAY FLYER

PROPOSED

LOCAL

COMMUTER/FREEWAY FLYER

2 ROUTE NUMBER

PARKING FACILITIES FOR COMMUTERS

EXISTING

PROPOSED

GRAPHIC SCALE

0 1 2 3 4 MILES

0 8000 16000 24000 FEET

Report No. 20, Carpooling in the Metropolitan Milwaukee Area. That initial carpooling effort indicated a significant latent demand for carpooling, and concluded that a continued carpooling promotion 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 carpooling promotion program. This program includes media promotion or ride-sharing 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 is assisting in this effort by providing the computer facilities necessary to conduct the matching program. In the spring of 1982, the Commission will again conduct a survey to determine the extent to which such ride-sharing efforts have been effective and the extent of carpooling in the Milwaukee area.

Milwaukee County Transit System Service Study

In July 1980, work was concluded on the preparation of a five-year program for transit service improvements in Milwaukee County. A report entitled Recommended Transit Improvement Program for Milwaukee County: 1981-1985 was published and adopted in principle by the Milwaukee County Board of Supervisors. This study was designed to appraise and reevaluate the existing services provided by the Milwaukee County Transit System. The study was funded in part with federal Urban Mass Transportation Administration planning monies made available to Milwaukee County through the Commission.

The proposed five-year program includes eight distinct types of actions. These consist of: the provision of new local bus service, or service that would provide presently unserved areas of Milwaukee County with local service through entirely new routes; local route extensions, or the provision of service to currently unserved areas through the extension of existing local bus routes; reroutings, or changes that would improve directness of service, service area coverage, and connectivity; service enhancement, or the provision of an increased frequency of bus service on existing routes; transfer coordination, or changes to route schedules to better coordinate service and effect better transfers at major transfer points; the provision of new limited stop—or express—service along major travel corridors during peak travel periods; further park-ride lot construction; and the use of exclusive bus lanes and parking restrictions to facilitate bus movements.

The report sets forth a series of recommendations in each of these eight identified areas. All these recommendations serve to refine, detail, and implement the transit service improvement recommendations contained in the adopted regional transportation system plan.

ELDERLY AND HANDICAPPED TRANSPORTATION PLANNING

During 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 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

During 1980, the major Commission effort in the area of elderly and handicapped planning involved the preparation of what are termed, in federal jargon, "Section 504 transition plans" for each of the public transit operators in 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. In brief, these rules as they pertain to federally assisted transit operations are as follows:

1. All buildings and other fixed facilities used by a transit system must be made accessible to handicapped persons and particularly to wheelchair-bound persons no later than July 1, 1982.

2. By July 1, 1982, one-half of all buses in service during the peak hour must contain wheelchair lifts to make them accessible to handicapped persons. The UMTA may extend the time period for meeting this requirement for up to seven additional years, or until July 1, 1989, upon a showing of good cause. If the July 1, 1982, deadline cannot be met, the transit operator must offer an interim special service to accommodate the transportation needs of wheelchair-bound persons in particular. This service would no longer be required once the main-line bus fleet is made accessible.

3. Transit system services, policies, and practices must be modified as necessary to ensure nondiscrimination on the basis of handicap.

4. A transition plan for each urbanized area receiving federal financial assistance for transit services must be completed, adopted by the local transit operator and metropolitan planning organization, and submitted to the UMTA by July 2, 1980. A transition plan was defined as a staged multi-year planning document which identifies the transportation-related capital improvement projects and modifications to fixed facilities, vehicles, equipment, services, policies, and practices to be undertaken to eliminate any existing discrimination against handicapped persons and to facilitate the achievement of accessibility by federally assisted programs by the July 2, 1982, deadline set forth in the final rule.

During 1980, the Regional Planning Commission worked with the four public operators in the three urbanized areas of the Region and with the local handicapped population of the communities served by the federally assisted public transit operators to prepare the federally mandated transition plans for each urbanized area. The following is a summary of the major recommendations of each plan.

Kenosha Urbanized Area

Recommendations for making the federally assisted public transit system operating within the Kenosha urbanized area, the Kenosha Transit System, 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. The plan was adopted by the Common Council of the City of Kenosha on July 21, 1980, and by the Regional Planning Commission on September 11, 1980. The transition plan for the Kenosha Transit System contains the following major findings and recommendations:

1. The Kenosha bus fleet is expected to be expanded with the acquisition of five new buses in 1981 and six buses each year in 1984, 1986, and 1987. These buses are to contain wheelchair lifts. By 1987 the City will then meet the federal requirement that one-half of the peak-period bus fleet be accessible to the handicapped.

2. Until 1987, when the bus fleet is accessible, the City of Kenosha is to provide an interim specialized service for handicapped persons. It is recommended that the City continue to support the provision of such a service through the Kenosha Achievement Center (KAC), with KAC adding one more vehicle for this purpose.

3. The City of Kenosha should conduct a building survey in 1981 to identify existing accessibility barriers in all buildings and

facilities used in the administration of the transit system, and prepare an implementation schedule for making any necessary building modifications.

4. The Kenosha transit system should develop a formal policy concerning such matters as driver sensitivity and safety training so that at such time as the City of Kenosha begins to take delivery of wheelchair lift-equipped buses, the bus drivers will be trained in the use and operation of the lifts.

5. The Kenosha transit system should expand its communications network to include teletypewriter service for hearing-impaired individuals.

6. The Kenosha transit system should contract for the services of a mobility trainer to instruct handicapped persons in the use of buses.

Milwaukee Urbanized Area

Separate transition plans were prepared for each of the federally subsidized, general public transit operations within the Milwaukee urbanized area. Recommendations for making the Milwaukee County Transit System accessible to handicapped persons are set forth in SEWRPC Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, Volume Two, Milwaukee Urbanized Area/Milwaukee County. The plan was formally adopted by the Milwaukee County Board of Supervisors on May 17, 1980, and by the Regional Planning Commission on June 20, 1980, and contains the following major findings and recommendations:

1. The bus fleet replacement and expansion program for the Milwaukee County Transit System is expected to result in a 61.4 percent accessible bus fleet by July 2, 1982. The number of accessible buses in the system bus fleet should be sufficient to guarantee that 50 percent of the buses used during the peak periods of system operation are accessible to handicapped persons. Therefore, Milwaukee County would not be required to provide an interim accessible transportation service after July 2, 1982.

2. Milwaukee County should continue to implement the present program of transit system building improvements and modifications in accordance with current federal, state, and local handicapped accessibility design standards.

3. Milwaukee County should implement a park-ride lot handicapped barrier elimination program, which would include providing for designated handicapped parking, curb ramps at bus boarding islands, and accessible bus passenger waiting shelters and public telephone facilities.

4. Milwaukee County should provide sufficient funds to employ or contract for the services of a mobility trainer to instruct handicapped persons in the use of buses.

5. Milwaukee County should develop a bus passenger assistance training module in the current driver training program and establish one additional bus operator training position to deal specifically with handicapped-related activities.

6. Milwaukee County should expand its daily communications network to include teletypewriter service for hearing-impaired individuals.

Recommendations for making the commuter-oriented bus service provided by Wisconsin Coach Lines, Inc., with federal assistance obtained through Waukesha County accessible to handicapped persons are set forth in SEWRPC Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, Volume Four, Milwaukee Urbanized Area/Waukesha County. The plan was formally adopted by the Waukesha County Board of Supervisors on July 15, 1980, and by the Regional Planning Commission on September 11, 1980, and contains the following major findings and recommendations:

1. Waukesha County is expected to purchase five new accessible buses for lease to the private operator in 1987. It is anticipated that use of these lift-equipped vehicles will meet the federal requirement that one-half of the peak-period bus fleet be accessible to the handicapped by 1989.

2. Until 1987, Waukesha County, through the County Department of Aging, is to provide an interim accessible transportation service for handicapped persons who cannot use the buses of the commuter bus fleet.

3. Waukesha County should conduct a survey in 1981 to identify existing accessibility barriers in all buildings and facilities used in the administration of the commuter transit service and prepare an implementation schedule for making any necessary modifications.

4. Waukesha County should study the need for and consequences of establishing a policy requiring all bus drivers to provide assistance to handicapped persons. Pending the outcome of this study, the County would develop a driver safety training and sensitivity program so that bus drivers will be trained in the use of the wheelchair lifts at that time when lift-equipped vehicles are placed in use.

Racine Urbanized Area

Recommendations for making the federally assisted public transit system in the Racine urbanized area, the Belle Urban System, accessible to handicapped persons are set forth in SEWRPC Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, Volume Three, Racine Urbanized Area. The plan was formally adopted by the Common Council of the City of Racine on July 15, 1980, and by the Regional Planning Commission on September 11, 1980, and contains the following major findings and recommendations:

1. The replacement and expansion program for the city-owned bus fleet calls for the expansion of the fleet in 1983 with the purchase of 17 new buses, and the replacement of three buses in the fleet in 1988. Buses purchased to make these adjustments would be wheelchair lift-equipped. Therefore, by 1989 the Belle Urban System would meet the federal requirement that one-half of the peak-period bus fleet be accessible to handicapped persons.

2. Until 1988 when the bus fleet is accessible, the City of Racine is to continue to provide an interim specialized service for the handicapped. This service is recommended to continue to be operated through the countywide Lincoln Lutheran Specialized Transportation program with funding support provided by the City of Racine. The present level of service provided by this program was deemed to be adequate.

3. The City of Racine should complete a building survey in 1981 to identify existing accessibility barriers in all buildings and facilities used in the administration of the transit system, and prepare an implementation schedule for making any building modifications.

4. The Racine transit system should develop a formal policy concerning such matters as driver sensitivity and safety training so that at such time as the City of Racine begins to take delivery of wheelchair lift-equipped buses, the drivers will be trained in the use and operation of the lifts.

5. The City of Racine transit system should expand its communications network to include teletypewriter service for hearing-impaired individuals.

At year's end, the four Section 504 transition plans had been submitted to the federal Urban Mass Transportation Administration for review and approval.

TRANSPORTATION IMPROVEMENT PROGRAM

In December 1980 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: 1981-1985. The program was developed with the assistance of Wisconsin Department of Transportation staff and through the cooperation of the various local units and agencies of government in the three urbanized areas of the Region, and of the Cities of Kenosha and Racine and the Counties of Milwaukee and Waukesha as the operators of special mass transportation systems in these urbanized areas. The 1981-1985 TIP document identifies all planned 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 1981 through 1985 TIP by the Intergovernmental Coordinating and Advisory

Table 12

COST SUMMARY OF PROJECTS WITHIN ANNUAL ELEMENT BY URBANIZED AREA

Funding	Urbanized Area						Total	
	Kenosha		Milwaukee		Racine			
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Federal . . .	$3,507,750	67.1	$134,029,800	56.5	$11,545,900	71.9	$149,083,450	57.7
State	766,150	14.7	21,838,723	9.2	1,946,500	12.1	24,551,373	9.5
Local	953,900	18.2	81,232,597	34.3	2,557,100	16.0	84,743,597	32.8
Total	$5,227,800	100.0	$237,101,120	100.0	$16,049,500	100.0	$258,378,420	100.0

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 2, 1980.

The program contains 457 projects for the five-year programming period, representing a total potential investment in transportation improvements and services of about $902 million. Of this total, $437 million, or about 48 percent, is proposed to be provided in federal funds; $95 million, or about 11 percent, in state funds; and $370 million, or about 41 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 21-month period beginning January 1, 1981—the shorter period being used for federally assisted transit problems, the longer period for federally assisted highway projects. A cost summary of these projects is shown in Table 12. Cost data presented in this table represent the proposed annual element expenditures for a total of 372 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 gathered into nine categories: 1) highway preservation—that is, reconstruction of existing facilities to maintain existing capacities; 2) highway improvement—that is, reconstruction of existing facilities to expand existing 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 improvements; 7) transit preservation; 8) transit improvement; and 9) transit expansion projects. Figure 33 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:

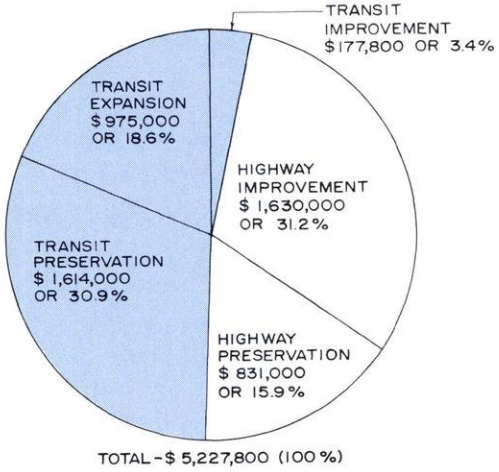
- A substantial share of the investment proposed in the 1981 annual element is for the preservation of transportation facilities, with over 47 percent of the total investment in the Milwaukee urbanized area, over 26 percent in the Racine urbanized area, and almost 47 percent in the Kenosha urbanized area being used for this purpose. This level of effort is especially notable when it is realized that virtually none of the funding for routine highway maintenance activities—snowplowing, ice control, grass cutting, power for street lighting, and litter pickup—is included in the TIP.

- A substantial share of the investment proposed in the 1980 annual element is for the provision of public transit facilities and services, with almost 53 percent of the total investment in the Kenosha urbanized area, over 50 percent in the Milwaukee urbanized area, and over 32 percent in the Racine urbanized area being used for this purpose. This level of effort is especially notable when it is realized that the transit expenditures are for a 12-month period, and the highway expenditures are for a 21-month period.

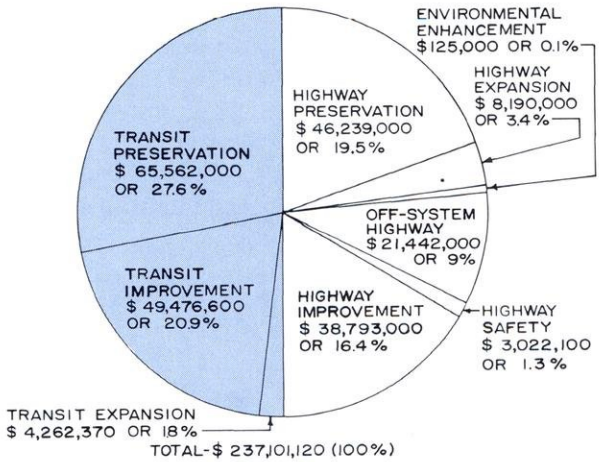
Figure 33

DISTRIBUTION OF EXPENDITURES IN ANNUAL ELEMENT OF 1981-1985 TRANSPORTATION IMPROVEMENT PROGRAM BY PROJECT CATEGORY

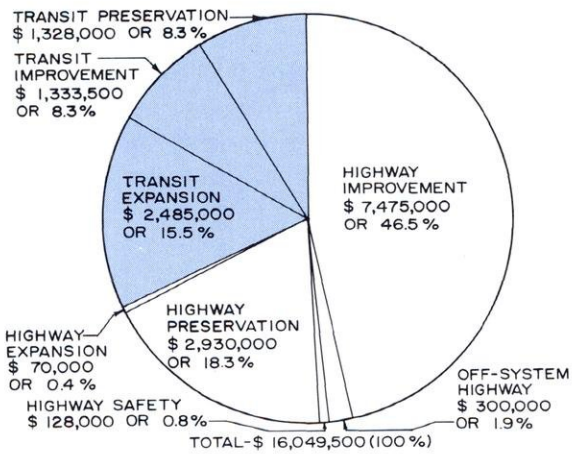
KENOSHA URBANIZED AREA



MILWAUKEE URBANIZED AREA



RACINE URBANIZED AREA



- Highway expansion is nearly nonexistent in the urbanized areas of the Region, with none of the expenditures in the Kenosha urbanized area, 3.4 percent in the Milwaukee urbanized area, and 0.4 percent in the Racine urbanized area being used for this purpose.

A comparison of the 1981 annual element of the TIP with the 1980 annual element of the 1980-1984 TIP as reported in the Commission 1979 Annual Report indicates the following:

- In the Kenosha urbanized area, total expenditures are proposed to increase by about 16 percent—from about $4.50 million to about $5.23 million. Expenditures for highways, which comprised about 53 percent of total expenditures in 1980, are proposed to comprise about 47 percent of total expenditures in 1981. Expenditures for transit comprised about 47 percent of total expenditures in 1980, and are proposed to account for about 53 percent of expenditures in 1981.

- In the Milwaukee urbanized area, total expenditures are proposed to increase by about 8 percent—from about $220.1 million to about $237.1 million. Expenditures for highways, which comprised about 60 percent of total expenditures in 1980, are proposed to comprise about 50 percent of total expenditures in 1981. Expenditures for transit comprised about 40 percent of total expenditures in 1980, and are proposed to account for about 50 percent of expenditures in 1981.

- In the Racine urbanized area, total expenditures are proposed to increase by about 103 percent—from about $7.9 million to about $16.0 million. Expenditures for highways, which comprised about 69 percent of total expenditures in 1980, are proposed to comprise about 68 percent of total expenditures in 1981. Expenditures for transit comprised about 31 percent of total expenditures in 1980, and are proposed to account for about 32 percent of expenditures in 1981.

RAILWAY TRANSPORTATION PLANNING

During 1980, the Commission's participation in the railway planning process was limited to two principal areas of activity. The first area of activity was

the Commission's provision of continued technical assistance to the Village of East Troy in the implementation of a track rehabilitation project. The second area of activity was the continued monitoring of various issues concerning railway system development and redevelopment in southeastern Wisconsin which may have an affect on other planning efforts which the Commission is involved with. The work on the rehabilitation of the Municipality of East Troy Wisconsin Railroad is summarized below, followed by a discussion of other railway issues monitored by the Commission staff.

Rehabilitation of the Municipality of East Troy Wisconsin Railroad

As reported in the Commission 1979 annual report, the Commission staff has been providing technical assistance to the Village of East Troy in implementing the recommendations set forth in SEWRPC Community Assistance Planning Report No. 20, A Rail Transportation Service Plan for the East Troy Area. Prior to 1980, such assistance consisted of the preparation of a set of contract and specification documents for the proposed project, the preparation of a federal grant application for funding from the U. S. Department of Commerce, Economic Development Administration, the conduct of preconstruction meetings, the provision of support to the village officials charged with project administration and inspection, and the preparation of a plan and profile for the railway within the project limits. Actual construction work commenced in September 1979 and continued through the end of November of that year.

Work by the contractor commenced again in the spring of 1980, with the project formally completed in November 1980. In total, individual work items along the 7.2-mile line included the replacement of 12,500 hardwood cross ties, the installation of 8,000 tie plates, the installation of 9,138 cubic yards of crushed stone ballast, the replacement of 608 linear feet of rail, the rehabilitation of four turnouts as well as all at-grade highway crossings, substantial angle bar rehabilitation and replacement, and the installation of 6,700 feet of new ditching for proper drainage of the track and roadbed (see Figure 34).

In separate, but coordinated, efforts, the Wisconsin Department of Transportation, the Village and Town of East Troy, and the Town of Mukwonago cooperatively reconstructed two bridge structures carrying vehicular traffic over the railway right-of-way. The two bridge structures which were replaced—at Phantom Woods Road and at Beach Road—were obsolete, narrow structures with inadequate and hazardous vertical and lateral clearances. Following the bridge replacements, a third bridge in similar poor condition was removed and not replaced.

A description of this project was provided in the September-October 1980 issue of the SEWRPC Newsletter (Volume 20, No. 5). The Newsletter article was accompanied by illustrations showing the physical condition of the track structure and roadbed before and after project completion.

Shortline Railroad Activity

In addition to the Municipality of East Troy Wisconsin Railroad, two new shortline common carrier railways began operations during 1980 partly within the Southeastern Wisconsin Region. These railways are the Central Wisconsin Railroad Company, operating between the Cities of Waukesha and Milton, and the Wisconsin & Southern Railroad Company, operating between the Cities of Milwaukee and Oshkosh, with branch lines serving the communities of Menomonee Falls, Mayville, Beaver Dam, Fox Lake, Cambria, and Markesan. Creation of these two shortline common carriers was basically a result of the financial problems facing the Milwaukee Road, in bankruptcy since December 1977.

In an attempt to rectify its poor financial position, the Milwaukee Road ceased operations over much of its 10,000-mile-long system during 1980, selling portions of the unwanted lines to other buyers including other railroads, shippers, and various government agencies. During the first quarter of 1980, the State of Wisconsin reached agreement with the Milwaukee Road for the acquisition of 158 miles of railway line then before the Interstate Commerce Commission for formal abandonment, as well as of an additional 220 miles of railway line which were expected to be approved for abandonment in the future. The two new shortline railways in southeastern Wisconsin operate over such lines purchased by the State of Wisconsin. Operations on the Central Wisconsin Railroad Company began in February 1980 and on the Wisconsin & Southern Railroad Company, in July 1980. The Waukesha to Milton railway line—now operated by the Central Wisconsin Railroad Company—is discussed in more detail in SEWRPC Community Assistance Planning Report No. 30, Whitewater

Figure 34

TRACK REHABILITATION ON THE MUNICIPALITY OF EAST TROY WISCONSIN RAILROAD

These two photographs show the general appearance of the track structure and roadbed on the main line of the Municipality of East Troy Wisconsin Railroad (METWRR) before and after track rehabilitation work done during 1979 and 1980. The left photograph shows the dangerously deteriorated condition of the track structure and roadbed prior to reconstruction. The right photograph shows the condition of same after completion of the work. Most crossties were replaced, and the line was reballasted to provide proper support, alignment, and drainage for the track.

Area Rail Service Plan, which presents alternative plans for rail freight service continuation in this corridor. The operation of the railway line by the Central Wisconsin is in accordance with recommendations of that plan.

Railway Passenger Service

In other railway transportation planning matters, the Commission staff has recognized a continuing interest in railway passenger service improvements within the Region. Evidence of this interest was indicated by a continuing interest on the part of certain elected officials and private citizens in the relocation of Amtrak intercity passenger train service to a route which would directly serve the Cities of Racine and Kenosha. On December 17, 1980, the Commission supported such a relocation at a meeting held by Amtrak officials. The extension of commuter rail service between Chicago and Kenosha to the City of Racine was further supported by a one-day demonstration of modern commuter rail equipment in the City of Racine during October, as well as by the submission of a proposal for federal funding assistance of track rehabilitation between the Cities of Racine and Kenosha for purposes of such a service extension for a two-year trial. Projects relating to this demonstration effort were added to the regional transportation improvement program by the Commission in June 1980.

Other Rail Planning Activities

In December 1979, the Chicago & North Western Transportation Company filed an application with the Interstate Commerce Commission for abandonment of its line between Lake Geneva, Wisconsin, and Ringwood, Illinois. On August 29, 1980, the Interstate Commerce Commission decided that the present and future public convenience and necessity permit the abandonment of this line subject to its being held intact for a period of 120 days from the effective date of the certificate to allow any interested party to acquire all or part of the property. On October 22, 1980, the effective date of abandonment was indefinitely stayed pending appeal by certain protestants.

Scheduled carferry service across Lake Michigan between the City of Milwaukee and Ludington, Michigan, ended on September 14, 1980. The Chessie System (Chesapeake & Ohio Railway Company) carferries made a few unscheduled trips during early October before ending an 83-year history of floating railway freight cars between Michigan and the Port of Milwaukee. Carferry service operated by the Grand Trunk Western Railroad Company between Milwaukee and Muskegon, Michigan, was discontinued during 1978. Other carferry service across Lake Michigan to other Wisconsin cities—namely, Manitowoc and Kewaunee—continues to be provided by both the Chessie System and the Michigan Interstate Railway Company.

Table 13

COMMON CARRIER RAILWAY MAINLINE MILEAGE IN SOUTHEASTERN WISCONSIN: DECEMBER 31, 1980

County	Chicago & North Western Transportation Company		Chicago, Milwaukee, St. Paul & Pacific Railroad Company		Soo Line Railroad Company		Wisconsin & Southern Railroad Company		Central Wisconsin Railroad Company		Municipality of East Troy Wisconsin Railroad		Total	
	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region	Mileage	Percent of Total in Region
Kenosha	28.5	5.1	12.2	2.2	10.2	1.8	--	--	--	--	--	--	50.9	9.1
Milwaukee	61.2	11.0	37.2	6.7	--	--	9.1	1.6	--	--	--	--	107.5	19.3
Ozaukee	25.8	4.6	25.1	4.5	--	--	--	--	--	--	--	--	50.9	9.1
Racine	24.5	4.4	40.2	7.2	13.5	2.4	--	--	--	--	--	--	78.2	14.0
Walworth	13.0	2.3	35.4	6.4	4.0	0.7	--	--	6.5	1.2	5.0	0.9	63.9	11.5
Washington	27.3	4.9	--	--	25.3	4.5	22.5	4.0	--	--	--	--	75.1	13.5
Waukesha	47.6	8.6	33.0	5.9	26.5	4.8	2.8	0.5	18.6	3.3	1.3	0.2	129.8	23.3
Region	227.9	41.0	183.1	32.9	79.5	14.3	34.4	6.2	25.1	4.5	6.3	1.1	556.3	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 other 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. Percentage figures may not sum exactly because of rounding.

A segment of former Milwaukee Road railway track between the communities of Walworth—in Walworth County—and Janesville—in Rock County—has been purchased by the Wisconsin Department of Transportation for possible future use as a railway line. Although the trackage and structures have been kept intact for the entire 19.3-mile distance—about 9.7 miles of which is located within Walworth County—the railway line was inactive as of the end of 1980.

As indicated above, numerous changes have occurred in the status of southeastern Wisconsin's railway network during 1980. Some of these changes are of major importance, especially for communities which are now served by different railway carriers. Map 18 and Table 13 illustrate the extent recognized common carrier railway lines in the Region as of December 31, 1980.

AIR TRANSPORTATION PLANNING

During 1980, Commission activities in air transportation planning included continued monitoring through secondary data sources of aviation activities in the Region and assisting in the preparation of airport master plans. Such plans are prepared as a step toward implementation of the regional airport system plan adopted by the Commission in 1976. This plan is documented in SEWRPC Planning Report No. 21, A Regional Airport System Plan for Southeastern Wisconsin, and is graphically summarized on Map 19.

Airport Master Planning

As noted in previous annual reports, airport master plans have been completed and adopted for the Kenosha (1977) and West Bend (1977) Municipal Airports. Both of these plans refine and detail the systems level recommendations contained in the regional airport system plan. Master plans have been completed but have not yet been adopted for General Mitchell Field and for the Waukesha County Airport, with the latter master plan currently at variance with the regional airport system plan recommendations with respect to runway configuration.

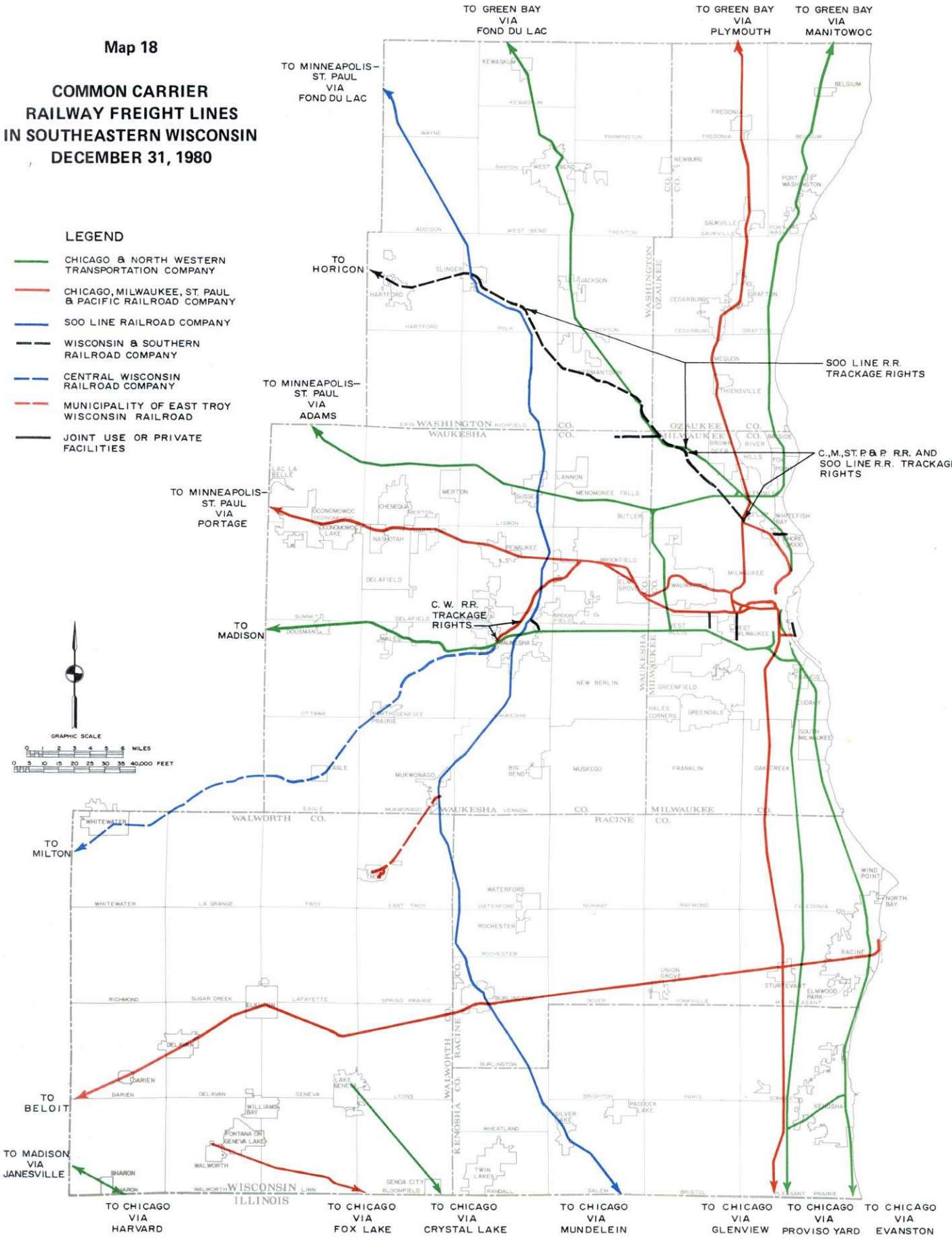
During 1980, the master plan for the Hartford Municipal Airport was completed by the consultant retained by the Wisconsin Department of Transportation for the City of Hartford. The plan, which details the facility development needs for the airport through the year 2000, serves to refine and amend the recommendations for upgrading the Hartford Municipal Airport from a basic utility airport to a general utility airport set forth in the adopted regional airport system plan. Formal adoption of the new facility plan by the Common Council of the City of Hartford was pending at year's end.

Aviation Activity

The Commission continued to monitor aviation activity in 1980 in order to compare such activity with the forecasts of based aircraft, aircraft opera-

Map 18

COMMON CARRIER RAILWAY FREIGHT LINES IN SOUTHEASTERN WISCONSIN DECEMBER 31, 1980



Map 19

REGIONAL AIRPORT SYSTEM PLAN: 1995

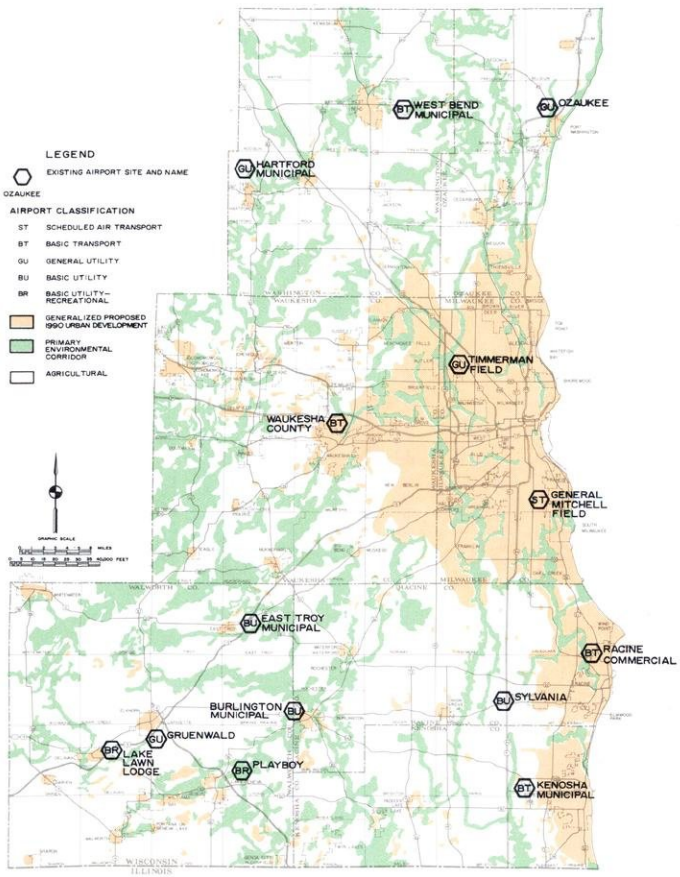
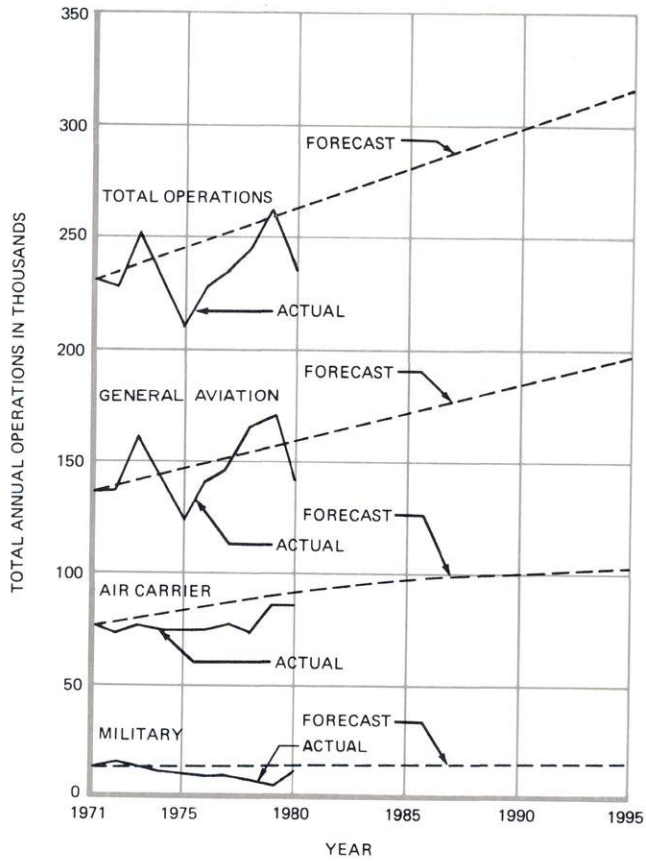


Figure 35

ANNUAL AIRCRAFT OPERATIONS: GENERAL MITCHELL FIELD–MILWAUKEE



tions, and passenger enplanements as set forth in the adopted regional airport system plan. One set of forecasts deals with anticipated total annual aircraft operations at General Mitchell Field in Milwaukee, the Region's only scheduled air carrier airport. As shown in Figure 35, aircraft operations at General Mitchell Field totaled about 240,000 in 1980, or about 9 percent less than the 264,000 operations forecast to occur at Mitchell Field during 1980 in the regional airport system plan, and an 8 percent decrease from the 261,000 operations experienced in 1979. Total aircraft operations at the airport are comprised of air carrier, general aviation, and military operations. Air carrier operations totaled about 85,000, an increase of 2,000 operations over the 1979 level of about 83,000. This increase in operations occurred despite the discontinuance of service to Milwaukee by Western Airlines on June 1, 1980, and by Braniff International on October 1, 1980, and the interruption of service provided by Ozark Airlines caused by a 26-day employee strike.

General aviation operations at General Mitchell Field totaled about 142,000 in 1980, a decrease of nearly 17 percent from the 1979 level of 171,000 operations. This decrease in general aviation operations, probably brought about primarily by increases in aviation fuel costs, more than offset the increased air carrier and military aircraft operations.

Military aircraft operations, as noted in Figure 35, totaled about 12,100 in 1980, an increase of about 5,300, or nearly 78 percent, over the 1979 level of 6,800 operations. This increase reverses the 1978 and 1979 trend of declining operations by military aircraft at the field

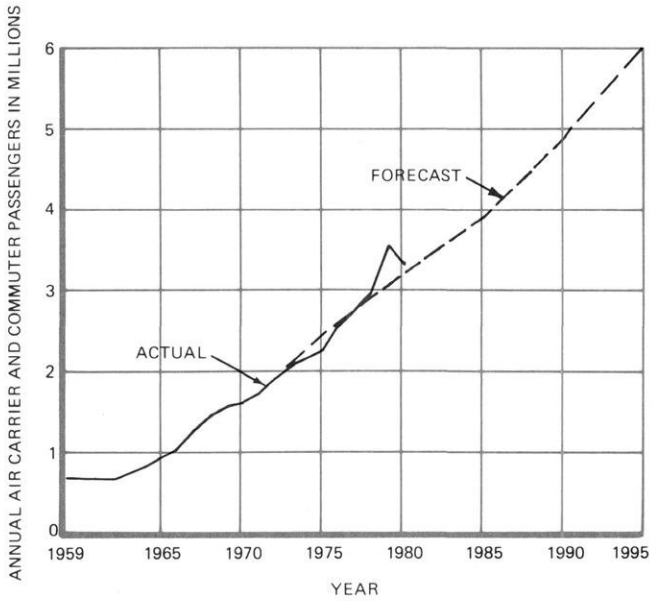
Air carrier and commuter enplaning and deplaning of passengers at General Mitchell Field, as shown in Figure 36, totaled about 3.3 million in 1980, a decrease of 160,000, or about 5 percent, from the 1979 level of passenger activity. While this represents the first decline in passengers since 1961, the 1980 level is still about 0.1 million, or more than 3 percent, greater than the 3.2 million passengers forecast for the year 1980 in the regional airport system plan.

Aircraft based in the Region in 1980 totaled about 1,400, an increase of about 3 percent over the 1979 total. The number of based aircraft in 1980 was approximately 10 percent lower than the forecast of 1,560 aircraft by 1980.

Table 14 depicts a revised historical summary of aircraft based within the Region. Previously, the number of based aircraft was estimated using aircraft registration data. These estimates, however, included aircraft which may not always have been in active service, and conversely, did not include aircraft registered in other states which may have been based at an airport within the Region. The revised estimates of based aircraft were derived from actual field survey data obtained by the Wisconsin Department of Transportation, Division of Aeronautics, under a continuing airport inspection program.

Figure 36

ANNUAL AIR CARRIER AND COMMUTER ENPLANING AND DEPLANING PASSENGERS: GENERAL MITCHELL FIELD–MILWAUKEE



DATA PROVISION AND ASSISTANCE

The Commission spends a considerable amount of time and effort each year in answering requests for transportation data. The following list is indicative of the types of requests responded to in 1980.

- The Milwaukee Transport Services, Inc., was provided with the staff assistance and data processing services required to apply the Commission travel simulation models in the analysis of alternative short-range transit system improvements. Four alternative transit systems were encoded, and anticipated 1985 transit passenger loadings simulated. The work included the preparation of evaluative information describing the level of transit service provided to the residents of the urbanized area by each alternative system.

- The City of Mequon was provided with assistance in the analysis of existing and probable future traffic volumes on Port Washington Road (CTH W) and Cedarburg Road (STH 57), and of the impact of alternative land use development patterns on these highway facilities.

- The City of West Allis was provided with assistance in the analysis of existing and probable future traffic volumes on W. Greenfield Avenue.

- At the request of the City of West Bend, a design for a study of the existing and probable future traffic circulation patterns within the central business district was prepared, the study being intended to support a central business district redevelopment program.

- The Wisconsin Department of Transportation was provided with travel time, travel distance, and travel cost data for highway, transit, commuter-bus, bicycle, and walk modes by U. S. Postal Service zip code area. The data are to be used in the preparation and calibration of urban-area travel models

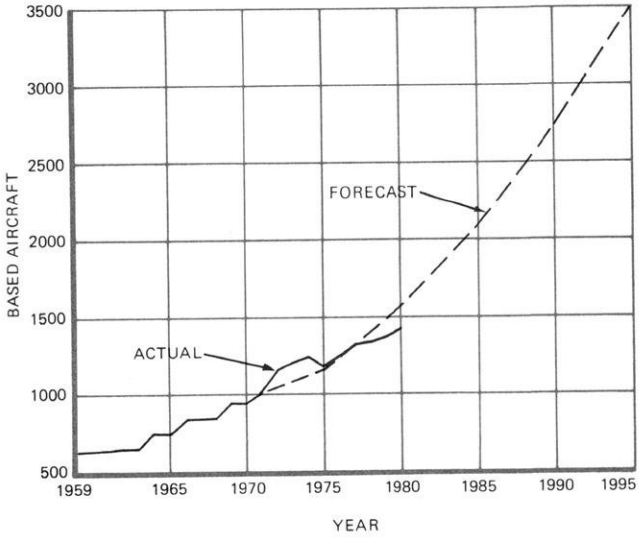
Table 14

AIRCRAFT BASED IN THE REGION

County	1960	1965	1970	1975	1980
Kenosha	28	60	76	148	250
Milwaukee	338	362	356	371	352
Ozaukee	19	13	32	28	30
Racine	65	89	108	151	195
Walworth.	23	31	48	82	109
Washington . . .	45	63	118	136	157
Waukesha	118	163	243	255	308
Total	636	781	981	1,171	1,401

Figure 37

AIRCRAFT BASED IN THE REGION



developed through a conjoint analysis of driver license renewal survey respondents, the models being required for the preparation of a new state transportation plan.

- The American Lung Association of Wisconsin was provided with data collected through a special transportation-air quality survey. These data will be used by the Association in assessing attitudes of southeastern Wisconsin residents toward air quality and developing an educational program on air pollution abatement.

- Congressman Les Aspin was provided with data supporting the relocation of Amtrak service from the Milwaukee Road trackage to the Chicago & North Western trackage through Kenosha and Racine Counties in the Chicago to Milwaukee rail corridor.

ENVIRONMENTAL PLANNING DIVISION

DIVISION FUNCTIONS

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

- What is the existing quality of the lakes, streams, and groundwaters of the Region? Is water quality getting better or worse over time?
- What are the sources of water pollution? How can these sources best be controlled to abate water pollution and meet water quality objectives?
- What is the extent of the natural floodlands along lakes and streams?
- What are the best ways to resolve existing flooding problems and to ensure that new flooding problems are not created?
- What is the existing air quality in the Region? Is air quality getting better or worse over time?
- What are the sources of air contaminants? What can be done to control the emissions of these contaminants?
- Will future emissions of air contaminants result in air clean enough to meet the air quality standards? If not, what strategies can be employed to ensure that the standards are met?
- 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?

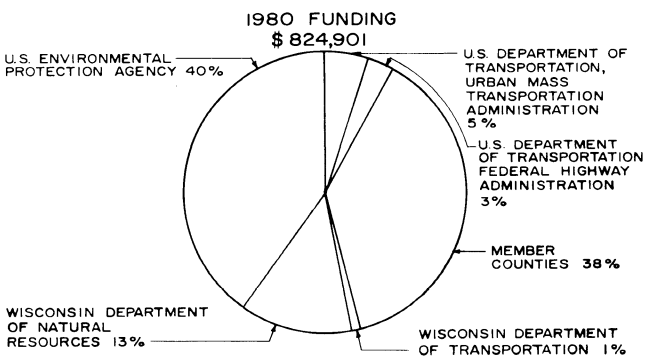
In attempting to find sound answers to these and related questions, develop recommendations concerning environmental protection and enhancement, monitor levels of environmental quality in the Region, and respond to requests for data and technical assistance, activities were conducted in 1980 in four identifiable program areas: water quality planning, watershed and floodland management planning, air quality planning, and solid waste planning.

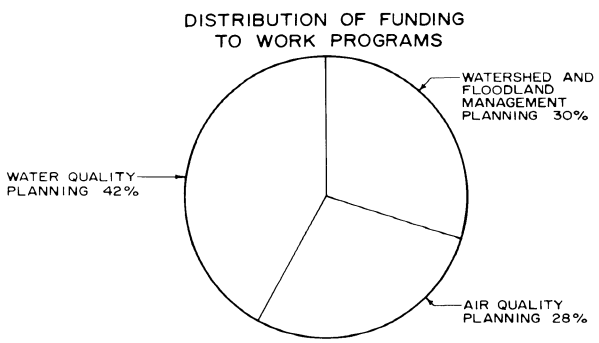
WATER QUALITY PLANNING

During 1980, Commission water quality planning efforts were focused primarily on activities relating to implementation of the adopted regional water quality management plan. Such activities included the preparation of more detailed 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

Figure 38

ENVIRONMENTAL PLANNING DIVISION





pollution abatement facilities identified in the adopted regional plan. Finally, the Commission continued to conduct reviews of proposed sanitary sewer extensions, as well as a program for public participation in water quality management within the Region.

Regional Water Quality Management Plan

As noted in the 1979 Annual Report, the Commission completed and adopted a regional water quality management plan in 1979. The plan, designed in part to meet the Congressional mandate, set forth in the federal Clean Water Act, that the waters of the United States be made "fishable and swimmable" wherever practical, 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 storm water runoff. The plan was adopted by the Commission on July 12, 1979, following a series of subregional public informational meetings, a regional planning conference devoted to the plan, and a formal public hearing on the plan.

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 grants in partial support of sewerage system development and redevelopment, for the issuance of all waste discharge permits by the Wisconsin Department of Natural Resources (DNR), for the review and approval of sanitary sewer extensions by the DNR, and for state and federal 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. For a descriptive summary of the regional water quality management plan, refer to the 1979 Annual Report.

After formal adoption of the regional water quality management plan by the Commission, the plan was formally certified to all local units of government designated as implementing agencies in the plan, as well as to federal and state agencies concerned with implementation of the plan recommendations. The plan was formally approved by the Wisconsin Natural Resources Board on July 19, 1979, and certified by that Board to the Governor on August 3, 1979. On December 3, 1979, the Governor endorsed the plan and certified it to the Administrator of the U. S. Environmental Protection Agency (EPA). That agency approved the plan on April 30, 1980.

At the local governmental level, the regional water quality management plan had, by the end of 1980, been formally adopted by the Kenosha, Milwaukee, Racine, and Waukesha County Boards of Supervisors; the Common Councils of the Cities of Burlington, Elkhorn, Greenfield, Hartford, Milwaukee, and Port Washington; the Village Boards of the Villages of Hales Corners, Nashotah, and Whitefish Bay; the Town Boards of the Towns of Mt. Pleasant and Pewaukee; and the governing boards of the Caddy Vista Sanitary District, the Town of Pewaukee Sanitary District No. 3, and the Walworth County Metropolitan Sewerage District. The plan has also been formally acknowledged by the U. S. Department of Agriculture, Soil Conservation Service; the U. S. Department of the Interior, Geological Survey and Fish and Wildlife Service; the Wisconsin Department of Health and Social Services; and the University of Wisconsin-Extension Service.

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 would identify the specific 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.

The Wisconsin Fund Pollution Abatement Grant Program established by the State Legislature includes state cost-sharing monies to be made avail-

able for the implementation of nonpoint source pollution control projects that are identified in detailed plans prepared for what the Wisconsin Department of Natural Resources has termed "priority watersheds." This program is guided by a state nonpoint source coordinating committee.

During 1980, the Commission assisted the Racine County Soil and Water Conservation District and 22 other concerned nonpoint source management agencies in completing a refined and detailed nonpoint source pollution abatement plan for the Root River watershed. This plan is documented in SEWRPC Community Assistance Planning Report No. 37, A Nonpoint Source Water Pollution Control Plan for the Root River Watershed. The report was formally adopted and approved by the Supervisors of the Racine County Soil and Water Conservation District on February 22, 1980, by the Secretary of the Wisconsin Department of Natural Resources on March 5, 1980, and by the Regional Planning Commission on March 6, 1980, as an amendment to the previously adopted regional water quality management plan. The plan was subsequently approved by the Governor, the Racine County Board of Supervisors, the Common Council of the City of Greenfield, the Village Board of the Village of Hales Corners, and the Town Board of the Town of Mt. Pleasant.

The Root River nonpoint source water pollution control plan contains specific recommendations for the establishment of septic tank system and construction site erosion control programs in the urban areas of the watershed, as well as specific recommendations pertaining to cropping practices, livestock waste management, stream bank management, and other land management in rural areas. Immediately upon completion of the planning effort, the landowners in the Root River watershed became eligible for cost-sharing monies available under the Wisconsin Fund program administered by the Wisconsin Department of Natural Resources. By year's end, five landowners living in rural areas and eight landowners living in urban areas of the watershed had entered into agreements with the Department to implement specific water pollution abatement projects recommended in the plan. These projects include such activities as the construction of a livestock waste treatment facility on the John Scott farm in the Town of Raymond, the construction of grassed waterways on four farms in the Towns of Caledonia and Raymond, the placement of a river bank stabilization structure and a grassed waterway in Johnson Park in the City of Racine, and the placement of critical area vegetative cover on 84 acres of an abandoned landfill located near the Root River in Milwaukee County.

Also during 1980, the Commission assisted the Wisconsin Department of Natural Resources in the selection of additional "priority watersheds" for further planning and funding assistance. Acting on the advice of the seven soil and water conservation districts in the Region, the Commission nominated two watersheds as candidates for special studies and funds—the "Upper" and "Middle" subwatersheds of the Fox River watershed. Although neither of these two watersheds was selected for priority status by the Department, the Onion River watershed, which is located partly in Ozaukee County but primarily in Sheboygan County, and which was submitted by the Sheboygan County Soil and Water Conservation District, was designated as a priority watershed. By year's end detailed nonpoint source pollution abatement planning activities for the Onion River watershed had begun.

Lake Water Quality Management Planning

Work continued during 1980 on studies of 13 major inland lakes in southeastern Wisconsin. These studies, which are intended to result in recommendations for the better management of the lakes and the watersheds tributary to the lakes to achieve water quality objectives, represent a joint effort by the Commission, the Wisconsin Department of Natural Resources, the Geneva Lake Environmental Agency, and several lake protection and rehabilitation districts. The 13 inland lakes for which comprehensive studies are underway are: George Lake and Paddock Lake in Kenosha County; Eagle Lake in Racine County; Geneva Lake and Lake Wandawega in Walworth County; Friess Lake and Pike Lake in Washington County; and Ashippun Lake, Lac La Belle, North Lake, Oconomowoc Lake, Okauchee Lake, and Pewaukee Lake in Waukesha County.

The Commission has under preparation for each of these 13 lakes a community assistance planning report that will document the results of the study. The report will address the chemical, biological, and physical conditions of the lake, the uses of the lake, the proposed land management and land use measures in the lake watershed, necessary point and nonpoint source pollution control measures, and related implementation actions.

At year's end, the lake management study reports for Ashippun Lake and Lac La Belle had been com-

pleted and were ready for the printer. The remaining 11 lake management studies are scheduled to be completed over the next several years as budget and work program conditions permit.

Local Sewerage Facilities Planning

During 1980 the Commission continued to work extensively with local engineering staffs and consultants in the preparation of detailed sewerage facilities plans designed to meet the requirements of Section 201 of the federal Clean Water Act, as well as the requirements of the Wisconsin Department of Natural Resources in support of the administration of the Wisconsin Fund established by the State Legislature in 1978. Work activities during 1980 included the provision of basic economic, demographic, land use, and natural resource base data for inclusion in facilities plan reports; 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 capacities and levels of treatment, to those charged with preparing the facilities plan reports; and the review of, and comment on, draft reports prepared in the facilities planning process.

During 1980, such facilities planning reports were completed for sewage treatment facilities for the Villages of Genoa City and Sharon in Walworth County and Newburg in Ozaukee County. These three reports set forth final recommendations for the construction of new or expanded sewage treatment facilities in accordance with the recommendations set forth in the adopted regional water quality management plan. As such, the three reports were recommended by the Commission to the State for approval. At year's end, similar facility plans were under development for the Racine metropolitan area, including the North Park Sanitary District; the entire Geneva Lake area, including at the eastern end of the lake the City of Lake Geneva and the unincorporated community of Lake Como, and at the western end of the lake the Villages of Fontana, Walworth, and Williams Bay; the Village of Lac La Belle; the Town of Oconomowoc, and the Towns of Pleasant Prairie and Yorkville.

The sewerage facilities planning and design effort being conducted by the Milwaukee Metropolitan Sewerage District again during 1980 required substantial support services from the Commission. The Commission staff served on several district advisory committees, including the Technical Coordinating Committee, the Grants Policy Committee, the Technical Advisory Committee on Water Quality Monitoring, and the Environmental Impact Statement Coordinating Committee. During 1980 the Commission also provided to the District economic, demographic, land use, and soils data; water quality simulation modeling services and related analyses; and technical review of, and assistance in the preparation of, facilities planning and environmental impact statement documents.

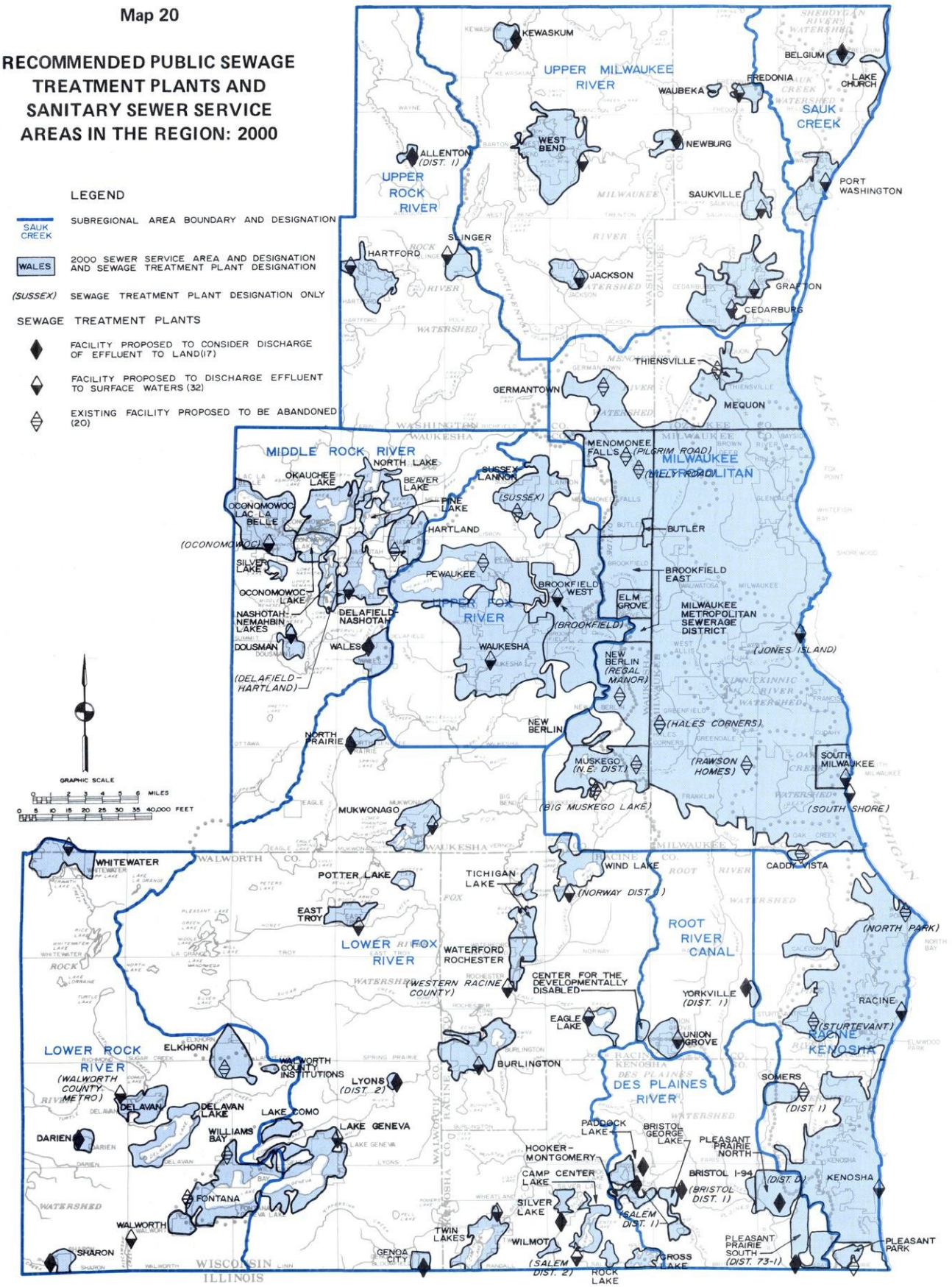
Sanitary Sewer Extensions and Sewer Service Area Refinement Process

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 sanitary sewer extensions. Such review and comment must relate a proposed 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 sanitary sewer extensions unless such extensions are found to be in conformance with adopted plan recommendations.

The regional water quality management plan described above includes recommended sanitary sewer service areas attendant to each recommended sewage treatment facility. There are in the plan a total of 85 such identified sanitary sewer service areas (see Map 20). These recommended sanitary sewer service areas are based upon the urban land use configurations identified in the adopted regional land use plan for the year 2000. Thus, the delineations are necessarily general in nature and do not reflect detailed local planning considerations. Accordingly, the Commission directed that, upon adoption of the regional water quality management plan, steps be taken to refine and detail each of the 85 sanitary sewer service areas delineated in the plan in cooperation with the local units of government concerned. A process for refining and detailing the areas was set forth in the plan, consisting primarily of intergovernmental meetings with the affected units of government and culminating in the holding of a public hearing on a refined and detailed sewer service area. Each such area would be documented in a Commission community assistance planning report, which would be formally adopted by the operator of the affected sewage treatment facility and by the Commission, and forwarded to the Wisconsin Natural Resources

Map 20

RECOMMENDED PUBLIC SEWAGE TREATMENT PLANTS AND SANITARY SEWER SERVICE AREAS IN THE REGION: 2000



Board and the U. S. Environmental Protection Agency as an amendment to the regional water quality management plan.

During 1980 the refinement and detailing process continued for the sanitary sewer service areas to be served by the treatment facilities operated by the Cities of Hartford and West Bend and by the Walworth County Metropolitan Sewerage District. A public hearing was held with respect to the West Bend sewer service area plan, with the result that at year's end local officials were considering changes to the plan based upon comments received at the well-attended public hearing. Also at year's end, the Walworth County Metropolitan Sewerage District sewer service area plan involving the four individual sewer service areas was readied for public hearing.

During the year, such refinement and detailing efforts were begun for sanitary sewer service areas in the Cities of Mequon and Muskego; the Villages of Genoa City and Thiensville; and the Town of Somers.

Pending the completion of this refinement process, the Commission will 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 1980, such review comments were provided on 178 such extensions, shown distributed by county in Table 15.

In order to facilitate an understanding of the issues surrounding sanitary sewer service area delineation—as well as such related issues as environmental corridor delineation, wetland preservation, and the land development process in southeastern Wisconsin—the Commission conducted a Regional Planning Conference on January 31, 1980. This day-long conference was attended by approximately 400 persons, including local elected officials, local plan commission members, municipal engineers, municipal planners, consulting engineers, land surveyors, land developers, environmental groups, and citizens. The conference addressed the importance of coordination in the land development process between federal, state, and local units of government. Emphasized in particular were the relationships between the extension of sanitary sewer service, the promotion of sound land use development, and the impact of urbanization on environmentally sensitive areas, such as environmental corridors and wetlands.

Table 15

SANITARY SEWER EXTENSION REVIEWS: 1980

County	Number
Kenosha	16
Milwaukee	58
Ozaukee	6
Racine	14
Walworth	9
Washington	12
Waukesha	63
Total	178

Proceedings of this important conference were published by the Commission and distributed during the year.

Public Participation Efforts

During 1980, the University of Wisconsin-Extension Service continued to assign a full-time extension agent to the Commission to formulate and conduct public education and involvement activities. Much of the effort in 1980 was centered on public involvement in the nonpoint source water pollution planning program for the Root River watershed and educational efforts on recommendations made in that plan. Six public informational meetings and seven joint community planning meetings were held. Four brochures and three tours were used to focus public attention on the plan. A model was built to illustrate proper land management practices. The model, along with other water quality displays and educational materials, was made available to the public at the Wisconsin State Fair, two county fairs, and seven other public events. A set of slides to accompany a presentation on the Root River plan was developed and presented to 10 citizen and student groups. A one-hour radio interview program was aired on how farmers could improve land management practices and control water pollution.

Other activities focused on the implementation of other aspects of the regional water quality plan. A sludge management training session was held for University of Wisconsin-Extension and county employees to being them up-to-date with recent sludge management research. A sludge demonstration plot was established at State Fair Park for the 1980 State Fair. The plot demonstrated the

nutrient value of sludge, showing differences in crop response to various land treatments. As already noted, a regional conference focusing on sewer service area refinement and environmental corridor and wetland preservation was held. Three tours on land use and water quality were conducted for elementary and high school teachers. Eight presentations on improving water quality were made to interested groups. Finally, educational assistance was provided to two lake districts in their efforts to manage the watersheds tributary to the lakes in order to preserve clean water.

WATERSHED AND FLOODLAND MANAGEMENT PLANNING

During 1980, Commission efforts in watershed and floodland management planning were concentrated primarily on the preparation of a comprehensive plan for the Pike River watershed. In addition, large-scale topographic maps were completed for the Oak Creek watershed in preparation for a proposed comprehensive study of that watershed (see Map 21). Other work included the provision of hydrologic and hydraulic data—including flood flow and stage data—to consulting engineers and governmental agencies for use in the conduct of federal flood insurance rate studies. Finally, the Commission continued to promote the conduct of a cooperative stream gaging program.

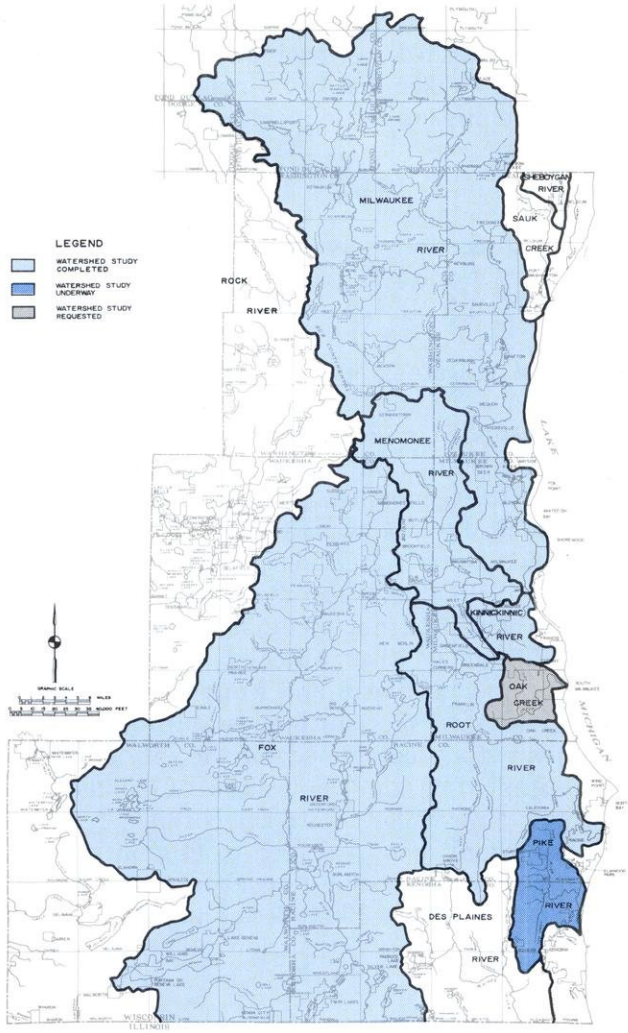
Pike River Watershed Study

Work began in 1980 on the preparation of a comprehensive plan for the Pike River watershed. This work effort, which is being undertaken by the Commission at the request of the county boards of the Counties of Kenosha and Racine, is being guided by the Pike River Watershed Committee, comprised of local, state, and federal officials and concerned citizen leaders from throughout the watershed. Funding for the study is being provided by the two County Boards concerned.

During 1980, the Watershed Committee met seven times to consider and review materials prepared by the Commission staff for inclusion in the final planning report. The Committee reviewed and approved several report chapters setting forth inventory findings, formulated a set of watershed development objectives and standards, and reached agreement on a refined and detailed land use, park, and open space plan for the watershed. At year's end, the Commission staff had initiated the hydrologic/hydraulic studies necessary for the design and evaluation of alternative floodland management measures. The Pike River watershed study is scheduled for conclusion late in 1981.

Map 21

SEWRPC WATERSHED STUDY STATUS: 1980



Oak Creek Watershed Study

In 1980 the Milwaukee Metropolitan Sewerage District and the City of South Milwaukee authorized the Commission to proceed with the preparation of large-scale topographic maps of the Oak Creek watershed, the cost to be borne by the District and the City. As a result, during the year 1" = 100', 2' contour topographic maps, based upon the Commission-recommended control survey network for such maps, were obtained for 7.5 square miles

of area in the watershed. With this mapping, and 24.5 square miles of such mapping previously completed by the City of Franklin, the City of Greenfield, the City of Oak Creek, and Milwaukee County to Commission standards, the entire Oak Creek watershed, as well as the entire City of South Milwaukee, has been mapped in accordance with Commission-recommended specifications.

At year's end, funding arrangements that would permit completion of the watershed study were under discussion between the Milwaukee Metropolitan Sewerage District, Milwaukee County, the City of South Milwaukee, and the Commission.

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 Root, Fox, Milwaukee, Menomonee, and Kinnickinnic River watersheds, resulting in the delineation of floodlands for about 631 miles of major stream channels, not including stream channels in the Milwaukee River watershed lying outside the Region in Sheboygan and Fond du Lac Counties. In addition, a special Commission floodland management study completed for the City of Hartford has resulted in the delineation of floodlands for another four miles of stream channel. Large-scale flood hazard maps prepared to Commission specifications are available for about 235 miles, or 37 percent, of the 635 miles of major stream channel for which the Commission has developed flood hazard data.

Flood Insurance Rate Studies

Under the National Flood Insurance Act of 1968, the U. S. Department of Housing and Urban Development has been given broad authority to conduct studies to determine the location and extent of floodlands and the risks related to the insurance of urban development in floodland areas. The Department is proceeding with the conduct of such studies on a community-by-community basis throughout the Region. While the Commission has not directly contracted with the Department for the conduct of such studies, the staff does cooperate with all of the engineering firms and federal 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 but 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 the Department 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 communities along a given river or stream.

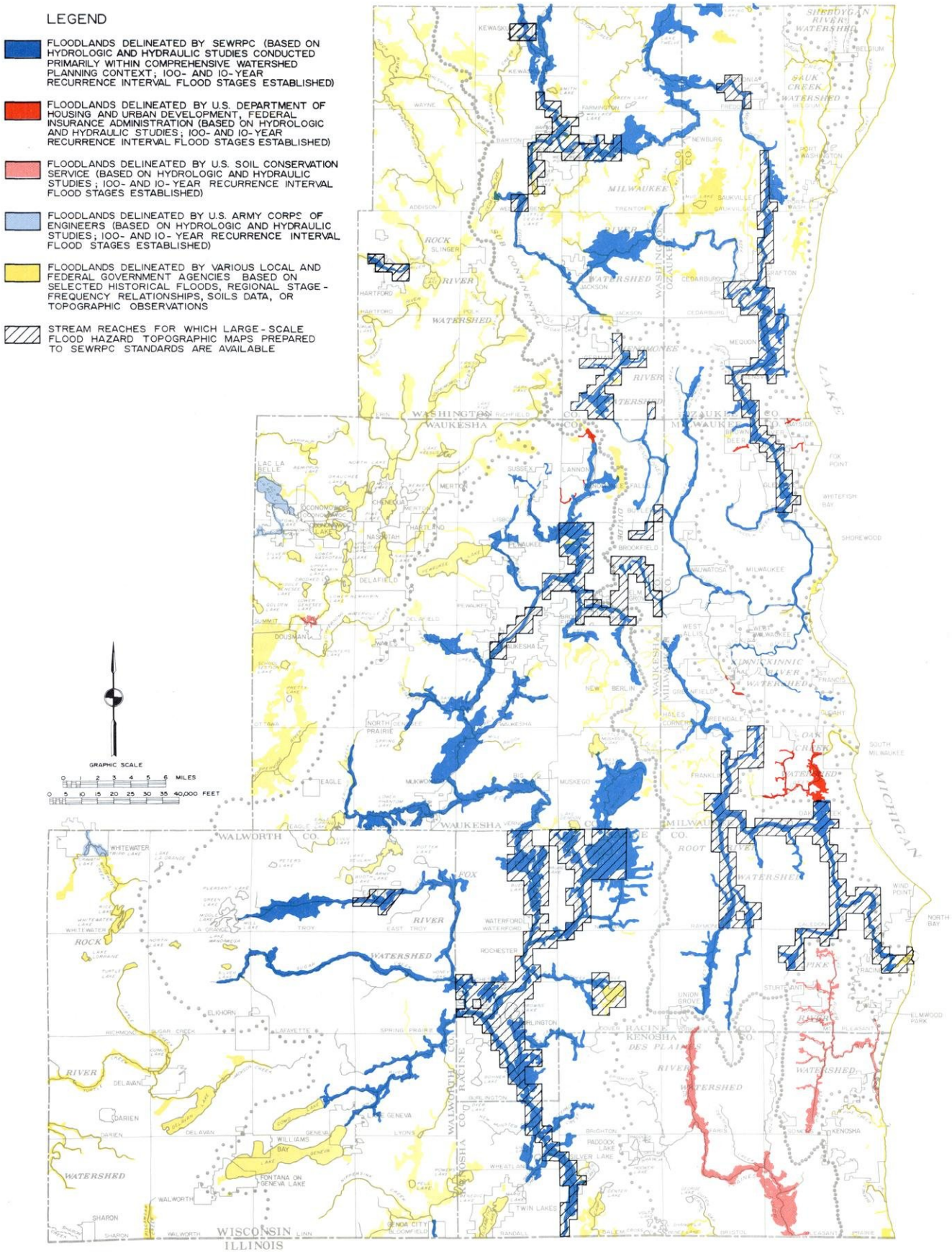
By the end of 1980, federal flood insurance rate studies had been completed and were underway, respectively, for 27 and 42 civil divisions in the Region, as shown on Map 23. Of the 42 studies in progress, reports presenting the findings of 10 studies were in draft form by the end of 1980. The Commission was involved not only in providing available data from the Commission files to the contractors conducting such studies, but in delineating regulatory floodways and attending meetings with local officials to discuss the conduct of, and results of, the flood insurance rate studies. The Commission stands ready to assist the local communities in the enactment of sound local floodland regulations as required by the federal flood insurance program and State Statute.

Stream Gaging Program

Streamflow data are essential to the sound management of the water resources of the Region. When the Commission began its regional planning program in 1960, only two continuous recording streamflow gages were in operation on the entire regional stream network. Since that time, the Commission has been instrumental in establishing, through cooperative, voluntary intergovernmental action, 16 additional continuous recording streamflow gages, which provide the means for obtaining invaluable long-term records of streamflow. All of these gages are maintained by the U. S. Geological Survey, under a contract with the Commission (see Map 24). The U. S. Geological Survey publishes the data obtained. Local funds to support the operation of the gages are provided by the Fond du Lac, Ozaukee, Racine, Washington, and Waukesha County Boards of Supervisors; the Milwaukee Metropolitan Sewerage District; and the Kenosha Water Utility.

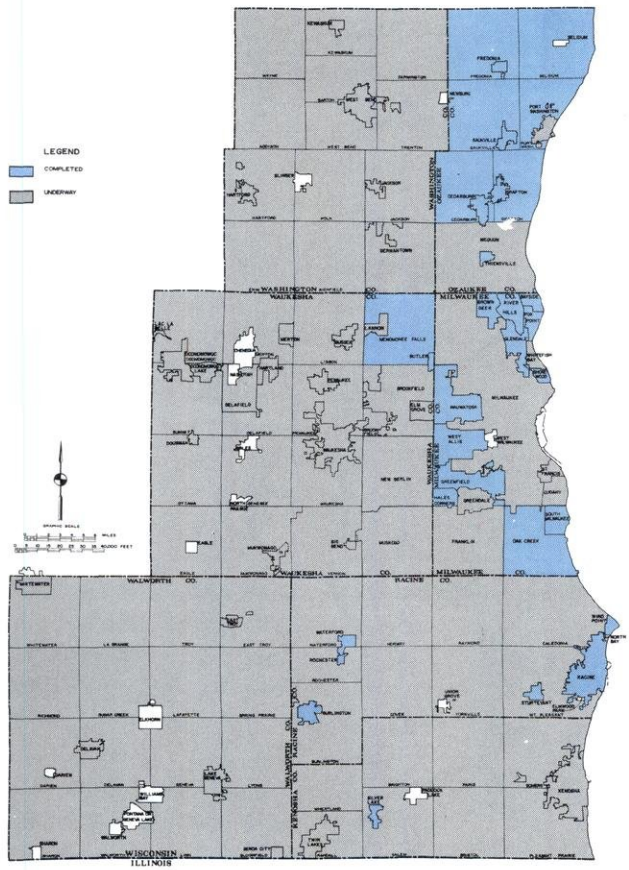
Map 22

DELINEATION OF FLOODLANDS: 1980



Map 23

STATUS OF FLOOD INSURANCE RATE STUDIES



AIR QUALITY PLANNING

During 1980 the air quality planning efforts of the Division were primarily focused on the completion, adoption, and implementation of the regional air quality attainment and maintenance plan. In addition, work activities included the preparation of recommendations concerning the locations of motor vehicle inspection and emission test facilities in the Region in conjunction with the establishment of the federally mandated vehicle inspection and maintenance program for southeastern Wisconsin. Also during 1980, work was completed by the Commission on the air quality simulation modeling effort in support of the City of Milwaukee study of fugitive dust emission sources in the Menomonee River Valley.

Regional Air Quality Attainment and Maintenance Plan

In 1980 the Commission completed and adopted a regional air quality attainment and maintenance plan for the Region. The preparation of this plan was undertaken at the request of, and in cooperation with, the Wisconsin Departments of Natural Resources and Transportation. The plan identifies the measures needed to attain and maintain within the Region the federally estalished ambient air quality standards, and is documented in SEWRPC Planning Report No. 28, A Regional Air Quality Attainment and Maintenance Plan for Southeastern Wisconsin: 2000.

The primary purpose of the regional air quality attainment and maintenance plan was to identify those areas within the Southeastern Wisconsin Region which are presently experiencing, or which may be expected to experience over the 20-year plan design period, excessive levels of air pollution, and to evaluate alternative pollution abatement measures necessary to achieve and maintain clean air throughout the Region. More specifically, the regional air quality attainment and maintenance plan was to identify and quantify the principal sources of air pollution in the Region, both existing and probable future; to provide an evaluation of alternative control measures which are technologically feasible and economically sound for application to the identified air pollution sources; and to recommend the implementation of specific control actions to ensure the attainment of clean ambient air in the Region and the maintenance of such clean air through the year 2000. The plan was also intended to provide assistance to the Wisconsin Department of Natural Resources in the development of additions to, and revisions of, the State Implementation Plan to achieve the ambient air quality standards.

The air quality plan is comprised of five major elements: a particulate matter pollution control plan, a sulfur dioxide pollution control plan, a carbon monoxide pollution control plan, a hydrocarbon/ozone pollution control plan, and recommendations for a continuing and expanded ambient air quality monitoring effort. Based on ambient air quality monitoring data and air quality computer simulation modeling, it was determined that neither a short-term attainment plan nor a long-term maintenance plan was required to ensure safe levels of nitrogen dioxide in the Region over the planning period.

LOCATION OF U. S. GEOLOGICAL SURVEY STREAM GAGING STATIONS: 1980

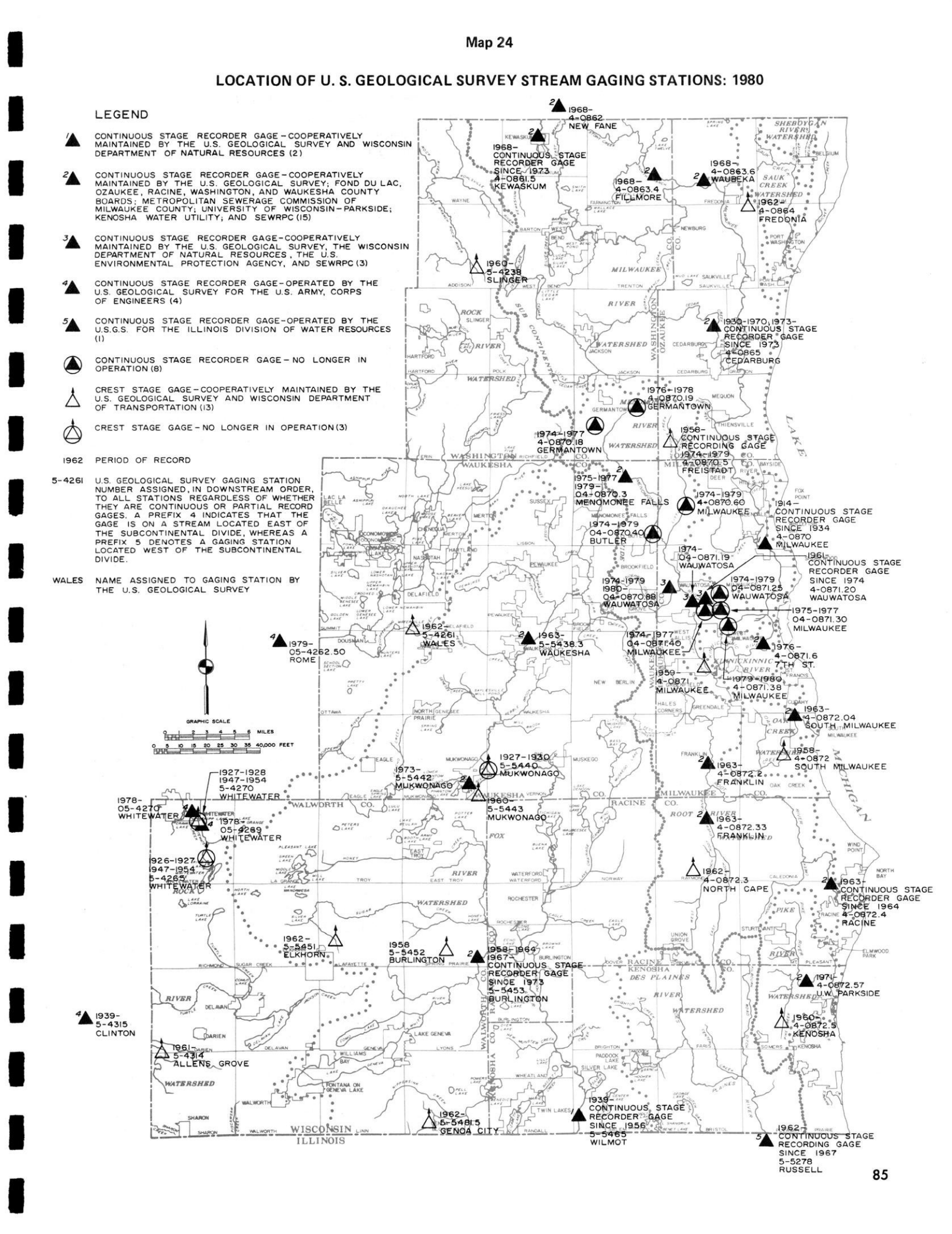
LEGEND

- 1 — CONTINUOUS STAGE RECORDER GAGE – COOPERATIVELY MAINTAINED BY THE U.S. GEOLOGICAL SURVEY AND WISCONSIN DEPARTMENT OF NATURAL RESOURCES (2)
- 2 — CONTINUOUS STAGE RECORDER GAGE – COOPERATIVELY MAINTAINED BY THE U.S. GEOLOGICAL SURVEY; FOND DU LAC, OZAUKEE, RACINE, WASHINGTON, AND WAUKESHA COUNTY BOARDS; METROPOLITAN SEWERAGE COMMISSION OF MILWAUKEE COUNTY; UNIVERSITY OF WISCONSIN – PARKSIDE; KENOSHA WATER UTILITY; AND SEWRPC (15)
- 3 — CONTINUOUS STAGE RECORDER GAGE – COOPERATIVELY MAINTAINED BY THE U.S. GEOLOGICAL SURVEY, THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES, THE U.S. ENVIRONMENTAL PROTECTION AGENCY, AND SEWRPC (3)
- 4 — CONTINUOUS STAGE RECORDER GAGE – OPERATED BY THE U.S. GEOLOGICAL SURVEY FOR THE U.S. ARMY, CORPS OF ENGINEERS (4)
- 5 — CONTINUOUS STAGE RECORDER GAGE – OPERATED BY THE U.S.G.S. FOR THE ILLINOIS DIVISION OF WATER RESOURCES (1)
- CONTINUOUS STAGE RECORDER GAGE – NO LONGER IN OPERATION (8)
- CREST STAGE GAGE – COOPERATIVELY MAINTAINED BY THE U.S. GEOLOGICAL SURVEY AND WISCONSIN DEPARTMENT OF TRANSPORTATION (13)
- CREST STAGE GAGE – NO LONGER IN OPERATION (3)

1962 — PERIOD OF RECORD

5-4261 — U.S. GEOLOGICAL SURVEY GAGING STATION NUMBER ASSIGNED, IN DOWNSTREAM ORDER, TO ALL STATIONS REGARDLESS OF WHETHER THEY ARE CONTINUOUS OR PARTIAL RECORD GAGES. A PREFIX 4 INDICATES THAT THE GAGE IS ON A STREAM LOCATED EAST OF THE SUBCONTINENTAL DIVIDE, WHEREAS A PREFIX 5 DENOTES A GAGING STATION LOCATED WEST OF THE SUBCONTINENTAL DIVIDE.

WALES — NAME ASSIGNED TO GAGING STATION BY THE U.S. GEOLOGICAL SURVEY



Particulate Matter Pollution Control Plan

Particulate matter is a term for a large variety of substances that have the ability to remain suspended in ambient air for indefinite periods of time. Natural sources of particulate matter include bacteria, viruses, fungi, molds, yeasts, pollen, and spores from live and decaying plant and animal life, as well as particles caused by wind erosion, volcanic activities, and forest fires. Human-caused particulate matter includes soot, dust, and fly ash caused by combustion, industrial processes, agricultural activities, and transportation movements. Particulate matter can be harmful to human health either through absorption or inhalation into the body of a chemically or physically toxic particle, or through interference with cleansing mechanisms in the human respiratory tract. Excessive levels of particulate matter can also have adverse effects on animals, vegetation, and materials.

Both primary and secondary long-term and short-term ambient air quality standards have been set for particulate matter. On an annual basis the primary standard for particulate matter—that is, the maximum level permissible to protect human health—has been set at 75 micrograms per cubic meter ($\mu g/m^3$). The secondary standard has been established at 60 $\mu g/m^3$, and is designed to prevent damage to plants, animals, and materials. The 24-hour primary standard has been established at 260 $\mu g/m^3$, and the secondary standard at 150 $\mu g/m^3$.

Existing Monitored Particulate Matter Levels

In 1977 measured ambient air quality levels exceeding the primary standard for particulate matter were observed at three monitoring stations in Milwaukee County and at two stations in Waukesha County. Violations of the secondary standard were found at 14 monitoring stations—six in Milwaukee County, two in Kenosha County, two in Racine County, one in Walworth County, and three in Waukesha County. Based on these monitoring data, the U. S. Environmental Protection Agency has formally designated primary and secondary nonattainment areas for particulate matter in the Region (see Map 25). There are two designated primary nonattainment areas—one in the Menomonee River Valley portion of the City of Milwaukee and one in the City of Waukesha—and five secondary nonattainment areas—one each surrounding the primary nonattainment areas in the Cities of Milwaukee and Waukesha, one centered on General Mitchell Field in Milwaukee County, and one each in the Cities of Kenosha and Racine. About 355,500 persons reside in these designated particulate matter nonattainment areas, of which about 20,200 reside within the primary nonattainment areas.

Sources of Particulate Matter

About 30,500 tons of particulate matter were released into the atmosphere over the Region from all identified sources in 1977. About 18,600 tons, or 61 percent, were attributable to area sources of emissions (see Figure 39). Point sources, including major industrial facilities and fuel-burning installations, accounted for about 7,400 tons, or about 24 percent, and line sources accounted for only about 4,400 tons, or 15 percent. The estimated distribution of particulate matter emissions by county and source category is set forth in Table 16. Particularly important area sources of particulate matter emissions are industrial fugitive dust and agricultural tilling operations, while the majority of emissions from point sources are attributable to large fuel-burning installations such as electric power generating stations.

Simulation of Existing Air Quality—Particulate Matter

The particulate matter emissions were assessed for their impact on ambient air quality in the Region using the Wisconsin Atmospheric Diffusion Model (WIS*ATMDIF) under prevailing meteorological conditions for the base year 1977. As shown on Map 26, the modeling effort indicated that about a five-square-mile area of Milwaukee County and about a 12-square-mile area of Waukesha County exceeded the primary standard for particulate matter in 1977. This effort also indicated that an additional 24-square-mile area in Milwaukee County, a 23-square-mile area in Waukesha County, and a very small area—less than one square mile—in Racine County exceeded the secondary standard. About 65,700 persons, or about 4 percent of the total regional population, live in those areas of the Region indicated by the modeling results to exceed the primary particulate standard. Taken together, the results of the air quality monitoring and air quality simulation work for the year 1977 indicated that it was necessary to prepare a plan to ensure the near-term attainment of the particulate matter ambient air quality standards.

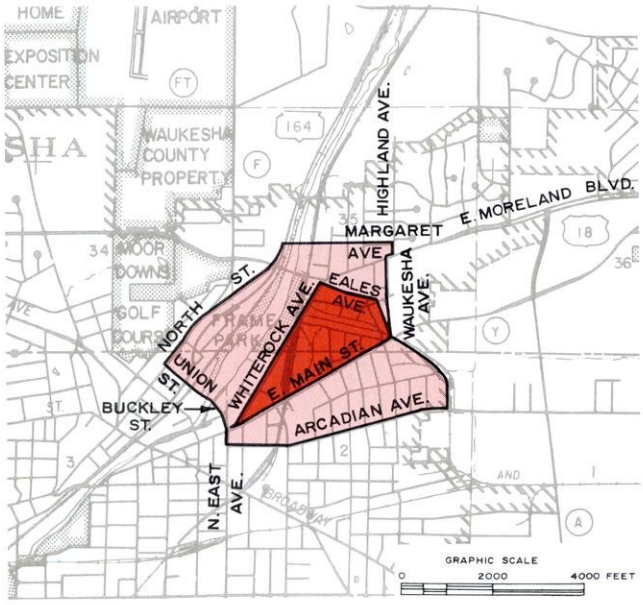
Simulation of Forecast Air Quality—Particulate Matter

Forecasts of particulate matter emissions in the Region were prepared for 1982—the year man-

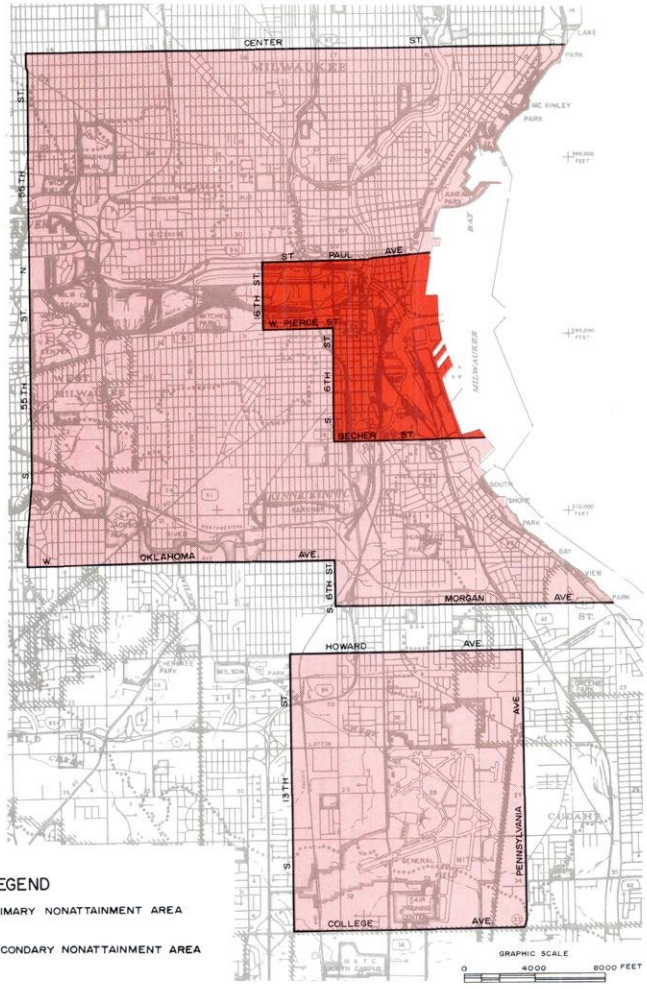
Map 25

PRIMARY AND SECONDARY PARTICULATE MATTER NONATTAINMENT AREAS IN THE REGION

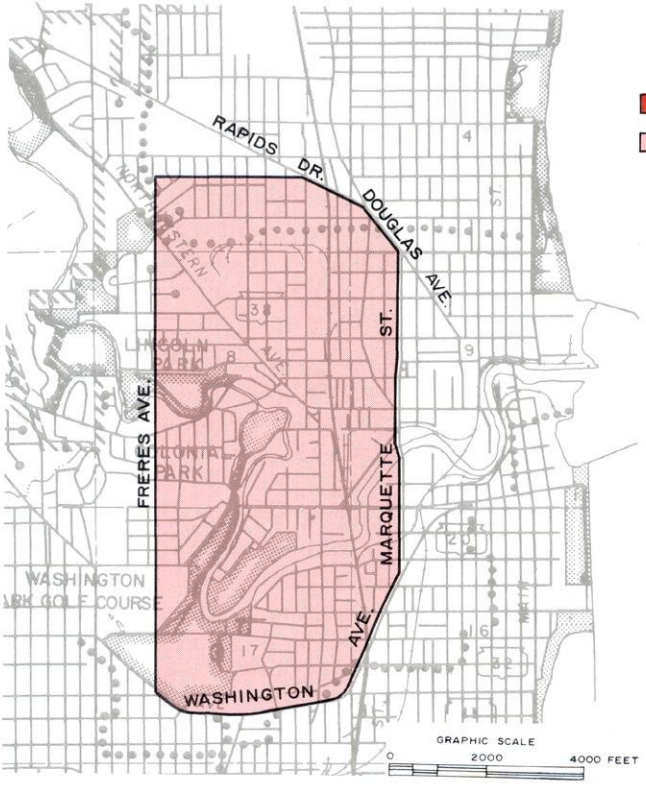
WAUKESHA PRIMARY AND SECONDARY NONATTAINMENT AREA



MILWAUKEE PRIMARY AND SECONDARY NONATTAINMENT AREA



RACINE SECONDARY NONATTAINMENT AREA



LEGEND

PRIMARY NONATTAINMENT AREA

SECONDARY NONATTAINMENT AREA

KENOSHA SECONDARY NONATTAINMENT AREA

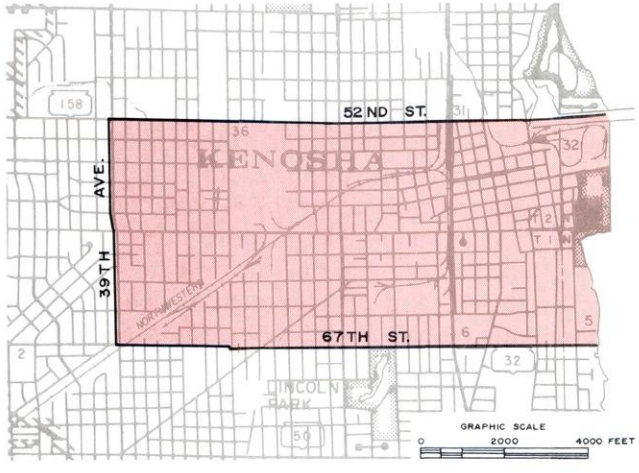


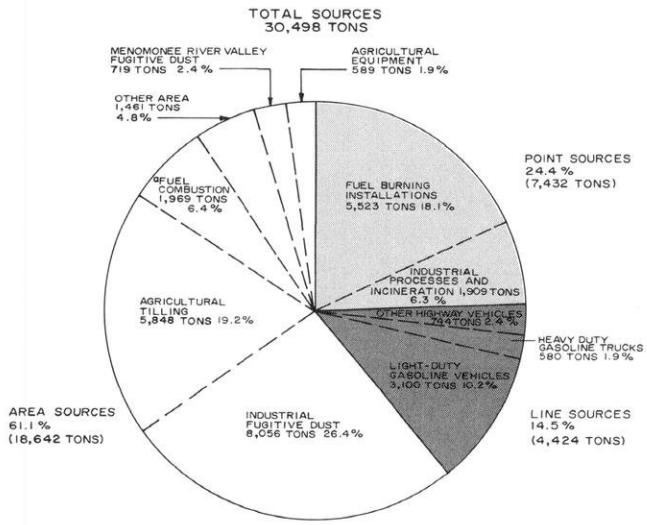
Table 16

SUMMARY OF TOTAL SUSPENDED PARTICULATE MATTER EMISSIONS BY COUNTY AND SOURCE CATEGORY: 1977

County	Point Sources			Line Sources			Area Sources			Total	
	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Region
Kenosha	49	0.7	3.3	368	8.3	24.6	1,078	5.8	72.1	1,495	4.9
Milwaukee . . .	6,095	82.0	47.2	2,056	46.5	15.9	4,768	25.6	36.9	12,919	42.4
Ozaukee	536	7.2	33.3	224	5.1	13.9	848	4.5	52.7	1,608	5.3
Racine	293	4.0	11.1	420	9.5	15.8	1,932	10.4	73.0	2,645	8.7
Walworth. . . .	127	1.7	5.4	264	6.0	11.3	1,946	10.4	83.3	2,337	7.6
Washington . .	10	0.1	0.6	272	6.1	16.1	1,407	7.6	83.3	1,689	5.5
Waukesha . . .	322	4.3	4.1	820	18.5	10.5	6,663	35.7	85.4	7,805	25.6
Region	7,432	100.0	24.4	4,424	100.0	14.5	18,642	100.0	61.1	30,498	100.0

Figure 39

SUMMARY OF PARTICULATE MATTER EMISSIONS IN THE REGION BY MAJOR SOURCE CATEGORY: 1977



[a]INCLUDES AREA SOURCE EMISSIONS FROM FUEL USED FOR RESIDENTIAL, SMALL COMMERCIAL-INSTITUTIONAL, AND SMALL INDUSTRIAL SPACE AND WATER HEATING PURPOSES.

dated by the U. S. Congress for achieving the primary standards—1985, and 2000, the latter two years corresponding to an intermediate stage year and a final design year for the regional land use and transportation plans. These forecasts were necessary in order to evaluate the probable impact of future growth and development in the Region on particulate matter levels. The results of the forecasts are summarized by county in Table 17, and the relative contributions of point, area, and line sources to the total particulate matter burden in the forecast years are shown in Figure 40.

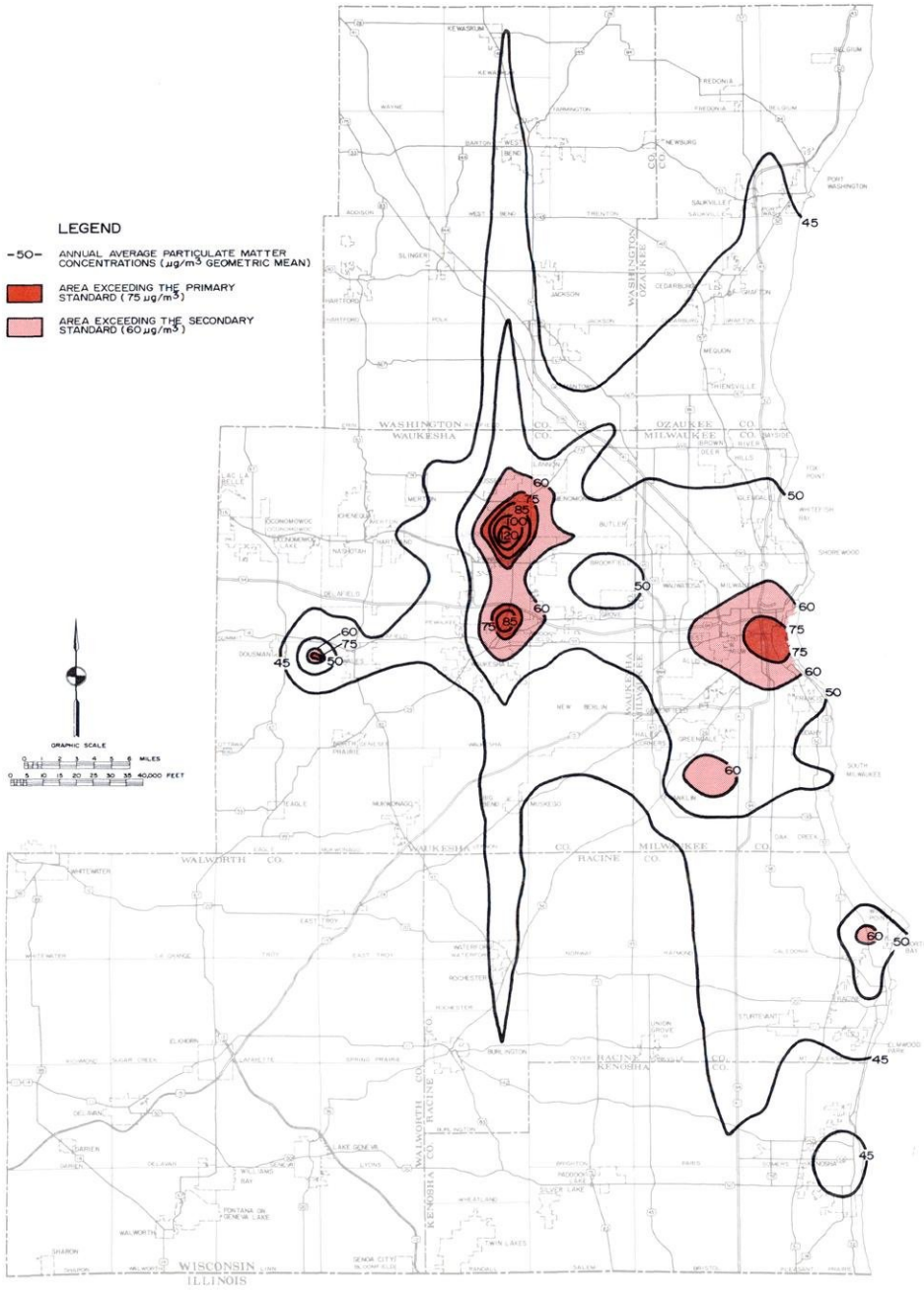
Particulate matter emissions are expected to increase by about 4,300 tons, or by about 14 percent—from 30,500 tons in 1977 to 34,800 tons in 2000. Much of this forecast increase is attributable to point sources since coal use for industrial purposes is expected to increase. A modest increase in particulate matter emissions from area sources is expected to be offset by an equivalent reduction in line sources.

The WIS*ATMDIF model was used to simulate the impacts of this forecast of future particulate matter emissions on ambient air quality. The results of this simulation effort are shown on Map 27. The area forecast to exceed the primary standard in Milwaukee County by the year 2000 in the absence of further control measures is expected to encompass about 11 square miles, an increase of 6 square miles over the area exceeding the primary standard in 1977. The secondary standard is expected to be exceeded over an additional 75 square miles of land area in Milwaukee County, an increase of 51 square miles, or 13 percent, over the area exceeding the secondary standard in 1977. The same amount of area is forecast to exceed the secondary standard around major quarrying operations in Milwaukee, Racine, and Kenosha Counties in the year 2000 as in 1977.

It was accordingly concluded that the particulate matter air pollution problem in the Region may be expected to increase in severity—both in magnitude and in areal extent—over the design period. Nearly 129,700 persons, or about 6 percent of the total forecast regional population in the year 2000, could be expected to reside in areas not meeting the primary standard. This would represent about 74,900, or 137 percent, more persons than were

Map 26

COMPUTER-SIMULATED ANNUAL GEOMETRIC AVERAGE PARTICULATE MATTER CONCENTRATIONS IN THE REGION: 1977



Map 27

COMPUTER-SIMULATED ANNUAL GEOMETRIC AVERAGE PARTICULATE MATTER CONCENTRATIONS IN THE REGION: 2000

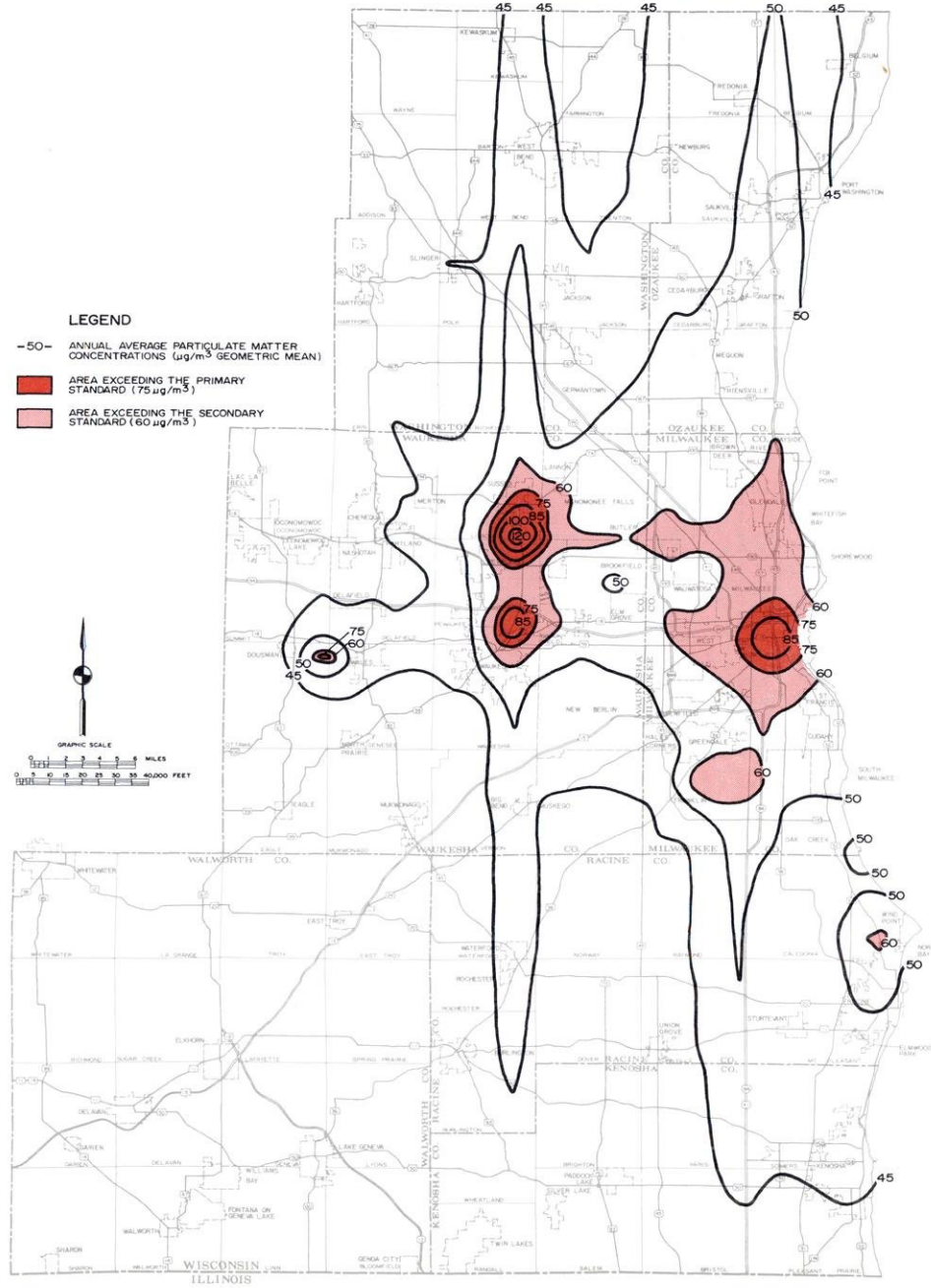


Table 17

SUMMARY OF EXISTING AND FORECAST PARTICULATE MATTER EMISSIONS IN THE REGION BY COUNTY: 1977, 1982, 1985, AND 2000

County	Existing 1977 Emissions (tons)	Forecast 1982 Emissions (tons)			Forecast 1985 Emissions (tons)			Forecast 2000 Emissions (tons)		
			Difference 1977-1982			Difference 1977-1985			Difference 1977-2000	
		Emissions	Absolute	Percent Change	Emissions	Absolute	Percent Change	Emissions	Absolute	Percent Change
Kenosha	1,495	1,858	364	24.4	1,894	400	26.8	2,444	950	63.6
Milwaukee . . .	12,919	12,264	- 656	- 5.1	13,633	713	5.5	15,185	2,265	17.5
Ozaukee	1,608	1,560	- 48	- 3.0	1,581	- 27	- 1.7	1,987	379	23.6
Racine	2,645	2,569	- 75	- 2.8	2,715	71	2.7	3,013	369	14.0
Walworth. . . .	2,337	2,266	- 72	- 3.1	2,315	- 23	- 1.0	2,448	110	4.7
Washington . .	1,689	1,725	34	2.0	1,749	58	3.4	1,813	122	7.2
Waukesha . . .	7,805	7,604	- 203	- 2.6	7,665	- 142	- 1.8	7,929	122	1.6
Region	30,498	29,846	- 652	- 2.15	31,552	1,054	3.4	34,819	4,321	14.2

exposed to harmful particulate levels in 1977. Consequently, a plan for the long-term maintenance of the particulate matter standards was deemed necessary as a supplement to the attainment plan.

Recommended Particulate Matter Pollution Control Plan

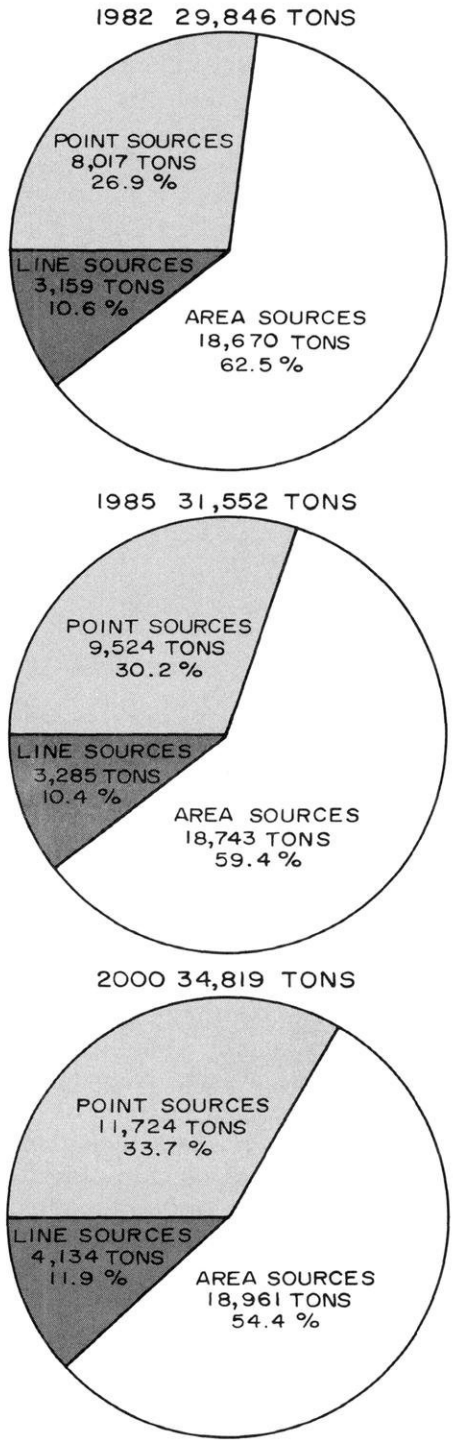
The particulate matter pollution control plan consists of four basic measures: the imposition of control measures on existing sources of emissions; the imposition of control measures on new sources of emissions; the conduct of an intensive ambient air quality monitoring effort; and the conduct of a pilot vacuum street sweeping program in Milwaukee County. Analyses conducted under the study indicate that if these actions are carried out, significant progress toward the attainment and maintenance of the particulate matter standards may be expected, with the possibility that the standards will be met and maintained as controls of upwind air pollution sources are implemented. The following is a brief description of each of these recommended actions:

- The Wisconsin Department of Natural Resources has developed emission limitations to be applied to all existing sources that lie within or which significantly impact upon the designated particulate matter nonattainment areas. These emission limitations have been termed "reasonably available control technology" (RACT). The plan considers the application of these emission limitations to existing sources to be a committed action. Such emission limitations may also be applied by the DNR to existing sources identified outside the nonattainment area where the DNR has determined on a case-by-case basis through mathematical modeling techniques that such sources impact upon air quality in the nonattainment area. The existing sources consist largely of industrial processes and fugitive dust sources.

- New sources of particulate matter emissions are those industrial process facilities, fuel-burning installations, and fugitive dust sources created after 1979. For such new sources that would not be located within identified particulate matter nonattainment areas, and which would not impact upon such areas, the plan recommends that the federally prescribed "new source performance standards" (NSPS) be applied. For those new sources for which federally prescribed performance standards have not been developed, the plan recommends that allowable emissions be based upon the federally prescribed "best available control technology" (BACT). It should be pointed out that, under committed federal actions, decisions as to whether to allow new sources of particulate matter emissions are subject to overriding considerations inherent in the federal regulations designed to prevent the significant deterioration of air quality where air quality standards are currently met. The plan recommends that those new sources proposed within the designated particulate matter nonattainment areas, or which impact upon such areas, achieve the federally pre-

Figure 40

RELATIVE CONTRIBUTION OF POINT, LINE, AND AREA SOURCES TO THE TOTAL FORECAST PARTICULATE MATTER EMISSIONS IN THE REGION: 1982, 1985, AND 2000



scribed "lowest achievable emissions rate" (LAER). In general, such emission rates are more stringent than those based on RACT or BACT. In addition, the plan recommends that where a new source with a potential to emit at least 50 tons of particulate matter a year is proposed for construction in a designated nonattainment area, a greater than one-for-one emission reduction from existing sources in the nonattainment area be procured after the application of LAER control technology. The actual amount and location of emission offsets would have to be negotiated in an agreement between the owner of a new source and the DNR.

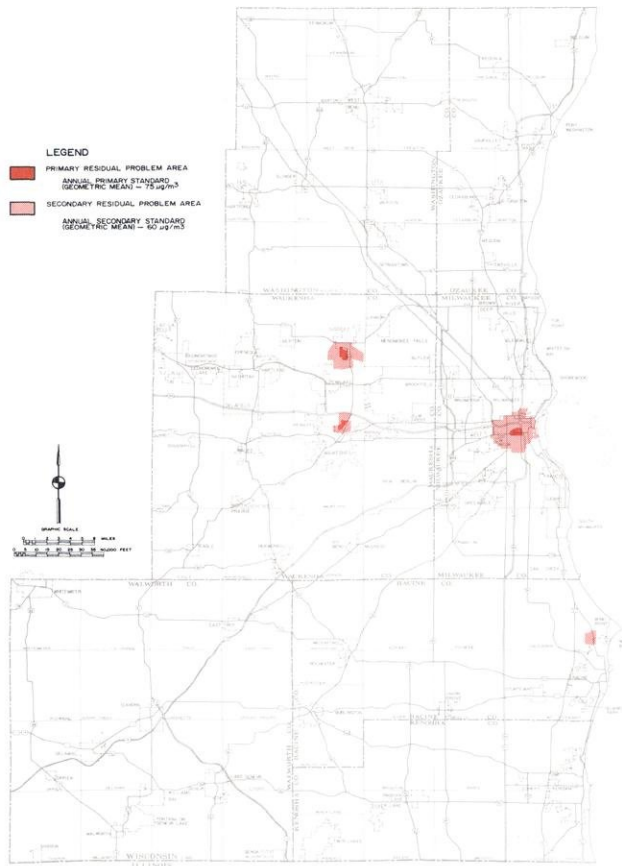
- While the above-described committed actions may be expected to yield significant reductions in particulate matter levels, it is possible that a residual particulate matter problem may still exist in parts of Milwaukee, Racine, and Waukesha Counties in 1982, as shown on Map 28. For several reasons—because of the significant reduction in particulate matter concentrations which is expected to result from implementation of the actions, because of the uncertainties inherent in the air quality simulation modeling, because of the uncertainties concerning future levels of long-range transport of particulate matter into the Region, and because of uncertainties regarding the level of emissions from mineral extraction operations within the Region—it was not deemed wise to recommend more stringent emission limitations for particulate matter sources, in particular, mineral extraction sources, than otherwise prescribed under the actions noted above. It is possible that the particulate matter standards will be achieved as the emission levels from long-range transport are reduced. In light of these uncertainties and in order to avoid placing further economic and burdensome restrictions on sources of particulate matter in the Region, the plan calls instead for both a local short-term ambient air quality monitoring effort to help verify the results of efforts to simulate the impact of mineral extraction operations in the Region, and an areawide long-range monitoring effort to measure the particulate levels in the Region resulting from the long-range transport of particulate matter into the Region.

- Road dust was identified as a significant source of particulate matter. While the plan does not recommend widespread changes in municipal street sweeping programs that would involve more frequent and timely street sweeping in the heavily urbanized areas of the Region, the plan does call for a pilot vacuum street sweeping program in the central portion of Milwaukee County. It is proposed that this effort, including a special ambient air quality monitoring effort, provide a quantitative evaluation of the impact of road dust on ambient air quality and on the reduction of particulate matter that could be achieved through street sweeping.

If the foregoing actions are carried out, particulate matter emissions could be reduced by about 5,500 tons per year, or by about 18 percent, from the 30,500 tons of total particulate matter emitted in the Region in 1977. The impact of this emission reduction on forecast particulate matter emissions from all sources is indicated in Figure 41. The plan recommendations would affect 71 existing facilities in the Region, including 8 industrial point sources and 63 industrial fugitive dust sources. Implementation of these recommendations at the 71 facilities would involve a one-time capital cost of about $31.3 million, with attendant operating costs of about $13.1 million per year. These costs do not include the cost of the proposed pilot vacuum street sweeping program, since the scope of work for such a program has not yet been defined. The cost attendant to the proposed additional monitoring efforts are identified below.

Map 28

RESIDUAL PARTICULATE MATTER PROBLEM AREAS AFTER THE IMPLEMENTATION OF COMMITTED ACTIONS: 1982



Sulfur Dioxide Pollution Control Plan

Sulfur dioxide is a nonflammable, nonexplosive, colorless gas with a pungent, irritating odor. Sulfur dioxide in the atmosphere comes primarily from the burning of coal having sulfur or sulfur-bearing components.

Excessive concentrations of sulfur dioxide in the ambient air represent a threat to human health. Inhaling sulfur dioxide can cause a constriction in human bronchial tubes. Sulfur dioxide can also accentuate symptoms in persons with chronic respiratory diseases and has been associated with increased morbidity of elderly persons having heart diseases. Animals, vegetation, and materials have been found to tolerate higher sulfur dioxide concentrations than humans.

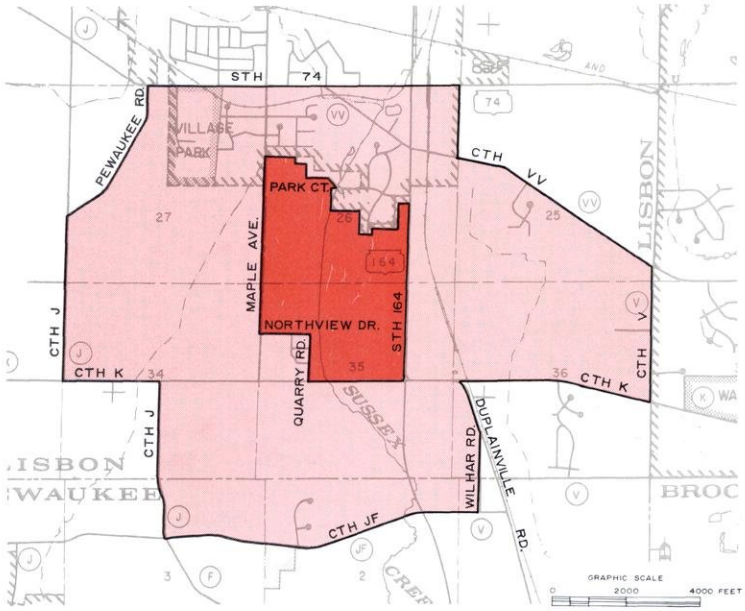
Primary long-term and short-term ambient air quality standards have been set for sulfur dioxide. The primary annual average standard is 80 micrograms per cubic meter ($\mu g/m^3$) and the primary 24-hour average standard is 365 $\mu g/m^3$. Average annual and 24-hour average secondary standards were deemed unnecessary because of the greater tolerance of animals, vegetation, and materials to sulfur dioxide concentrations. In order to prevent short-term exposure to sulfur dioxide, however, a three-hour secondary standard was established at 1,300 $\mu g/m^3$.

Existing Monitored Sulfur Dioxide Levels

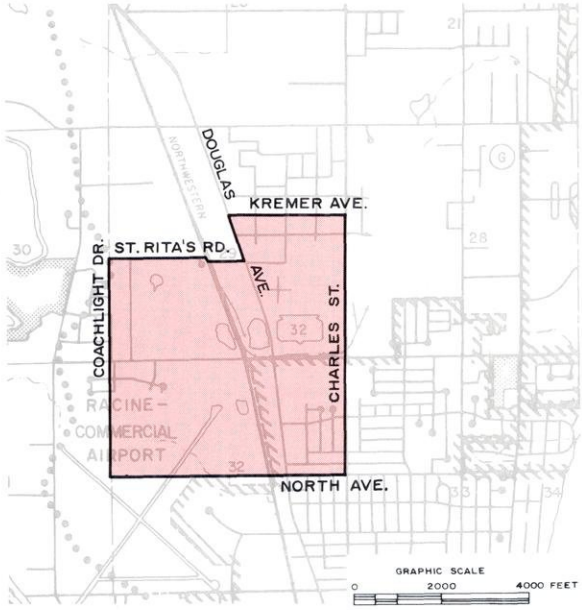
In 1976 no violations of the annual, 24-hour, or three-hour average sulfur dioxide standards were recorded at the network of monitoring stations

Map 28 (continued)

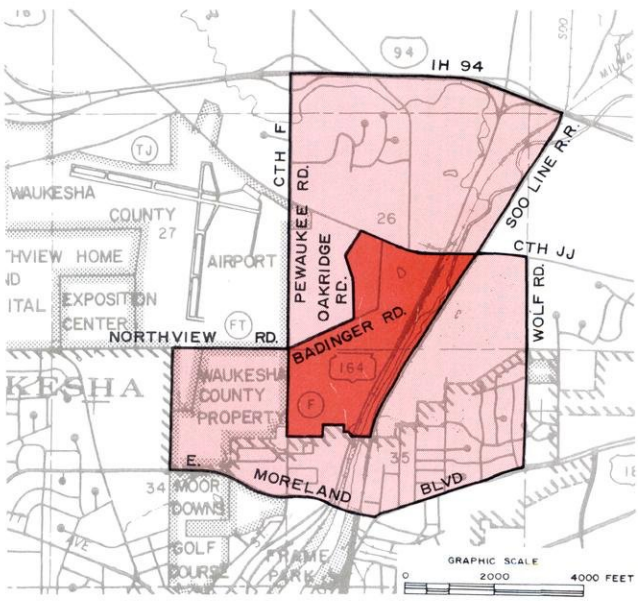
RESIDUAL PROBLEM AREA IN SUSSEX: 1982



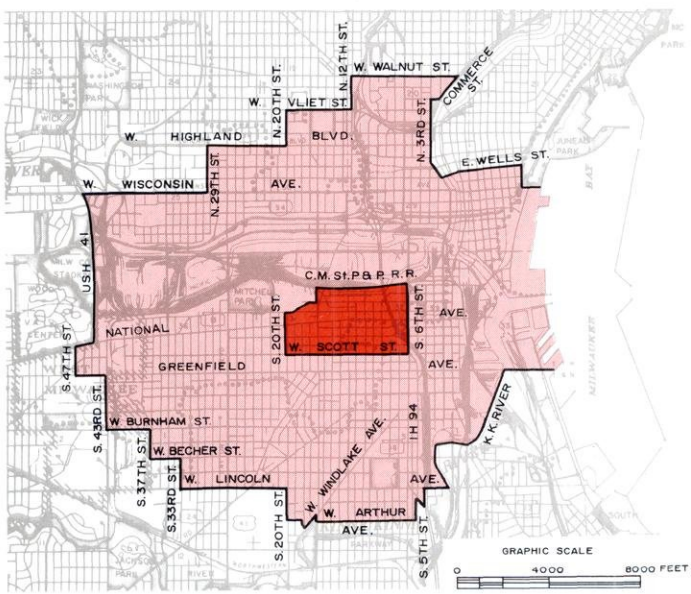
RESIDUAL PROBLEM AREA IN RACINE: 1982



RESIDUAL PROBLEM AREA IN WAUKESHA: 1982



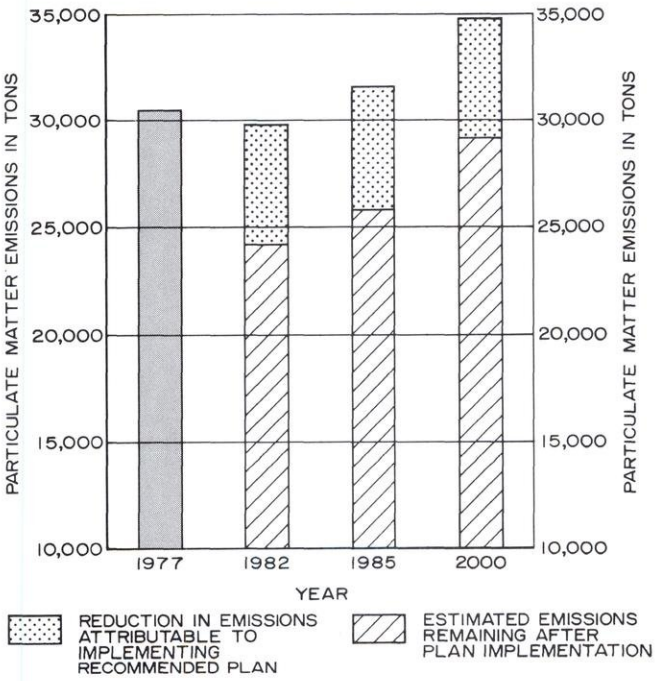
RESIDUAL PROBLEM AREA IN MILWAUKEE: 1982



in Milwaukee and Racine Counties. In 1977 and 1978, however, violations of the 24-hour average sulfur dioxide standard were recorded at two monitoring stations in Milwaukee County. Based upon these violations, the Wisconsin Department of Natural Resources recommended that the U. S. Environmental Protection Agency designate a 7.4-square-mile area in east-central Milwaukee County as a nonattainment area for sulfur dioxide (see Map 29). For the purpose of the regional air quality study, this designation was accepted as a committed action. This area was designated as a nonattainment area for sulfur dioxide by the U. S. Environmental Protection Agency on November 10, 1980. About 62,500 persons reside in this sulfur dioxide nonattainment area.

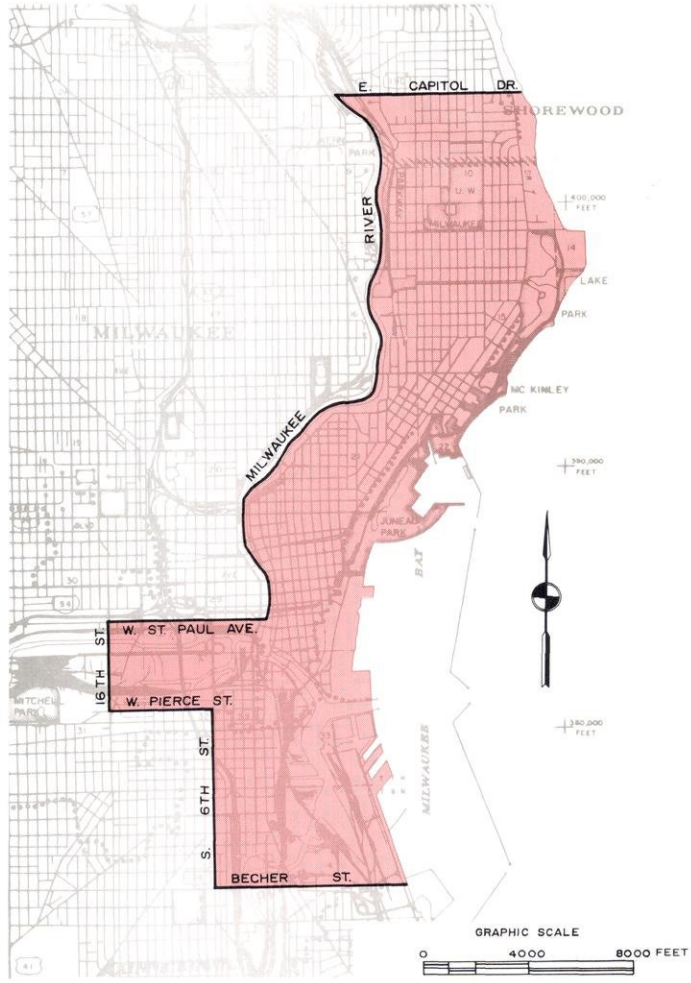
Figure 41

EXISTING AND FORECAST PARTICULATE MATTER EMISSIONS WITHOUT ADDITIONAL CONTROLS AND UNDER THE RECOMMENDED PLAN



Map 29

SULFUR DIOXIDE NONATTAINMENT AREA IN MILWAUKEE



Sources of Sulfur Dioxide

About 249,900 tons of sulfur dioxide were released into the atmosphere of the Region by identified sources in 1976. About 236,700 tons, or 95 percent, were attributable to point sources located primarily in Milwaukee County (see Figure 42 and Table 18). These point sources are primary fuel-burning installations, such as electric power generation plants, having a heat input capacity of 100 million British Thermal Units (BTU's) or more per hour. Area sources accounted for about 11,400 tons of sulfur dioxide, or less than 5 percent of the total. Sulfur dioxide emissions from area sources are primarily generated by the combustion of fossil fuel in residential, small industrial, and commercial-institutional boilers and furnaces. Line sources contribute only about 1,800 tons of the total sulfur dioxide emissions, or less than 1 percent of the total.

Simulation of Existing Air Quality—Sulfur Dioxide

The sulfur dioxide emissions in the Region, as obtained from the foregoing inventory, were assessed for their impact on ambient air quality in the Region using the Wisconsin Atmospheric Diffusion Model (WIS*ATMDIF) under prevailing meteorological conditions for the base year 1976. The three averaging periods—annual, 24-hour, and three-hour—corresponding to the sulfur dioxide ambient air quality standards were considered in this modeling effort. The results of the simulation modeling effort for the annual average period are shown on Map 30. As may be seen on this map, the maximum sulfur dioxide concentration isopleth has a value of 50 $\mu g/m^3$, expressed as an annual arithmetic average, and is centered in and around the central business district of the City of Milwaukee. This 50 $\mu g/m^3$ isopleth value is about 63 percent of the primary annual average standard

Table 18

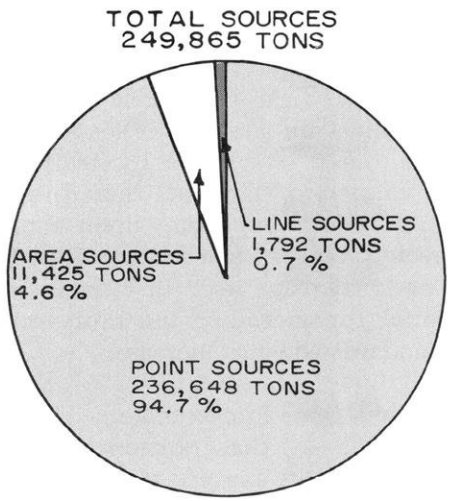
SUMMARY OF SULFUR DIOXIDE EMISSIONS IN THE REGION BY COUNTY AND BY MAJOR SOURCE CATEGORY: 1976

County	Point Sources			Line Sources			Area Sources			Total	
	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Region
Kenosha	392	0.17	26.2	180	10.0	12.0	925	8.1	61.8	1,497	0.6
Milwaukee . . .	184,788	78.09	96.8	768	42.9	0.4	5,444	47.6	2.9	191,000	76.4
Ozaukee	51,136	21.60	98.8	112	6.3	0.2	502	4.4	0.9	51,750	20.7
Racine	208	0.09	11.6	180	10.0	10.0	1,400	12.3	78.3	1,788	0.7
Walworth. . . .	32	0.01	4.7	124	6.9	18.3	522	4.6	77.0	678	0.3
Washington . .	8	--[a]	0.9	120	6.7	13.3	775	6.8	85.8	903	0.4
Waukesha . . .	84	0.04	3.7	308	17.2	13.7	1,857	16.2	82.6	2,249	0.9
Region	236,648	100.00	94.7	1,792	100.0	0.7	11,425	100.0	4.6	249,865	100.0

[a] *Less than 0.01 percent.*

Figure 42

SUMMARY OF SULFUR DIOXIDE EMISSIONS IN THE REGION BY MAJOR SOURCE CATEGORY: 1976



of 80 $\mu g/m^3$. Simulation modeling results for the 24-hour average and three-hour average sulfur dioxide concentrations in the Region also indicated that the ambient air quality standards for these averaging periods—365 $\mu g/m^3$ and 1,300 $\mu g/m^3$, respectively—were not exceeded in the Region during 1976. Although the modeling effort for 1976 is supported by the available sulfur dioxide monitoring data for that year, violations of the 24-hour average sulfur dioxide standard have occurred at two stations in Milwaukee County during 1977 and 1978. It should be noted that the monitoring data indicating a violation of the short-term sulfur dioxide standards have been questioned by certain groups, including the Wisconsin Electric Power Company. The objections relate to the accuracy of the monitoring effort. Nevertheless, based upon this monitoring data, a need to prepare an attainment plan for sulfur dioxide was recognized.

Simulation of Forecast Air Quality—Sulfur Dioxide

Forecasts of sulfur dioxide emissions in the Region were prepared for 1982, 1985, and 2000. These forecasts were necessary to evaluate the probable impact of future growth and development in the Region on sulfur dioxide levels. The results of these forecasts are summarized by county in Table 19, while the relative contributions of point, area, and line sources to the total sulfur dioxide burden in the forecast years are shown in Figure 43.

As may be seen in Table 19, total sulfur dioxide emissions in the Region may be expected to decrease by about 22,300 tons, or about 9 percent—from about 249,900 tons in 1976 to about 227,600 tons in the year 2000. This anticipated decrease is attributable to emissions from point sources, which may be expected to decline by about 30,800 tons, or 13 percent—from about 236,600 tons in 1976 to about 205,800 tons in the year 2000—as a result of the expected retirement

Table 19

SUMMARY OF EXISTING AND FORECAST SULFUR DIOXIDE EMISSIONS IN THE REGION BY COUNTY: 1976, 1982, 1985, AND 2000

County	Existing 1976 Emissions (tons)	Forecast 1982 Emissions (tons)			Forecast 1985 Emissions (tons)			Forecast 2000 Emissions (tons)		
		Emissions	Difference 1976-1982		Emissions	Difference 1976-1985		Emissions	Difference 1976-2000	
			Absolute	Percent Change		Absolute	Percent Change		Absolute	Percent Change
Kenosha	1,497	12,389	10,892	727.6	12,656	11,159	745.4	23,003	21,506	1,436.6
Milwaukee . . .	191,000	173,506	- 17,494	- 9.2	178,437	- 12,563	- 6.6	186,501	- 4,499	- 2.4
Ozaukee	51,750	38,762	- 12,988	- 25.1	38,840	- 12,910	- 24.9	4,030	- 47,720	- 92.2
Racine	1,788	2,330	542	30.3	3,431	1,643	91.9	5,209	3,421	191.3
Walworth. . . .	678	1,046	368	54.3	1,280	602	88.8	1,752	1,074	158.4
Washington . .	903	2,056	1,153	127.7	2,219	1,316	145.7	2,885	1,982	219.5
Waukesha . . .	2,249	2,696	447	19.9	3,015	766	34.1	4,245	1,996	88.8
Region	249,865	232,785	- 17,080	- 6.8	239,878	- 9,987	- 3.9	227,625	- 22,240	- 8.9

of older electric power generation plants. This decrease will be offset somewhat by an increase in sulfur dioxide emissions from area and line sources. Sulfur dioxide emissions from area sources are forecast to increase by about 7,800 tons, or 68 percent—from about 11,400 tons in 1976 to about 19,200 tons in the year 2000—principally as a result of increases in fuel use for residential, commercial-institutional, and small industrial purposes. Sulfur dioxide emissions from line sources are forecast to increase by about 800 tons, or 44 percent—from about 1,800 tons in 1976 to about 2,600 tons in the year 2000—as a result of increased travel in the Region.

The WIS*ATMDIF model was used to simulate the impacts of future sulfur dioxide emissions on ambient air quality. Average meteorological conditions observed in the Region over the five-year period 1964 through 1968 were used. The results of this simulation modeling effort for the annual average period are shown on Map 31 for the year 2000. This map indicates that the annual average sulfur dioxide ambient air quality standard of 80 $\mu g/m^3$ will be exceeded over an approximately 9.6-square-mile area of Milwaukee County by the year 2000. The simulation modeling effort for the year 1985 indicated that the annual average sulfur dioxide standard would not be exceeded by that year. Thus, in the absence of further abatement efforts, sulfur dioxide levels may be anticipated to exceed the annual average standard in parts of Milwaukee County after 1985 but prior to the year 2000.

The underlying reason for the expected increase in ambient air sulfur dioxide concentrations by the year 2000 is that, although regional point source emissions were forecast to decrease over the planning period, the near-ground-level emissions from line sources and, particularly, from area sources are forecast to increase. Line and area source emissions have a greater impact on ambient air quality since they are released near the surface. Point source emissions, which are generally released from substantially elevated stacks, must travel through a greater volume of air and, therefore, become more dilute before impacting upon the surface. It is expected that as the annual average sulfur dioxide levels increase over the planning period, the potential for exceeding the short-term sulfur dioxide standards will also increase.

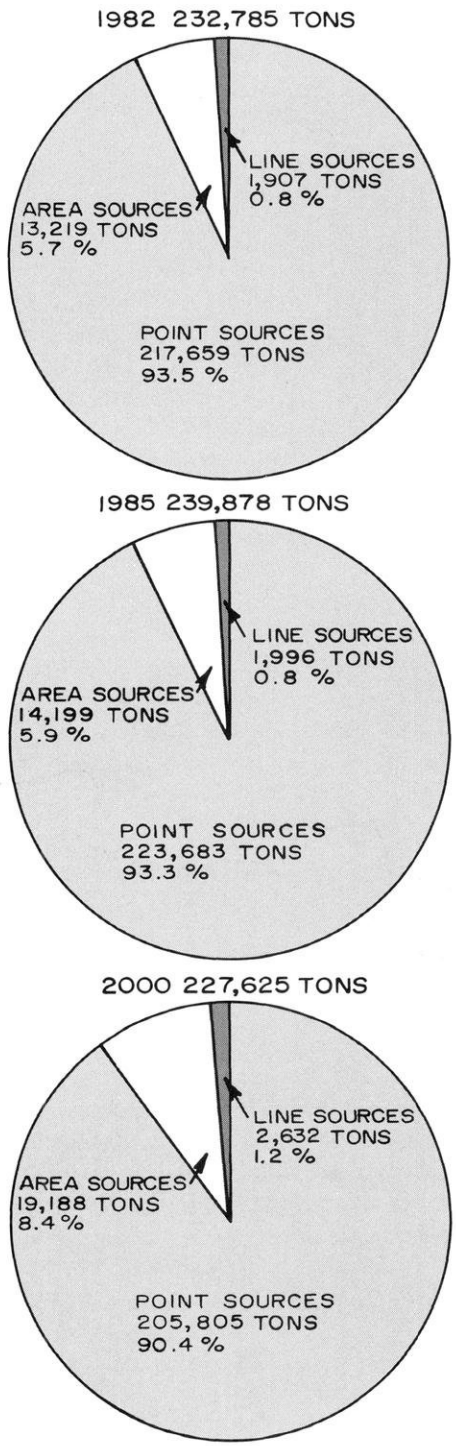
It is estimated that approximately 130,300 persons will reside in that portion of Milwaukee County forecast to exceed the annual average sulfur dioxide ambient air quality standard of 80 $\mu g/m^3$ in the year 2000. It has been concluded, therefore, that an attainment plan and a maintenance plan are required to ensure safe levels of sulfur dioxide in the Region.

Recommended Sulfur Dioxide Pollution Control Plan

The recommended sulfur dioxide pollution control plan consists of both committed actions—that is, actions presently mandated by either the U. S. Environmental Protection Agency or the Wisconsin Department of Natural Resources—and

Figure 43

RELATIVE CONTRIBUTION OF POINT, LINE, AND AREA SOURCES TO THE TOTAL FORECAST SULFUR DIOXIDE EMISSIONS IN THE REGION 1982, 1985, AND 2000



additional measures recommended to supplement the committed actions. The committed actions include the designation of the sulfur dioxide nonattainment area in Milwaukee County; the application of emission control limitations to existing sulfur dioxide emission sources; and the application of emission control limitations to new or modified sulfur dioxide emission sources. The additional recommended actions include the eventual replacement, as it becomes necessary, of coal-fired residential and small commercial-institutional space and water heaters with gas, fuel oil, or electric heaters, and the establishment of a regulatory scheme to preferentially allocate natural gas supplies to industrial users in the Region. Implementation of these committed and recommended actions may be expected to provide for the near-term attainment and long-term maintenance of the sulfur dioxide ambient air quality standards. The following is a brief description of each of these committed and recommended actions:

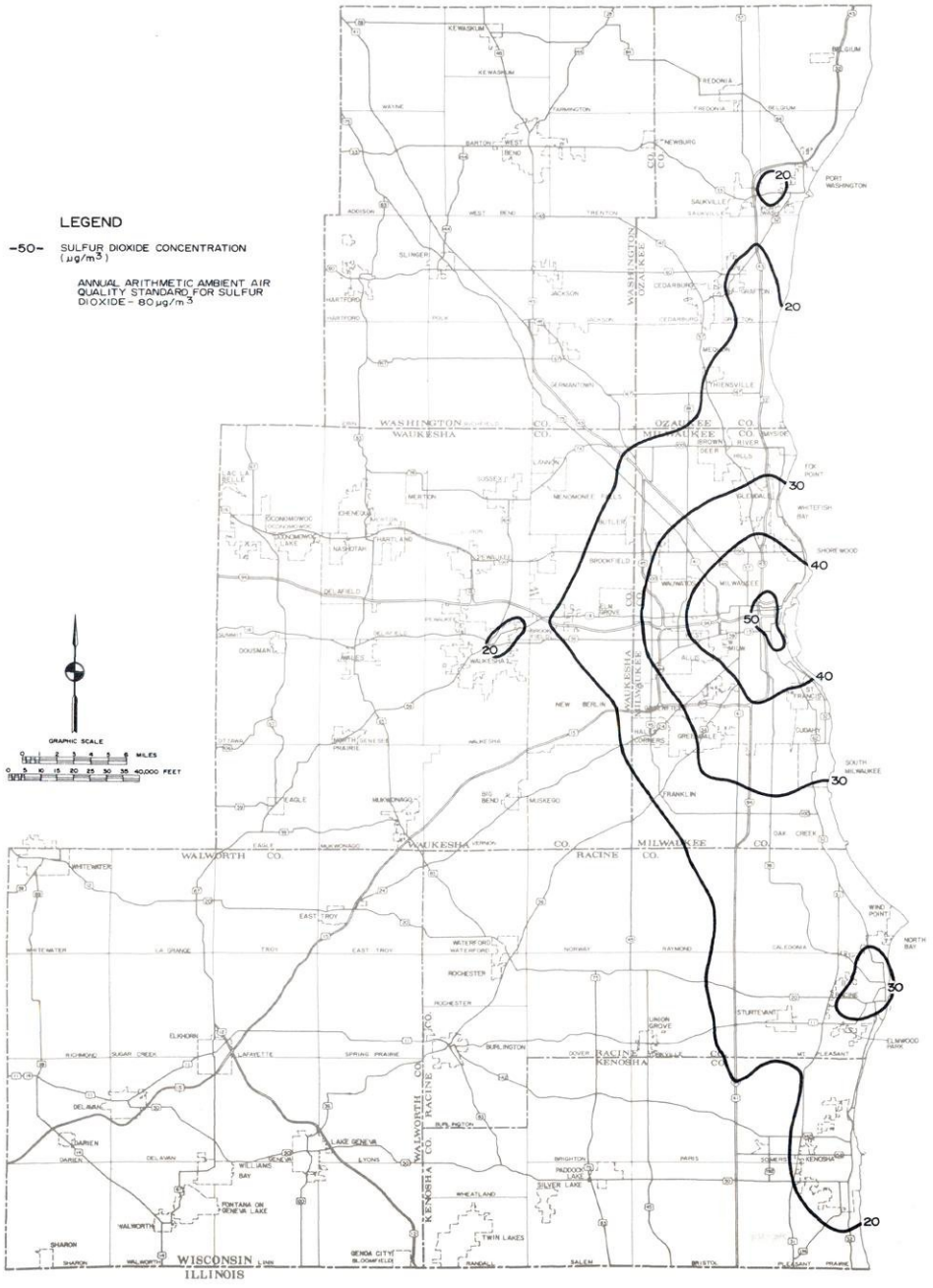
- The plan envisioned that the proposed sulfur dioxide nonattainment area in Milwaukee County would be formally designated as a nonattainment area by the U. S. Environmental Protection Agency. This area was so designated on November 10, 1980. This designation provides the basis for the establishment of "reasonably available control technology" (RACT) emission limitations for existing sources of sulfur dioxide which lie within, or impact upon, this area.

- The plan envisioned that, upon designation of the sulfur dioxide nonattainment area, RACT emission limitations for sulfur dioxide will be developed and applied to any existing sources lying within the nonattainment area, and to any additional existing sources lying outside the nonattainment area which, on a case-by-case basis, are determined to have an impact upon air quality in the nonattainment area. In particular, such RACT limitations would be established for fuel-burning installations with a heat input capacity greater than 250 million BTU's per hour, installations which are not controlled by existing regulations.

- New sources of sulfur dioxide emissions—that is, any industrial process facility or fuel-burning installation constructed after July 1, 1979—which lie within, or significantly

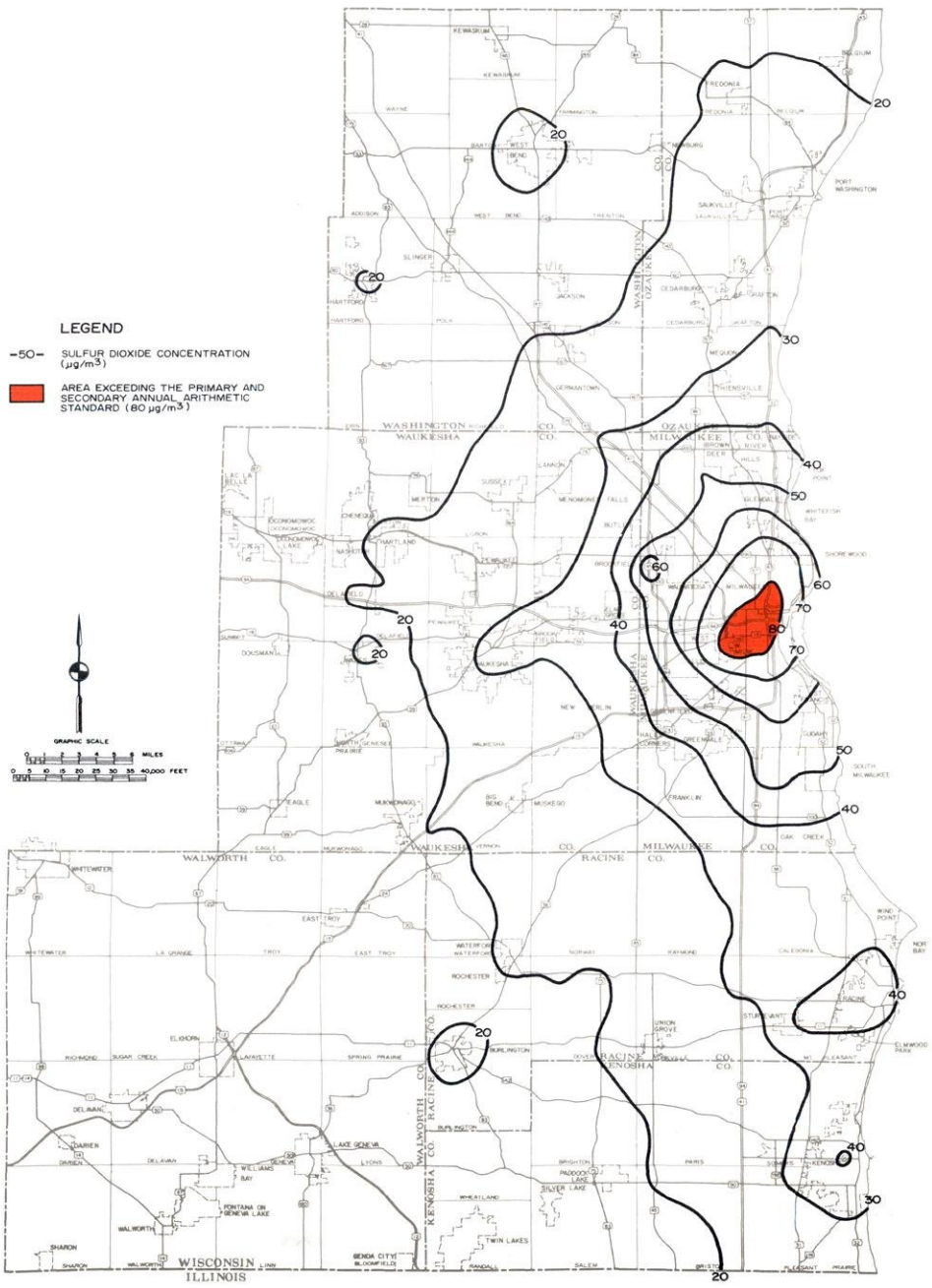
Map 30

COMPUTER-SIMULATED ANNUAL ARITHMETIC AVERAGE SULFUR DIOXIDE CONCENTRATIONS IN THE REGION: 1976



Map 31

COMPUTER-SIMULATED ANNUAL ARITHMETIC AVERAGE SULFUR DIOXIDE CONCENTRATIONS IN THE REGION: 2000



impact upon, the designated sulfur dioxide nonattainment area would be required to meet the "lowest achievable emission rate" (LAER) and achieve a greater than one-for-one emission reduction in or near the nonattainment area. For new sources outside the nonattainment area which do not impact upon the nonattainment area, the plan recommends that, at a minimum, the federally prescribed "new source performance standards" (NSPS) be met by those 28 industrial sources for which standards have been set, and that the emission limitations based upon the federally prescribed "best available control technology" (BACT) be met by all other sources. It should be pointed out that, under committed federal actions, decisions as to whether to allow new sources of sulfur dioxide emissions are subject to overriding considerations inherent in the federal regulations designed to prevent the significant deterioration of air quality in areas where air quality standards are currently met.

- While the above-described committed actions may be expected to yield significant reductions in sulfur dioxide levels, it is possible that, in the event that natural gas supplies are curtailed in the Region or the use of gas becomes economically untenable, an extensive conversion to coal use by major industrial facilities will result in sulfur dioxide levels in excess of the established standards by the year 2000. In such event, the plan recommends that additional actions be taken to reduce sulfur dioxide concentrations in the ambient air in the Region. Analyses have indicated that coal, used as a primary fuel for residential and small commercial-institutional space and water heating purposes, continues to be a significant contributor to sulfur dioxide concentrations in the ambient air in the Region, particularly in Milwaukee County. Residences and small businesses have been voluntarily eliminating the use of coal for such purposes over a long period of time in favor of the use of fuel oil, natural gas, and electricity. The plan proposes that such conversion be completed and that no new such sources be allowed. It is envisioned that the conversion would take place only as existing units wear out and are normally retired.

- Given the energy costs and availability problem facing the nation, it is recognized that there may be increased pressures in future years to convert natural gas industrial fuel-burning installations to coal-burning installations in southeastern Wisconsin. In order to minimize such conversion, and the detrimental effect this would have on ambient air quality in the Region through the addition of new sources of sulfur dioxide emissions, the recommended plan calls for a preferential allocation of natural gas supplies by the Wisconsin Public Service Commission to industrial sources in the Region in the event that supplies are curtailed. Such a preferential allocation would assist in reducing the conversion to coal-burning installations, and thereby contribute toward meeting the established sulfur dioxide ambient air quality standards.

If the foregoing actions are carried out, sulfur dioxide concentrations in the Region should not exceed the established sulfur dioxide standard on an annual average basis. As may be seen on Map 32, with full implementation of the committed and recommended actions, annual average sulfur dioxide concentrations in the Region are not expected to exceed 70 $\mu g/m^3$, which is 10 $\mu g/m^3$ less than the established standard of 80 $\mu g/m^3$. Additional analyses have indicated that the 24-hour average and three-hour average sulfur dioxide ambient air quality standards will not be exceeded in the Region in the year 2000 with full implementation of the committed and recommended actions.

Because the sulfur dioxide plan does not make recommendations concerning specific actions to be taken by individual facilities, it is not possible at this time to estimate the cost of attaining and maintaining the ambient air quality standards for this pollutant species. For example, while the plan envisioned the promulgation of RACT emission limitations on existing sources of sulfur dioxide emissions which lie within or impact upon the nonattainment area, cost estimates of compliance with such limitations cannot be made until the RACT regulations have been developed and their impact upon each source is known. Also, it is assumed that conversion to coal by industrial facilities will result from a future lack of natural gas supplies relative to the forecast demand. There-

fore, such conversions as may occur and the attendant air pollution control costs are assumed to result from the economic considerations of the source owner rather than from a specific action recommended in the sulfur dioxide plan.

Carbon Monoxide Pollution Control Plan

Carbon monoxide is a colorless, odorless, and tasteless gas. It is the most widely distributed and most commonly occurring of the air pollutants, accounting by weight for more total atmospheric pollution than all the other pollutants combined. Carbon monoxide is formed primarily by the incomplete combustion of carbonaceous fuels used for motor vehicles, space heating, and industrial processes. Natural sources of carbon monoxide include volcanoes, lightening-caused forest fires, and the photodissociation of carbon dioxide in the upper atmosphere.

Carbon monoxide is the agent responsible for most of the poisoning deaths that occur in the United States each year. It is readily absorbed into the lungs and reacts with protein in the blood to reduce the oxygen-carrying and -exchange mechanism in the circulatory system. The result, if sufficient concentrations of carbon monoxide are inhaled, is mortality by suffocation.

The air quality standards for carbon monoxide are intended to limit the buildup of this pollutant species in the blood stream. Since this buildup occurs rapidly during early exposures, and since it reaches an equilibrium after about eight hours, a one-hour average and an eight-hour average primary ambient air quality standard have been established. These primary standards, 40 milligrams per cubic meter (mg/m^3) and 10 mg/m^3 for the one-hour average and eight-hour average periods, respectively, are thought to be sufficient to protect the public health with an adequate margin of safety. Carbon monoxide has been shown not to have any detrimental effect on vegetation or materials at levels presently found in the ambient air. The secondary ambient air quality standards for carbon monoxide have, therefore, been established at the same level as the primary standards.

Existing Monitored Carbon Monoxide Levels

In 1977 there were eight monitoring stations measuring carbon monoxide levels in the Region: five in Milwaukee County, two in Racine County, and one in Waukesha County. The highest one-hour average carbon monoxide concentration recorded during 1977 was 25.8 mg/m^3—measured at 606 W. Kilbourn Avenue in the City of Milwaukee. This level is approximately 65 percent of the 40 mg/m^3 ambient air quality standard. All five carbon monoxide monitoring sites in Milwaukee County and the monitoring site in Waukesha County recorded maximum carbon monoxide concentrations in excess of the 10 mg/m^3 eight-hour average ambient air quality standard. The highest eight-hour average carbon monoxide concentration monitored during 1977—17.3 mg/m^3—was recorded at 3716 W. Wisconsin Avenue in the City of Milwaukee. Based upon these monitoring data, supplemented with data from 1976 and 1978, the Wisconsin Department of Natural Resources has designated an approximately 85-square-mile area bounded generally by Silver Spring Drive on the north, STH 100 on the west, Layton Avenue on the south, and Humboldt Boulevard on the east in Milwaukee County as a carbon monoxide nonattainment area (see Map 33). About 693,500 persons are estimated to reside in this nonattainment area.

Sources of Carbon Monoxide

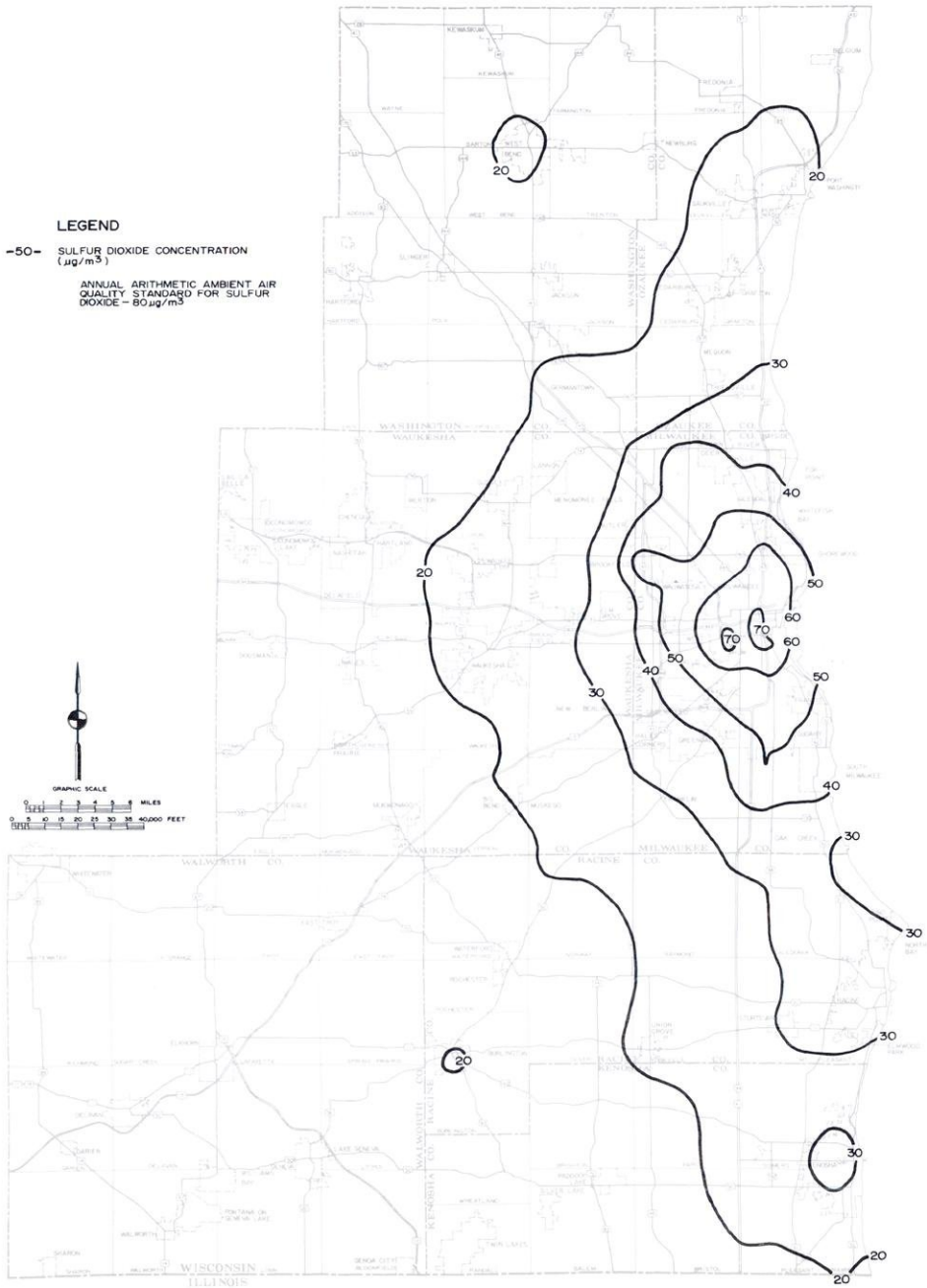
About 598,800 tons of carbon monoxide were released into the atmosphere over the Region from all identified sources in 1977. About 519,800 tons, or nearly 87 percent, were attributable to line sources of emissions—that is, automobiles and trucks (see Figure 44). Area sources accounted for about 70,500 tons, or nearly 12 percent, and point sources accounted for only about 8,600 tons, or slightly more than 1 percent. The estimated distribution of carbon monoxide emissions by county and source category is shown in Table 20.

Simulation of Existing Air Quality—Carbon Monoxide

The carbon monoxide emissions in the Region, as obtained from the foregoing inventory, were assessed for their impact on ambient air quality in the Region using the Wisconsin Atmospheric Diffusion Model (WIS*ATMDIF) under meteorological conditions least favorable to pollutant dispersion. The results of this effort are shown on Map 34 for the one-hour average carbon monoxide concentrations and on Map 35 for the eight-hour carbon monoxide concentrations during 1977. As may be seen on Map 34, the maximum one-hour average carbon monoxide level indicated for the Southeastern Wisconsin Region is 35 mg/m^3—a level approximately 12 percent below the 40 mg/m^3

Map 32

COMPUTER-SIMULATED ANNUAL ARITHMETIC AVERAGE SULFUR DIOXIDE CONCENTRATIONS IN THE REGION UNDER THE ADOPTED PLAN: 2000



Map 33

CARBON MONOXIDE NONATTAINMENT AREA IN MILWAUKEE

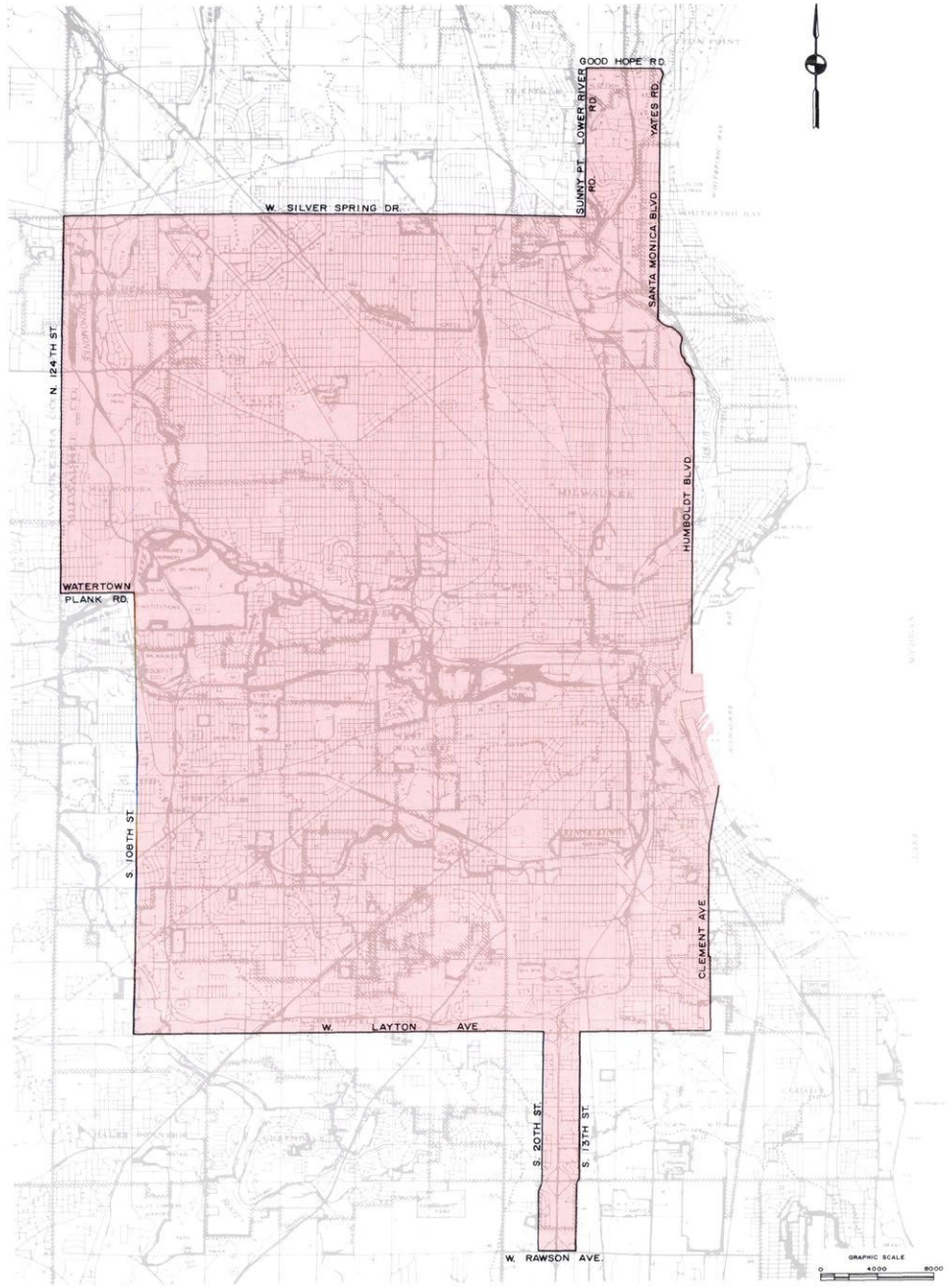


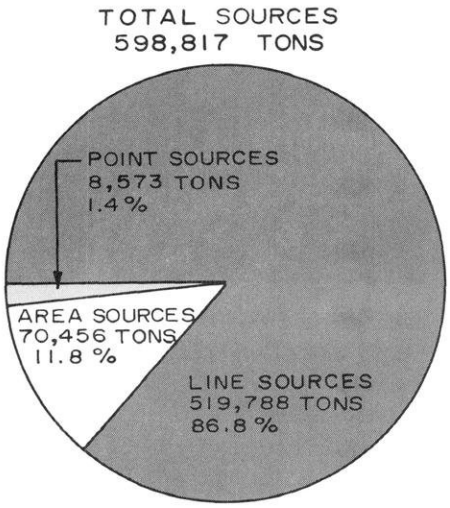
Table 20

SUMMARY OF CARBON MONOXIDE EMISSIONS IN THE REGION BY COUNTY AND BY MAJOR SOURCE CATEGORY: 1977

County	Point Sources			Line Sources			Area Sources			Total	
	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Region
Kenosha	32	0.4	0.08	37,694	7.2	87.1	5,565	7.9	12.9	43,291	7.2
Milwaukee . . .	6,840	79.8	2.30	273,936	52.7	90.3	22,484	31.9	7.4	303,260	50.6
Ozaukee	380	4.4	1.50	20,659	4.0	84.0	3,552	5.1	14.4	24,591	4.1
Racine	33	0.4	0.06	46,639	9.0	85.8	7,670	10.9	14.1	54,342	9.1
Walworth. . . .	506	5.9	1.50	24,947	4.8	74.5	8,053	11.4	24.0	33,506	5.6
Washington . .	292	3.4	0.84	26,584	5.1	76.9	7,695	10.9	22.3	34,571	5.8
Waukesha . . .	490	5.7	0.47	89,329	17.2	84.9	15,437	21.9	14.7	105,256	17.6
Region	8,573	100.0	1.40	519,788	100.0	86.8	70,456	100.0	11.8	598,817	100.0

Figure 44

SUMMARY OF CARBON MONOXIDE EMISSIONS IN THE REGION BY MAJOR SOURCE CATEGORY: 1977



standard—and occurs in the vicinity of the Marquette Interchange in Milwaukee County. This finding is supported by available monitoring data which indicate that the one-hour average carbon monoxide ambient air quality standard was not exceeded during 1977.

As shown on Map 35, however, the eight-hour average carbon monoxide standard of 10 mg/m^3 is shown to be exceeded over an approximately 20.7-square-mile area in Milwaukee County under "worst case" meteorological conditions. It is estimated that approximately 267,800 persons reside in this 20.7-square-mile area. The air quality simulation modeling results thus support the findings of the ambient air quality monitoring data that an attainment plan is required to ensure safe levels of carbon monoxide throughout the Region.

Simulation of Forecast Air Quality—Carbon Monoxide

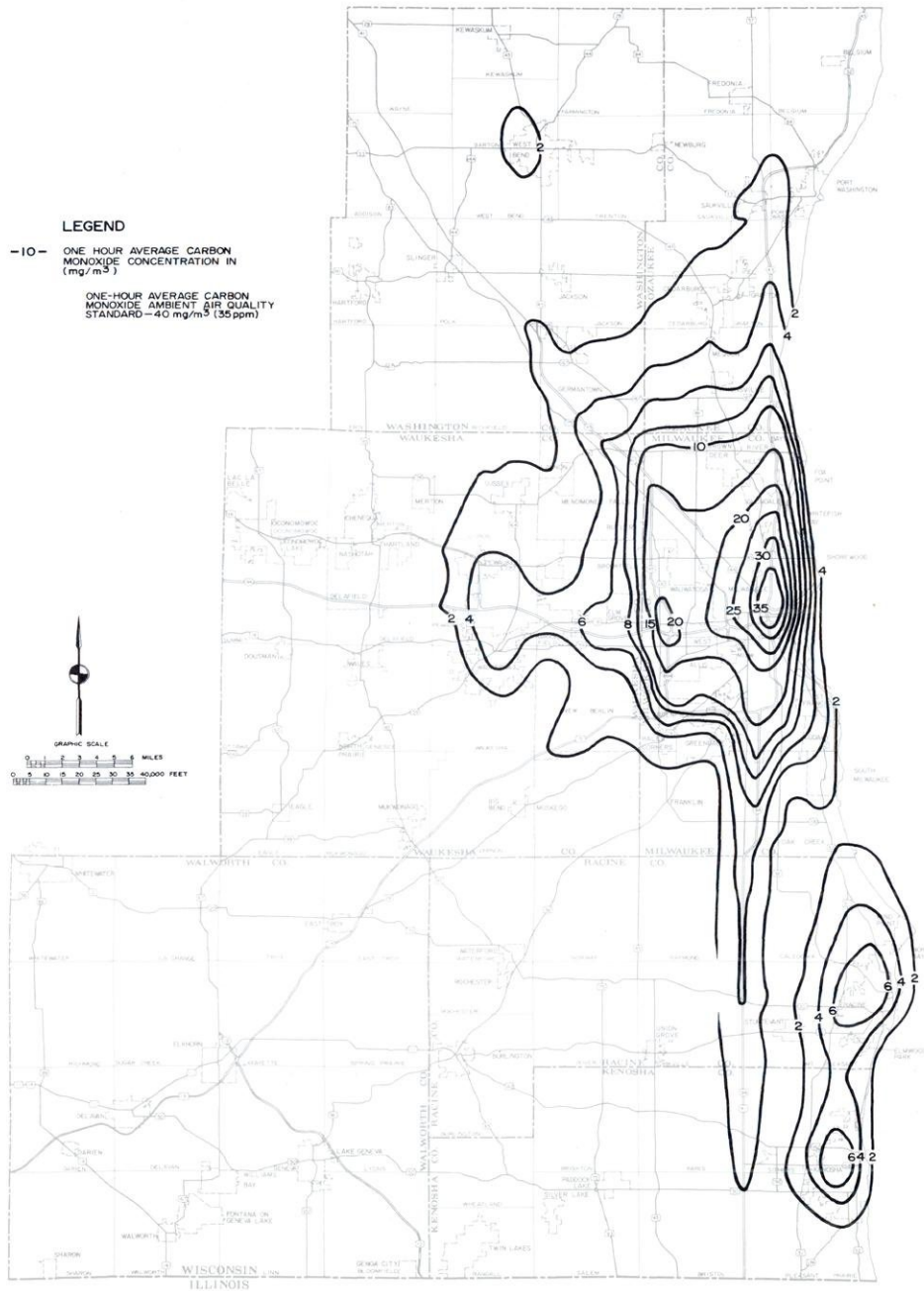
Forecasts of carbon monoxide emissions in the Region were prepared for the years 1982, 1985, and 2000. The results of these forecasts are summarized by county in Table 21, and the relative contributions of point, area, and line sources to the total carbon monoxide emissions burden in the forecast years are shown in Figure 45.

As may be seen in Table 21, total carbon monoxide emissions from all sources in the Region may be expected to decrease by about 327,100 tons, or about 55 percent—from about 598,800 tons in 1977 to about 271,700 tons in the year 2000. This anticipated decrease is attributable to an expected reduction in carbon monoxide emissions from line sources—principally as a result of the federal motor vehicle emissions control program. This decrease is expected to offset somewhat forecast increases in carbon monoxide emissions from point and area sources.

The WIS*ATMDIF model was used to simulate the impacts of carbon monoxide emissions on future ambient air quality. The same "worst case" meteorological conditions used in the base year modeling effort were used in the forecast modeling effort. Since an existing problem has already been identified with respect to the eight-hour average carbon monoxide standard, and since carbon monoxide

Map 34

COMPUTER-SIMULATED ONE-HOUR MAXIMUM CARBON MONOXIDE CONCENTRATIONS IN THE REGION: 1977



Map 35

COMPUTER-SIMULATED EIGHT-HOUR MAXIMUM CARBON MONOXIDE CONCENTRATIONS IN THE REGION: 1977

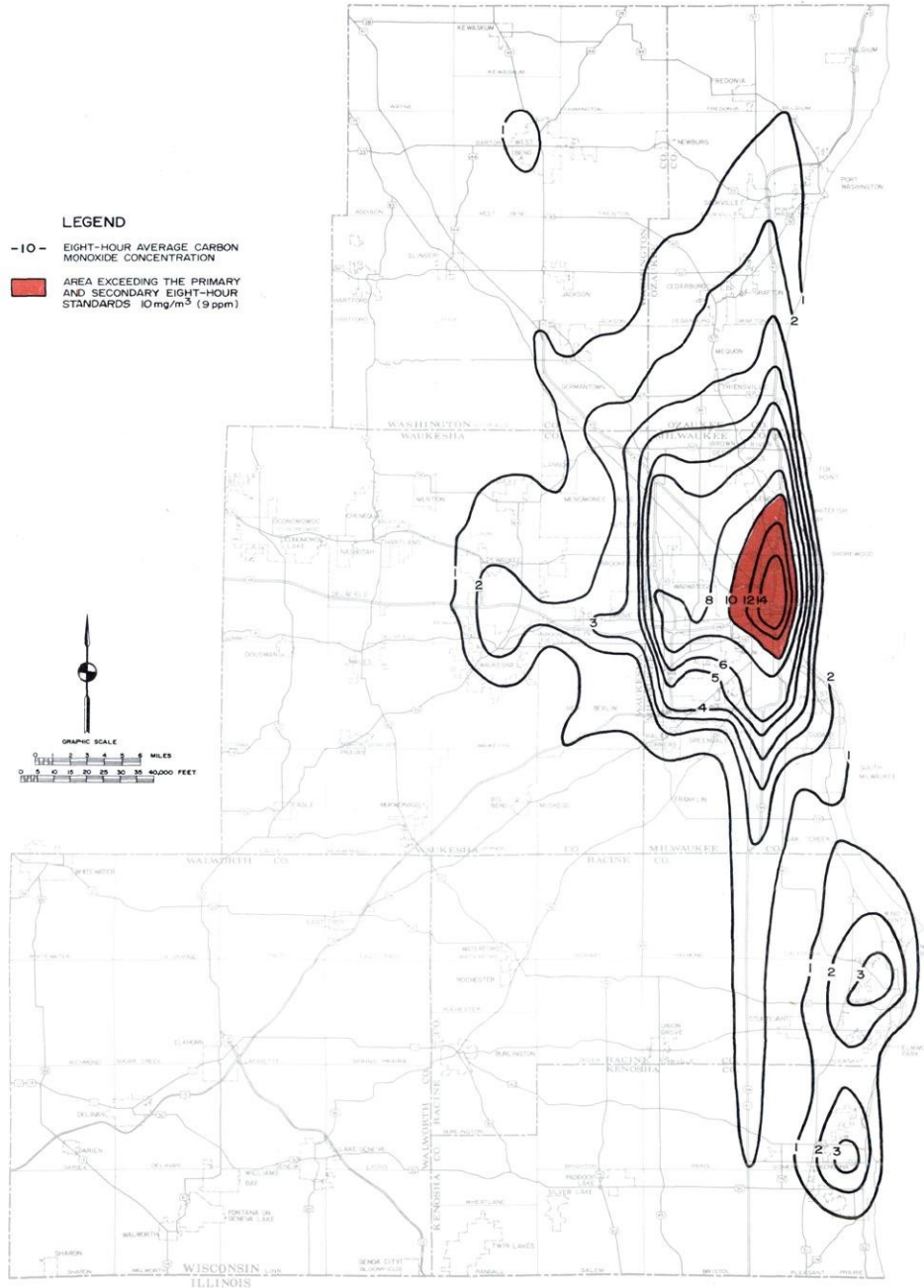


Table 21

SUMMARY OF EXISTING AND FORECAST CARBON MONOXIDE EMISSIONS IN THE REGION BY COUNTY: 1977, 1982, 1985, AND 2000

County	Existing 1977 Emissions (tons)	Forecast 1982 Emissions (tons)			Forecast 1985 Emissions (tons)			Forecast 2000 Emissions (tons)		
		Emissions	Difference 1977-1982		Emissions	Difference 1977-1985		Emissions	Difference 1977-2000	
			Absolute	Percent Change		Absolute	Percent Change		Absolute	Percent Change
Kenosha	43,291	31,398	- 11,893	- 27.5	24,772	- 18,519	- 42.8	21,880	- 21,411	- 49.5
Milwaukee . . .	303,260	214,661	- 88,599	- 29.2	161,247	- 142,013	- 46.8	121,980	- 181,280	- 59.8
Ozaukee	24,591	18,147	- 6,444	- 26.2	14,547	- 10,044	- 40.8	13,934	- 10,657	- 43.3
Racine	54,342	39,425	- 14,917	- 27.5	30,921	- 23,421	- 43.1	25,253	- 29,089	- 53.5
Walworth. . . .	33,506	26,449	- 7,057	- 21.1	22,180	- 11,326	- 33.8	18,601	- 14,905	- 44.5
Washington . .	34,571	26,208	- 8,363	- 24.2	21,422	- 13,149	- 38.0	18,626	- 15,945	- 46.1
Waukesha . . .	105,256	79,510	- 25,746	- 24.5	64,405	- 40,851	- 38.8	51,444	- 53,812	- 51.1
Region	598,817	435,798	- 163,019	- 27.2	339,494	- 259,323	- 43.3	271,718	- 327,099	- 54.6

emissions are forecast to decrease significantly in future years, only the eight-hour averaging period was considered in this modeling effort. Forecast maximum eight-hour average carbon monoxide concentrations in the Region in the year 1982 are shown on Map 36.

As may be seen on Map 36, it is expected that, in the absence of further abatement measures, the eight-hour average carbon monoxide standard of 10 mg/m^3 will be exceeded over a 2.7-square-mile area around the Marquette Interchange in Milwaukee County in the year 1982. The area forecast to exceed the standard in 1982, however, is approximately 18 square miles less than the area indicated to have exceeded the standard in 1977. Additional modeling has indicated that the eight-hour average carbon monoxide standard may be expected to be attained by 1985 in the absence of further abatement measures and to continue to be maintained through the year 2000. It may be concluded, therefore, that although an attainment plan was required to achieve the eight-hour average carbon monoxide ambient air quality standard in the Region, a plan to ensure the long-term maintenance of this standard was not. The primary purpose of the required attainment plan is to accelerate the attainment of the carbon monoxide standard to the year 1982.

Recommended Carbon Monoxide Pollution Control Plan

The recommended plan to accelerate the attainment of the eight-hour average carbon monoxide standard in the Region to the year 1982 is presented below with the recommended hydrocarbon/ozone plan. Such plans are discussed jointly because of the commonality of emission sources and because many control actions—particularly transportation-related control actions—have an influence on both carbon monoxide and hydrocarbon emissions.

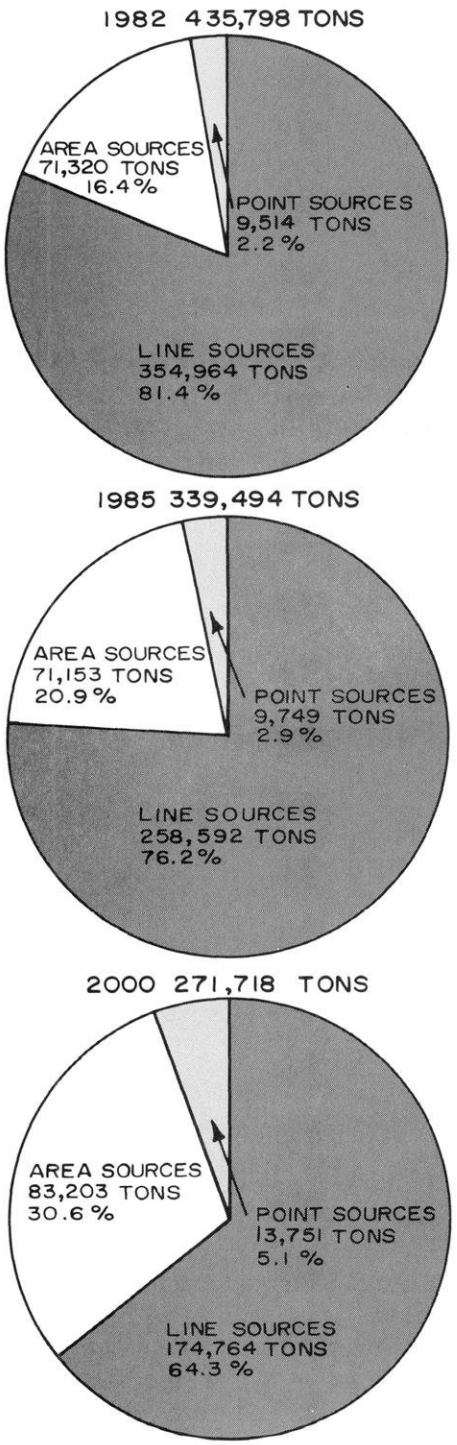
Hydrocarbons and Ozone Pollution Control Plan

Hydrocarbons are compounds whose molecules consist of hydrogen and carbon atoms only. Hydrocarbons of themselves have no direct effect on human health at levels found in the atmosphere. They do, however, enter into and promote the formation of photochemical oxidants, the most important of which is ozone. Hydrocarbons react with oxygen atoms, ozone molecules, and certain additional oxidation products generated by the action of sunlight on other compounds in the atmosphere, particularly nitrogen dioxide. Sunlight alone has no appreciable effect on hydrocarbons in the ambient air. Without such reaction products as ozone, hydrocarbons would not be involved in photochemical air pollution.

Ozone in particular appears to cause substantial damage to the respiratory tract. Being chemically active, ozone may react with the mucus and tissue layers in all compartments of the respiratory tract, causing deterioration of the cellular lining and consequently a restriction of normal pulmonary functions. Ozone is also known to deteriorate materials, particularly rubber and certain textile fibers.

Figure 45

RELATIVE CONTRIBUTION OF POINT, LINE, AND AREA SOURCES TO THE TOTAL FORECAST CARBON MONOXIDE EMISSIONS IN THE REGION: 1982, 1985, AND 2000



In order to protect the public health and welfare from the deleterious effects of ozone, a maximum one-hour average ozone standard has been established at a level of 235 micrograms per cubic meter ($\mu g/m^3$), which is equivalent to 0.12 part per million (ppm). In addition, since ozone is not directly emitted into the atmosphere, but rather is formed in the ambient air from the reaction of sunlight with precursor compounds, a hydrocarbon ambient air quality standard was promulgated as a guideline for achieving the ozone standard. The hydrocarbon standard has been established at 160 $\mu g/m^3$ for a three-hour, 6:00 a.m. to 9:00 a.m., averaging period, since a strong correlation has been observed between early morning hydrocarbon concentrations and maximum ozone concentrations during the afternoon.

Existing Monitored Hydrocarbon and Ozone Levels

To date, there is only a limited amount of ambient air quality monitoring data available on regional hydrocarbon levels. One special monitoring study for hydrocarbons was conducted at the Kenosha Airport between August 4 and September 30, 1976. Of the 58 monitoring days, 43 recorded violations of the three-hour average ambient air quality standard for hydrocarbons. The highest level recorded was 553 $\mu g/m^3$, measured on September 19, 1976—a level approximately 250 percent above the established standard.

During the summer of 1977, there were 10 ambient air quality monitoring sites in the Region recording ozone levels: five in Milwaukee County, two in Racine County, and one each in Kenosha, Ozaukee, and Waukesha Counties. With the exception of one station in Racine County, all of these monitoring sites recorded maximum hourly average ozone concentrations in excess of the ambient air quality standard of 0.12 ppm. The highest maximum hourly average ozone concentration monitored during 1977 was 0.204 ppm, recorded at 2114 E. Kenwood Boulevard in the City of Milwaukee. This level exceeds the established standard by about 70 percent.

On the basis of available monitoring data recorded between 1973 and 1977, the Wisconsin Department of Natural Resources has designated Kenosha, Milwaukee, Ozaukee, Racine, and Waukesha Counties as an ozone nonattainment area. Because ambient air quality monitoring for ozone levels in Walworth and Washington Counties has not been conducted

Table 22

SUMMARY OF HYDROCARBON EMISSIONS IN THE REGION BY COUNTY AND BY MAJOR SOURCE CATEGORY: 1977

County	Point Sources			Line Sources			Area Sources			Total	
	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Source Total	Percent of County Total	Emissions (tons)	Percent of Region
Kenosha	3,857	12.0	34.7	3,527	7.4	31.7	3,738	7.1	33.6	11,122	8.4
Milwaukee . . .	22,200	69.1	30.5	24,922	52.0	34.2	25,680	49.0	35.3	72,802	55.0
Ozaukee	938	2.9	19.1	1,935	4.0	39.4	2,039	3.9	41.5	4,912	3.7
Racine	1,801	5.6	15.9	4,325	9.0	38.2	5,186	9.9	45.8	11,312	8.6
Walworth. . . .	654	2.0	10.9	2,339	4.9	38.9	3,023	5.8	50.2	6,016	4.5
Washington . .	1,054	3.3	15.8	2,520	5.3	37.8	3,085	5.9	46.3	6,659	5.0
Waukesha . . .	1,623	5.1	8.3	8,340	17.4	42.5	9,641	18.4	49.2	19,604	14.8
Region	32,127	100.0	24.3	47,908	100.0	36.2	52,392	100.0	39.5	132,427	100.0

to date, these two counties are unclassified. In total, therefore, approximately 1,675 square miles, or more than 62 percent of the total area of the Region, are included within the designated ozone nonattainment area. Approximately 1,629,000 persons, or about 92 percent of the total regional population, reside within the five counties of this nonattainment area.

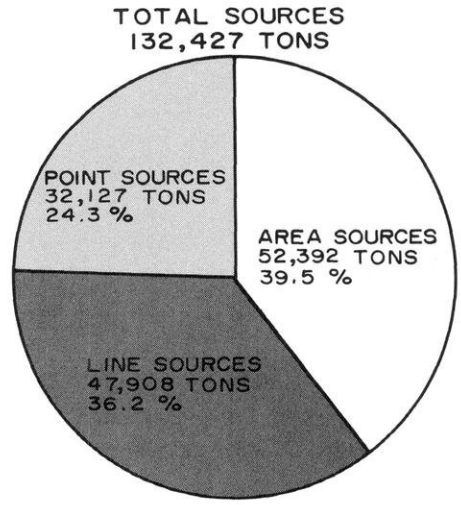
Sources of Hydrocarbons

About 132,400 tons of total hydrocarbon emissions were released into the atmosphere over the Region from all identified sources in 1977. Approximately 52,400 tons, or slightly less than 40 percent, were attributable to area sources of emissions, such as fuel combustion and solvent use (see Figure 46). Line sources accounted for about 47,900 tons, or about 36 percent, and point sources, including surface coating operations and petroleum marketing, accounted for about 32,100 tons, or about 24 percent. The estimated distribution of total hydrocarbon emissions by county and source category is shown in Table 22.

It should be noted that not all hydrocarbon compounds are equally reactive nor contribute uniformly to the formation of ozone in the ambient air. Those hydrocarbon compounds figuring most significantly in the photochemical process are termed volatile organic compounds. It has been estimated that of the 132,400 tons of total hydrocarbon emissions, only about 102,200 tons, or about 77 percent, are volatile organic compounds that contribute to the ozone problem in the Region during the summer months. Major sources of volatile organic compounds include motor vehicles, petroleum product marketing and storage, and surface coating operations.

Figure 46

SUMMARY OF HYDROCARBON EMISSIONS IN THE REGION BY MAJOR SOURCE CATEGORY: 1977



Simulation of Existing Air Quality—Hydrocarbons and Ozone

Because ozone is a photochemically reactive pollutant species which forms in the atmosphere, the nonreactive modeling techniques that have been used to evaluate nonreactive pollutant species are not applicable. The technique recommended by the U. S. Environmental Protection Agency for evaluating ozone levels in the ambient air, and the effectiveness of alternative controls, is the Empirical Kinetics Modeling Approach (EKMA). The results of the EKMA model are stated as a reduction in volatile organic compound emissions

from local sources required to reduce the maximum ozone concentrations to a level below the established standard. The results of this EKMA simulation modeling effort indicated that the 102,200 tons of volatile organic compound emissions in the Region during 1977 would have to be reduced by 62 percent at a minimum, 74 percent at a maximum, to achieve the ambient air quality standard for ozone. The volatile organic compound emission rate in the Region, therefore, should not exceed about 38,800 tons in any year and, ideally, should not exceed about 26,600 tons in any year. The attainment and maintenance of the ambient air quality standard for ozone, therefore, may be evaluated against the achievement of the maximum permissible volatile organic compound emission rate.

In order to depict the area which has the greatest potential for reductions in volatile organic compound emissions, the Wisconsin Atmospheric Diffusion Model (WIS*ATMDIF) was used to simulate the total hydrocarbon emissions inventory in the Region during 1977 in the assumed absence of photochemical reactions. The results of this modeling effort are shown on Map 37. As may be seen on this map, the most intensive hydrocarbon concentrations are located in Milwaukee County, where an area of approximately 90 square miles exceeds the maximum three-hour, or average, hydrocarbon standard of 160 $\mu g/m^3$.

Simulation of Forecast Air Quality—Hydrocarbons and Ozone

The Clean Air Act as amended in 1977 requires that all primary, or health-related, ambient air quality standards be attained by December 31, 1982. However, in certain cases an extension to December 31, 1987, may be granted for the attainment of the ozone standard. To evaluate the attainment and maintenance of the ozone standard in the Region, forecasts of volatile organic compound emissions were prepared for the years 1982, 1987, and 2000. A summary of these emission forecasts is presented in Table 23. It should be noted that only those control regulations, including those under the federal motor vehicle emissions control program, in effect prior to July 1, 1979, were accounted for in these forecasts.

As may be seen in Table 23, volatile organic compound emissions in the Region are forecast to decrease by about 19,800 tons, or 20 percent, from the 1977 emission level by the year 1982. This emission rate is approximately 43,600 tons, or about 112 percent, higher than the maximum allowable emission rate of about 38,800 tons per year. Attainment of the ozone standard is, therefore, not indicated by the year 1982 under the present level of emission controls. As also shown in Table 23, volatile organic compound emissions in the Region may be expected to total about 74,500 tons in 1987 and 82,700 tons in the year 2000. These emission rates are about 35,700 tons and 43,900 tons, or about 92 percent and 113 percent, respectively, over the maximum allowable emission rate of 38,800 tons per year. It has therefore been concluded that an attainment plan and a maintenance plan will be required to ensure safe levels of ozone throughout the Region over the planning period.

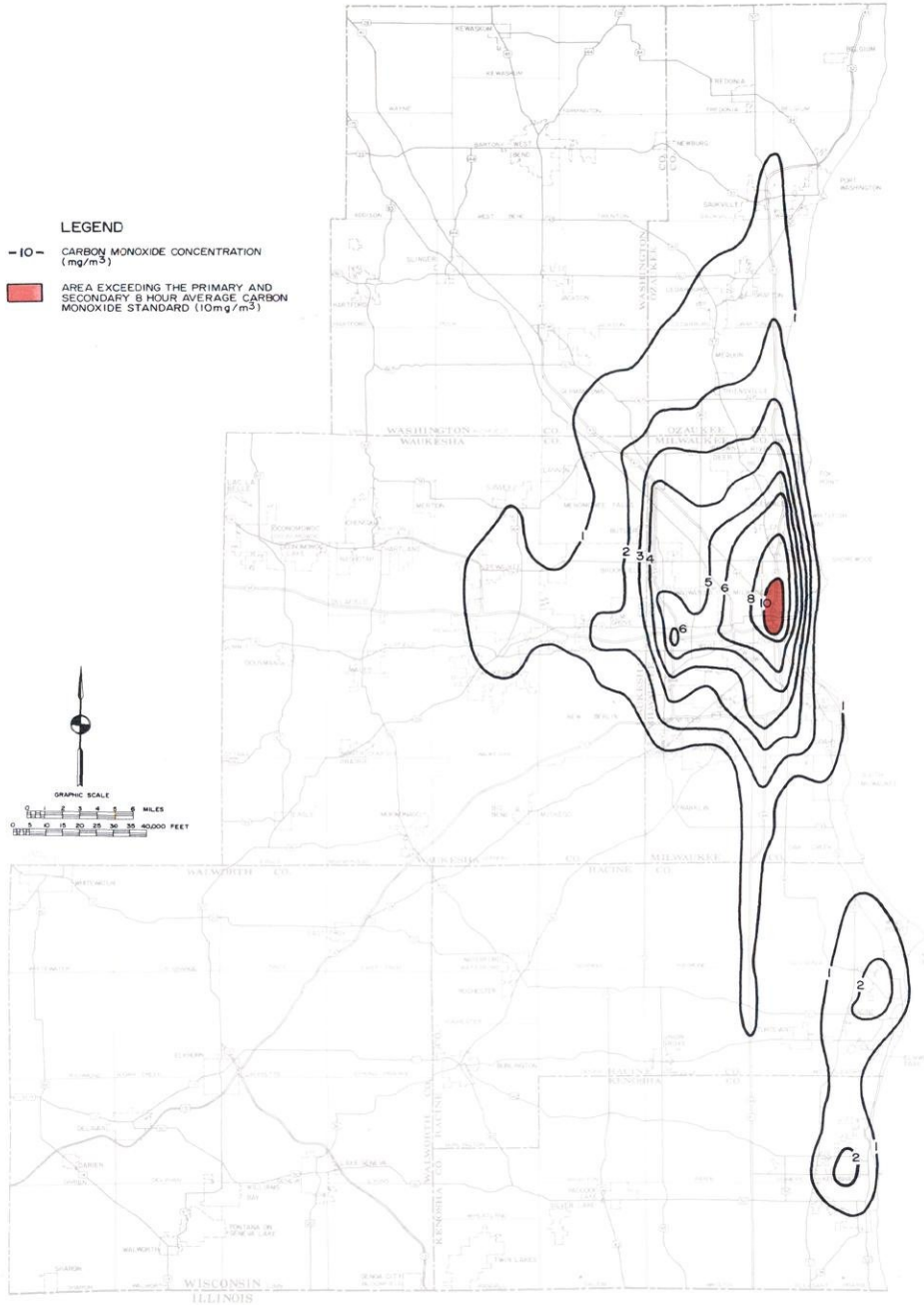
Recommended Carbon Monoxide and Hydrocarbon/Ozone Pollution Control Plan

As noted earlier, the recommended plan for carbon monoxide is treated jointly with the hydrocarbon/ozone plan because of the commonality of emission sources and the corresponding influence that many control actions—particularly transportation-related control actions—have on carbon monoxide and hydrocarbon emissions. The recommended carbon monoxide pollution control plan is based essentially on actions related to transportation pollutants, since nearly 87 percent of all carbon monoxide emissions are due to line sources. The recommended hydrocarbon/ozone plan calls for controlling volatile organic compound emissions from both stationary and mobile sources. Both the carbon monoxide and hydrocarbon/ozone plans consist of committed actions—that is, actions presently mandated by either the U. S. Environmental Protection Agency or the Wisconsin Department of Natural Resources—and additional measures recommended to supplement the committed actions.

For carbon monoxide emissions from industrial sources, the committed actions include only the continued enforcement of existing state regulations. For hydrocarbon emissions, or, more specifically, volatile organic compound emissions, from industrial sources, the committed actions include the application of "reasonably available control technology" (RACT) on certain major industrial sources and processes. The committed actions for both carbon monoxide and volatile organic compounds also include the continued implementation of the federal motor vehicle emissions control program. To supplement these committed actions, the recommended carbon monoxide and hydrocarbon/ozone plan recommends continued efforts toward

Map 36

COMPUTER-SIMULATED MAXIMUM EIGHT-HOUR AVERAGE CARBON MONOXIDE CONCENTRATIONS FROM LINE AND AREA SOURCES IN THE REGION: 1982



Map 37

MAXIMUM THREE-HOUR (6:00 A.M. TO 9:00 A.M.) AVERAGE HYDROCARBON CONCENTRATIONS IN THE REGION: 1977

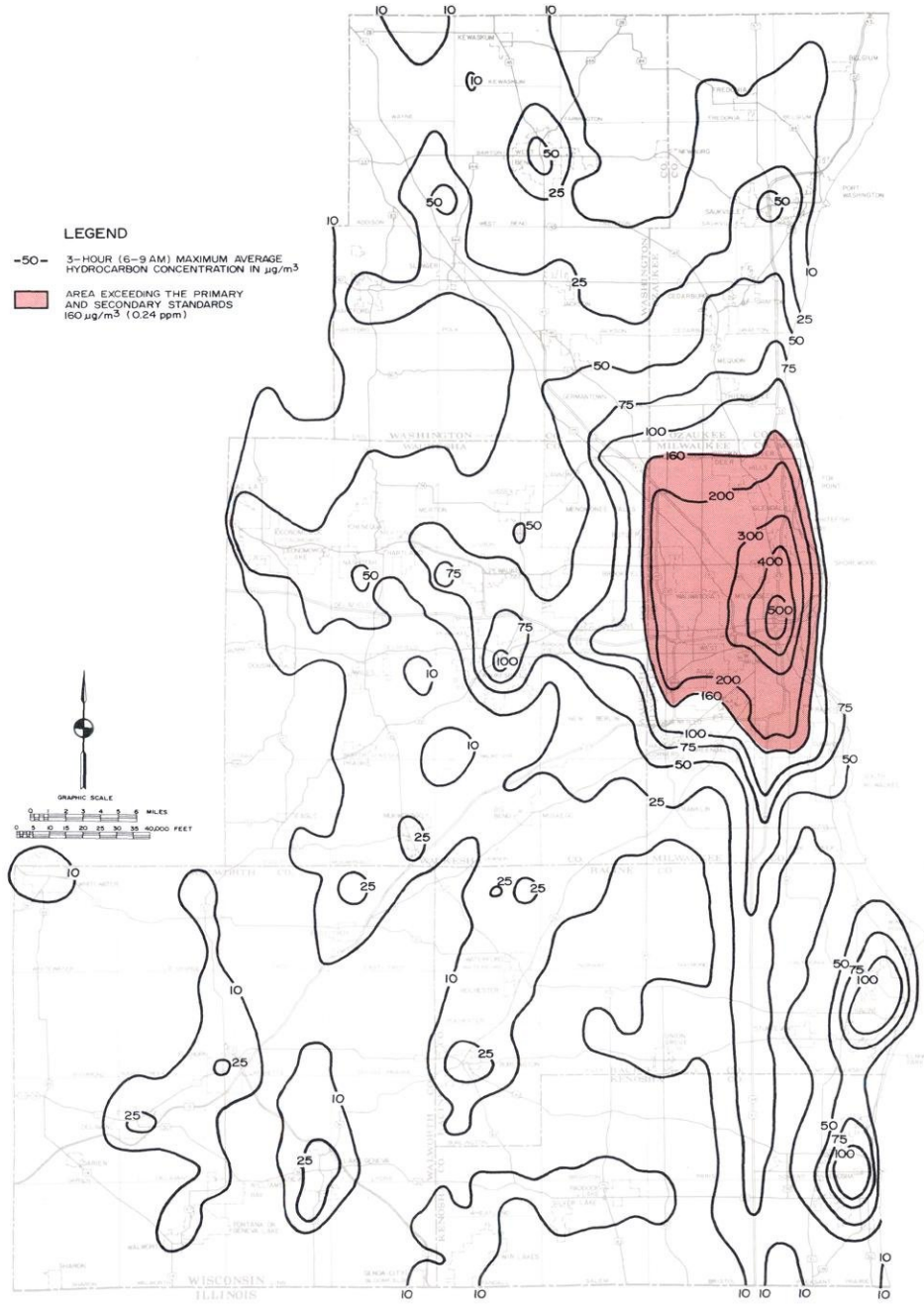


Table 23

SUMMARY OF EXISTING AND FORECAST VOLATILE ORGANIC COMPOUND EMISSIONS IN THE REGION BY COUNTY: 1977, 1982, 1987, AND 2000

Source Category	Existing 1977 Emissions (tons)	Forecast Emissions (tons)		
		1982	1987	2000
Stationary	53,499	51,615	52,711	56,656
Mobile.	42,665	24,436	15,275	16,481
Miscellaneous . . .	5,999	6,301	6,491	9,612
Total	102,163	82,352	74,477	82,749

implementation of the regional transportation plan, most importantly including the recommended transportation systems management actions; establishment of an inspection and maintenance program for automobiles and light-duty trucks; and a prohibition on the use of cutback asphalt as a paving material in the Region. The following is a brief description of each of these committed and recommended actions:

- For existing sources of volatile organic compound emissions, RACT limitations have been developed by the Wisconsin Department of Natural Resources. The plan envisions that these RACT limitations will be applied uniformly to sources of volatile organic compound emissions within the seven-county Southeastern Wisconsin Region. These existing RACT rules pertain to volatile organic compound emissions from 34 groups of stationary sources, and include controls on such sources as petroleum marketing and storage, surface coating operations, solvent metal cleaning, and miscellaneous solvent use.

- New sources of volatile organic compound emissions—that is, sources constructed after July 1, 1979—should achieve the federally prescribed "lowest achievable emission rate" (LAER), and should achieve a greater than one-for-one emission reduction from other volatile organic compound emission sources in the Region.

- The plan recognizes as a fully committed action continued enforcement of the federal motor vehicle emissions control program. This program applies to all newly manufactured automobiles and light-duty trucks marketed within the United States.

- The plan recognizes that one of the most important actions that can be taken to achieve and maintain the carbon monoxide and hydrocarbon/ozone ambient air quality standards is the implementation of the adopted regional transportation system plan, particularly including those elements of the plan dealing with transportation systems management. Such transportation systems management actions consist of measures that are designed to both improve traffic flow and reduce vehicle miles of travel. The regional transportation system plan includes a set of coordinated, mutually reinforcing, transportation systems management actions which have been identified as having the greatest potential for reducing carbon monoxide and volatile organic compound emissions from motor vehicles. Of particular importance are the following measures as identified in the transportation plan: implementation of a freeway traffic management system; conduct of an extensive and ongoing carpool/vanpool formation promotional campaign; development of additional park-ride and park-and-pool lots; and, most importantly, extensive short-term and long-term improvements in public transit service.

- In order to ensure that the emission control equipment now being required on automobiles and light-duty trucks under the federally mandated pollution control program is properly maintained, the plan recommends that a vehicle inspection and maintenance program be established. Under this program, all automobiles and light-duty trucks registered in the seven-county Southeastern Wisconsin Region that are 15 years old or less at the time of inspection would be tested annually to ensure that the vehicle emission rate does not significantly exceed federally mandated exhaust emission standards. Vehicles failing the test would be required to undergo repairs in order that they be brought into compliance with these established emission standards.

- While the analyses indicated that the aforementioned actions would likely result in the achievement of the ozone air quality standard by the year 1987, the continued main-

tenance of the standard is not expected because of anticipated regional growth and development. Accordingly, the recommended plan calls for a prohibition on the use of cutback asphalt as a paving material in southeastern Wisconsin. Cutback asphalt can be replaced by a bituminous plant mix or asphalt emulsions. It is envisioned that this prohibition not only will further ensure attainment of the ozone ambient air quality standard by 1987, but will also provide for the maintenance of the standard through the year 2000.

If the aforementioned actions are carried out, it is anticipated that volatile organic compound emissions will be reduced, as shown in Figure 47, for the years 1982, 1987, and 2000. As indicated in this figure, an estimated 34,300 tons of volatile organic compounds will be emitted in the Region in 1987 from all sources—approximately 4,500 tons below the maximum allowable emission rate of 38,800 tons per year. As also indicated in this figure, although regional growth and development provide for a slight increase in volatile organic compound emissions between 1987 and the year 2000, the estimated 37,400 tons of volatile organic compound emissions in the Region in the year 2000 is about 1,400 tons less than the maximum allowable emission rate of 38,800 tons per year. Thus, both the attainment and maintenance of the ozone standard in the Region may be expected with full implementation of the committed and recommended actions.

With full implementation of the committed and recommended actions, it is anticipated that carbon monoxide emissions will be reduced, as shown in Figure 48, for the years 1982, 1987, and 2000. As may be seen in this figure, by 1982 carbon monoxide emissions are forecast to decrease by about 166,800 tons, or about 28 percent—from about 598,800 tons in 1977 to 432,000 tons in 1982. This reduction in carbon monoxide emissions over the five-year period 1977-1982 is expected to result from the implementation of the federal motor vehicle emissions control program and the implementation of the adopted regional transportation system plan, with its attendant transportation systems management actions. It is envisioned that the transportation systems management actions will be most effective in those areas of the Region presently exhibiting excessive carbon monoxide levels due to high traffic volumes. Thus, although the reductions in carbon monoxide emissions attribut-

Figure 47

IMPACT OF THE RECOMMENDED PLAN ON FORECAST VOLATILE ORGANIC COMPOUND EMISSIONS IN THE REGION

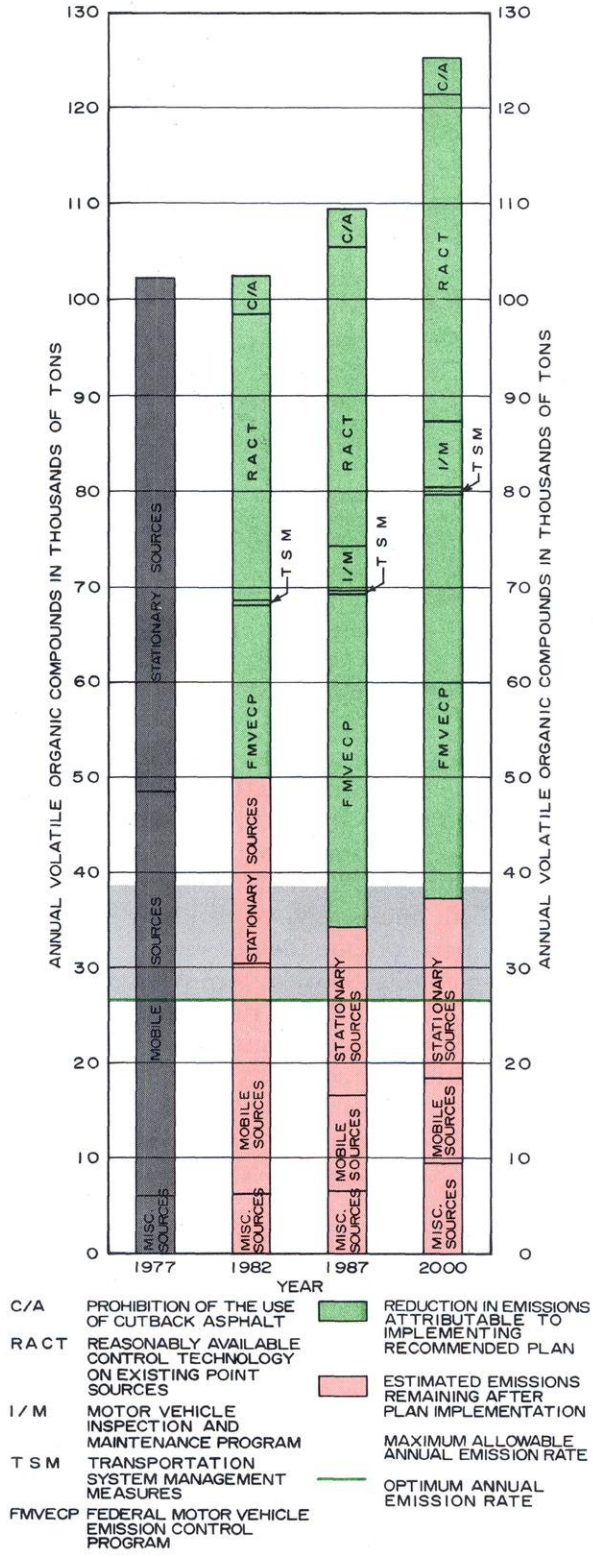
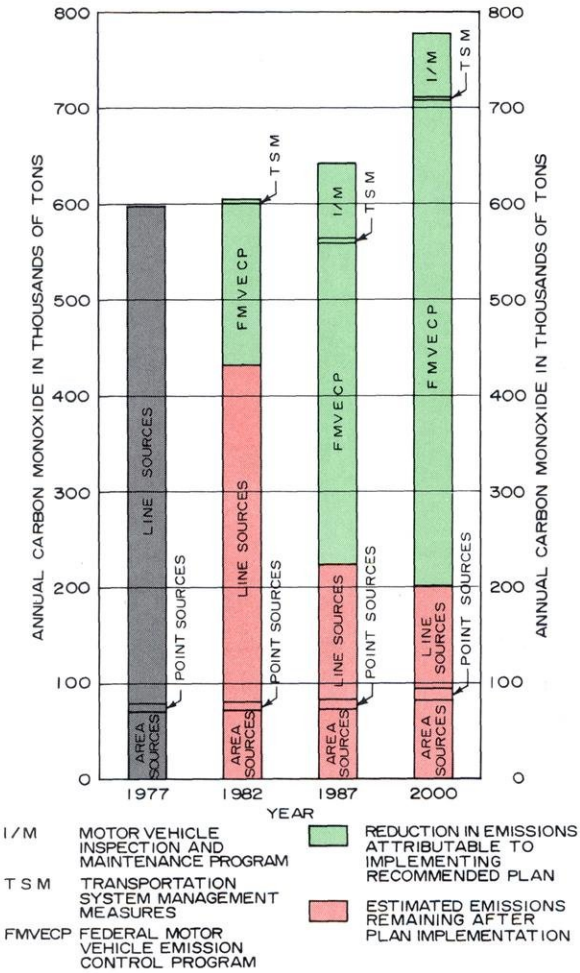


Figure 48

IMPACT OF THE RECOMMENDED PLAN ON FORECAST CARBON MONOXIDE EMISSIONS IN THE REGION



able to implementation of transportation systems management actions will be relatively small, they will be most effective in eliminating carbon monoxide problem areas.

The costs of the recommended carbon monoxide and hydrocarbon/ozone plan element are associated principally with the recommendation for RACT emission controls on stationary sources of volatile emissions and with the establishment and operation of a vehicle inspection and maintenance program. Costs associated with the continued implementation of the federal motor vehicle emissions control program are borne as a part of the cost of purchasing new vehicles and are not considered "new" costs for the purpose of this plan. Similarly, costs associated with implementation of the regional transportation plan are not attributed directly to the air quality plan since they have been set forth basically for land use development and transportation service improvements.

About 6,200 facilities would be affected by implementation of the proposed RACT emission limitations on volatile organic compounds. Of this total, about 4,500 facilities are solvent metal cleaning operations, and about 1,200 are gasoline service stations. The costs of carrying out the plan recommendations at these 6,200 facilities include a one-time capital expenditure of about $32.2 million and attendant operating costs of about $7.5 million per year. The total cost of implementing the vehicle inspection and maintenance program would be approximately $11.5 million annually. This cost consists of an estimated $6.8 million annually to cover the cost of building, operating, and maintaining the necessary testing stations, and about $4.7 million annually expected to be incurred by vehicle owners to bring those vehicles which fail the test into compliance with emissions standards.

The Recommended Ambient Air Quality Monitoring Network

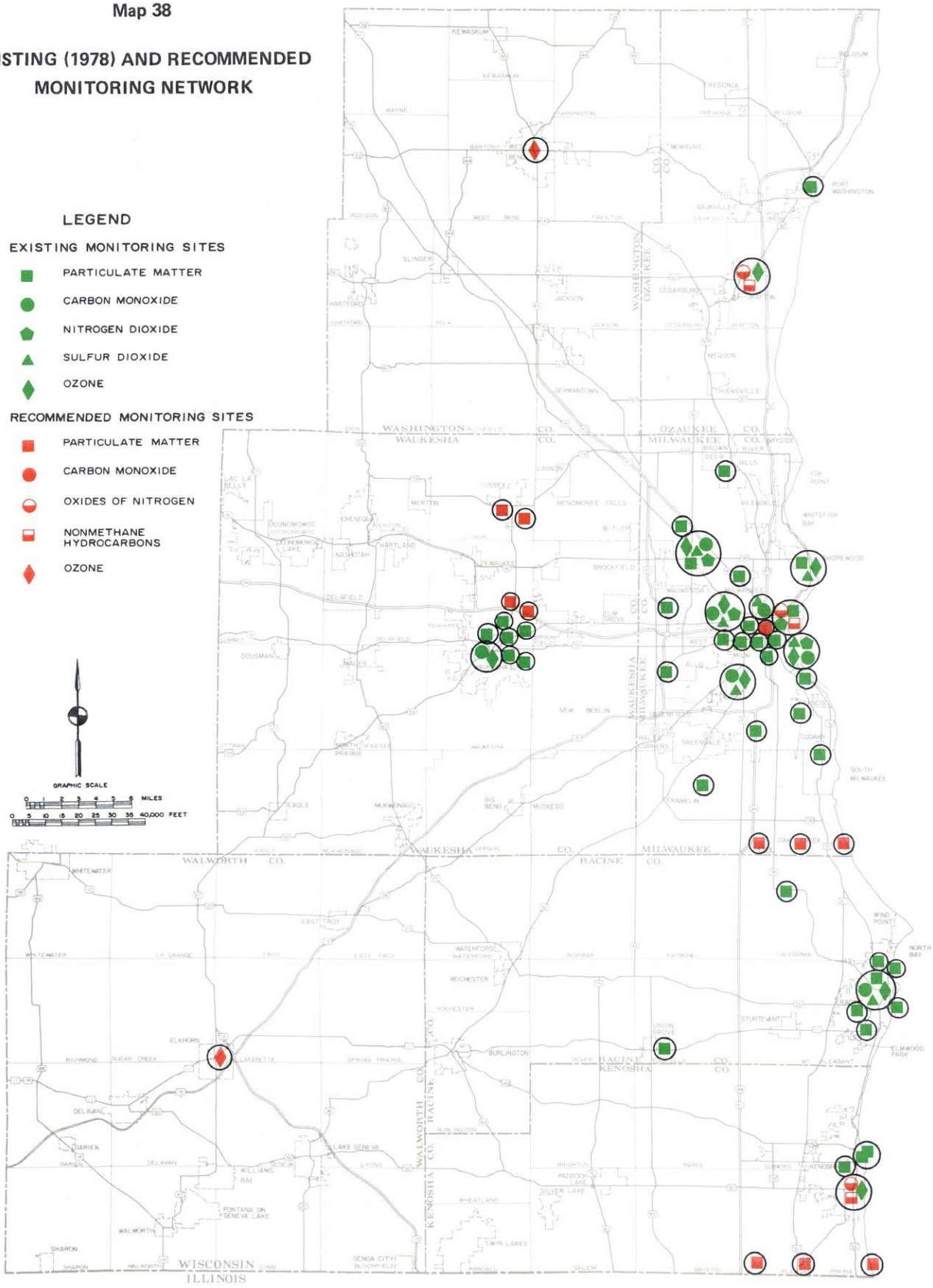
The regional air quality attainment and maintenance plan recommends that the operation of the existing ambient air quality monitoring network in the Region be continued, but that such operation be expanded and adjusted not only to verify the results of the regional air pollution analysis summarized herein, but also to monitor progress toward the attainment and maintenance of the ambient air quality standards. Specific recommendations concerning the placement of additional ambient air quality monitoring sites in the Region are shown on Map 38 and are summarized below:

- The placement of three high-volume, particulate matter gravimetric samplers along the Illinois-Wisconsin border in Kenosha County, and an additional three samplers at the Milwaukee County-Racine County border for the purpose of measuring the long-range transport of particulate matter from extraregional sources.

- The placement of from two to four high-volume particulate matter gravimetric samplers around at least one major quarrying operation in the Region for the purpose of verifying the results of the air quality simu-

Map 38

EXISTING (1978) AND RECOMMENDED MONITORING NETWORK



lation modeling effort, and the placement of such additional particulate matter monitors as may be necessary to adequately assess the impacts of the proposed pilot vacuum street sweeping program in Milwaukee County.

- The placement of an additional carbon monoxide ambient air quality monitor in the area of the Marquette Interchange in Milwaukee County in order to assess the simulation modeling results which indicate that this area presently experiences, and may be expected to continue to experience, the highest carbon monoxide concentrations in the Region, and to measure further progress toward attainment of the eight-hour average carbon monoxide ambient air quality standard.

- The placement of air quality monitors for oxides of nitrogen and nonmethane hydrocarbons near the Illinois-Wisconsin state line in Kenosha County—preferably in conjunction with the existing ozone monitoring site in that area—in or near the central business district of the City of Milwaukee, and downwind of the Milwaukee urbanized area in the Village of Grafton in Ozaukee County. The purpose of these monitors is to gather additional data on prevailing concentrations of these components, both in terms of the transport of such components and in terms of the local contributions.

- The placement of ozone monitors in Walworth County and in Washington County in order to establish attainment or nonattainment with the ozone ambient air quality standards in these two counties.

- The review of all existing monitoring sites so as to ensure conformance with the siting requirements prescribed by the U. S. Environmental Protection Agency. Care should be taken to minimize sampling error as may result from passive filter loading, excessive sample volume rates, and source-oriented sampler exposure.

It is estimated that the cost of operating the additional monitors recommended under the plan will include a one-time capital cost of about $83,700 and a monthly operating and maintenance cost of about $3,000. These costs would be in addition to those already incurred for the establishment and maintenance of the existing air quality monitoring network in the Region.

Plan Implementation

Primary responsibility for implementation of the regional air quality attainment and maintenance plan is placed with the Wisconsin Department of Natural Resources. The principal mechanism by which the Department may implement the plan is the State Implementation Plan to achieve air quality standards. Through revisions to that plan, specific recommendations for action may be translated by the Department into administrative regulations. In addition, the Wisconsin Department of Transportation, in conjunction with the DNR, is responsible for the establishment and operation of a vehicle inspection and maintenance program. The Wisconsin Public Service Commission may also aid in the implementation of the plan by establishing a preferential natural gas allocation program for industries in areas with sulfur dioxide problems in the event natural gas supplies to the State are curtailed.

Locally, all units of government in the Region may aid in the implementation of the plan recommendations by taking actions to implement those transportation system improvement and management actions which have been identified as having significant air quality benefits. Also, the Cities of Greenfield, Milwaukee, West Allis, West Milwaukee, and Wauwatosa and Milwaukee County are identified in the plan as being responsible for the conduct of a pilot vacuum street sweeping program in cooperation with the Wisconsin Departments of Natural Resources and Transportation.

In order to facilitate the implementation of the regional air quality attainment and maintenance plan, it was recommended that a formal institutional mechanism be established for the banking and trading of emission reduction credits. Such emission reduction credits could be obtained if an air pollution source reduced its emissions to a level below that required in the Wisconsin State Implementation Plan. The difference between the allowable emission rate and the lower emission rate would then be credited to the source owner, who could use the credit as an offset for later expansion, or could sell the credit for a profit. A formal mechanism for administering an emission reduction credit banking and trading system in southeastern Wisconsin would provide the marketplace for such transactions under a specific set of guidelines. It is anticipated that the Commission will undertake the preparation of a prospectus detailing a course of study for establishing an emission reduction credit banking and trading system within the following year.

Plan Adoption and Endorsement

After formal adoption of the regional air quality attainment and maintenance plan by the Commission on June 20, 1980, the plan was formally certified to those units and agencies of government having plan implementation responsibilities or which lie within the major urbanized areas of the Region. The plan was formally acknowledged by the U. S. Environmental Protection Agency on August 21, 1980 and was formally endorsed by the Wisconsin Department of Transportation on November 24, 1980. At the local level, the plan was adopted by the Milwaukee County Board of Supervisors on November 6, 1980 and by the Village Board of the Village of River Hills on September 17, 1980.

Vehicle Inspection and Emission Test Facility Site Location Study

During 1980 the Commission completed a study to determine the optimum locations for a network of vehicle inspection and emission test facilities in the Region. The study, prepared at the request of the Wisconsin Departments of Natural Resources and Transportation, is documented in SEWRPC Community Assistance Planning Report No. 40, Recommended Locations for Motor Vehicle Inspection and Emission Test Facilities in the Southeastern Wisconsin Region. The report contains the system design procedures, evaluation of alternative test facility locations, and recommended configuration and location for a 15-site/37-test lane motor vehicle inspection and emission test facilities network required to implement a motor vehicle air pollution control equipment inspection and emission test program in the seven-county Southeastern Wisconsin Region (see Map 39). The recommended locations of the 15 test facilities necessary to meet an anticipated 1985 test demand of approximately 1.2 million inspection and emission tests would serve to minimize the average time and distance that vehicle owners in the Region must travel to participate in the required program. The recommended test facility configuration is designed to minimize inconvenience to the affected vehicle owners, and thus enhance public acceptance of, and participation in, the required program—a program whose purpose is to reduce carbon monoxide and hydrocarbon emissions from motor vehicles in the Region. The test facility network design is characterized by an average one-way trip length of 5.4 miles, equivalent to the average journey-to-work distance in the Region.

Menomonee River Valley Fugitive Dust Study

Work was also completed during 1980 on a staff memorandum, "Air Quality Simulation Modeling Results for the Menomonee River Valley Fugitive Dust Study." The memorandum documented the air quality computer simulation modeling of the 1973 and 1977 and forecast 1982 particulate matter concentrations in the ambient air due to fugitive dust emissions generated by vehicle travel on unpaved roads, unpaved parking lots, unpaved truck lots, and dust from aggregate storage piles in the heavily industrialized area of the Menomonee River Valley in the City of Milwaukee. The memorandum was reviewed and approved by the Menomonee River Valley Cooperative Study Technical Advisory Committee on September 30, 1980.

SOLID WASTE MANAGEMENT PLANNING

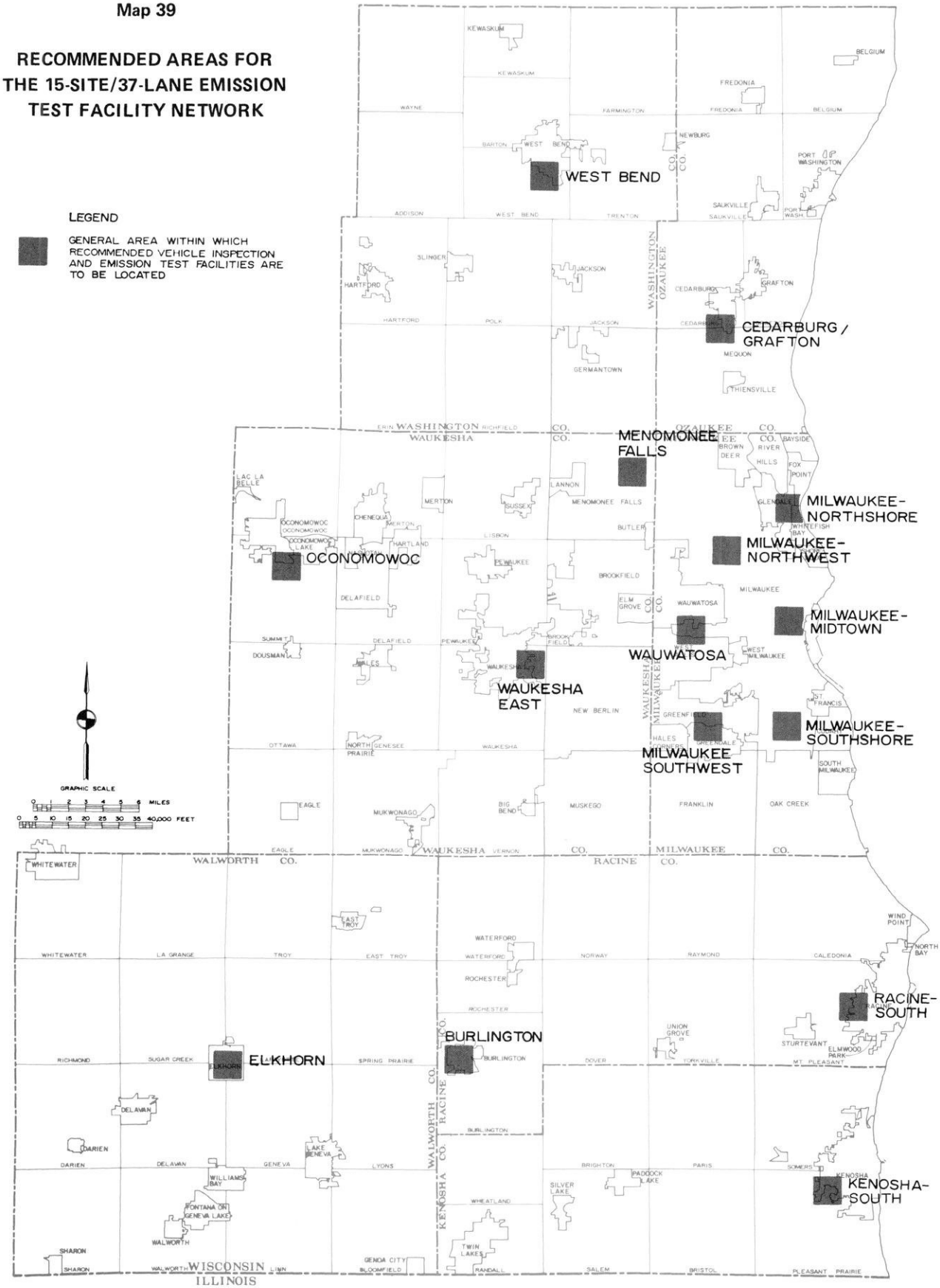
During 1980, the Commission continued to provide assistance to counties within the Region in the preparation of locally developed, county-oriented solid waste management plans. Specifically, assistance was provided during 1980 to Washington and Waukesha Counties in the development of a solid waste management plan for these two counties. This assistance was provided through Commission staff participation on a technical advisory committee established by Washington and Waukesha Counties for the purpose of guiding the development of the solid waste plan for these two counties. The Commission also provided Washington and Waukesha Counties with certain technical and planning data necessary to expeditious conduct of the solid waste management planning programs of those counties.

During 1980, the Commission also assisted Racine County in selecting an engineering consultant to conduct a solid waste management study for that county. In addition, the Commission assisted Racine County in the development of a solid waste management plan through the provision of technical and planning data and participation on a technical advisory committee established by the County. Technical support and planning data were also provided by the Commission to Ozaukee County for use in the preparation of a solid waste management plan. Finally, during 1980 the Commission provided assistance to Walworth County in considering alternative approaches to solid waste management planning through the preparation for the County of a prospectus for a solid waste management plan.

In addition to assisting in the development of county solid waste management plans, the Commission provided assistance to county and local units of government through the preparation of technical review reports on specific solid waste facility proposals. Included among such reviews were reports on two major landfills in Walworth County and one hazardous waste storage facility in Waukesha County.

Map 39

RECOMMENDED AREAS FOR THE 15-SITE/37-LANE EMISSION TEST FACILITY NETWORK



PLANNING RESEARCH DIVISION

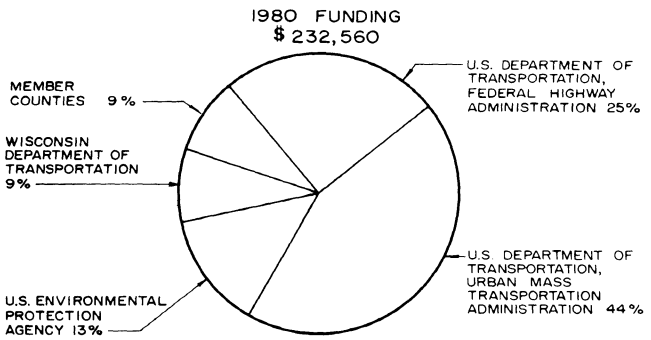
DIVISION FUNCTIONS

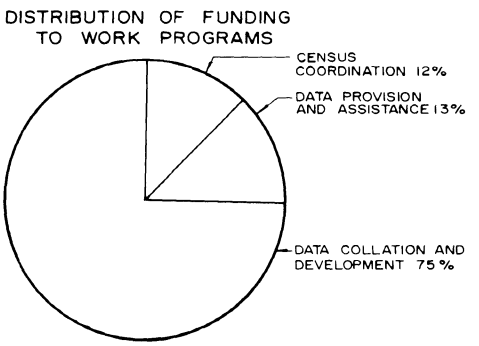
The Commission's Planning Research Division is responsible for developing demographic, economic, and public financial resource data that serve as the basis for the preparation of regional and subregional plans by other Commission divisions. The kind of basic questions addressed by this Division include:

- 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 are the characteristics of those who live and work in the Region in such terms as age, sex, race, income, household size, and occupation? How are these characteristics changing over time?
- What is the structure of the Region's economy in terms of employment in major industry groups? How is this structure 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?
- How much is being spent to provide public facilities and services? What are the sources of this money? How are these patterns changing over time?
- Will there likely be sufficient public financial resources to carry out regional plan recommendations?

Figure 49

PLANNING RESEARCH DIVISION





In an attempt to find sound answers to these and other questions, the Planning Research Division during 1980 conducted a number of activities in three identifiable areas: data collation and development, data provision and assistance, and census coordination.

DATA COLLATION AND DEVELOPMENT

During 1980, the Division staff continued to monitor secondary data sources for changes in population, employment, and school enrollment levels. In addition, the Division staff provided support to the Land Use and Housing, Transportation, Special Projects, and Environmental Planning Division staffs in the conduct of major work programs by those divisions.

Population

Provisional population counts from the 1980 federal census indicate that no appreciable population increase occurred in the seven-county Southeastern

Wisconsin Region between 1970 and 1980. The 1980 year-around resident population level of 1,764,919 represents an increase of only 8,836 residents—less than 1 percent—over the 1970 level of 1,756,083 residents. The increase recorded during the decade of the 1970's represents the smallest 10-year population increase in the Region since 1850—the year of the first federal census to include what is now the Southeastern Wisconsin Region—thus signaling an end to 120 years of continuous, rapid population growth. The minor increase in population between 1970 and 1980 stands in marked contrast to the large population increases of the immediately preceding decades—333,000 residents during the 1950's and 182,500 residents during the 1960's.

The lack of any meaningful change in the regional population level between 1970 and 1980 is indicative of a virtual balance between natural increase and net migration at the regional level. Preliminary estimates place the level of natural increase—births minus deaths—at 113,800 persons, equivalent to a 6.5 percent increase in the population, or about one-half the rate of natural increase of 12.9 percent which occurred in the Region in the 1960's. However, during the decade there were 105,000 more out-migrants than in-migrants, for a net out-migration rate of 6.0 percent, or about four times the rate of net out-migration of 1.3 percent which occurred in the Region in the 1960's.

Although the resident population level of the Region remained virtually unchanged between 1970 and 1980, significant geographic shifts in the Region's population distribution continued to occur, as shown in Table 24. Milwaukee County lost about 89,300 residents between 1970 and 1980—a decrease of about 8 percent. The three Milwaukee area suburban counties of Ozaukee, Washington, and Waukesha continued their rapid growth of the past several decades, with population increases of about 23, 33, and 21 percent, respectively. These three counties together grew by about 82,500 residents, with over one-half of this increase occurring in Waukesha County. The Region's three southern counties—Kenosha, Racine, and Walworth—experienced lesser rates of population increase than did the Milwaukee area suburban counties, with increases of about 4, 1, and 13 percent, respectively. These three counties together grew by about 15,600 residents, with about one-half of this increase occurring in Walworth County.

The continuation of these changes in regional population distribution has resulted in an areawide diffusion of population around the three primarily urban counties of Kenosha, Milwaukee, and Racine. From 1970 to 1980, the proportion of the total regional population in these three counties decreased by about 5 percentage points, from about 76 percent in 1970 to about 71 percent in 1980, while the proportion of the total regional population in Ozaukee, Walworth, Washington, and Waukesha Counties increased by about 5 percentage points, from about 24 percent in 1970 to about 29 percent in 1980. This continuing outward diffusion of population has resulted in the creation of certain areawide developmental and environmental problems related to the changing pattern of land use, including traffic congestion, air and water pollution, flooding, the loss of prime agricultural lands, and the general deterioration and destruction of the natural resource base.

Comparisons of the 1980 forecast and the 1980 actual resident population levels in the Region are set forth by county in Table 25 and Figures 50 through 57. Based on the design year 2000 popu-

Table 24

REGIONAL POPULATION

County	Population		Difference 1970-1980	
	1970	1980	Number	Percent
Kenosha	117,917	123,137	5,220	4.43
Milwaukee	1,054,249	964,988	- 89,261	- 8.47
Ozaukee	54,461	66,981	12,520	22.99
Racine	170,838	173,132	2,294	1.34
Walworth	63,444	71,507	8,063	12.71
Washington	63,839	84,848	21,009	32.91
Waukesha	231,335	280,326	48,991	21.18
Region	1,756,083	1,764,919	8,836	0.50

Table 25

COMPARISON OF THE 1980 FORECAST AND ACTUAL POPULATION

County	1980 Population		Difference	
	Forecast	Actual	Number	Percent
Kenosha	139,200	123,100	- 16,100	- 11.6
Milwaukee	1,014,500	965,000	- 49,500	- 4.9
Ozaukee	76,200	67,000	- 9,200	- 12.1
Racine	185,600	173,100	- 12,500	- 6.7
Walworth	74,700	71,500	- 3,200	- 4.3
Washington	90,900	84,900	- 6,000	- 6.6
Waukesha	292,300	280,300	- 12,000	- 4.1
Region	1,873,400	1,764,900	- 108,500	- 5.8

Figure 50

POPULATION FORECAST AND CURRENT POPULATION LEVELS FOR THE REGION: 1950-2000

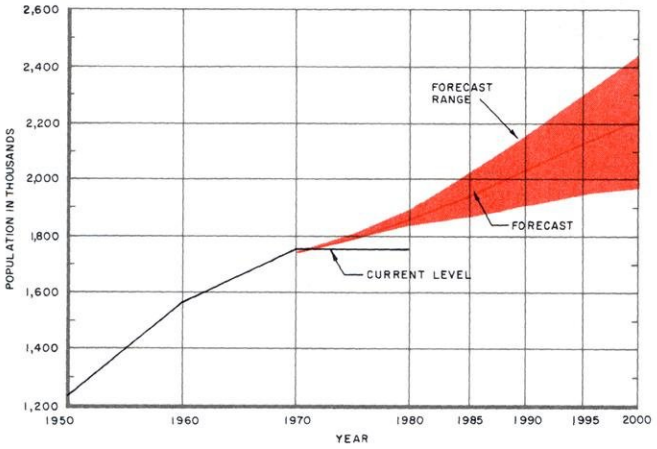


Figure 51

POPULATION FORECAST AND CURRENT POPULATION LEVELS FOR KENOSHA COUNTY: 1950-2000

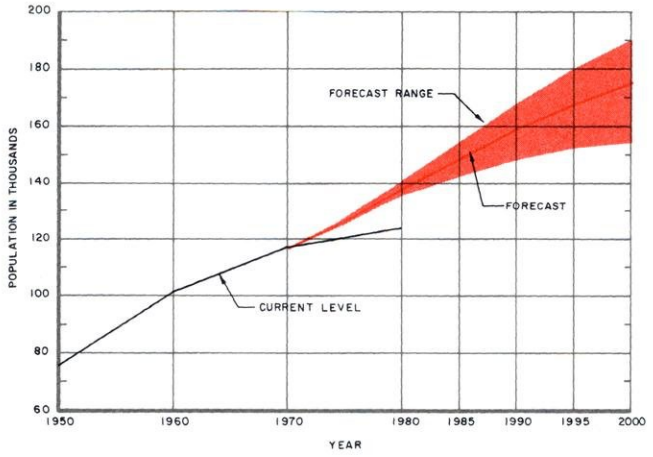


Figure 52

POPULATION FORECAST AND CURRENT POPULATION LEVELS FOR MILWAUKEE COUNTY: 1950-2000

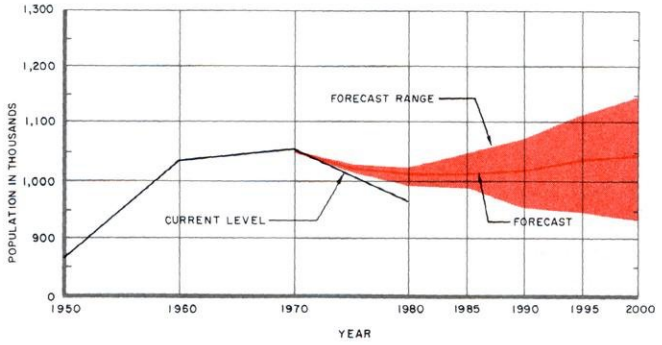


Figure 53

POPULATION FORECAST AND CURRENT POPULATION LEVELS FOR OZAUKEE COUNTY: 1950-2000

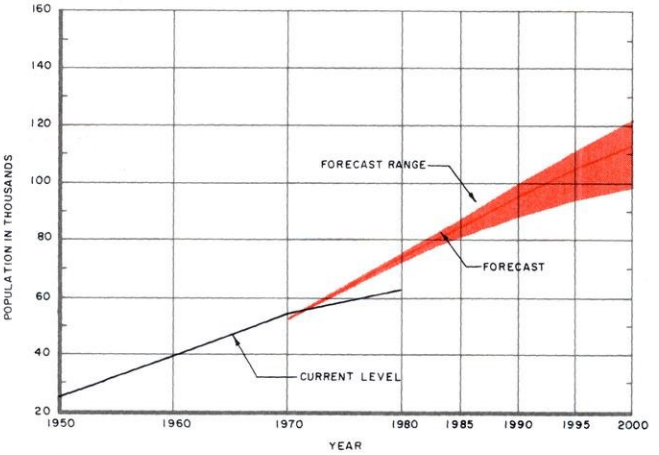


Figure 54

POPULATION FORECAST AND CURRENT POPULATION LEVELS FOR RACINE COUNTY: 1950-2000

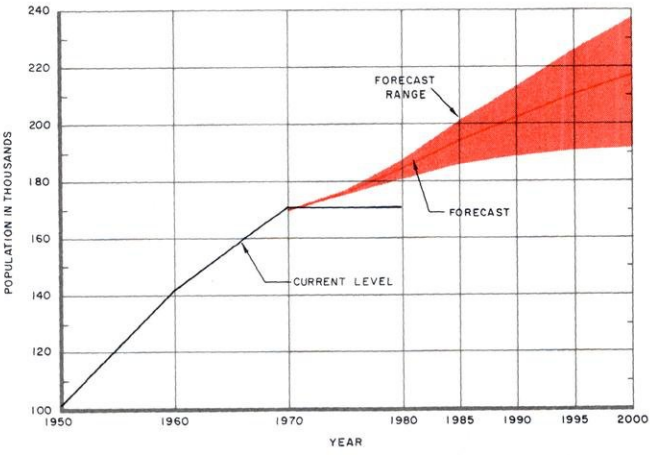


Figure 55

POPULATION FORECAST AND CURRENT POPULATION LEVELS FOR WALWORTH COUNTY: 1950-2000

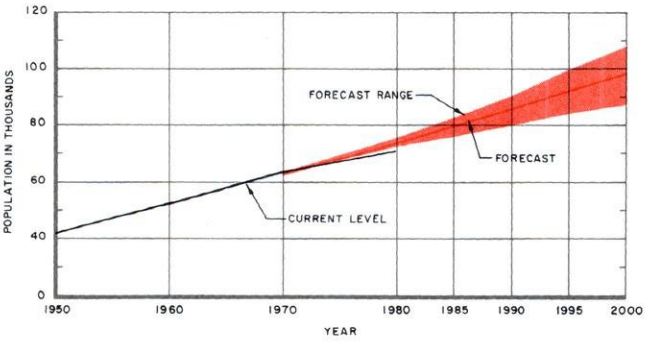


Figure 56

POPULATION FORECAST AND CURRENT POPULATION LEVELS FOR WASHINGTON COUNTY: 1950-2000

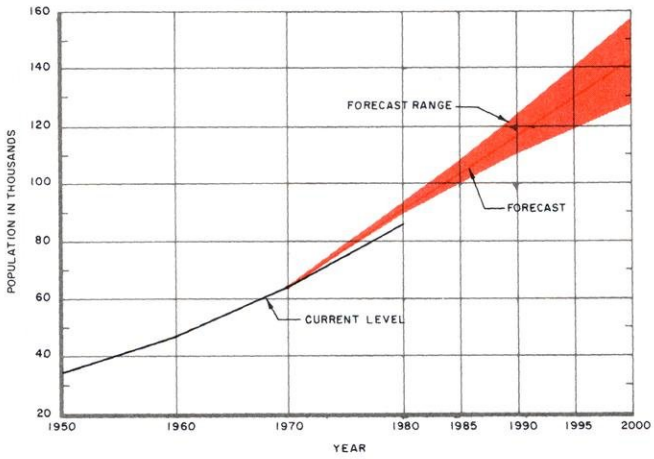
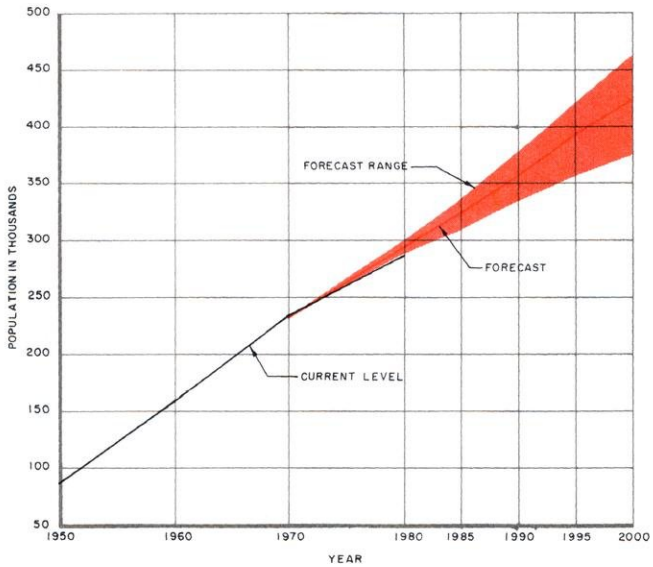


Figure 57

POPULATION FORECAST AND CURRENT POPULATION LEVELS FOR WAUKESHA COUNTY: 1950-2000



lation forecast developed in 1974 by Commission staff and advisory committees and used in the preparation of the adopted regional land use and transportation plans, the overall population level of the Region was anticipated to reach about 1.87 million in 1980. The actual 1980 population level of 1.76 million noted above is about 6 percent below this forecast level.

The shortfall in the 1980 stage of the design year 2000 population forecast was not unexpected. By 1977 the monitoring of this forecast, as documented yearly in this Annual Report, had indicated that significant socioeconomic changes were occurring within the Region. In particular, the apparent stagnation of population growth in conjunction with the observed continued increase of both jobs and housing units was noted by the Commission staff. Consequently, a special study of regional population change was undertaken in 1978 which culminated with the publication in 1979 of SEWRPC Technical Report No. 22, Recent Population Growth and Change in Southeastern Wisconsin: 1970-1977. One of the major conclusions of this report was that the 1980 stage of the Commission's design year 2000 population forecast probably would not be met, although it was believed that the shortfall would be within the range of plus or minus 10 percent per decade generally accepted as the range of forecast accuracy desirable for long-range land use and supporting physical facilities planning.

The 1980 census figures reported herein have confirmed the expected shortfall in the 1980 stage of the design year 2000 population forecast. While this shortfall does not exceed the range of forecast accuracy at the regional level, two counties— Kenosha and Ozaukee—did register shortfalls exceeding the range. In both Counties the shortfall was approximately 12 percent.

As the probability of a population shortfall became increasingly apparent during the closing years of the 1970's, Commission attention came to be focused upon alternative long-range planning processes that might provide better guidance with respect to anticipated regional change in a period of major national social and economic change. One such process, known as "alternative futures," was recommended by the Commission staff for use in the Milwaukee area primary transit system alternatives analysis, a planning study initiated by the Commission during 1979. Under the alternative futures approach, the "analyses and forecasts" step of the traditional planning process is replaced by an "alternative futures analysis." The alternative futures analysis has three phases. The first phase of the analysis is the development of alternative future scenarios of factors which, while external to the Region, affect the growth or decline of the Region and, therefore, the physical facility and service needs in the Region. The factors are termed external to the Region because they are variables

over which public and private decision-makers within the Region have little or no influence, and to which the Region must in the future respond. Examples of such external factors are the future price and availability of energy and future population lifestyles. The second phase of the alternative futures analysis is the determination of the amount of regional growth or decline—including population change—likely under the alternative external factor scenarios developed under the first phase. The third phase is the development of alternative land use plans to accommodate the regional change expected under each scenario of future changes in external factors. Division staff members were involved in the preparation of alternative population futures under the second phase of the alternative futures analysis. Work on these scenarios—which acknowledge and incorporate the less than anticipated population growth that occurred during the 1970's—was nearing completion at the end of 1980, and a report on the scenarios and the attendant population change that could be expected to occur under each scenario is scheduled to be issued in 1981.

During 1980, the Division staff completed SEWRPC Technical Report No. 19, A Regional Population Projection Model. This report presents a description of the mathematical model used by the Commission in analyzing population change and in preparing population projections and forecasts for the Region. The model is a cohort-component model which projects population levels by age, sex, and race for five-year intervals on the basis of assumptions concerning fertility, mortality, and migration. The Commission staff will utilize the model to prepare new population projections and a new population forecast for the Region upon receipt of the necessary detailed reports of the federal 1980 census of population and housing. Copies of this report may be obtained from the Commission offices.

Employment

Employment in the Region during 1980 was estimated at 874,700 jobs, a decrease of about 2,600 jobs, or less than 1 percent, from the 1979 level of 877,300 jobs. Following the economic downturn of 1975, the Region showed considerable economic growth and recovery during the latter years of the 1970's. However, the economic downturn that began during the later half of the second quarter of 1980 resulted in virtually the same level of employment in the Region in 1980 as in 1979, and in an increase in the level of unemployment. Unemployment in the Region during 1980 was estimated at 57,400 persons, an increase of about 19,900 persons, or about 53 percent, over the 1979 level of about 37,500 persons. The estimated unemployment rate in the Region during 1980 was 6.2 percent, compared with 4.1 percent in 1979.

Change in the structure of the regional economy continues to follow a pattern established in recent years. Specifically, manufacturing employment has shown a relative decline in importance—from representing about 43 percent of all jobs in 1960 to representing about 34 percent in 1970—and in 1980 accounted for about 30 percent of the total number of jobs in the Region. In contrast, the private service category has continued to grow in importance, both absolutely and relatively, as a regional employment source. In 1960 private services accounted for about 18 percent of all jobs in the Region. By 1970 private services had increased in relative importance to over 22 percent of all jobs, and by 1980 had further increased to 24 percent of all jobs in the Region (see Table 26 and Figure 58).

On a county basis, as shown in Table 27, there was a mixture of employment losses and gains between 1979 and 1980. Ozaukee, Racine, and Waukesha Counties showed a slight increase in employment between 1979 and 1980; Walworth County showed no change in employment; and employment losses were registered in Kenosha, Milwaukee, and Washington Counties. Since 1970, the Region has added about 133,100 jobs—an increase of about 18 percent—with about 63,800 of these jobs being added in Milwaukee County. The greatest rates of employment increase in the 1970's have occurred in Ozaukee and Waukesha Counties—41 percent and 46 percent, respectively.

The change between 1970 and 1980 in the relative distribution of jobs within the Region is shown by county in Figure 59. The proportion of total employment in Milwaukee County has declined despite an increase in absolute employment within the County. In 1960 about 75 percent of the total regional employment was located in Milwaukee County. In 1970 about 69 percent of the total regional employment was located in Milwaukee County. By 1980, the Milwaukee County share of regional employment had decreased to 66 percent. In contrast, the proportion of total regional employment in Waukesha County has increased from about 5 percent in 1960 to about 9 percent

Table 26

REGIONAL EMPLOYMENT BY MAJOR CATEGORY: 1970-1980

Employment Category	Employment (in thousands)		Difference	
	1970	1980	Number	Percent
Agriculture	10.6	9.4	- 1.2	- 11.3
Construction and Mining	24.0	26.6	2.6	10.8
Manufacturing				
Food and Kindred Products	18.9	20.2	1.3	6.9
Printing and Publishing	14.9	15.7	0.8	5.4
Primary Metals	22.5	17.1	- 5.4	- 24.0
Fabricated Metals	24.6	31.7	7.1	28.9
Nonelectrical Machinery	68.1	74.8	6.7	9.8
Electrical Machinery	36.5	39.3	2.8	7.7
Transportation Equipment	22.0	20.8	- 1.2	- 5.5
Other Manufacturing	43.5	42.9	- 0.6	- 1.4
Manufacturing Subtotal	251.0	262.5	11.5	4.6
Wholesale Trade	32.0	44.4	12.4	38.8
Retail Trade	111.2	137.1	25.9	23.3
Transportation, Communication, and Utilities	36.0	38.5	2.5	6.9
Finance, Insurance, and Real Estate	31.2	43.4	12.2	39.1
Private Services, Except Education[a]	166.9	211.9	45.0	27.0
Government Services and Education	78.7	100.9	22.2	28.2
Total Employment	741.6	874.7	133.1	18.0

[a] *Includes the self-employed and domestic household workers.*

in 1970, and to about 11 percent in 1980. In the five remaining counties of the Region, the relative share of total regional employment has remained more constant over time.

Based upon the regional employment forecast of about 1.02 million jobs in the year 2000, the employment level of the Region was anticipated to approximate 833,100 jobs in 1980 (see Figure 60). As noted, there were an estimated 874,700 jobs in the Region in 1980, or about 41,600, or 5 percent, more jobs than forecast. As shown in Table 28, most of the difference occurs in Milwaukee County, where the 1980 estimate is 36,200 jobs, or 6.7 percent, greater than forecast.

The approximately 18 percent increase in the number of jobs in the Region since 1970, coupled with a total regional population increase of less than 1 percent for the same period, presents an apparent paradox. A relatively healthy and growing national economy during the decade resulted in the creation of new jobs. In the Region these newly created jobs did not result in net in-migration—as would have occurred in the past—but were absorbed by the existing regional population base. Three factors in particular appear to have made this absorption possible: 1) the rapidly increasing numbers of women entering the labor force; 2) the changing age structure of the Region's resident population; and, perhaps, 3) an increasing tendency for one person to hold more than one job.

School Enrollment

Total regional school enrollment continued to decline during 1980, as shown in Table 29. The decline of about 12,000 students represents

Figure 58

PERCENTAGE DISTRIBUTION OF JOBS IN THE REGION BY MAJOR INDUSTRY GROUP: 1970-1980

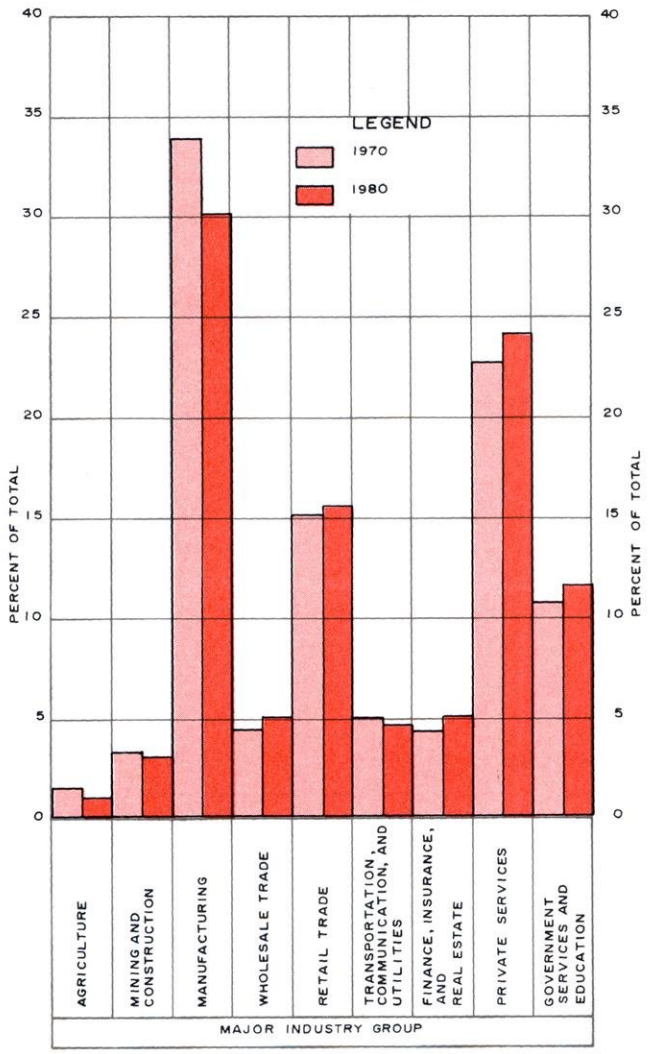


Figure 59

PERCENTAGE DISTRIBUTION OF JOBS IN THE REGION BY COUNTY: 1970-1980

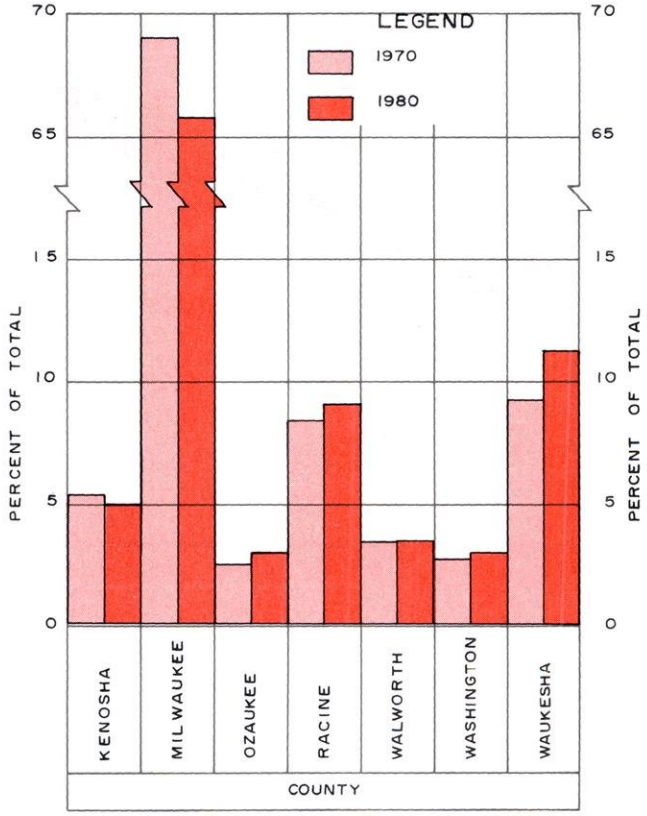


Table 27

REGIONAL EMPLOYMENT

County	Employment			Difference 1970-1980	
	1970	1979	1980	Number	Percent
Kenosha . . .	39,200	45,400	42,900	3,700	9.4
Milwaukee . .	510,900	576,500	574,700	63,800	12.5
Ozaukee . . .	17,900	24,400	25,300	7,400	41.3
Racine	61,900	78,500	78,700	16,800	27.1
Walworth. . .	24,200	29,700	29,700	5,500	22.7
Washington .	20,300	25,600	25,400	5,100	25.1
Waukesha . .	67,200	97,200	98,000	30,800	45.8
Region	741,600	877,300	874,700	133,100	18.0

a decrease of about 3 percent between 1980 and the previous year. Public school enrollment declined by 12,100 students, or 4 percent, while nonpublic school enrollment increased by about 60 pupils, or 0.1 percent. Since 1970, total regional school enrollment has declined by about 22 percent.

Map 40 shows public school enrollment changes between 1970 and 1980 for 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 71 percent of the public K-12 and the combined union high school and K-8 districts have experienced enrollment declines of more than 5 percent since 1970. Approximately 20 percent of the districts have experienced enrollment gains of 5 percent or more and about 9 percent of the districts have experienced modest or no change—from a 5 percent decline to 5 percent gain—in enrollments.

Figure 60

ESTIMATED AND FORECAST EMPLOYMENT: SOUTHEASTERN WISCONSIN REGION

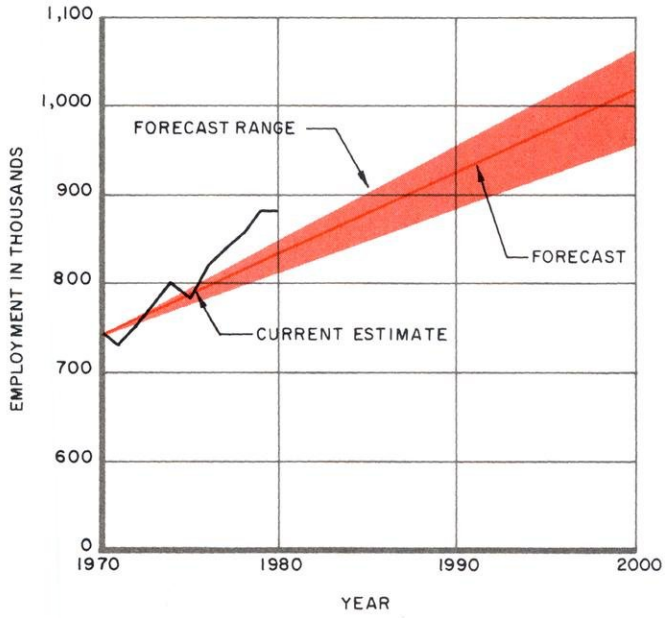


Table 28

COMPARISON OF FORECAST AND ESTIMATED REGIONAL EMPLOYMENT

County	1980 Employment		Difference (estimate minus forecast)	
	Forecast	Estimated	Number	Percent
Kenosha . . .	44,200	42,900	-1,300	-2.9
Milwaukee . .	538,500	574,700	36,200	6.7
Ozaukee . . .	24,600	25,300	700	2.9
Racine	73,100	78,700	5,600	7.7
Walworth. . .	29,900	29,700	-200	-0.7
Washington .	25,500	25,400	-100	-0.4
Waukesha . .	97,300	98,000	-100	0.7
Region	833,100	874,700	41,600	5.0

Table 29

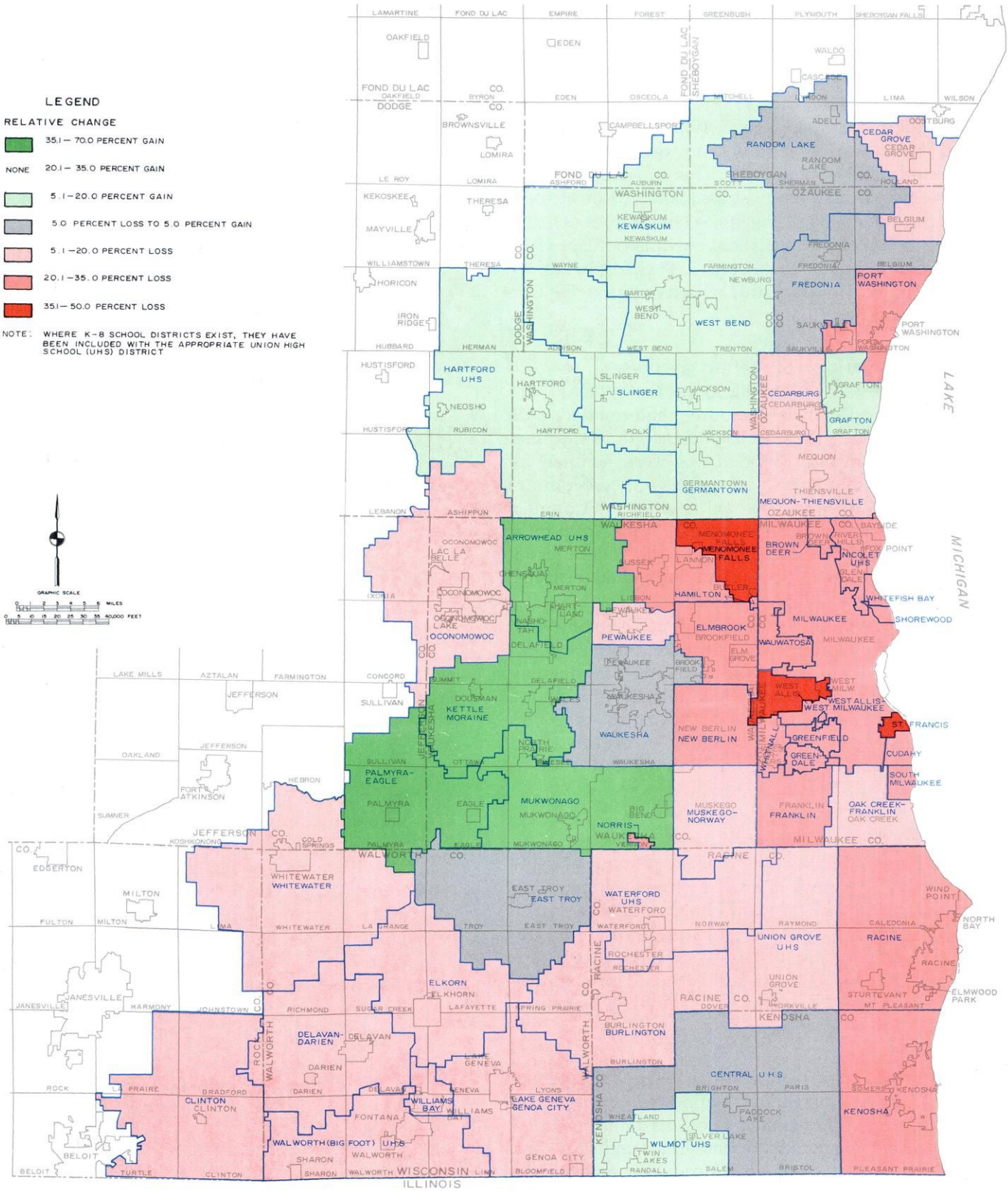
REGIONAL SCHOOL ENROLLMENT

County	Enrollment			Difference 1970-1980		Difference 1979-1980	
	1970	1979	1980	Number	Percent	Number	Percent
Kenosha	32,332	27,455	26,679	- 5,653	- 17.5	- 776	- 2.8
Milwaukee . . .	267,929	191,224	184,891	- 83,038	- 31.0	- 6,333	- 3.3
Ozaukee	15,876	15,563	14,984	- 892	- 5.6	- 579	- 3.7
Racine.	48,597	39,834	38,773	- 9,824	- 20.2	- 1,061	- 2.7
Walworth. . . .	15,570	14,129	13,694	- 1,876	- 12.0	- 435	- 3.1
Washington . .	19,169	22,210	21,509	2,340	12.2	- 701	- 3.2
Waukesha. . . .	73,077	70,850	68,688	- 4,389	- 6.0	- 2,162	- 3.1
Region	472,550	381,265	369,218	- 103,332	- 21.9	- 12,047	- 3.2

School districts experiencing enrollment increases are concentrated in Washington and Waukesha Counties—those counties with the largest absolute total population growth in the Region since 1970. The largest enrollment declines are concentrated in Milwaukee County and Racine County, where every K-12 district and combined union high school and K-8 district has experienced an enrollment decline since 1970. The majority of the districts in the southern portion of the Region—Kenosha, Racine, and Walworth Counties—exhibit declining enrollment patterns. A similar pattern of enrollment decline exists in eastern Waukesha County and, to a lesser degree, in Ozaukee County.

Map 40

RELATIVE SCHOOL ENROLLMENT CHANGES IN THE REGION: 1970-1980



The Division staff maintains school district boundary maps for each of the seven counties in the Region. Copies of these maps are available to interested parties from the Commission offices.

DATA PROVISION AND ASSISTANCE

Considerable Division staff time is directed each year at answering requests for demographic and economic and related data. This function includes the provision of technical assistance to local units of government, public agencies, and school districts in the conduct of special data acquisition activities and in the analysis of data. The following are examples of Division staff activity during 1980 in performing this function.

- Preparation of letter responses to 125 requests for population, employment, and public financial resource and related data contained in the Commission's data files. In addition, 325 requests were handled by telephone and 125 requests were accommodated through personal visits to the Commission offices. These requests came from local units of government, state and federal agencies, private firms, and individual citizens.

- Provision of technical assistance to the Walworth County Overall Economic Development Planning Committee in its ongoing planning activities. Such assistance included serving as a technical advisor to the committee, attending committee meetings, and providing data from Commission files as requested.

- Provision of technical assistance to the Waukesha School District in conducting its annual school census, including preparation of a list of all household addresses in the district; provision of preprinted school census forms; provision of data entry, verification, and edit services; and preparation of summary reports as requested by school district personnel.

- Provision of technical assistance to the Racine County Emergency Telephone System (9-1-1) Planning Committee. Such assistance included attending committee meetings and providing counsel in the selection of an appropriate planning framework.

- Preparation of an economic impact analysis of the acquisition and rehabilitation of an unused railroad depot for use as a transit mall. This analysis was prepared at the request of the City of Lake Geneva and was used by the City to determine whether funds for the project could be requested from the U. S. Commerce Department, Economic Development Administration, under the provisions of Title I of the Public Works and Economic Development Act.

- Provision of selected unpublished data from the 1970 Census of Population and Housing to the City of West Allis. These data were used by the City in developing a report submitted to the U. S. Department of Housing and Urban Development.

- Provision of a copy of the Milwaukee geographic base file to the Milwaukee County Department of Social Services. Copies of address-matching computer programs used by the Commission staff in conjunction with the file were also provided. These materials were to be used by the Department to restructure existing address file modules.

- Provision of information concerning expected changes in the number of school-age children over the next decade to the Racine Unified School District to assist it in evaluating whether to close or consolidate some existing schools.

- Provision of selected economic activity data to the Racine County Overall Economic Development Planning Committee to be used in the preparation of its annual report.

- Provision of copies of the Census Bureau Metropolitan Map Series map sheets, as updated by Commission staff in preparation for the 1980 census, to the Department of Fiscal Liaison of the City of Milwaukee for use as a general reference and resource material.

- Preparation of area measurements of all unincorporated units of government in Ozaukee County to be utilized by the County in administering the county ordinance concerning the Town Road Improvement Fund.

- Preparation of estimates of the total resident population of all watersheds lying wholly or partially within Milwaukee County for the Milwaukee County Executive's Office. Those portions of the total resident population of each watershed residing in the Milwaukee Metropolitan Sewerage District, the Milwaukee Metropolitan Sewerage District Contract Service Area, and the balance of the watershed were also estimated.

- Provision of technical assistance, at the request of the Kenosha County Board of Supervisors, to the Kenosha County Council on Economic Development in the preparation of an update to the Kenosha County Overall Economic Development Plan document.

- Preparation for the District 2 staff of the Wisconsin Department of Transportation of mechanically compiled and plotted land use maps for an area of about 20 square miles in southern Ozaukee County. These maps were for use in the preparation and evaluation of long-range physical improvement alternatives for Wauwatosa Road.

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 U. S. Bureau of the Census, the Commission provides staff services to Census Statistical Areas Committees in each county. The Commission also provides technical services directly to the Bureau in the form of base map preparation and maintenance, and geographic base file development and maintenance. The geographic base file is a computer-readable description of the block faces, street address ranges, and census statistical tabulating and reporting unit boundaries of an area.

Census Statistical Areas Committees

Division staff members serve as the census "key person" for three of the seven counties comprising the Region—Ozaukee, Walworth, and Washington. Division staff members serve on the Census Statistical Areas Committees for each of the remaining four counties and supply staff support as requested. Having completed the remaining preparations for the 1980 Census of Population and Housing during 1977, the Census Statistical Areas Committees did not meet in 1980.

Geographic Base File Update and Maintenance

The Division staff completed the update of the geographic base files for the Kenosha, Milwaukee, and Racine urbanized areas in 1978 in preparation for the 1980 census. Initial Census Bureau processing of the files indicated that their quality was well within the acceptable error standard of 5 percent or less established nationally for file quality. The estimated error rates for the Kenosha, Milwaukee, and Racine files are 3.2 percent, 1.4 percent, and 1.4 percent, respectively.

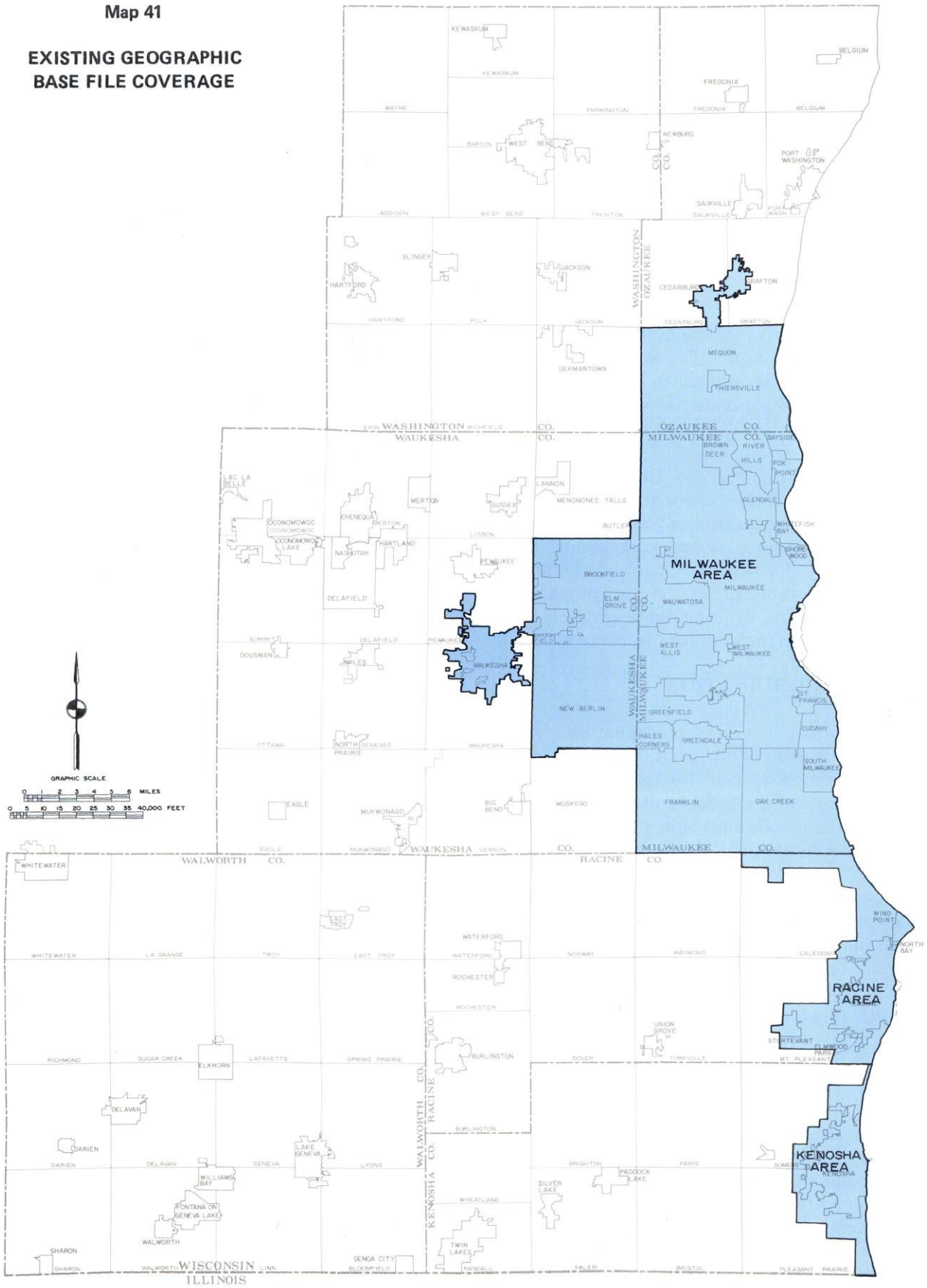
In addition to their primary use in geocoding census questionnaires, the geographic base files have a variety of local applications—one of the more useful of which is address matching. In an address-matching application, a group of records containing street addresses can be processed against the geographic base file to identify the specific geographic area—for instance, a census tract or individual urban block—in which the particular street address occurs. The numeric code for the specific geographic area can be attached to the record containing the street address, thereby enabling the data associated with the record to be aggregated by particular geographic units. For instance, records of individual building permits containing street addresses could be utilized to prepare reports of new units authorized for construction, or of the value of new residential construction, by census tract.

Since completion of the update and edit operations, a number of address-matching applications have been completed using the files. In most cases, match rates well in excess of 90 percent have been obtained. As the address-matching software is improved through use and experience and as residual errors in the file are corrected, it is anticipated that the match rates will become even better. The area for which geographic base files presently exist is shown on Map 41. This area contained about 75 percent of the Region's total resident population in 1980.

During 1980, the Division staff modified the geographic base files so that in addition to coding addresses to geographical units recognized by the U. S. Census Bureau, the files could be used to

Map 41

EXISTING GEOGRAPHIC BASE FILE COVERAGE



code addresses to Planning Analysis Areas, Traffic Analysis Zones, and U. S. Public Land Survey one-quarter sections—geographic units utilized by the Commission in its planning activities. These files, as modified, were used to analyze survey records obtained by Commission staff from bus ridership surveys in the Kenosha and Racine areas. The files were also used in the preparation by Division staff of small geographic area estimates of employment utilizing place-of-work records obtained from the Wisconsin Department of Industry, Labor and Human Relations.

COMMUNITY ASSISTANCE PLANNING DIVISION

DIVISION FUNCTIONS

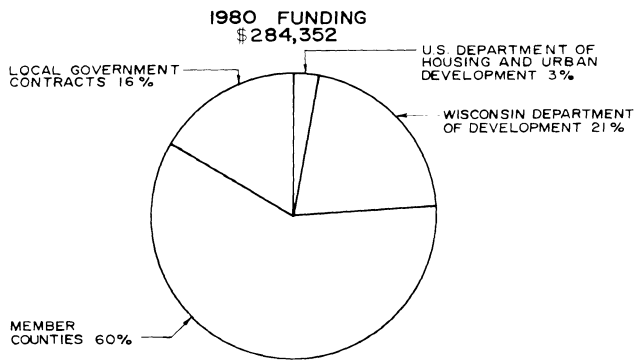
The Community Assistance Planning Division has primary responsibility for assisting local units of government in the Region in local planning efforts, thereby promoting coordination of local and regional plans and plan implementation actions. The Division provides five basic types of services: educational, advisory, review, project planning, and resident planning. The Division staff is also responsible for the conduct, on request, of urban district planning programs.

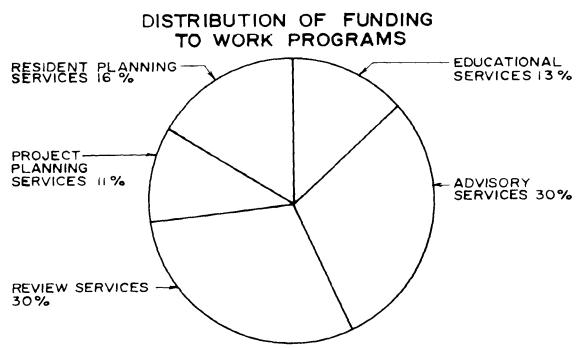
EDUCATIONAL SERVICES

Educational services are provided 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 1980, educational efforts included the following:

Figure 61

COMMUNITY ASSISTANCE PLANNING DIVISION





- Presentations on the general scope of the work of the Commission and on the details of specific work programs to local governmental, civic, and professional groups, such as the Washington County Board of Realtors, classes at the University of Wisconsin-Whitewater, and the Plan Commissions of the Towns of Somers and Summit and the Villages of Eagle and Slinger.

- Participation in discussions on the status of planning at the annual conference of the Wisconsin Chapter of the American Planning Association, and conduct of a bus tour to observe development problems and opportunities in southeastern Wisconsin.

- Participation in a two-day seminar entitled, "Planning and Zoning for Community Growth Management" at the University of Wisconsin-Madison.

- Conduct of the Commission's 1980 Regional Planning Conference on the process for refining sanitary sewer service areas. This process was also reviewed at the annual conference of the Americal Planning Association, Wisconsin Chapter, and before the West Bend Builders Association.

- Presentation of a wetland short course at the annual conference of the National Wildlife Foundation and before a class at the University of Wisconsin-Milwaukee. Commission staff also conducted a wetland classification tour for the Wisconsin Audubon Society.

- Preparation of six Commission newsletters discussing Commission planning programs and related activities. The newsletters are distributed to about 2,500 interested individuals and agencies. Major topics addressed included: the recommended regional air

quality management plan, the Waukesha transit development program, large-scale topographic mapping efforts in the Village of Slinger and in Kenosha County, the Municipality of East Troy railroad rehabilitation project, the neighborhood and community land use plans for the City of Franklin and the Villages of Germantown and Fredonia, the park and open space plans for the City of Kenosha and the Village and Town of Pewaukee, the recommended Oconomowoc area traffic management plan, and the new members appointed to the Commission.

- Preparation and distribution to newspapers and radio and television stations of seven news releases during the year pertaining to Commission work activities. The topics addressed were: the Commission's annual conference which addressed implementation of the southeastern Wisconsin areawide water quality management plan; an informational meeting on the Pike River watershed study; the conduct of a City of Kenosha bus ridership survey; the conduct of a City of Racine bus ridership survey; the major findings and recommendations of the Commission's air quality plan, and an announcement of a public informational meeting and public hearing on the plan; a series of meetings held on possible public transit improvements and system expansion in Waukesha County; and an informational meeting held for the purpose of setting priorities for water pollution abatement planning.

- Preparation of the Commission's 1979 Annual Report.

ADVISORY SERVICES

Advisory services consist of the provision of basic planning and engineering data available in the Commission 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 1980 include:

- Provision of technical data to federal flood insurance study contractors and provision of assistance to municipal officials in the review of federal flood insurance study proposals for the Cities of Delafield, Franklin, Glendale, Kenosha, Milwaukee, Muskego, Port Washington, West Allis, West Bend, and Whitewater, the Villages of Elm Grove, Germantown, Hartland, Pewaukee, and Twin Lakes, and the unincorporated areas of Kenosha, Racine, and Washington Counties.

- Provision of data and advice concerning the interpretation of floodland limits to the Cities of Brookfield, Kenosha, Oak Creek, Racine, and Wauwatosa, the Villages of Saukville and Sussex, the Town of Caledonia, and the Counties of Ozaukee and Racine.

- Provision of technical data and advice concerning proposed bridge construction or replacement to the U. S. Coast Guard, the City of Waukesha, the Town of Mukwonago, and Milwaukee County.

- Provision of data and advice concerning the proposed filling of wetlands to the Cities of Brookfield and Franklin and the Villages of Elm Grove and Lac La Belle.

- Provision of advice to the City of Burlington concerning the proposed relocation of a retaining wall along Bridge Street and the Fox River.

- Conduct of traffic engineering analyses and provision of advice to the Village of Elm Grove for the improvement of the Pilgrim Parkway-Blue Mound Road intersection.

- Conduct of a wetlands inventory in a portion of the northwest side of the City of Milwaukee.

- Provision of information to the Village of Mukwonago on the probable future traffic volumes on CTH NN as a result of proposed school construction.

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 to prevent unnecessary duplication of planning efforts, and to coordinate and encourage regional plan implementation. Five basic types of review services are performed: review of local plans, plan implementation devices, and development proposals;

review of federal and state grant applications under the U. S. Office of Management and Budget Circular A-95; review of environmental impact statements, reports, and assessments; review of flood hazards affecting individual properties; and review of applications for state income tax credit eligibility under the Wisconsin Farmland Preservation Act.

The following represent typical review services completed in 1980 by the Commission in the first review category:

- Review of and comment on 26 preliminary subdivision plats at the request of Kenosha and Walworth Counties, the Cities of Brookfield, Franklin, Hartford, and Waukesha, and the Town of Brookfield.

- Review of and comment on various land use, transportation, and health plans at the request of local units of governments and other public bodies. Examples of such plan reviews include: comments on a plan for the development of Milwaukee's northwest side for the City of Milwaukee; comment on a Long-Range Resource Conservation Program for Kenosha County; comment on a Solid Waste Management Plan for Washington and Waukesha Counties; comments on the Policies and Procedures for Development of a Health Systems Plan and Annual Implementation Plan for the Southeastern Wisconsin Health Systems Agency; comment on the State Health Plan for the Wisconsin Health Policy Council; and comment on the CATS Year 2000 Transportation Development Plan for the Chicago Area Transportation Study.

- Review of and comment on one proposed airport and one proposed heliport site location at the request of the Wisconsin Department of Transportation.

- Review of and comment zoning ordinances, land division ordinances, and other codes for local units of government and other public bodies. Examples of ordinances and codes reviewed include: a grading permit procedure for the City of Waukesha; revision of Section H62.20 of the Wisconsin Administrative Code for the Wisconsin Department of Health and Social Services; proposed harbor assistance program rules for the Wisconsin Department of Transportation; model local zoning provisions for regulating bikeways and bicycle racks for the Wisconsin Department of Transportation; and a model manufactured housing ordinance for the Wisconsin Manufactured Housing Association.

- Review of and comment on nine applications for U. S. Department of the Army Section 404 permits required for placement of fill in wetlands. These applications were for proposed filling or shoreland improvement projects in the City of Milwaukee, the Villages of Jackson and Whitefish Bay, the Towns of Delavan and Mt. Pleasant, and Kenosha and Racine Counties.

Division activities regarding the review of federal and state grant applications are summarized in Table 30. In total, review comments were provided for 502 applications for federal and state grants, loans, or mortgage insurance guarantees requesting in the aggregate more than $652 million in financial assistance. Of the total 502 requests, 166 totaling $113,368,067 were found to be in conformance with and serving to implement the adopted regional plan elements; 333 totaling $537,729,325 were found to be not in conflict with the adopted regional plan elements; and 3 totaling $914,857 were found to be in conflict with the regional plan elements. The projects in conflict with adopted regional plan elements included two trunk sewer extensions by the Milwaukee Metropolitan Sewerage District (MMSD). In these instances, the conflicts were related to jurisdiction and not function. The third project found to be in conflict with adopted regional plans was a housing project in the City of Waukesha, which was found to encroach upon the wetland component of a delineated primary environmental corridor. This conflict was subsequently resolved through redesign of the project.

Division activities regarding the review of environmental impact statements, reports, and assessments are summarized in Table 31. In reviewing environmental impact statements, comments are provided by the Commission relating the projects and the data contained in the statements to the adopted regional plans.

Flood hazard reviews of residential properties are requested by realtors and lending institutions. During 1980 the Division staff conducted a total of 146 flood hazard reviews, as shown distributed by county in Table 32.

Table 30

A-95 REVIEWS: 1980

Review Category	Number of Reviews	Aggregate Amount of Federal and/or State Grant, Loan, or Mortgage Insurance Requests
Air Quality	2	$ 4,744,997
Community Action—Social Services	178	433,577,995
Community Development Block Grants	40	43,899,521
Community Facilities	10	3,793,724
Natural Resource Conservation	28	18,712,710
Historic Preservation	2	558,612
Housing	30	46,607,827
Park and Open Space	32	7,998,037
Law Enforcement	91	14,274,211
Sanitary Sewerage	35	36,196,655
Solid Waste	2	66,377
Transportation	49	38,778,216
Water Supply	3	2,803,266
Total	502	$652,012,249

Table 31

ENVIRONMENTAL IMPACT STATEMENT AND PRELIMINARY ENVIRONMENTAL REPORT REVIEWS: 1980

Document Received	Requesting Agency
Environmental Impact Statement for Small Power Production and Cogeneration Facilities	Federal Energy Regulatory Commission
Water Conservation Assessment and Accompanying Environmental Impact Statement	Great Lakes Basin Commission
Preliminary Environmental Report for District State Office Building in the City of Waukesha	Wisconsin Department of Administration, Division of State Facilities Management

The final type of review service performed by the Division is the review of applications for farmland tax credit eligibility. The Division locates each farm proposed to be preserved to determine whether the lands involved have been delineated on the regional land use plan as "prime agricultural lands." During 1980, the Division reviewed 29 applications for farmland preservation contracts, which would result in the preservation of an additional 3,443 acres of farmland in southeastern Wisconsin. The distribution of farmland preservation applicants is shown in Table 33. The total acreage qualified for participation in the Farmland Preservation Program is shown in Table 2 on page 20 of this report.

PROJECT PLANNING SERVICES

Project planning services involve the conduct, at cost, for local units of government of detailed planning studies resulting in the preparation of local plans and plan implementation devices. The following is a list of examples of project planning efforts conducted during 1980:

Table 32

FLOOD HAZARD REVIEWS: 1980

County	Number of Reviews
Kenosha	7
Milwaukee	49
Ozaukee	15
Racine	10
Walworth	4
Washington	2
Waukesha	59
Total	146

Table 33

FARMLAND PRESERVATION REVIEWS: 1980

County	Number of Applications
Kenosha	9
Milwaukee	3
Ozaukee	4
Racine	7
Walworth	--[a]
Washington	4[a]
Waukesha	2
Total	29

[a] *Exclusive agricultural zoning districts have been adopted in Walworth County and in the Washington County Towns of Barton and Trenton. These zoning regulations have been approved by the Wisconsin Department of Agriculture, Trade and Consumer Protection. Accordingly, farmers in these areas whose land is zoned for agricultural use are automatically eligible for tax credits. A total of 560 farmers in Walworth County received such credits in 1980. Five farmers received credits in the Town of Barton and 10 farmers received credits in the Town of Trenton in 1980. These farms are not reviewed on a case-by-case basis by SEWRPC.*

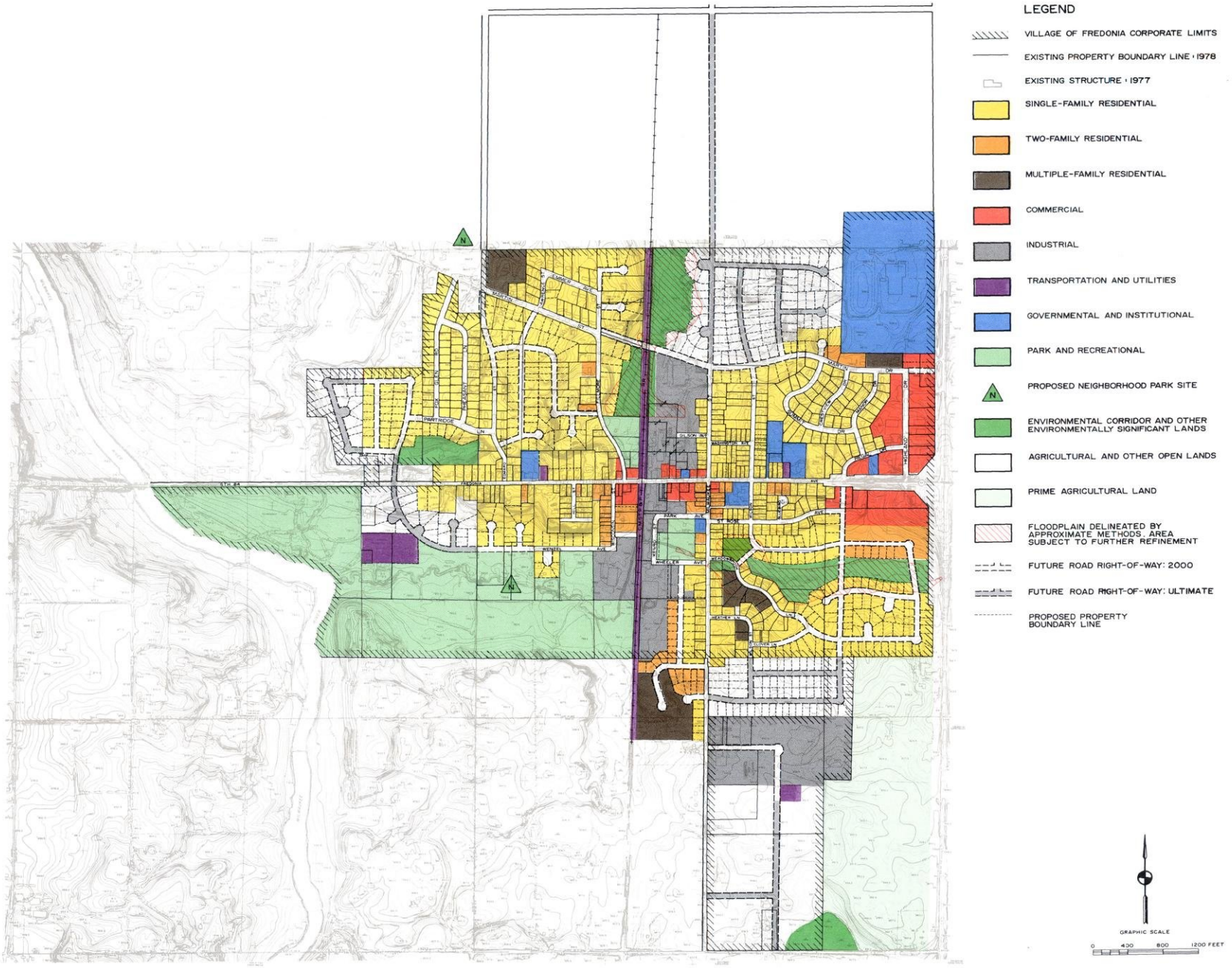
- Preparation of a land use plan for the Village of Germantown. The plan is set forth in SEWRPC Community Assistance Planning Report No. 36, A Land Use Plan for the Village of Germantown: 2000, Village of Germantown, Washington County, Wisconsin. The plan presents two alternative land use plans intended to meet the population needs of the Village to the design year 2000. The plan seeks to refine, detail, and implement the adopted regional land use plan, and, in particular, to refine the delineation of prime agricultural lands and primary and secondary environmental corridors in the Village.

- Preparation of a land use plan for the Village of Fredonia and environs, together with accompanying zoning, land subdivision, and official mapping recommendations. The plan is set forth in SEWRPC Community Assistance Report No. 38, A Land Use and Traffic Circulation Plan for the Village of Fredonia: 2000, Ozaukee County, Wisconsin. The plan, which is summarized on Map 42, seeks to refine, detail, and implement the adopted regional land use plan. The plan also presents a future street system plan and suggested subdivision layouts to accommodate the 1,300-person population increase anticipated by the plan design year. To assure that the future street locations will be protected from encroachment by urban development, an official map was prepared showing, and thereby reserving, the location and width of the planned future streets (see Map 43).

- Preparation of a precise neighborhood unit development plan for the Woodview Neighborhood in the City of Franklin. Such plans are viewed by the Commission as an important means of guiding and shaping urban land use development and redevelopment in the public interest at the local level. The Woodview plan is documented in SEWRPC Community Assistance Planning Report No. 43, A Development Plan for the Woodview Neighborhood, City of Franklin, Milwaukee County, Wisconsin. Neighborhood plans, such as the Woodview plan, suggest future collector and land access street alignments and attendant block configurations, as well as locations within the neighborhood considered to be best suited for institutional, recreational, and commercial uses and for various kinds of residential uses. Such plans recommend areas that should be protected from intensive development for environmental reasons, and indicate the need to reserve land for major drainageways and utility easements.

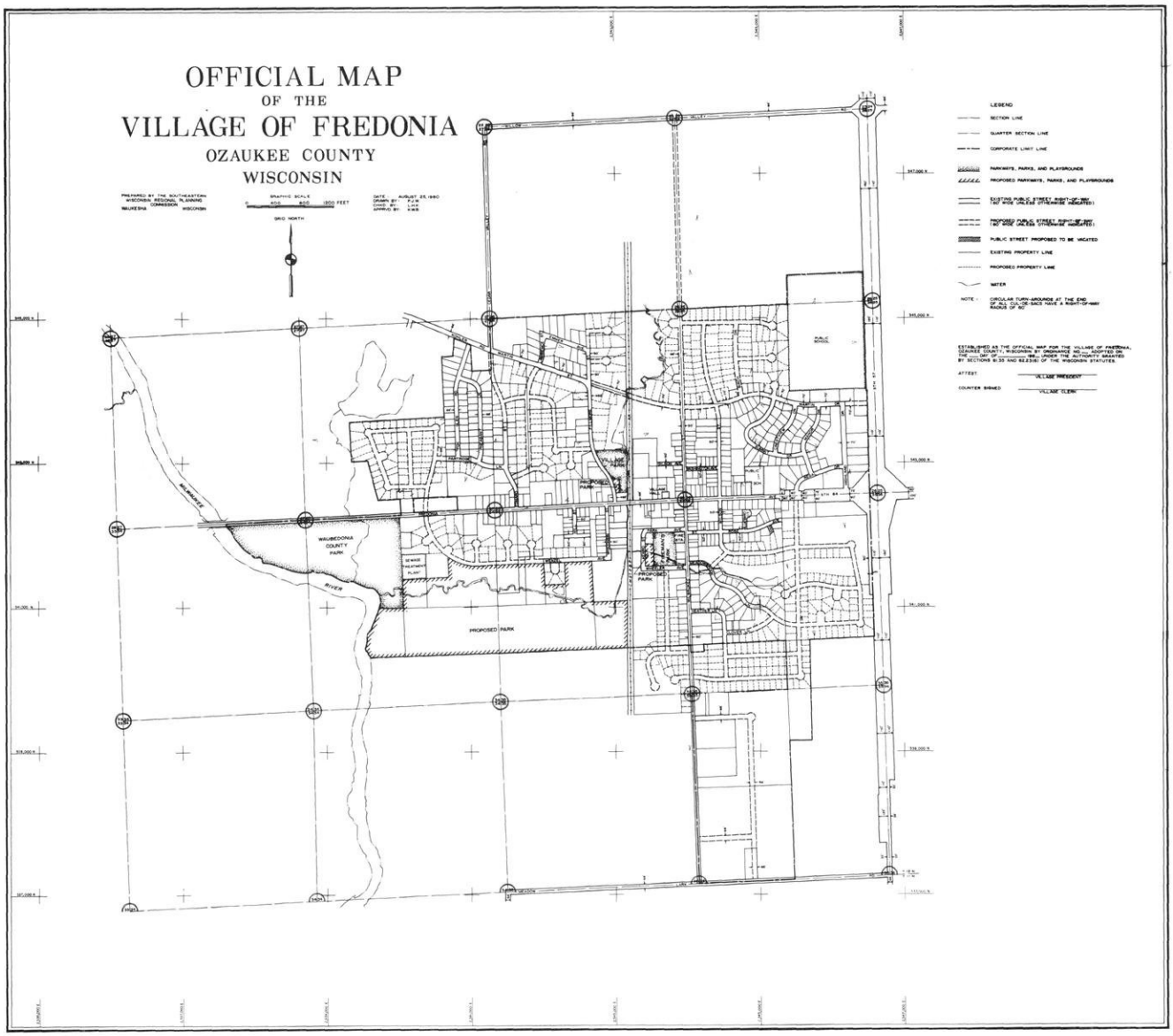
Map 42

RECOMMENDED LAND USE PLAN FOR THE VILLAGE OF FREDONIA, OZAUKEE COUNTY: 2000



Map 43

OFFICIAL MAP OF THE VILLAGE OF FREDONIA

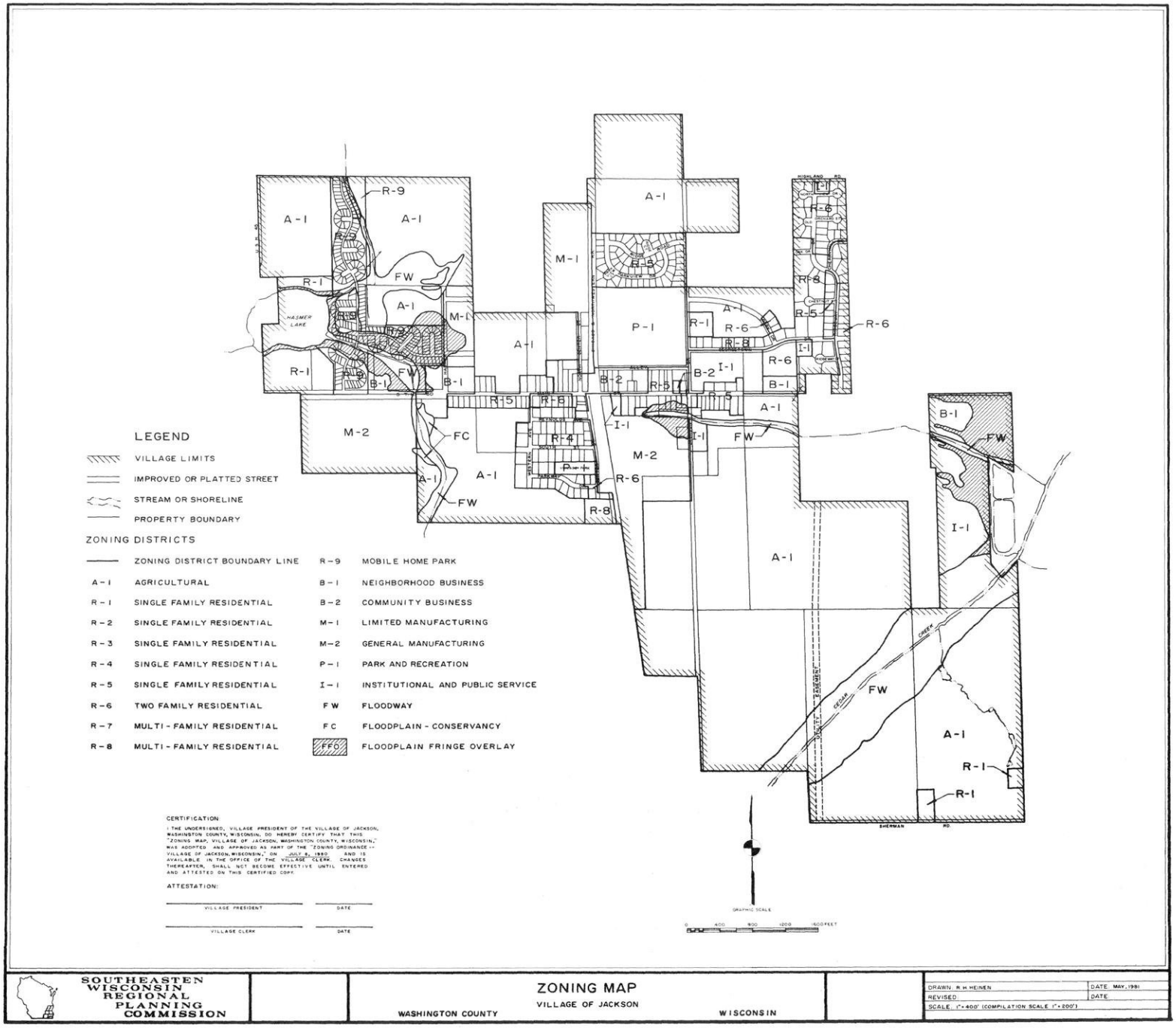


- Completion of zoning ordinances and accompanying zoning district maps for the City of Cedarburg and the Village of Jackson. These ordinances were adopted in 1980 and each seek, to carry out the land use and floodland management recommendations contained in adopted Commission plans. The Village of Jackson zoning map is presented as Map 44.

- Completion of a revised "Supplementary Floodland Zoning Map" for the Village of Silver Lake. This map was originally prepared by the Commission staff in 1971 based on floodplain information developed in the Commission's comprehensive study of the Fox River watershed. The map was redrafted in 1980 to reflect additional floodplain data developed in the preparation of the Flood Insurance Study, Village of Silver Lake, Wisconsin, conducted by the Federal Emergency Management Agency and additional large-scale topographic mapping prepared for the Commission under the areawide water quality planning program.

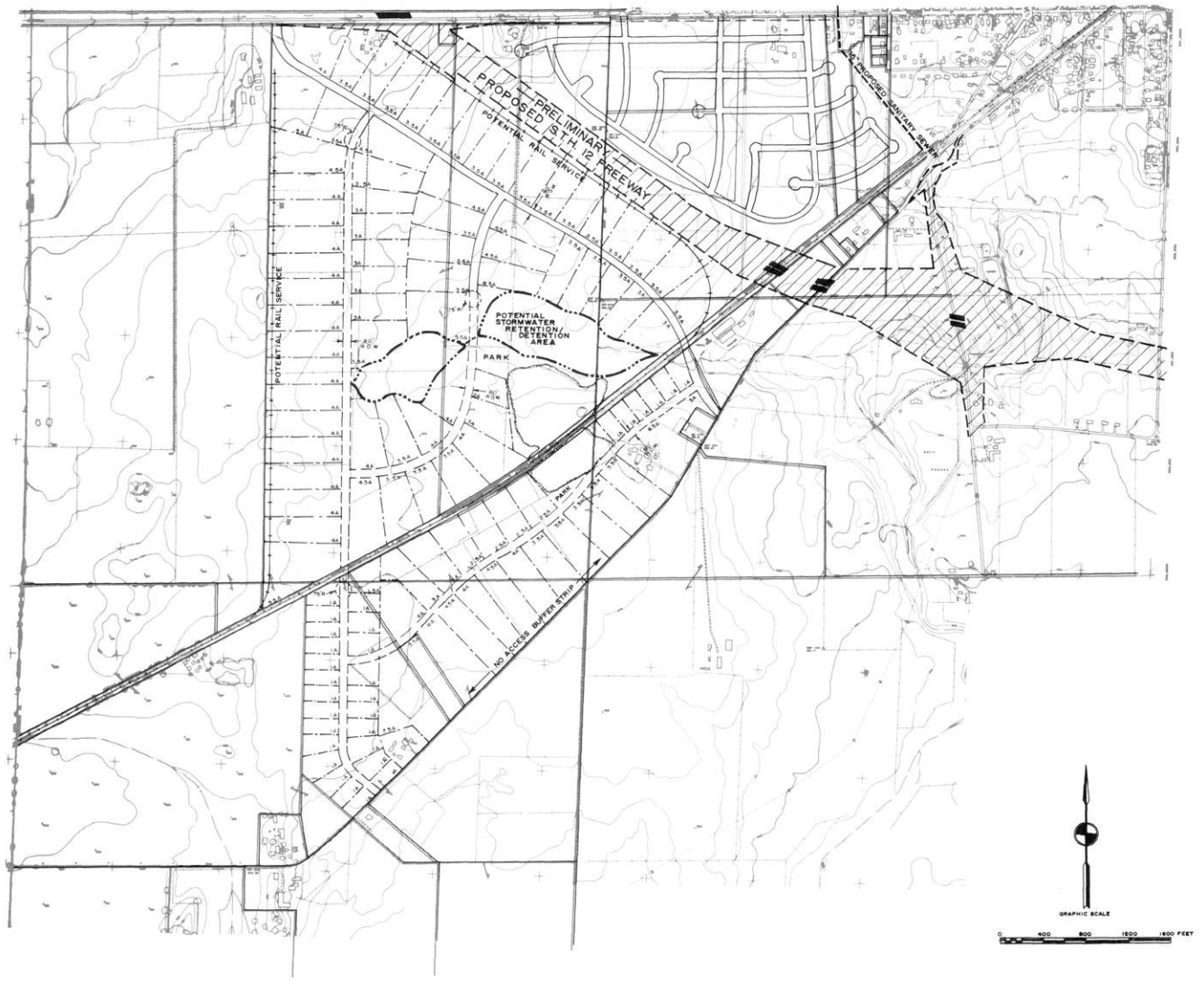
Map 44

VILLAGE OF JACKSON ZONING MAP



Map 45

CITY OF WHITEWATER INDUSTRIAL PARK DESIGN



- Preparation of a number of ad hoc planning studies to address special planning problems. These studies included the design and analysis of industrial park sites in the City of Whitewater and the Village of Williams Bay; the preparation of alternative land use schemes for a subneighborhood in the City of Cudahy that is influenced by the operation of General Mitchell Field airport; and the preparation of alternative land use schemes for land abutting STH 100 in the City of Greenfield. These ad hoc studies were documented in Community Assistance planning staff memoranda. One of the alternative industrial park schemes for the City of Whitewater is shown on Map 45.

RESIDENT PLANNING SERVICES

The Commission provides part-time resident staff assistance, on request, to local units of government. This type of assistance involves a commitment by the Commission staff to attend all local

plan commission meetings and to provide such local planning recommendations as may be requested from time to time. The Commission views such assistance as an interim step to eventual attainment of local full-time planning staffs.

During 1980 resident planning assistance was provided on a contractual basis to the Cities of Burlington, Cedarburg, Delavan, and Franklin, and to the Villages of Germantown and Sussex. Collectively, these services required Division staff attendance and participation at a total of 72 plan commission, village board, and city council meetings. In addition to attending meetings, the Commission staff maintained office hours in the city halls of two cities: the City of Delavan and the City of Franklin. During 1980 the Commission staff maintained such office hours for 21 working days at the City of Delavan City Hall and 83 working days at the City of Franklin City Hall. Where the volume of hours warrants such staff assignment, the placement of Commission staff in municipal buildings provides an effective and convenient way for local public officials and individual citizens to meet with Commission staff members and discuss development problems.

DISTRICT PLANNING SERVICES

The Commission has encouraged the creation of subregional districts to conduct comprehensive community planning programs. In past years, such programs were completed for two urban development-oriented districts—the Kenosha Planning District, consisting of the City of Kenosha and the Towns of Pleasant Prairie and Somers, and the Racine Urban Planning District, consisting of the City of Racine, the Villages of Elmwood Park, North Bay, Sturtevant, and Wind Point, and the Towns of Caledonia and Mt. Pleasant. Comprehensive community development plans for these districts have been formally adopted by the Commission.

The Kenosha Planning District comprehensive plan was completed in 1967. Late in 1979, the City of Kenosha asked the Commission to assist it in reviewing, updating, and extending the previously adopted plan. Accordingly, the advisory committee for the Kenosha Planning District was reactivated in 1980. The Commission staff has assumed a liaison role to the Committee and to the City of Kenosha staff as they update the plan, and is providing data and technical support for the work.

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 are not only 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 and mid-decade census years. 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. Finally, a major Division function involves final report production, including editing, type composition, proofreading, illustration preparation, offset printing, and binding.

BASE MAPPING

During 1980, the Division staff updated the Commission county planning base maps in the 1" = 2000' scale series using Wisconsin Department of Transportation state aid mileage summary maps. The updating effort included the making of changes in civil division corporate limit lines to reflect recent annexations and incorporations.

AERIAL PHOTOGRAPHY

In 1980 the Commission had new aerial photographs of the 2,689-square-mile Southeastern Wisconsin Region prepared. The Commission first obtained aerial photographs in 1963 and periodically thereafter in 1967, 1970, and 1975. The new 1980 aerial photographs are available in two scales. Large-scale photographs are available at a scale of 1" = 400', each photograph covering four U. S. Public Land Survey Sections, or four square miles, and being centered over the common section corner. Small-scale photographs are available at a scale of 1" = 2000', each photograph covering an entire 36-square-mile U. S. Public Land Survey township. The new photography was taken in April and May of 1980 after the Region was free of snow cover but before the trees had leafed out. All physical features of the land and cityscape, such as roads, buildings, structures, streams and watercourses, wetland and woodland areas, and other land lines and land forms, are clearly visible on the photographs.

The photographs are ratioed and rectified to Commission control survey data so that, with the exception of minor displacement due to relief, the photographs are true to scale and, in effect, constitute "maps" on which distances and areas can be measured to an accuracy of plus or minus 5 percent. The photographs provide the primary source of data for the necessary updating of all Commission base maps, of all Commission existing land use information, and of certain Commission natural resource base inventories, such as inventories of wetlands, woodlands, and wildlife habitat. Since the 1963, 1967, 1970, and 1975 aerial photographs were produced to similar specifications, a direct, accurate comparison of development in any subarea of the Region at five points in time can be readily made (see Figure 62). Thus, the new photographs will be extremely useful to the Commission as it performs its continuing function of planning for, and monitoring the growth and development of, the Region.

As in past years, the current aerial photography should prove to be extremely useful to the local units of government, to private enterprise, and to many individuals throughout the Region. The Commission has sold over 30,000 prints of the 1975 aerial photographs of the Region since they became available five years ago, and over 67,000 prints of its 1963, 1967, and 1970 photographs

Figure 62

TYPICAL AERIAL PHOTOGRAPHS: 1963, 1967, 1970, 1975, AND 1980

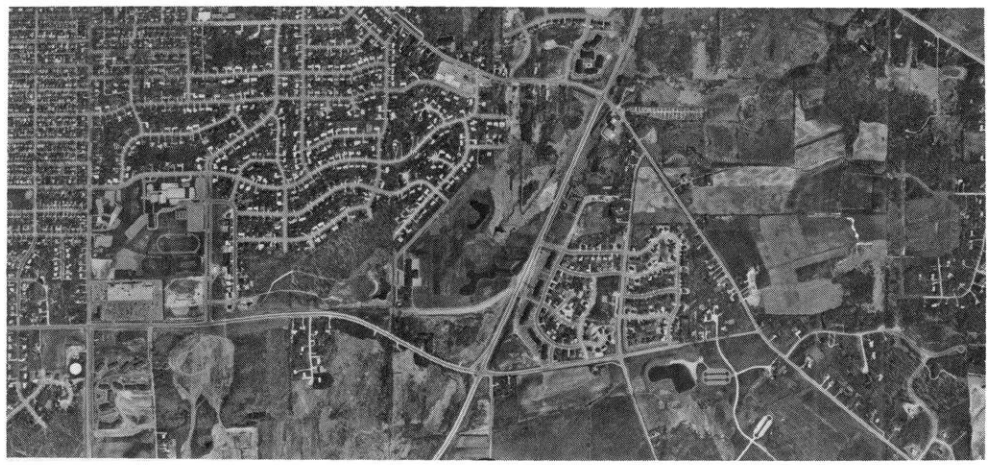
1963

1967

1970

Figure 62 (continued)

1975



1980

One of the primary uses of the large-scale aerial photograph enlargements is to record land use changes on a uniform basis in the Region over time. The above photographs illustrate how significant these changes can be as an urbanizing area expands over even a relatively short period of time. In the areas shown, a portion of the City of Waukesha, many significant changes can be seen to have taken place since 1963, including the development of a new circumferential highway, a new public school, and a new regional park, significant retail and service land use development, and the development of many new residential land subdivisions. High-quality, controlled, aerial photographs, such as these, enable land uses to be efficiently identified and accurate measurements made of the area devoted to the various uses, thus permitting the quantification of changes in land use over time.

combined. Orders for such photographs have come from all sections of the Region and from all sectors of the economy. Local units of government have used the photos to update local base maps and to prepare detailed land use and zoning district maps, and in the review of subdivision plats and annexation petitions. Many communities have prepared a mosaic of the aerial photographs covering the area within their corporate limits and surrounding environs to provide a convenient reference during council, board, or committee meetings. Private individuals have also extensively utilized Commission aerial photographs. In particular, those individuals concerned with building and land development have used the photos for investigations, site selection, and preliminary site design. Commercial and industrial firms have used the photos as an aid in selecting sites for such facilities as supermarkets, gasoline stations, and department stores. Other users of the photos include utility companies and sand and gravel mining companies.

TOPOGRAPHIC MAPPING AND SURVEY CONTROL

The Commission prepares and encourages local units of government in the Region to prepare 1" = 100' scale and 1" = 200' scale, 2' 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 many of 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 such control survey data throughout the Region.

Map 46 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 63 and Table 34, this area totals 1,033 square miles, or over 38 percent of the total area of the Region. A total of 5,678 U. S. Public Land Survey corners in the Region have been or are being relocated, monumented, and coordinated, representing over 48 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 nearly 400 inquiries for such data during 1980 alone.

REPRODUCTION SERVICES

In addition to serving all other Commission divisions through in-house reproduction of draft reports and letters, the Division provided reproduction services for local units of government and private interests. About 5,205 prints of aerial photographs of portions of the Region were reproduced, along with nearly 163 soil map prints and about 983 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 1980 the Division had responsibility for production of the following Commission publications:

PROSPECTUSES

- Overall Work Program—1981 Southeastern Wisconsin Regional Planning Commission, November 1980, 428 pages.

PLANNING REPORTS

- No. 28, A Regional Air Quality Attainment and Maintenance Plan for Southeastern Wisconsin: 2000, June 1980, 781 pages.

ANNUAL REPORTS

- 1979 Annual Report, July 1980, 190 pages.

TECHNICAL REPORTS

- No. 19, A Regional Population Projection Model, October 1980, 82 pages.
- No. 23, Transit-Related Socioeconomic, Land Use, and Transportation Conditions and Trends in the Milwaukee Area, December 1980, 407 pages.
- No. 25, Alternative Futures for Southeastern Wisconsin, December 1980, 149 pages.

Map 46

LARGE-SCALE TOPOGRAPHIC MAPPING AND RELOCATION, MONUMENTATION, AND COORDINATION OF U. S. PUBLIC LAND SURVEY CORNERS: 1980

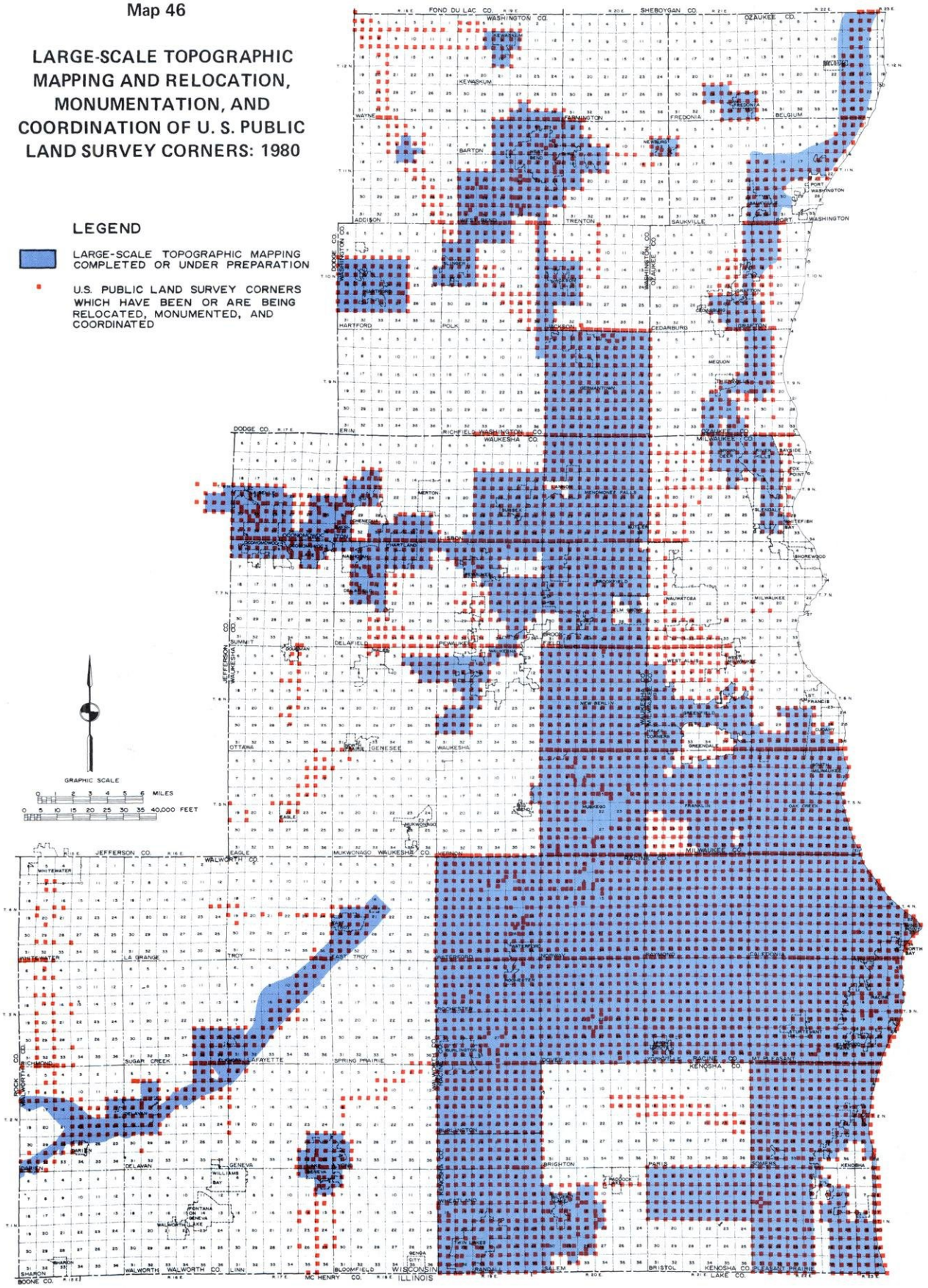
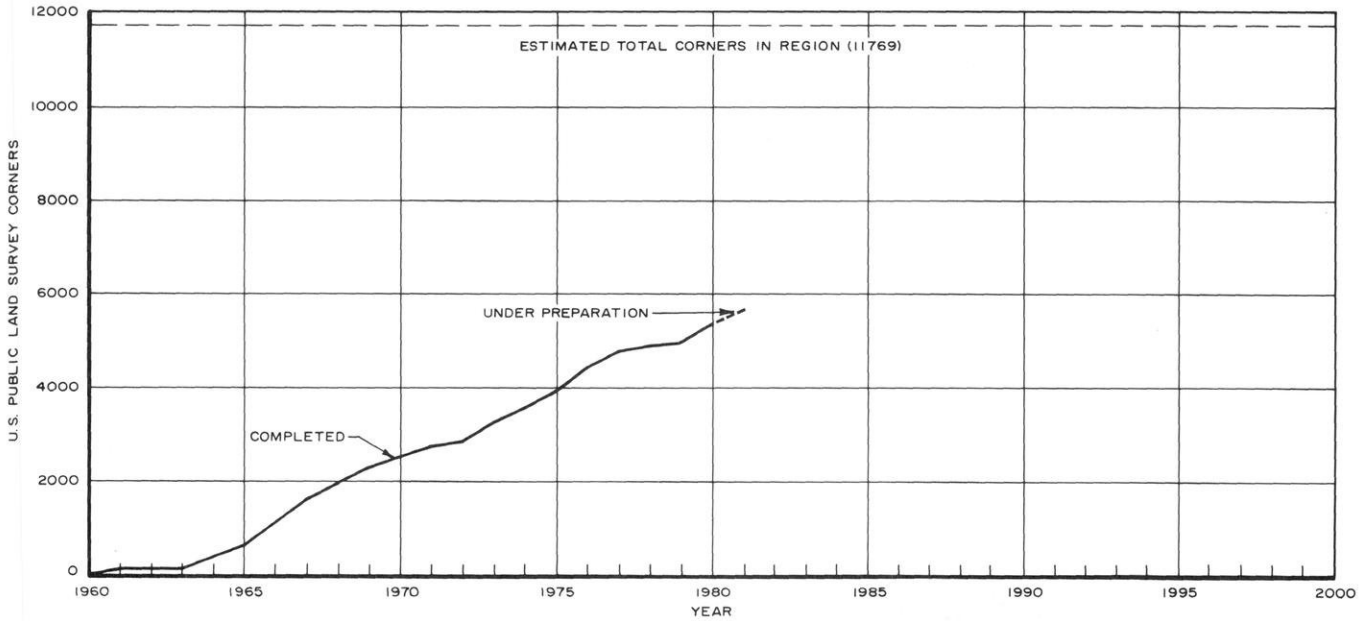
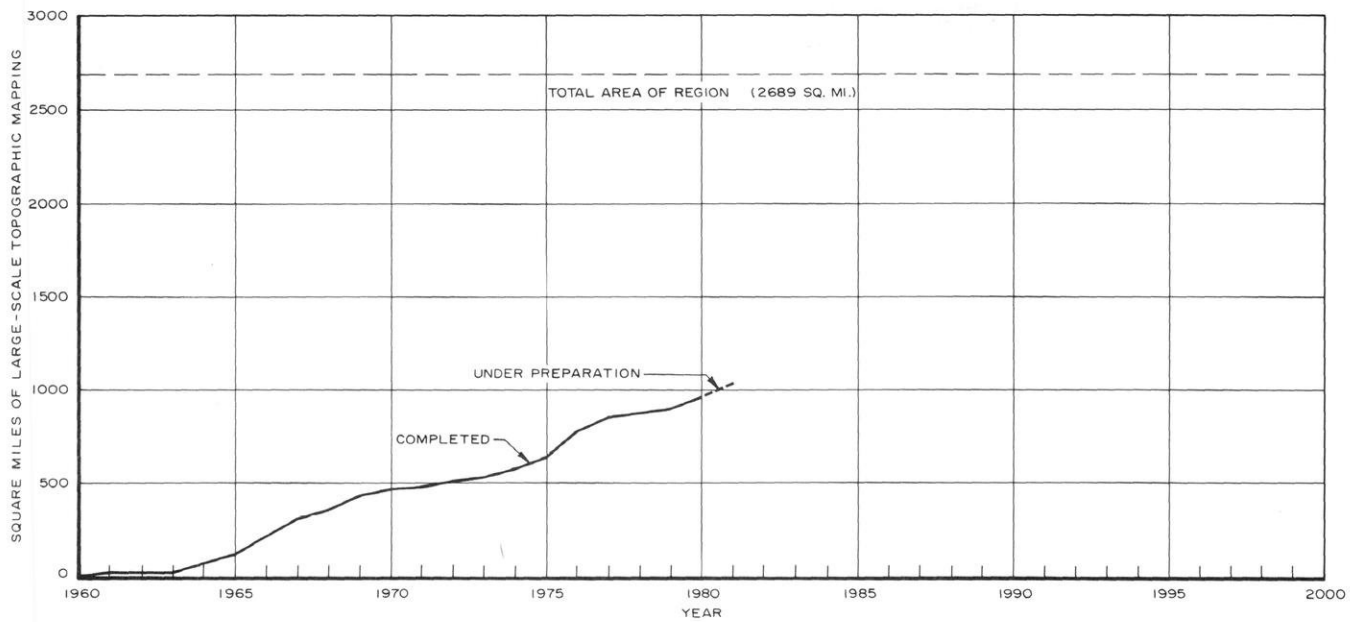


Figure 63

STATUS OF U. S. PUBLIC LAND SURVEY SECTION AND QUARTER SECTION CORNER RELOCATION, MONUMENTATION, AND COORDINATION AND LARGE-SCALE TOPOGRAPHIC MAPPING IN THE REGION: 1960-1981





COMMUNITY ASSISTANCE PLANNING REPORTS

- No. 31, Waukesha Area Transit Development Program: 1981-1985, February 1980, 152 pages.
- No. 36, A Land Use Plan for the Village of Germantown: 2000, Village of Germantown, Washington County, Wisconsin, July 1980, 87 pages.

TYPICAL SEWRPC MONUMENT

Table 34

LARGE-SCALE TOPOGRAPHIC MAPPING AND RELOCATION, MONUMENTATION, AND COORDINATION OF U. S. PUBLIC LAND SURVEY CORNERS: 1980

County	Total Area (square miles)	Area (square miles) of Large-Scale Topographic Mapping Completed or Under Preparation				
		Wisconsin Department of Transportation	SEWRPC	Local	Total	Percent
Kenosha	278	--	27.75	124.00	151.75	54.59
Milwaukee . . .	242	--	18.50	79.75	98.25	40.60
Ozaukee	234	26.75	24.25	2.00	53.00	22.65
Racine.	340	--	25.50	314.50	340.00	100.00
Walworth. . . .	578	30.25	--	24.00	54.25	9.39
Washington . .	436	1.50	22.75	83.75	108.00	24.77
Waukesha. . . .	581	1.25	78.75	147.50	227.50	39.16
Region	2,689	59.75	197.50	775.50	1,032.75	38.41

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	Local	Total	Percent
Kenosha	1,183	55	173	573	801	67.71
Milwaukee . . .	1,084	71	75	501	647	59.69
Ozaukee	1,070	104	175	21	300	28.04
Racine.	1,523	--	172	1,351	1,523	100.00
Walworth. . . .	2,521	266	--	125	391	15.51
Washington . .	1,811	127	153	450	730	40.31
Waukesha. . . .	2,577	109	485	692	1,286	49.90
Region	11,769	732	1,233	3,713	5,678	48.25

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.

- No. 37, A Nonpoint Source Water Pollution Control Plan for the Root River Watershed, March 1980, 105 pages.
- No. 38, A Land Use and Traffic Circulation Plan for the Village of Fredonia: 2000, Ozaukee County, Wisconsin, September 1980, 99 pages.
- No. 39, A Public Transit System Accessibility Plan, Volume One, Kenosha Urbanized Area, June 1980, 166 pages.
- No. 39, A Public Transit System Accessibility Plan, Volume Two, Milwaukee Urbanized Area, Milwaukee County, May 1980, 314 pages.
- No. 39, A Public Transit System Accessibility Plan, Volume Three, Racine Urbanized Area, June 1980, 121 pages.
- No. 39, A Public Transit System Accessibility Plan, Volume Four, Milwaukee Urbanized Area, Waukesha County, June 1980, 121 pages.

- No. 40, Recommended Locations for Motor Vehicle Inspection and Emissions Test Facilities in the Southeastern Wisconsin Region, October 1980, 38 pages.
- No. 42, A Park and Open Space Plan for the Town and Village of Pewaukee, Waukesha County, Wisconsin, October 1980, 108 pages.
- No. 43, A Development Plan for the Woodview Neighborhood, City of Franklin, Milwaukee County, Wisconsin, September 1980, 53 pages.
- No. 44, Proposed Public Transit Service Improvements: 1980, Waukesha County, Wisconsin, July 1980, 92 pages.
- No. 47, A Water Quality Management Plan for Lac La Belle, December 1980, 126 pages.
- No. 52, Housing Opportunities Guide for the Southeastern Wisconsin Region, December 1980, 41 pages.

CONFERENCE AND PUBLIC HEARING PROCEEDINGS

- Proceedings of the Twelfth Regional Planning Conference, Areawide Water Quality Management Plan Implementation, January 31, 1980, 139 pages.
- Minutes of Informational Meeting and Initial Public Hearing, A Comprehensive Plan for the Pike River Watershed, February 7, 1980, 31 pages.
- Minutes of Public Informational Meeting and Public Hearing, A Regional Air Quality Attainment and Maintenance Plan for Southeastern Wisconsin: 2000, May 7, 1980 and May 14, 1980, 89 pages.
- Minutes of Public Hearing, Sanitary Sewer Service Area for the City of West Bend and Environs, Washington County, Wisconsin, August 5, 1980 and August 19, 1980, 378 pages.

NEWSLETTERS

- Volume 20, Nos. 1-6, 222 pages.

OTHER

- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1981-1985, December 1980, 262 pages.

DATA PROCESSING AND SYSTEMS ENGINEERING DIVISION

DIVISION FUNCTIONS

The Commission's Data Processing and Systems Engineering 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 19-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 7,000 reels of magnetic tape, representing approximately 3,000 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 1980 the Commission used an IBM System 370 Model 148 central processing unit. The Model 148 has 2,000,000 bytes of main memory storage and has attached to it five high-speed magnetic tape drives, a 1,200-line-per-minute printer, and 2.5 billion characters of "on-line" high-speed magnetic disk storage. Two IBM 3742 data stations are maintained for entering data into the main computer using magnetic diskettes. Also attached to the system are 26 IBM 3278 display station terminals through which staff engineers, planners, and computer programmers can enter and retrieve data and use computer programs. In addition to the "in-house" terminal equipment, the System 370 Model 148 has attached to it 37 "remote" display stations and printers for use by the 10 local communities to which the Commission provides certain community assistance data processing services.

During 1980 about 140 "internal" requests for data retrieval were processed. The 140 requests represented approximately one-third of the Commission's computer usage during 1980. The other two-thirds was made up of simulation model applications and community assistance data processing services.

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 Data Processing and Systems Engineering 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 where the community delivers data to the Commission to process and the Commission returns appropriate reports and materials to the community. In 1980 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 148 computer via telephone lines. These terminals give the community the power of a large computer system at the price of a small computer.

During 1980 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.

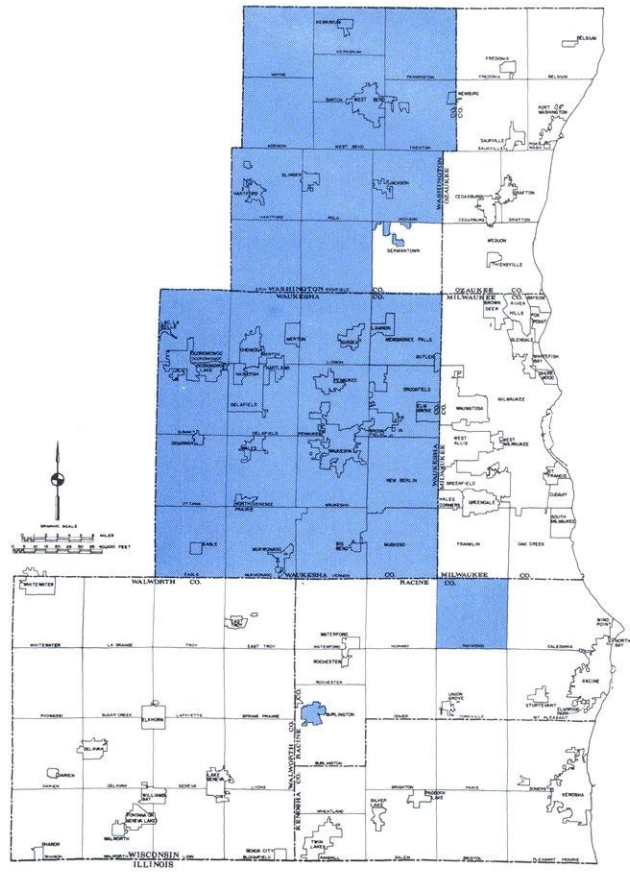
One of the services provided in the "batch" mode is the tax bill processing system, which provides communities with property tax assessment rolls and tax bills. Throughout 1980 these property tax-related services were provided at cost to 59 communities in the Region, as shown on Map 47. Another service provided in the "batch" mode is the payroll processing system, which was provided to 15 school districts and one village in the Region, as shown on Map 48. Map 49 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 one town—the Town of Allenton—and one village—the Village of Kewaskum—in the area of utility billing; to one school district—Waukesha—in the area of school census; and to one county—Racine—in the area of welfare check processing.

In the "on-line" processing mode, the Commission has installed computer terminals in two counties, seven cities, and one village. Map 50 shows the location of the terminals and the applications which were processed from those terminals during 1980.

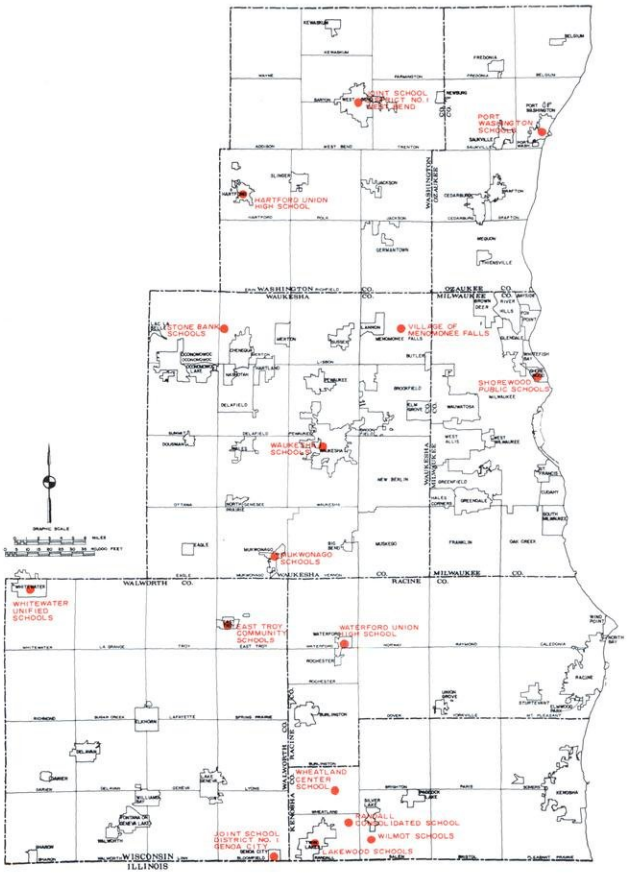
Map 47

LOCAL COMMUNITIES USING SEWRPC FOR PROPERTY TAX DATA PROCESSING



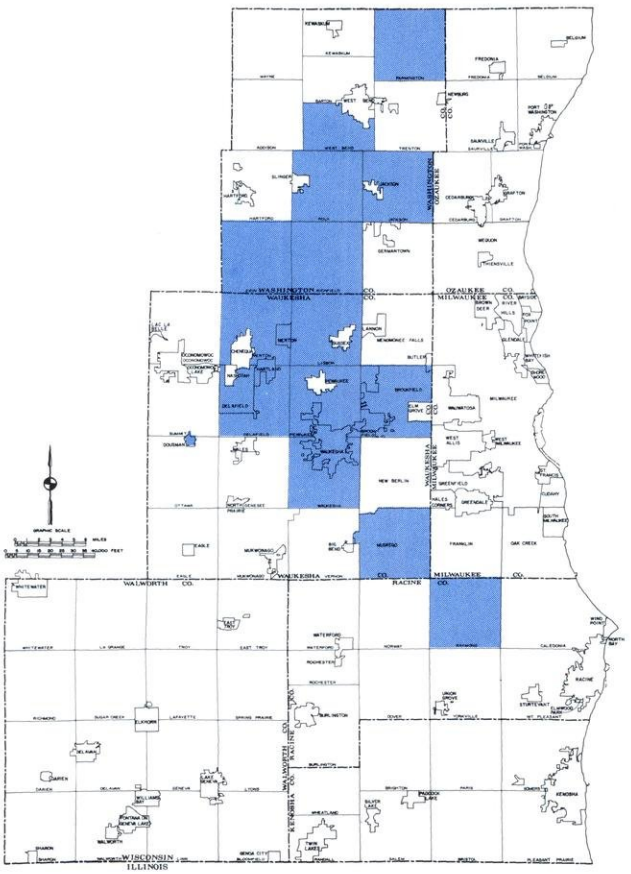
Map 48

SCHOOL DISTRICTS AND LOCAL COMMUNITIES USING SEWRPC FOR PAYROLL DATA PROCESSING



Map 49

LOCAL COMMUNITIES USING SEWRPC FOR VOTER REGISTRATION AND POLL LIST DATA PROCESSING

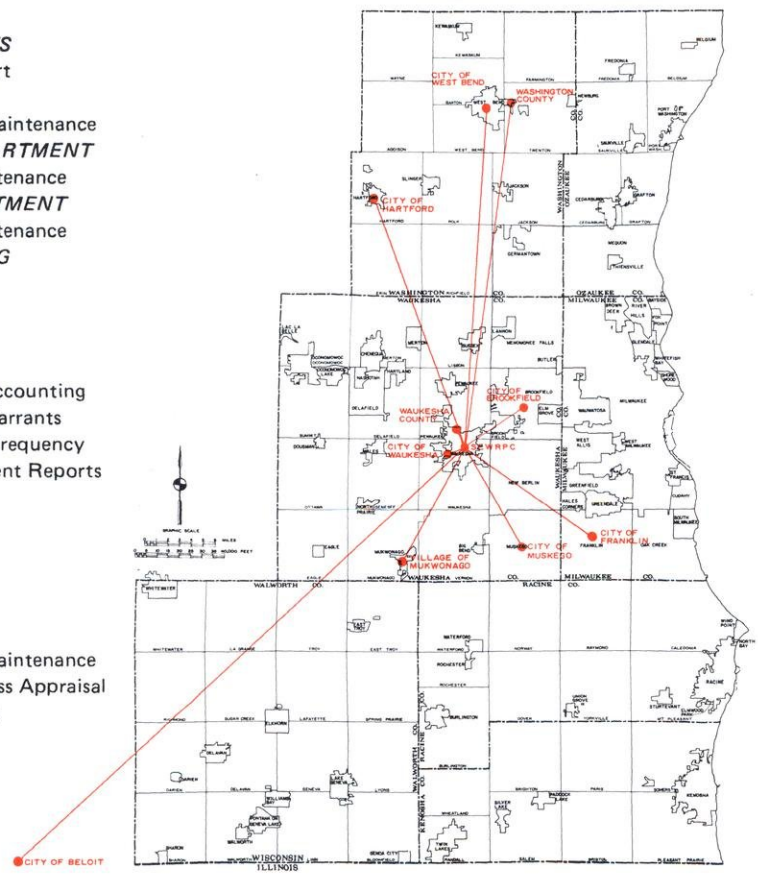


Map 50

LOCAL GOVERNMENT-SEWRPC TELEPROCESSING CONFIGURATION AND APPLICATIONS

WAUKESHA COUNTY
- *CLERK OF COURTS*
  Alimony and Support
- *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
  CETA
  4H

CITY OF BELOIT
- *CITY ASSESSOR*
  Property Tax File Maintenance
  Computer-Aided Mass Appraisal
  Mobile Home Billing



CITY OF WAUKESHA
- *CITY COMPTROLLER*
  Accounts Payable
  Receipts
  General Ledger
  Payroll
  Municipal Bonds
- *CITY ASSESSOR*
  Property Tax File Maintenance
- *CITY CLERK*
  Voter Registration

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

VILLAGE OF MUKWONAGO
- *CLERK*
  Utility Billing and Accounting
  Payroll
  Accounts Payable
  General Ledger
  Receipts

CITY OF FRANKLIN
- *CLERK*
  Budget Processing
  Accounts Payable
  Receipts
  Purchase Orders
  General Ledger

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

CITY OF WEST BEND
- *CITY CLERK*
  Purchase Orders
  Special Tax Assessments
  General Ledger
  Accounts Payable
- *CITY ASSESSOR*
  Property Tax File Maintenance

CITY OF MUSKEGO
- *CITY CLERK*
  Accounts Payable
  Receipts
  General Ledger
  Payroll
  Voter Registration
- *CITY ASSESSOR*
  Property Tax File Maintenance

CITY OF BROOKFIELD
- *CITY COMPTROLLER*
  Receipts
  Payroll
  Accounts Payable
  General Ledger
  Utility Billing
  Payroll
- *CITY POLICE DEPARTMENT*
  Uniform Crime Reporting
  Officer Activity
- *CITY ASSESSOR*
  Property Tax File Maintenance
- *CITY CLERK*
  Voter Registration

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 1980 by maintaining a trust account with a minority-controlled bank within the Commission's service area. In addition, the Commission has established a minority business enterprise program, commencing with the generation of a list of minority 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 1980 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 completion of 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 overall 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. In addition, under the overall work program, the Commission serves as a "pass through" agency to provide federal and state planning monies directly to certain local units of government. For example, transportation planning

funds are provided in this way to the County of Milwaukee. The Division administers these "pass through" funds, which in 1980 totaled $212,000.

PURCHASING AND CLERICAL SUPPORT

Equipment and supplies for all Divisions of the Commission are purchased through the Division. Through this centralized effort, economies are realized through quantity purchasing and uniformity of procurement efforts is maintained. The Division also provides all other Divisions of the Commission with clerical staff support in the typing of reports, in addition to the typing of routine and specialized correspondence.

SALE AND DISTRIBUTION OF PUBLICATIONS

During 1980 the Division distributed a total of 5,278 copies of Commission reports. These included: 251 prospectuses, 6 study designs, 609 planning reports, 11 planning guides, 526 technical reports, 1,984 community assistance planning reports, 29 technical records, 847 annual reports, 443 conference proceedings, 167 community profiles, 74 lake use reports, 134 public hearing minutes, 88 transportation improvement programs, and 75 overall work programs. In addition, the Division distributed 5,205 aerial photographs, 163 soils maps, and 963 maps from the Commission's base map series.

APPENDICES

Appendix A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION COMMISSIONERS AND COMMITTEES: AS OF DECEMBER 31, 1980

COMMISSIONERS

	Term Expires
KENOSHA COUNTY	
***Leon T. Dreger	1982
**Donald E. Mayew	1980
*Francis J. Pitts	1986
MILWAUKEE COUNTY	
***Richard W. Cutler	1984
**Vacant	1980
*Harout O. Sanasarian, Secretary	1978
OZAUKEE COUNTY	
***Thomas H. Buestrin	1982
*Allen F. Bruederle	1984
**Alfred G. Raetz	1984
RACINE COUNTY	
***George C. Berteau, Chairman	1980
*Raymond J. Moyer	1984
**Earl G. Skagen	1982
WALWORTH COUNTY	
**John D. Ames	1984
***Anthony F. Balestrieri, Vice-Chairman	1982
*Harold H. Kolb	1982
WASHINGTON COUNTY	
**Thomas J. Sackett	1984
*Harold F. Ryan	1984
***Frank F. Uttech	1982
WAUKESHA COUNTY	
**William D. Rogan, Treasurer	1986
*Robert F. Hamilton	1982
***Paul G. Vrakas	1986

*County Board-Appointed Commissioners.

**Appointed by the Governor from a County Board-approved list of candidates.

***Appointed by the Governor on his own motion without reference to any County Board-approved list.

COMMITTEES

EXECUTIVE COMMITTEE
George C. Berteau, Chairman
Anthony F. Balestrieri, Vice-Chairman
Richard W. Cutler
Robert F. Hamilton
Raymond J. Moyer
Francis J. Pitts
Alfred G. Raetz
Harold F. Ryan
Harout O. Sanasarian

ADMINISTRATIVE COMMITTEE
Alfred G. Raetz, Chairman
Frank F. Uttech, Vice-Chairman
George C. Berteau
Francis J. Pitts
William D. Rogan

INTERGOVERNMENTAL AND PUBLIC RELATIONS COMMITTEE
Francis J. Pitts, Chairman
Harout O. Sanasarian, Vice-Chairman
William D. Rogan, Treasurer
George C. Berteau
Allen F. Bruederle
Robert F. Hamilton
Harold H. Kolb
Raymond J. Moyer
Harold F. Ryan

PLANNING AND RESEARCH COMMITTEE
Anthony F. Balestrieri, Chairman
Donald E. Mayew, Vice-Chairman
John D. Ames
George C. Berteau
Robert F. Hamilton
Harold H. Kolb
Raymond J. Moyer
Alfred G. Raetz
Harold F. Ryan
Earl G. Skagen

Appendix B

COMMISSION ADVISORY COMMITTEES: 1980

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.

Stanley E. Altenbern (5) . . . . . President, Wisconsin Coach Lines, Inc., Waukesha
Anthony S. Bareta (3) . . . . . Director, Milwaukee County Planning Commission
John M. Bennett (1,4) . . . . . City Engineer, City of Franklin
James J. Blazek (2) . . . . . City Engineer, City of Racine
Richard R. Brandt (1) . . . . . Manager, Energy Requirements, Wisconsin Gas Company, Milwaukee
Robert W. Brannan (2,5,7) . . . . . Deputy Director, Department of Public Works, Milwaukee County
Bruce W. Bullamore (1,2,4,5) . . . . . Director, Department of Community Development, City of Kenosha
Donald M. Cammack (7) . . . . . Chief Planning Engineer, Wisconsin Department of Transportation
Frederick H. Chlupp (1,4) . . . . . Land Use and Park Administrator, Washington County
Arnold L. Clement (1,2) . . . . . Planning Director and Zoning Administrator, Racine County
Lucian M. Darin (2) . . . . . Director of Public Works, City of Hartford
Vencil F. Demshar (2) . . . . . Highway Commissioner, Waukesha County
Russell A. Dimick (2) . . . . . City Engineer, City of Cedarburg
Arthur D. Doll (1) . . . . . Director, Bureau of Planning, Wisconsin Department of Natural Resources
William E. Dow (1,3) . . . . . District Manager, Network Planning, Wisconsin Telephone Company
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
James E. Foley (7) . . . . . Airport Engineer, Department of Public Works, Milwaukee County
John M. Fredrickson (1) . . . . . Village Manager, Village of River Hills
Thomas J. Gaffney (2) . . . . . Traffic Engineer, City of Kenosha
Arne L. Gausmann (1,2) . . . . . Director, Bureau of Systems Planning, Wisconsin Department of Transportation
Norman N. Gill (1) . . . . . Executive Director, Citizens Governmental Research Bureau, Milwaukee
Herbert A. Goetsch (2,4,6) . . . . . Commissioner of Public Works, City of Milwaukee
James J. Gosling (5,7) . . . . . Executive Assistant, Wisconsin Department of Transportation
Lee H. Greenwood (2) . . . . . District General Manager, Central Greyhound Lines, Milwaukee
Gerald G. Griswold (5) . . . . . Town Engineer, Town of Caledonia
George A. Gundersen (2,4) . . . . . Chief of Statewide Planning Section, Division of Planning and Budget, Wisconsin Department of Transportation
Douglas F. Haist (3,5) . . . . . Administrator, Wisconsin Department of Transportation
John M. Hartz (5) . . . . . Director, Bureau of Transit, Wisconsin Department of Transportation
Frank M. Hedgcock (7) . . . . . Director of Planning, City of Waukesha
Sebastian J. Helfer (3) . . . . . Director, Campus Planning and Construction, Marquette University, Milwaukee
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Paul Juhnke (3) . . . . . Vice-President, Urban Affairs, Metropolitan Milwaukee Association of Commerce
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Bal Kale (3) . . . . . Demographer, Wisconsin Department of Administration
Dr. William Katz (3,6) . . . . . Director, Technical Services, Milwaukee Metropolitan Sewerage District
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Kathy Sellars (3,5) . . . . . Planner/Program Developer, Southeastern Wisconsin Area Agency on Aging, Inc.
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John M. Sowinski (3) . . . . . Supervisor of Local and Regional Planning Assistance, Wisconsin Department of Transportation
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TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL LAND USE-TRANSPORTATION PLANNING (Continued)

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John P. Varda (7) . . . . . General Counsel, Wisconsin Motor Carriers Association, Madison
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Arne L. Gausmann . . . . . Director, Bureau of Systems Planning, Wisconsin Department of Transportation
James F. Popp . . . . . Chief of Planning, U. S. Department of Transportation, Federal Aviation Administration
Joseph F. Sanek . . . . . Airport Director, Milwaukee County
Gerald Schwerm . . . . . Director of Transportation, Milwaukee County
Earl L. Stier . . . . . Manager, West Bend Airport
Lt. Col. Fred R. Wylie . . . . . Civil Engineer, 120th Air Refueling Group, Wisconsin Air National Guard, Milwaukee

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

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Emory R. Sacho . . . . . Administrator, Village of Grafton
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Cecil F. Mehring . . . . . Highway Engineer,
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Gerald G. Griswold . . . . . Town Engineer, Town of Caledonia
George A. Gundersen . . . . . Chief, Statewide Planning Section, Wisconsin Department of Transportation
Fred H. Larson . . . . . Commissioner of Public Works, City of Racine
Harvey Shebesta . . . . . District Director, Wisconsin Department of Transportation
Thomas N. Wright . . . . . Director of Planning, City of Racine

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Oliver W. Fleming . . . . . Supervisor, Walworth County
Richard Folman . . . . . Mayor, City of Lake Geneva
Thomas L. Frank . . . . . Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
George Gundersen . . . . . Chief, Statewide Planning Section, Wisconsin Department of Transportation
Harvey Shebesta . . . . . District Director, Wisconsin Department of Transportation
Clement Tracy . . . . . Chairman, Town of East Troy
Donald E. Zenz . . . . . Planning Commission, Village of Fontana

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

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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
Arne L. Gausmann . . . . . Director, Bureau of Systems Planning, Wisconsin Department of Transportation
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Gerald P. Lee . . . . . Building Inspector, City of Muskego
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Wilbur G. Perren . . . . . Supervisor, Town of Genesee
Herbert R. Teets . . . . . Division Administrator, U. S. Department of Transportation, Federal Highway Administration
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

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Kurt W. Bauer . . . . . Executive Director, Southeastern Wisconsin Regional Planning Commission — Secretary
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Jerome P. Faust . . . . . Supervisor, Washington County
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Joseph Hoffman . . . . . Citizen Member, City of Hartford
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Reuben Koch . . . . . Chairman, Town of West Bend
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Harvey Shebesta . . . . . District Director, Wisconsin Department of Transportation
Jerome A. Stautz . . . . . City Clerk, City of West Bend
Herbert R. Teets . . . . . Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Mervin C. Thompson . . . . . EPA Construction Supervisor, Washington County Sedimentation and Erosion Control Project
Carl Vogt . . . . . Town Clerk, Town of Addison

MILWAUKEE AREA PRIMARY TRANSIT SYSTEM ALTERNATIVES ANALYSIS CITIZENS, INTERGOVERNMENTAL, AND TECHNICAL COORDINATING AND ADVISORY COMMITTEE

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Kurt W. Bauer . . . . . Executive Director, Southeastern Wisconsin Regional Planning Commission — Secretary
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David Carley . . . . . Citizen Member, City of Milwaukee
Michael Corriveau . . . . . Executive Assistant, Office of the Milwaukee County Executive
William R. Drew . . . . . Commissioner, Department of City Development, City of Milwaukee
James F. Egan . . . . . Assistant Director, Program Research and Development, Department of City Development, City of Milwaukee
Michael H. Elconin . . . . . Citizen Member, City of Milwaukee
Arne L. Gausmann . . . . . Director, Bureau of Systems Planning, Wisconsin Department of Transportation
P. Douglas Gerleman . . . . . Chief Planner, U. S. Department of Transportation, Urban Mass Transportation Administration
John M. Hartz . . . . . Director, Bureau of Transit, Wisconsin Department of Transportation
Thomas P. Kujawa . . . . . Supervisor, Milwaukee County
Edwin J. Laszewski, Jr. . . . . City Engineer, City of Milwaukee
J. William Little . . . . . Administrator, City of Wauwatosa
Henry M. Mayer . . . . . Managing Director, Milwaukee Transport Services, Inc.
Henry F. Mixter . . . . . President, Village of Whitefish Bay
John O. Norquist . . . . . Wisconsin State Representative
Harvey Shebesta . . . . . District Director, Wisconsin Department of Transportation
Herbert R. Teets . . . . . Division Administrator, U. S. Department of Transportation, Federal Highway Administration

MILWAUKEE NORTHWEST SIDE/OZAUKEE COUNTY TRANSPORTATION IMPROVEMENT STUDY CITIZENS INTERGOVERNMENTAL AND TECHNICAL COORDINATING AND ADVISORY COMMITTEE

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Kurt W. Bauer . . . . . Executive Director, Southeastern Wisconsin Regional Planning Commission (Secretary)
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Warren D. Braun . . . . . Wisconsin State Senator
Wayne P. Frank . . . . . Chairman, Utilities and Licenses Committee, City of Milwaukee Common Council
P. Douglas Gerleman . . . . . Chief Planner, U. S. Department of Transportation, Urban Mass Transportation Administration
James J. Gosling . . . . . Executive Assistant, Office of the Secretary, Wisconsin Department of Transportation
Paul A. Henningsen . . . . . Supervisor, Milwaukee County
Edwin J. Laszewski, Jr. . . . . City Engineer, City of Milwaukee
J. William Little . . . . . Administrator, City of Wauwatosa
Henry M. Mayer . . . . . Managing Director, Milwaukee Transport Services, Inc.
Paul G. Meyer . . . . . Supervisor, Ozaukee County
Roy B. Nabors . . . . . Alderman, City of Milwaukee
Brian O'Connell . . . . . Planner, Department of City Development, City of Milwaukee
Harvey Shebesta . . . . . District Director, Wisconsin Department of Transportation
Herbert R. Teets . . . . . Assistant Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Sylvester N. Weyker . . . . . Highway Commissioner, Ozaukee County

CITIZENS AND TECHNICAL ADVISORY COMMITTEE FOR THE OCONOMOWOC AREA TRAFFIC MANAGEMENT STUDY

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Nancy M. Baker . . . . . Citizen Member, City of Oconomowoc
Grace C. Blaska . . . . . Alderman, City of Oconomowoc
Douglas B. Brown . . . . . Editor, Oconomowoc Enterprise
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James Zahradka . . . . . Associate Administrator, Memorial Hospital, Oconomowoc

Ex Officio Members

Gary P. Knerr . . . . . Traffic Project Engineer, Division of Transportation Districts, Wisconsin Department of Transportation
Joseph F. Mangiamale . . . . . Planning Consultant, City of Oconomowoc
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William R. Drew . . . . . Commissioner, Department of City Development, City of Milwaukee
Thomas L. Frank . . . . . Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration
Arne L. Gausmann . . . . . Director, Bureau of Systems Planning, Wisconsin Department of Transportation
P. Douglas Gerleman . . . . . Chief Planner, U. S. Department of Transportation, Urban Mass Transportation Administration
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Paul Juhnke . . . . . Vice-President, Urban Affairs, Milwaukee Metropolitan Association of Commerce
Henry M. Mayer . . . . . Managing Director, Milwaukee Transport Services, Inc.
Allen P. Pleyte . . . . . Traffic Engineer and Superintendent, Bureau of Traffic Engineering and Electrical Services, City of Milwaukee
James S. Rickun . . . . . Transportation/Air Quality Planner, Wisconsin Department of Natural Resources
John E. Schumacher . . . . . City Engineer, City of West Allis
Michael S. Treitman . . . . . Chief of Transportation and Planning, U. S. Environmental Protection Agency
Thomas A. Winkel . . . . . District Chief Planning Engineer, Wisconsin Department of Transportation

CITIZENS AND TECHNICAL ADVISORY COMMITTEE ON TRANSIT SERVICE PLANNING FOR HANDICAPPED PERSONS IN THE KENOSHA URBANIZED AREA

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Betty J. Anderson . . . . . Citizen Member
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Dennis M. Filippelli . . . . . Executive Director, Developmental Disabilities Service Center
Fabian J. Forbes . . . . . Citizen Member
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Mary A. Plunkett . . . . . Deputy Director, Department of Social Services, Kenosha County
Carol A. Schaufel . . . . . Counselor, Division of Vocational Rehabilitation, Wisconsin Department of Health and Social Services
Harvey Shebesta . . . . . District Director, Wisconsin Department of Transportation
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John F. Clark — Administrator, Milwaukee County Commission for Handicapped and Disabled Persons
Ellen D. Daly — Resource Coordinator, National Spinal Cord Injury Foundation
Adrian J. DeBlaey — President and Business Manager, Badger Association of the Blind
Durwood L. Egan — Deputy Program Director, Milwaukee County Combined Community Services Board
Janet K. Fitch — Director of Services, Community Care Organization; Commissioner, Milwaukee County Commission for Handicapped and Disabled Persons
Samuel Grodnick — Chairman, Transportation Committee, Milwaukee County Commission on Aging
Albert Kallas — President, Greater Milwaukee Stroke Club; Commissioner, Milwaukee County Commission for Handicapped and Disabled Persons
Terry D. Kocourek — Research Analyst, Milwaukee County Board of Supervisors
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Jean S. Logan — Member, Southeastern Wisconsin Coalition of Citizens with Handicaps and Disabilities
Eugene J. Paykel — Supervisor of Adult Services, Milwaukee County Department of Social Services
Vicki Plevin — Program Coordinator, United Cerebral Palsy of Southeastern Wisconsin, Inc.
Richard Pomo — Wisconsin Disabilities Coalition, Southeast Region
George E. Searing — Transportation and Senior Center Coordinator, Milwaukee County Office on Aging

Nonvoting Technical Staff Members

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James A. Marsho — Senior Engineer, Southeastern Wisconsin Regional Planning Commission
Neil R. Wienser — District Urban Planning Supervisor, Wisconsin Department of Transportation

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Stanley E. Altenbern — President, Wisconsin Coach Lines, Inc.
Robert A. Axness — President, Waukesha County Technical Institute Coalition of Disabled and Concerned Students
Kurt W. Bauer — Executive Director, Southeastern Wisconsin Regional Planning Commission
James C. Catania, Jr. — Citizen Member
Benny S. Coletti — Executive Director, Waukesha Training Center
Vencil F. Demshar — Highway Commissioner, Waukesha County
John C. Hale — Citizen Member
John M. Hartz — Director, Bureau of Transit, Wisconsin Department of Transportation
N. Edward Hill — Citizen Member
Kenneth L. Horgen — Citizen Member
Barbara J. Janasik — Citizen Member
Allan P. Kasprzak — Community Development Officer, Wisconsin Department of Health and Social Services
Kenneth M. Kassner — Area Supervisor, Health and Social Services, Wisconsin Division of Vocational Rehabilitation
Louis F. Kelnhofer — Citizen Member
Peter E. Safir — Director, Waukesha County Unified Services
Norma E. Schultz — Citizen Member
Thomas A. Winkel — District Chief Planning Engineer, Wisconsin Department of Transportation

CITIZENS AND TECHNICAL ADVISORY COMMITTEE ON TRANSIT SERVICE PLANNING FOR HANDICAPPED PERSONS IN THE RACINE URBANIZED AREA

Daniel C. Johnson, Chairman — Executive Director, Society's Assets
Kurt W. Bauer — Executive Director, Southeastern Wisconsin Regional Planning Commission
Susan A. Bill — Training Coordinator, Developmental Disabilities Information Service
Michael J. Glasheen — Transit Planner, City of Racine
John M. Hartz — Director, Bureau of Transit, Wisconsin Department of Transportation
Robert G. Heck — Alderman, City of Racine
Elwood E. Hoeppner — Chairman, Racine County Board of Supervisors
Bruce Howard — President, Omni Services, Racine
Allan P. Kasprzak — Community Development Officer, Wisconsin Department of Health and Social Services
Frank B. Miezio — Administrator, Lincoln Lutheran Home
Catherine P. Mocarski — Aging Coordinator, Racine County Human Services Department
Diane P. Sharp — Citizen Member
Harvey Shebesta — District Director, Wisconsin Department of Transportation
William J. Szylkowski — Citizen Member
Jack Taylor — President, Flash City Transit Company, Racine

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

George C. Berteau, Chairman — Chairman, Southeastern Wisconsin Regional Planning Commission
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
Arne L. Gausmann — Director, Bureau of Systems Planning, Wisconsin Department of Transportation
Donald K. Holland — Director of Public Works, City of Kenosha
Edward A. Jenkins — Transportation Director, City of Kenosha
Francis J. Pitts — Commissioner, Southeastern Wisconsin Regional Planning Commission
Gene A. Scharfenorth — Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Harvey Shebesta — District Director, Wisconsin Department of Transportation
Herbert R. Teets — Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Theodore G. Weigle, Jr. — Regional Director, U. S. Department of Transportation, Urban Mass Transportation Administration

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

George C. Berteau	Chairman, Southeastern Wisconsin Regional Planning Commission
Chairman	
Kurt W. Bauer	Executive Director, Southeastern Wisconsin Regional Planning Commission
James J. Blazek	City Engineer, City of Racine
Jon I. Dederich	Plan Commissioner, Village of Elmwood Park
Arne L. Gausmann	Director, Bureau of Systems Planning, Wisconsin Department of Transportation
Clair W. Jenn	Traffic Engineer, City of Racine
John Margis, Jr.	Highway Commissioner, Racine County
Lloyd C. Meier	President, Village of Wind Point
Herman V. Nelson	Trustee, Village of Sturtevant
Harvey Shebesta	District Director, Wisconsin Department of Transportation
Herbert R. Teets	Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Theodore G. Weigle, Jr.	Regional Director, U. S. Department of Transportation, Urban Mass Transportation Administration
Robert F. White	Supervisor, Town of Mt. Pleasant

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

George C. Berteau	Chairman, Southeastern Wisconsin Regional Planning Commission
Chairman	
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Ralph A. Becker	Director of Public Works, City of New Berlin
William C. Carey	Department of Fiscal Liaison, City of Milwaukee
Vencil F. Demshar	Highway Commissioner, Waukesha County
William R. Drew	Commissioner, Department of City Development, City of Milwaukee
Wayne P. Frank	Alderman, City of Milwaukee
Herbert A. Goetsch	Commissioner of Public Works, City of Milwaukee
Joseph M. Hutsteiner	Supervisor, Milwaukee County
Joseph C. LaPorte	Mayor, City of Waukesha
Edwin J. Laszewski, Jr.	City Engineer, City of Milwaukee
J. William Little	Administrator, City of Wauwatosa
William E. Meaux	Supervisor, Milwaukee County
Henry F. Mixter	President, Village of Whitefish Bay
Nick T. Paulos	Village Engineer, Village of Greendale
John E. Schumacher	City Engineer, City of West Allis
Harry A. Stein	Mayor's Office, City of Milwaukee
Betty L. Voss	Alderman, City of Milwaukee
Representative (vacant)	Local Government, Milwaukee County
Representative (vacant)	Local Government, Milwaukee County
Representative (vacant)	Local Government, Milwaukee County
Representative (vacant)	Local Government, Ozaukee/Washington Counties

Ex Officio Members

Kurt W. Bauer	Executive Director, Southeastern Wisconsin Regional Planning Commission
Secretary	
Robert W. Brannan	Deputy Director, Department of Public Works, Milwaukee County
Thomas J. Hart	Administrator, Division of Planning and Budget, Wisconsin Department of Transportation
Henry M. Mayer	Managing Director, Milwaukee Transport Services, Inc.
Harvey Shebesta	District Director, Wisconsin Department of Transportation
Herbert R. Teets	Division Administrator, U. S. Department of Transportation, Federal Highway Administration
Theodore G. Weigle, Jr.	Regional Director, U. S. Department of Transportation, Urban Mass Transportation Administration

WAUKESHA MASS TRANSIT CITIZENS AND TECHNICAL COORDINATING AND ADVISORY COMMITTEE

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Chairman	
David R. Markiewicz	Citizen Member
Recording Secretary	
Robert J. Foley	Citizen Member
Armand C. Garcia	Citizen Member
John A. Inzeo	Member, Waukesha School Board
Joseph C. LaPorte	Mayor, City of Waukesha
John I. Levenhagen	Alderman, City of Waukesha
Joan Marx	Member, Waukesha Chamber of Commerce
Richard S. Nettum	Executive Vice-President, Waukesha Chamber of Commerce
Charles G. Rohr	Transportation Director, Waukesha Joint School District
Edward J. Stoltz	Citizen Member
Michael L. Thaller	Citizen Member
Geraldine H. Wuerslin	Alderman, City of Waukesha

Nonvoting Technical Staff Members

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Vencil F. Demshar	Highway Commissioner, Waukesha County
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Donald R. Martinson	Chief Transportation Engineer, Southeastern Wisconsin Regional Planning Commission
Theodore G. Weigle, Jr.	Regional Director, U. S. Department of Transportation, Urban Mass Transportation Administration
Thomas A. Winkel	District Chief Planning Engineer, Wisconsin Department of Transportation

ROOT RIVER WATERSHED COMMITTEE

Robert J. Mikula	Director of Parks, Recreation and Culture, Milwaukee County Park Commission
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Thomas N. Wright	Director of Community Development, City of Racine
Vice-Chairman	
Kurt W. Bauer	Executive Director, Southeastern Wisconsin Regional Planning Commission
Secretary	
John M. Bennett	City Engineer, City of Franklin
James J. Blazek	City Engineer, City of Racine
Raymond T. Dwyer	City Engineer, City of Greenfield
Alvin A. Erdman	District Conservationist, U. S. Soil Conservation Service, Milwaukee and Waukesha Counties
Jerome J. Gottfried	Mayor, City of Muskego
Donald W. Hermann	Mayor, City of Oak Creek
Elwin G. Leet	Agricultural Agent, Racine County
Frederick L. Licau	President, Village of Hales Corners
Patrick J. Marchese	Acting Director of Technical Services, Milwaukee Metropolitan Sewerage District
John Margis, Jr.	Highway Commissioner, Racine County
Stephen F. Olsen	Mayor, City of Racine
Nick T. Paulos	Village Engineer, Village of Greendale
John L. Schultz	District Engineer, Southeast District, Wisconsin Department of Natural Resources
John E. Schumacher	City Engineer, City of West Allis
Udo L. Wilharm	Acting City Engineer, City of Oak Creek

FOX RIVER WATERSHED COMMITTEE

William D. Rogan, Chairman — Agri-Business Agent, Waukesha County
Paul G. Jaeger, Secretary — Agri-Business Agent, Kenosha County
Kurt W. Bauer — Executive Director, Southeastern Wisconsin Regional Planning Commission
Edmund M. Brick — Chief, Water Regulation Section, Bureau of Water and Shoreland Management, Wisconsin Department of Natural Resources
Lloyd W. Bryant — President, Village of Waterford
Dorothy Bucholtz — Citizen Member, Town of Burlington
Arnold L. Clement — Planning Director and Zoning Administrator, Racine County
Alvin A. Erdman — District Conservationist, U. S. Soil Conservation Service, Milwaukee and Waukesha Counties
Jerome T. Gottfried — Mayor, City of Muskego
H. Copeland Greene — Citizen Member, Genesee Depot
Henry F. Halter — Commissioner, Norway-Dover Drainage District
Franklin E. Hazelo — Chairman, Town of Rochester
Karl B. Holzworth — Director, Park Commission, Racine County
Lloyd Human — Chairman, Town of Norway
Ronald Hustedde — Resource Agent, Walworth County
Dr. Leonard C. Johnson — Soil and Water Conservation Specialist, Board of Soil and Water Conservation Districts, University of Wisconsin-Extension
Melvin J. Johnson — Citizen Member, Town of Norway
Walter Maas — Member, Town of Rochester Plan Commission
John H. Mielke — Consulting Engineer, Ruekert and Mielke, Inc., Waukesha
William A. Mitchell, Jr. — Mayor, City of Brookfield
Raymond J. Moyer, Jr. — Supervisor, Racine County; Commissioner, Southeastern Wisconsin Regional Planning Commission
Sterling A. Peck — Chairman, Town of Vernon
Eistein Pedersen — Citizen Member, Village of Rochester
Cloyd A. Porter — Assemblyman, Town of Burlington
Herbert E. Ripley — Health Officer, Waukesha County Health Department
Phil Sander — Executive Secretary, Southeastern Wisconsin Sportsmen's Federation
Dr. Bruno E. Schiffleger — Citizen Member, City of Elkhorn
Richard C. Schipper — Chairman, Town of Wheatland
Karl Schroeder — Horticulture and Natural Resources Agent, Racine County
Bernard G. Schultz — Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
Dorothy Schumacher — President, Village of Rochester
Arthur Stratton — Commissioner, Hoosier Creek Drainage District
Walter J. Tarmann — Executive Director, Waukesha County Park and Planning Commission
Rodney W. Vanden Noven — Director of Public Works, City of Waukesha
Franklin Walsh — Supervisor, Walworth County; Chairman, Town of Linn
Emmerich P. Wantschik — County Planner, Walworth County
Roy Weltzien — Chairman, Town of Waterford
Stan Wilson — Citizen Member, City of Burlington
John R. Zillmer — Secretary, Ice Age Park and Trail Foundation, Milwaukee

MILWAUKEE RIVER WATERSHED COMMITTEE

Richard W. Cutler, Chairman — Attorney, Quarles and Brady, Milwaukee; Member, Village of Fox Point Plan Commission; Commissioner, Southeastern Wisconsin Regional Planning Commission
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
Vaughn H. Brown — Vice-President, Tri-County Civic Association
Lawrence Brumm — President, Milwaukee River Restoration Council, Inc.
Delbert J. Cook — Chairman, Cedar Creek Restoration Council
Arthur G. Degnitz — Supervisor, Washington County
Arthur D. Doll — Director, Bureau of Planning, Wisconsin Department of Natural Resources
Edward Frauenheim — County Board Chairman, Sheboygan County
Herbert A. Goetsch — Commissioner of Public Works, City of Milwaukee
Michael C. Harrigan — Administrator, Village of Saukville
Lawrence W. Hillman — Vice-President of Quality Assurance and Facilities Planning, West Bend Company

MILWAUKEE RIVER WATERSHED COMMITTEE (Continued)

Robert L. Konik — Planner, Fond du Lac County
Patrick J. Marchese — Acting Director of Technical Services, Milwaukee Metropolitan Sewerage District
Robert J. Mikula — Director of Parks, Recreation and Culture, Milwaukee County Park Commission
Paul E. Mueller — Land Use and Park Administrator, Washington County
Donald A. Roensch — Administrator, City of Mequon
John P. Samarzja — Director, Department of Environmental Health, Ozaukee County
Bernard G. Schultz — Assistant District Director, Wisconsin Department of Natural Resources
Roland F. Senner — Chairman, Town of Trenton
Donald Stephens — President, Pfister & Vogel Tanning Company, Milwaukee
John G. Theusch — Chairman, Town of Farmington
George Watts — President, George Watts & Son, Inc., Milwaukee
Donald W. Webster — Supervisor, Town of Fredonia; Consulting Civil Engineer, City of Milwaukee
Richard E. Zarling — Director of Elementary Education, Kewaskum Community Schools

MENOMONEE RIVER WATERSHED COMMITTEE

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J. William Little, Vice-Chairman — Administrator, City of Wauwatosa
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
Arthur D. Doll — Director, Bureau of Planning, Wisconsin Department of Natural Resources
Glenn H. Evans — Citizens for Menomonee River Restoration
Frederick E. Gottlieb — Manager, Village of Menomonee Falls
Frank S. Hartay — Director of Manufacturing, Falk Corporation, Milwaukee
Edmund M. Henschel — Manager, Village of Elm Grove
George C. Keller — President, Wauwatosa State Bank
Raymond J. Kipp — Dean, College of Engineering, Marquette University
John T. MacKinnon — Director of Public Works, Village of Germantown
Patrick J. Marchese — Acting Director of Technical Services, Milwaukee Metropolitan Sewerage District
Robert J. Mikula — Director of Parks, Recreation, and Culture, Milwaukee County Park Commission
Donald A. Roensch — Administrator, City of Mequon
Bernard G. Schultz — Assistant District Director, Wisconsin Department of Natural Resources
John E. Schumacher — City Engineer, City of West Allis
Walter J. Tarmann — Executive Director, Waukesha County Park and Planning Commission
Clark E. Wangerin — City Engineer, City of Brookfield

KINNICKINNIC RIVER WATERSHED COMMITTEE

Robert J. Mikula, Chairman — Director of Parks, Recreation and Culture, Milwaukee County Park Commission
Edwin J. Laszewski, Jr., Vice-Chairman — City Engineer, City of Milwaukee
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
Raymond T. Dwyer — City Engineer, City of Greenfield
Patrick J. Marchese — Acting Director of Technical Services, Milwaukee Metropolitan Sewerage District
Stanley Polewski — Proprietor, Polewski Pharmacy, Milwaukee
Ronald J. Rutkowski — Director of Public Works, City of Cudahy
Dr. Rodolfo 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 Public Works, Milwaukee County
Frank J. Wabiszewski — Vice-President, Maynard Steel Casting Company, Milwaukee

PIKE RIVER WATERSHED COMMITTEE

George E. Melcher, Chairman — Director, Office of Planning and Zoning Administration, Kenosha County
Jerome Konicek, Vice-Chairman — Chairman, Mt. Pleasant Drainage District
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
Les Aspin — Member of Congress, First Congressional District, State of Wisconsin
Eual W. Bodenbach — Coordinator, Town of Mt. Pleasant
Peter Boscha — Supervisor, Town of Mt. Pleasant
Mary M. Carrington — Supervisor, Town of Mt. Pleasant
Arnold L. Clement — Planning Director and Zoning Administrator, Racine County
Donald K. Holland — Director of Public Works, City of Kenosha
Karl B. Holzwarth — Park Director, Racine County
Paul G. Jaeger — Agricultural Agent, Kenosha County
Abe Kirkorian — President, Village of Sturtevant
Niels E. Ladine — Director of Parks, Kenosha County
Leverett F. Leet — Retired Farmer, Town of Somers
Richard J. Lindl — Chairman, Town of Somers
Chelvadurai Manogaran — Associate Professor, Department of Geography, University of Wisconsin-Parkside
Raymond J. Moyer — Supervisor, Racine County; Commissioner, Southeastern Wisconsin Regional Planning Commission
O. Fred Nelson — Manager, Kenosha Water Utility
Eric H. Olson — Supervisor, Kenosha County; Professor, Department of Political Science, Carthage College
Francis J. Pitts — Supervisor, Kenosha County; Commissioner, Southeastern Wisconsin Regional Planning Commission
Stanley Renick — Member, Kenosha County Country Club
Karl Schroeder — Horticulture and Natural Resources Agent, Racine County
Bernard G. Schultz — Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
Larry S. Toney — District Conservationist, U. S. Soil Conservation Service, Racine County

OAK CREEK WATERSHED COMMITTEE

Norbert S. Theine, Chairman — Administrator, City of South Milwaukee
Paul E. Milewski, Vice-Chairman — Director of Planning, City of Oak Creek
Kurt W. Bauer, Secretary — Executive Director, Southeastern Wisconsin Regional Planning Commission
John M. Bennett — City Engineer, City of Franklin
James Foley — Acting Airport Director, Milwaukee County Department of Public Works
Gerald W. Laudon — Secretary, Milwaukee County Conservation Alliance
Edwin J. Laszewski, Jr. — City Engineer, City of Milwaukee
Patrick J. Marchese — Acting Director of Technical Services, Milwaukee Metropolitan Sewerage District
Robert J. Mikula — Director of Parks, Recreation and Culture, Milwaukee County Park Commission
Fred R. Rehm — Director, Professional Services Division, Department of Public Works, Milwaukee County
Bernard G. Schultz — Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
David Sharpe — Community Development Agent, University of Wisconsin-Extension, Milwaukee County

TECHNICAL ADVISORY COMMITTEE ON AREAWIDE WATER QUALITY MANAGEMENT PLANNING

Thomas F. Wolf, Chairman — Acting Executive Director, Milwaukee Metropolitan Sewerage District
Raymond J. Kipp, Vice-Chairman — Dean, College of Engineering, Marquette University
Lyman F. Wible, Secretary — Chief Environmental Engineer, Southeastern Wisconsin Regional Planning Commission
Vinton W. Bacon — Professor, College of Applied Science and Engineering, University of Wisconsin-Milwaukee
Anthony S. Bareta — Director, Milwaukee County Planning Commission
Kurt W. Bauer — Executive Director, Southeastern Wisconsin Regional Planning Commission
Frank R. Boucher — Director, Environmental Department, Wisconsin Electric Power Company
Arnold L. Clement — Planning Director and Zoning Administrator, Racine County
Norbert H. Dettmann — Supervisor, Washington County
Alvin A. Erdman — District Conservationist, U. S. Soil Conservation Service, Milwaukee and Waukesha Counties
Herbert A. Goetsch — Commissioner of Public Works, City of Milwaukee
Robert J. Grigeurich — District Loan Specialist, U. S. Department of Agriculture, Farmers Home Administration
Thomas N. Hentges — Commissioner, Racine County Farm Drainage Board
Lester O. Hoganson — General Manager, Racine Water and Wastewater Utility
Helen M. Jacobs — League of Women Voters; President, Southeast Wisconsin Coalition for Clean Air
Myron E. Johansen — Former District Conservationist, U. S. Soil Conservation Service, Ozaukee and Washington Counties
Dr. Leonard C. Johnson — Soil and Water Conservation Specialist, Wisconsin Board of Soil and Water Conservation Districts
Melvin J. Johnson — Citizen Member, Town of Norway
Elwin G. Leet — Agricultural Agent, Racine County
Christine M. Liszewski — Project Officer, Planning Branch, U. S. Environmental Protection Agency
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
Warren K. Porter — Director, Wisconsin Solid Waste Recycling Authority
Herbert E. Ripley — Health Officer, Waukesha County Department of Health
Donald A. Roensch — Administrator, City of Mequon
Harold F. Ryan — Supervisor, Washington County; Commissioner, Southeastern Wisconsin Regional Planning Commission
Marvin E. Schroeter — Secretary-Treasurer and General Manager, United Sewer and Water, Inc., Menomonee Falls
Bernard G. Schultz — Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
Walter J. Tarmann — Executive Director, Park and Planning Commission, Waukesha County
Rodney W. Vanden Noven — Director of Public Works, City of Waukesha
Emmerich P. Wantschik — County Planner, Walworth County
Udo L. Wilharm — City Engineer, City of Oak Creek

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL AIR QUALITY PLANNING

Richard A. Keyes, Chairman — Environmental Engineer, Professional Services Division, Department of Public Works, Milwaukee County
Barbara J. Becker, Vice-Chairman — President, Southeastern Wisconsin Coalition for Clean Air
Richard F. Pierce, Secretary — Principal Specialist, Environmental Planning Division, Southeastern Wisconsin Regional Planning Commission
Alice G. Altemeier — League of Women Voters, Ozaukee County
Kurt W. Bauer — Executive Director, Southeastern Wisconsin Regional Planning Commission
Wesley J. Beaton — Director of Environmental Health, City of Racine
Gerald D. Bevington — Assistant Director, Southeast District, Wisconsin Department of Natural Resources
John W. Blakey — President, Quality Aluminum Casting Company, Waukesha
Edwin J. Hammer — Environmental Engineer, Bureau of Environmental Analysis and Review, Wisconsin Department of Transportation
John C. Hanson — Director, Department of Environmental Control, Racine County

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL AIR QUALITY PLANNING (Continued)

Paul Koziar . . . . . Deputy Director, Bureau of Air Management, Wisconsin Department of Natural Resources
John H. Paige . . . . . Transportation Officer, Regional Development Department, Northeastern Illinois Planning Commission
Kenneth W. Ragland . . . . . Associate Professor, Department of Mechanical Engineering, University of Wisconsin-Madison
Fred R. Rehm . . . . . Director, Professional Services Division, Department of Public Works, Milwaukee County
Herbert E. Ripley . . . . . Health Officer, Waukesha County Health Department
Rodolfo N. Salcedo . . . . . Environmental Scientist, Department of City Development, City of Milwaukee
Harvey Shebesta . . . . . District Director, Wisconsin Department of Transportation
Mark P. Steinberg . . . . . Superintendent, Air Quality, Environmental Planning and Policy Division, Wisconsin Electric Power Company
Herbert R. Teets . . . . . Division Administrator, U. S. Department of Transportation Federal Highway Administration
Michael S. Treitman . . . . . Chief of Transportation and Planning Unit, U. S. Environmental Protection Agency
George A. Zimmer . . . . . Supervisor, Environmental Health, City of Kenosha Health Department

AD HOC TECHNICAL TASK FORCE FOR THE MILWAUKEE HARBOR ESTUARY STUDY DESIGN

Dr. Norman P. Lasca . . . . . Professor, Department of Geological Sciences, University of Wisconsin-Milwaukee; Representative of Technical and Citizen Advisory Committee on Coastal Management in Southeastern Wisconsin
Chairman
Thomas G. Ross . . . . . Waukesha Sub-District Chief, Water Resources Division, U. S. Geological Survey
Vice-Chairman
Kurt W. Bauer . . . . . Executive Director, Southeastern Wisconsin Regional Planning Commission
Secretary
Earl K. Anderson . . . . . Harbor Engineer, City of Milwaukee Harbor Commission
Dr. Eugene J. Aubert . . . . . Director, Great Lakes Environmental Research Laboratory
David N. Edgington . . . . . Director, Center for Great Lakes Research, University of Wisconsin Extension
Alvin A. Erdman . . . . . District Conservationist, U. S. Soil Conservation Service
Kent B. Fuller . . . . . Chief, Environmental Planning Staff, Great Lakes National Program Office, U. S. Environmental Protection Agency
Ronald Hennings . . . . . Wisconsin Geological and Natural History Survey, University of Wisconsin-Extension
John G. Konrad . . . . . Chief of Special Studies Section, Wisconsin Department of Natural Resources
Timothy Kubiak . . . . . Staff Biologist, Fish and Wildlife Service, U. S. Department of the Interior
George A. Kupfer . . . . . Superintendent, Bureau of Consumer Protection and Environmental Health, City of Milwaukee
Edwin J. Laszewski . . . . . City Engineer, City of Milwaukee
Patrick J. Marchese . . . . . Acting Director of Technical Services, Milwaukee Metropolitan Sewerage District
Robert J. Mikula . . . . . Director, Department of Parks, Recreation and Culture, Milwaukee County Park Commission
Dr. Rudolpho N. Salcedo . . . . . Environmental Scientist, Department of City Development, City of Milwaukee

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON COASTAL MANAGEMENT IN SOUTHEASTERN WISCONSIN

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Acting Chairman
Hubert J. Albert . . . . . Port Washington Yacht Club
Josephine Boucher . . . . . Member, North Shore League of Women Voters
Thomas H. Buestrin . . . . . Commissioner, Southeastern Wisconsin Regional Planning Commission, Ozaukee County
Sol Burstein . . . . . Executive Vice-President, Wisconsin Electric Power Company
Benjamin C. Chapla . . . . . Health Officer, Town of Caledonia
Ronald J. Frederick . . . . . County Board Chairman, Kenosha County
Herbert A. Goetsch . . . . . Commissioner of Public Works, City of Milwaukee
Roy F. Hoffmann . . . . . Municipal Port Director, Board of Harbor Commissioners, City of Milwaukee
George O. Lampert . . . . . Mayor, City of Port Washington
Dr. Norman P. Lasca . . . . . Professor, Department of Geological Sciences, University of Wisconsin-Milwaukee
Thomas W. Lisota . . . . . Alderman, City of Cudahy
Anthony L. Luljak . . . . . Alderman, City of Cudahy
Patrick J. Marchese . . . . . Acting Director of Technical Services, Milwaukee Metropolitan Sewerage District
Dr. Harold M. Mayer . . . . . Professor, Department of Geography, University of Wisconsin-Milwaukee
Robert J. Mikula . . . . . Director, Parks, Recreation and Culture, Milwaukee County Park Commission
William G. Murphy . . . . . Professor, Soil Mechanics, College of Engineering, Marquette University; Engineers and Scientists of Milwaukee
Mary C. Nelson . . . . . Alderman, City of South Milwaukee; Shoreline Property Owner
Dr. William T. Painter . . . . . President, Foundation Engineering, Inc., Milwaukee
Francis J. Pitts . . . . . Commissioner, Southeastern Wisconsin Regional Planning Commission, Kenosha County
Fred R. Rehm . . . . . Director, Professional Services Division, Department of Public Works, Milwaukee County
Ronald J. Rutkowski . . . . . Director of Public Works, City of Cudahy
Phil Sander . . . . . Executive Secretary, Southeastern Wisconsin Sportsmen's Federation
Henry A. Scholz . . . . . Manager, Village of Fox Point
Karl Schroeder . . . . . Horticulture/Natural Resource Agent, Racine County
Norbert S. Theine . . . . . Administrator, City of South Milwaukee
Robert Winnie . . . . . District Director, Wisconsin Department of Natural Resources

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON REGIONAL PARK AND OPEN SPACE PLANNING

Robert J. Mikula . . . . . Director of Parks, Recreation and Culture, Milwaukee County Park Commission
Chairman
Loren R. Anderson . . . . . President, Geneva Lake Development Corporation, Village of Williams Bay
Anthony S. Bareta . . . . . Director, Milwaukee County Planning Commission
Donald B. Brick . . . . . Recreation Agent, Walworth County
Frederick H. Chlupp . . . . . Land Use and Park Administrator, Washington County
Delbert J. Cook . . . . . Chairman, Cedar Creek Restoration Council
Richard W. Cutler . . . . . Attorney, Quarles and Brady, Milwaukee; Commissioner, Southeastern Wisconsin Regional Planning Commission
Norbert H. Dettmann . . . . . Supervisor, Washington County
Arthur D. Doll . . . . . Director, Bureau of Planning, Wisconsin Department of Natural Resources
David F. Egelhoff . . . . . Park Commissioner, Ozaukee County
Booker T. Hamilton . . . . . Production Supervisor, Rexnord Corporation
Karl B. Holzwarth . . . . . Park Director, Racine County Park Commission
Charles Q. Kamps . . . . . Attorney, Quarles and Brady, Milwaukee
Philip H. Lewis, Jr. . . . . Professor, Department of Landscape Architecture, University of Wisconsin-Madison; Director, Environmental Awareness Center, Madison
Richard J. Lindl . . . . . Chairman, Town of Somers
John Margis, Jr. . . . . Highway Commissioner, Racine County
Kathleen Pfister . . . . . Cultural Specialist, Department of City Development, City of Milwaukee
Robert D. Ross . . . . . Vice-President, Lee Enterprises Newspapers, East Racine
Phil Sander . . . . . Executive Secretary, Southeastern Wisconsin Sportsmen's Federation
George L. Schiltz . . . . . Former Chairman, Kenosha County Park Commission
Frederick G. Schmidt . . . . . Izaak Walton League; Member, Sierra Club

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

Mrs. John D. Squier . . . . . Member, Riveredge Nature Center, Inc.
Walter J. Tarmann . . . . . Executive 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 Manager, 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 Community Development, City of Racine

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON REGIONAL HOUSING STUDIES

Richard W. Cutler . . . . . Attorney, Quarles and Brady, Milwaukee; Chairman — Member, Village of Fox Point Plan Commission; Commissioner, Southeastern Wisconsin Regional Planning Commission
Kurt W. Bauer . . . . . Executive Director, Southeastern Wisconsin Regional Planning Commission; Secretary
William B. Ardern . . . . . President, General Appraisal Company, Milwaukee
Richard Barry . . . . . Representative, Metropolitan Milwaukee Association of Commerce; Vice-President-Treasurer, Bruce, Barry & Gleysteen, Inc., Milwaukee
Richard P. Blake . . . . . Architect, Blake-Wirth & Associates, Inc., Milwaukee; Board Member, Wisconsin Chapter—Southeast Section, American Institute of Architects
Delbert C. Blasdel . . . . . Administrative Code Consultant, Division of Safety and Buildings, Wisconsin Department of Industry, Labor and Human Relations
Clarence Dittmar . . . . . President, Dittmar Realty, Inc., Menomonee Falls
The Rev. John D. Fischer . . . . . Executive Director, Greater Milwaukee Conference on Religion and Urban Affairs, City of Milwaukee
Leonard F. Forschner . . . . . Area Economist, U. S. Department of Housing and Urban Development, City of Milwaukee Area Office
Norman N. Gill . . . . . Executive Director, Citizens Governmental Research Bureau, Milwaukee
Melvin Goldin . . . . . Secretary-Treasurer, Recht-Goldin-Siegel, Inc., Milwaukee
William Kelly . . . . . Director, Indian Urban Affairs Council, City of Milwaukee
Bernard N. Nill . . . . . Assistant Planning Director, Department of City Development, City of Milwaukee
Kenneth J. Payne . . . . . Housing Coordinator, Milwaukee County Expressway Commission
Glenn Peters . . . . . Secretary-Treasurer, Peters Development Corporation, West Bend
Wesley L. Scott . . . . . Executive Director, Milwaukee Urban League
Kathy Sellars . . . . . Planner/Programmer Developer, Southeastern Wisconsin Area Agency on Aging, Inc.

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James Moyer . . . . . Farmer, Town of Yorkville, Racine County; Vice-Chairman
Emil Mravec . . . . . Farmer, Town of Randall, Kenosha County; Secretary
Dennis Boland . . . . . Manager, Agricultural Stabilization and Conservation Service, Racine County
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Leon T. Dreger . . . . . Farmer, Town of Somers, Kenosha County
Claude Epping . . . . . Farmer, Town of Salem, Kenosha County
Kenneth Gould . . . . . Farmer, Town of Dover, Racine County
Kenneth Jacobs . . . . . Farmer, Town of Norway, Racine County
Paul G. Jaeger . . . . . Agricultural Agent, Kenosha County
John C. Kevek . . . . . Farmer, Town of Pleasant Prairie, Kenosha County
Stanley Lois . . . . . Farmer, Town of Wheatland, Kenosha County
Rolland F. Prochaska . . . . . Farmer, Town of Caledonia, Racine County
Wendolyn Reiter . . . . . Farmer, Town of Brighton, Kenosha County
Ralph Rice . . . . . Farmer, Town of Burlington, Racine County
Karl Schroeder . . . . . County Horticulture/Natural Resource Agent, Racine County
Earl Stollenwork . . . . . Farmer, Town of Paris, Kenosha County
Elmer Strassburg . . . . . Manager, Agricultural Stabilization and Conservation Service, Kenosha County
Larry Toney . . . . . District Conservationist, U. S. Soil Conservation Service
Roy E. Weltzien . . . . . Farmer, Town of Waterford, Racine County
Robert Willard . . . . . Farmer, Town of Rochester, Racine County

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON COMPREHENSIVE PLANNING FOR THE KENOSHA PLANNING DISTRICT

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Donald Andreoli . . . . . Alderman and Member, City Plan Commission, City of Kenosha; Vice-Chairman
Achille F. Infusino . . . . . Citizen Member, City of Kenosha
Ernest R. Klees . . . . . Member, Plan Commission, Town of Somers
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John Papan . . . . . Chairman, Town of Pleasant Prairie Plan Commission
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James M. Smith . . . . . Supervisor, Town of Somers
Douglas Stanich . . . . . Citizen Member, City of Kenosha
C. Tom Wood . . . . . Chairman, Town of Pleasant Prairie

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Ray Forgianni . . . . . City Planner, City of Kenosha
Dr. John J. Hosmanek . . . . . Superintendent of Schools, Kenosha Unified School District No. 1
Russell Knetzger . . . . . Town Planner, Town of Pleasant Prairie
George E. Melcher . . . . . Zoning Administrator, Kenosha County

Appendix C

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION STAFF: 1980

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Kurt W. Bauer, P. E.
Executive Director

Philip C. Evenson
Assistant Director

Margaret M. Shanley
Executive Secretary

Elaine I. Andersen
Secretary II

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Phillip D. House
Stephen W. Justinger
Loren G. Muehlius
Patrick M. O'Donnell
Jeffrey J. Shannon
Digitizer Operators

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Data Processing Manager

Robert J. Baier
Community Services Representative

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Programming Supervisor

Paul J. Clavette
Systems Analyst

Richard L. Henley
Senior Programmer/Analyst

Victor J. Janka, Jr.
Donald S. Johnson
Bruce W. Lecus
Jerome W. VonLoh
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Operations Supervisor

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Pamela J. Fischer
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Richard S. Grant
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Principal Specialist

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Thomas R. Sear
Joseph E. Stuber
Senior Engineers

James R. D'Antuono
Senior Planner

J. Douglas Wilson
Senior Specialist

Steven N. Krafcheck
Specialist

Cynthia V. Cartwright
Yih-Fey Lee
Engineers

Nancy A. Greer
Research Aide

Irene A. Brown
Secretary I

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Ronald H. Heinen
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B. Lynn Nowak
Donald P. Simon
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August R. Kutschenreuter
Bergetta J. Ruehmer
Paula J. Wilkie
Planning Draftsmen

Donnette M. Dolzall
Editor

Charlotte S. Vega
Composer Operator

Debra K. Sommerfeld
Research Aide

Wendy A. Hoeft
James E. Loeper
Office Equipment Operators

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Robert E. Beglinger
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John L. Zastrow
Senior Specialist

Albert A. Beck
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Craig A. Murawski
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David P. Jukins
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Otto P. Dobnick
Joseph M. Kampschroer
Senior Planners

Barbara A. Poff
Secretary I

ADMINISTRATIVE SERVICES DIVISION

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Administrative Officer

Joan A. Zenk
Administrative Assistant

Sharon L. Owsley
Bookkeeper

Luella M. Fredrickson
Secretary II

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Jean A. Brylow
John F. Roth
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INTERAGENCY STAFF ASSIGNMENTS

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Bureau of Engineers
City of Milwaukee

James H. Kasdorf
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Wisconsin Department of Transportation

Marc A. Schultz
Community Development Agent
Natural Resources Education
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Appendix D

PUBLICATIONS OF THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION: 1962-DECEMBER 1980

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
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Lake Michigan Estuary and Direct Drainage Area Subwatersheds Planning Program Prospectus, September 1978
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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
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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
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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
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No. 20 - A Regional Housing Plan for Southeastern Wisconsin, February 1975
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No. 22 - A Jurisdictional Highway System Plan for Racine County, February 1975
No. 23 - A Jurisdictional Highway System Plan for Washington County, October 1974
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No. 25 - A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000
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No. 26 - A Comprehensive Plan for the Menomonee River Watershed
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No. 31 - A Regional Transportation Plan for the Transportation Handicapped in Southeastern Wisconsin: 1978-1982, April 1978
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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
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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
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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
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No. 25 - Alternative Futures for Southeastern Wisconsin, December 1980

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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
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No. 4 - Floodland Information Report for the Rubicon River, City of Hartford, Washington County, Wisconsin, December 1974
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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
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No. 12 - Waukesha Area Transit Development Program: 1977-1981, January 1977
No. 13 - Flood Control Plan for Lincoln Creek, September 1977
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
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No. 17 - A Plan for the Jefferson Park Neighborhood, Village of Germantown, Washington County, Wisconsin, March 1978
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No. 19 - Storm Water Storage Alternatives for the Crossway Bridge and Port Washington-Bayfield Drainage Area in the Village of Fox Point, August 1977
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No. 21 - A Transportation Systems Management Plan for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1978, December 1977
No. 22 - Alternative and Recommended Land Use Plans for the Town of Genesee: 2000, February 1978
No. 23 - A Park and Recreation Plan for Ozaukee County, August 1978
No. 24 - A Park and Open Space Plan for the Village of Darien, December 1978
No. 25 - A Plan for the Delrock Neighborhood, City of Delavan, Walworth County, Wisconsin, January 1979
No. 26 - A Transportation Systems Management Plan for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1979, December 1978
No. 27 - A Park and Open Space Plan for the Town of Eagle, April 1979
No. 28 - Oconomowoc Area Traffic Management Plan, City of Oconomowoc, Waukesha County, Wisconsin, December 1979
No. 29 - A Development Plan for the Quarry Ridge Neighborhood, City of Burlington, Racine County, Wisconsin, July 1979
No. 30 - Whitewater Area Rail Service Plan, August 1979
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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
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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
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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. 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. 47 - A Water Quality Management Plan for Lac La Belle, December 1980
No. 52 - Housing Opportunities Guide for the Southeastern Wisconsin Region, December 1980

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by Kurt W. Bauer, Executive Director
The SEWRPC Land Use-Transportation Study
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Home Interview Sample Selection - Part I
by Kenneth J. Schlager, Chief Systems Engineer
Truck and Taxi Sample Selection
by Thomas A. Winkel, Urban Planning Supervisor
A Backward Glance: Early Toll Roads in Southeastern Wisconsin
by Richard E. Rehberg, Editor

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Arterial Network and Traffic Analysis Zones
by Richard B. Sheridan, Chief Transportation Planner
Conducting the Household Postal Questionnaire Survey
by Wade G. Fox, Cartography and Design Supervisor
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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
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by Sheldon W. Sullivan, Administrative Officer
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by Wade G. Fox, Cartography and Design Supervisor
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A Backward Glance: The Man-Made Ice Age
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by Kurt W. Bauer, Executive Director
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by Wade G. Fox, Cartography and Design Supervisor and
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and Historic Sites in Southeastern Wisconsin
by Theodore F. Lauf, Research Analyst
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by Karl W. Holzwarth, Landscape Architect
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by Richard E. Rehberg, Editor

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Reconciliation of Sample Coverage in the Internal O & D Surveys
by Eugene G. Muhich, P.E., Transportation Planning Engineer
The Contingency Check Program
by Wade G. Fox, Cartography and Design Supervisor
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by William T. Wambach, Jr., P.E.
A Backward Glance: The Milwaukee and Rock River Canal
by James E. Seybold, Editor

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by Richard B. Sheridan, Chief Transportation Planner
A Study of the Water Quality and Flow of Streams in Southeastern Wisconsin
by Roy W. Ryling, Hydrologist
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by Richard B. Sheridan, Chief Transportation Planner and
Wade G. Fox, Cartography and Design Supervisor
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by Kurt W. Bauer, Executive Director

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by Kenneth J. Schlager, Chief Systems Engineer

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Capacity of Arterial Network Links
by Richard B. Sheridan, Chief Transportation Planner
The ABC Method of Current Population Estimation
by Donald L. Gehrke, Economics and Population Analyst and
Orlando E. Delogu, Financial Resources and Legal Analyst
O & D Surveys Accuracy Checks
by Eugene E. Muhich, P.E., Transportation Planning Engineer
A Backward Glance: Railroad Transportation in Southeastern Wisconsin
by Patricia J. Tegge, Editor

Volume 2 - No. 3, February-March 1965

Determination of Historical Flood Frequency for the Root River of Wisconsin
by James C. Ringenoldus, P.E., Harza Engineering Company
The Regional Multiplier
by Kenneth J. Schlager, Chief Systems Engineer
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
by Kurt W. Bauer, Executive Director

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by Richard B. Sheridan, P.E., Chief Transportation Planner
Inventory of Land Development Regulations in Southeastern Wisconsin
by William J. Kockelman, Chief Community Assistance Planner
A Backward Glance: Highway Development in Southeastern Wisconsin - Part I
by Jean C. Meier, Librarian and Research Assistant

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A Modal Split Model for Southeastern Wisconsin
by Edward Weiner, Highway Engineer

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Transit System Development Standards
by Edward Weiner, Transportation Planning Engineer
Modified Rapid Transit Service in the Southeastern Wisconsin Region
by Sheldon W. Sullivan, Administrative Officer
A Backward Glance: Highway Development in Southeastern Wisconsin - Part II
by Jean C. Meier, Research Assistant and
Sheldon W. Sullivan, Administrative Officer

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Characteristics of Travel in the Milwaukee Central Business District
by Sheldon W. Sullivan, Administrative Officer
Computing the Center of Population and the Geographic Center
by Wayne H. Faust, Associate Planner
A Backward Glance: Downtown Yesterdays
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Hydrogeologic Considerations in Liquid Waste Disposal,
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by Martha J. Ketelle, Department of Geology and Geophysics,
University of Wisconsin-Madison, Wisconsin

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Characteristics of Air and Ground Travel Generated by
General Mitchell Field Airport Terminal: May 1968
by Sheldon W. Sullivan, Chief of Data Collection
Shifts in Centers of Population within the Region: 1960-1970
by Wayne H. Faust, Associate Planner
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Freeway Flyer Service in Southeastern Wisconsin—A Progress Report: 1964-1971
by Sheldon W. Sullivan, Chief of Data Collection
Development of Equations for Rainfall Intensity—Duration-Frequency Relationship
by Stuart G. Walesh, Water Resources Engineer
A Backward Glance: The American Automobile—A Brief History of the Development
of the American Automobile and the Growth of Automobile Registrations in the
United States, Wisconsin, and the Southeastern Wisconsin Region: 1896-1970
by Sheldon W. Sullivan, Chief of Data Collection

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Floodland Management: The Environmental Corridor Concept
by Stuart G. Walesh, SEWRPC Water Resources Engineer
Characteristics of Travel in the Milwaukee Central Business District: 1963 and 1972
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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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A Backward Glance: Milwaukee's Water Story
by Milwaukee Water Works
Is There a Groundwater Shortage in Southeastern Wisconsin?
by Douglas A. Cherkaver and Vinton W. Bacon,
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An Overview of the Sources of Water Pollution in Southeastern Wisconsin
by Kurt W. Bauer, Executive Director, SEWRPC
The Effect of Sample Rate on Socioeconomic and Travel Data
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2nd Regional Planning Conference, November 14, 1962
3rd Regional Planning Conference, November 20, 1963
4th Regional Planning Conference, May 12, 1965
5th Regional Planning Conference, October 26, 1965
6th Regional Planning Conference, May 6, 1969
7th Regional Planning Conference, January 19, 1972
8th Regional Planning Conference, October 16, 1974
Regional Conference on Sanitary Sewerage System User and
Industrial Waste Treatment Recovery Charges, July 18, 1974
9th Regional Planning Conference, April 14, 1976
10th Regional Planning Conference, March 15, 1978
11th Regional Planning Conference, April 19, 1979
12th Regional Planning Conference, January 31, 1980

OTHER

A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1978-1982, December 1977
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1979-1983, December 1978
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1980-1984, December 1979
A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1981-1985, December 1980

Appendix E

BRUCE E. BOETTCHER

CERTIFIED PUBLIC ACCOUNTANT, S.C.

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MEMBER
WISCONSIN INSTITUTE C.P.A.'S
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CERTIFIED PUBLIC ACCOUNTANTS

July 29, 1981

To the Commissioners of
Southeastern Wisconsin Regional Planning Commission
916 North East Avenue
Waukesha, Wisconsin 53186

Gentlemen:

I have examined the accompanying Balance Sheets and the related Statements of Revenues, Expenditures, and Changes in Fund Balances for the year 1980 of the following funds of the Southeastern Wisconsin Regional Planning Commission:

1. Southeastern Wisconsin Regional Planning Commission Fund
2. U. S. Department of Housing and Urban Develop-
3. U. S. Department of Transportation, Urban Mass Transportation Administration Fund
4. U. S. Department of Transportation, Federal Highway Administration Fund
5. U. S. Environmental Protection Agency Section 175 Fund
6. U. S. Department of Transportation, Federal Railroad Administration Fund
7. Wisconsin Department of Administration Fund
8. Wisconsin Department of Transportation Fund
9. Wisconsin Department of Natural Resources Fund
10. Wisconsin Department of Local Affairs and Development Fund
11. Milwaukee County Fund
12. Service Agreements Fund
13. U.S. Environmental Protection Agency Section 208 Fund
14. Wisconsin Department of Natural Resources - Water Fund
15. Data Processing Fund
16. Milwaukee Metropolitan Sewerage District Fund
17. Stream Gaging Fund
18. Kenosha County Tropographic Mapping - DOA Fund
19. Indirect Expense Fund
20. Pike River Watershed Fund
21. Village of Slinger Mapping Fund
22. Kenosha County Topographic Mapping Fund
23. Wisconsin Department of Natural Resources Inspection and Maintenance Project Fund
24. Nationwide Urban Runoff Pollution Study Fund
25. Oak Creek Mapping Study Fund
26. Milwaukee Inner Harbor Estuary Fund

My 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 I considered necessary in the circumstances.

As you are aware, calendar year 1980 was the first year in which the Commission was required to comply with the terms and conditions of the Office of Management and Budget (OMB) Circular A-102, "Uniform Requirements for Grants to State and Local Governments," as revised October 22, 1979. The revisions to the guidelines governing recipients of federal grants were required to be implemented effective January 1, 1980. To comply with the revised provisions of OMB A-102, the Commission modified its accounting system effective January 1, 1980, to record revenues and expenditures by individual grant contract rather than by planning program as had been done in preceding years. The modifications to the accounting system have been examined and, in my opinion, are in accordance with the guidelines set forth in OMB A-102.

Effective March 17, 1980, the OMB also implemented Attachment P to OMB A-102 which set forth guidelines governing firms conducting audits for recipients of federal and state grants. My examination was made in accordance with the guidelines set forth in OMB A-102, Attachment P and, in my opinion, the Commission is in compliance with the terms and conditions of the grant contracts. Also, the Commission is, in my opinion, in compliance with the terms and conditions governing letter-of-credit procedures and requests for reimbursement.

In my opinion, the accompanying financial statements present fairly the financial position of the above funds at December 31, 1980, and the results of its operations for the fiscal year then ended, in conformity with generally accepted accounting procedures applied on a basis in accordance with standards prescribed by the Office of Management and Budget in its documents A-102 governing requirements for grants management and FMC-74-21 governing allowability and allocability of costs.

I have also revised compliance and internal control matters in accordance with the provisions of the HUD audit guide for the Comprehensive Planning Assistance Program, and the Office of Management and Budget's Circular A-102, "Uniform Requirements for Grants to State and Local Governments," and have included applicable comments on Pages 3 and 4.

Respectfully submitted,

BRUCE E. BOETTCHER, CPA, S.C.

Bruce E. Boettcher
Certified Public Accountant

COMMENTS ON COMPLIANCE AND INTERNAL CONTROL

1. Based on my tests of transactions and examination of records, I believe that Southeastern Wisconsin Regional Planning Commission has complied with the following:

a. The terms and conditions of the grant contracts.

b. The regulations, policies, and procedures prescribed by its governing board, the Commission's grantor agencies, and the Office of Management and Budget.

2. As a part of my examination, I reviewed and tested the Commission's system of internal accounting control to the extent I considered necessary to evaluate the system as required by generally accepted auditing standards. Under these standards, the purpose of such evaluation is to establish a basis for reliance thereon in determining the nature, timing, and extent of other auditing procedures that are necessary for expressing an opinion on the financial statements. Additionally, my examination included procedures necessary in my judgment to determine compliance with contractual terms and conditions and regulations, policies, and procedures prescribed by OMB, as set forth in OMB A-102, Attachment P.

The objective of internal accounting control is to provide reasonable, but not absolute, assurance as to the safeguarding of assets against loss from unauthorized use or disposition, and the reliability of financial records for preparing financial statements and maintaining accountability for assets. The concept of reasonable assurance recognizes that the cost of a system of internal accounting control should not exceed the benefits derived and also recognizes that the evaluation of these factors necessarily requires estimates and judgments by management.

There are inherent limitations that should be recognized in considering the potential effectiveness of any system of internal accounting control. In the performance of most control procedures, errors can result from misunderstanding of instructions, mistakes of judgment, carelessness, or other personal factors. Control procedures whose effectiveness depends upon segregation of duties can be circumvented by collusion. Similarly, control procedures can be circumvented intentionally by management with respect either to the execution and recording of transactions or with respect to the estimates and judgments required in the preparation of financial statements. Further, projection of any evaluation of internal accounting control to future periods is subject to the risk that the procedures may become inadequate because of changes in conditions, and that the degree of compliance with the procedures may deteriorate.

My study and evaluation of the Commission's system of internal accounting control and my review of its compliance with contractual terms, regulations, policies, and procedures which was made for the purpose set forth in the first paragraph of this section, revealed no significant weaknesses.

COST ALLOCATION METHOD

Costs were distributed to the projects and activities pursuant to a cost allocation plan and/or a method of allocation, as applicable, as required by Office of Management and Budget Circular A-102 and Federal Management Circular FMC 74-4 and Handbook 6042.1 REV. I reviewed the method used to allocate indirect costs and found it to be consistent and reasonable.

FINDINGS AND RECOMMENDATIONS

Current Audit

During the audit of the Southeastern Wisconsin Regional Planning Commission for the year ended December 31, 1980, no findings were made which would require recommendations.

EXHIBIT A-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Southeastern Wisconsin Regional Planning Commission Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Contributions from Counties		$615,000.00	
Other Income			
Grant Revenue	$35,371.00		
Service Agreements	38,210.27		
Interest on Invested Funds	31,814.90		
Other Income	30,361.29		
Total Other Income		$135,757.46	
Total Revenues (Note 2)			$750,757.46
Expenditures			
Salaries and Fringe Benefits		$434,072.65	
Office and Other Expenses			
Technical Consultants	$ 27,811.20		
Services by Other Public Agencies	1,498.69		
Outside Salaries and Services	6,716.39		
Data Processing Services	147,500.94		
Newsletter Publication	5,679.97		
Office Drafting and DP Supplies	10,172.82		
Library Acquisition and Dues	54.75		
Reproduction and Publication	3,267.48		
Publication of Report	28,483.93		
Travel Expense	6,811.20		
Postage Expense	22.00		
Other Operating Expenses	258.72		
Unemployment Compensation Expense	781.00		
Automobile/Office Equipment Maintenance	748.12		
Depreciation of Automobile/ Equipment	11,254.79		
Total Office and Other Expenses		$251,062.00	
Indirect Expense		$281,678.18	
Total Expenditures			$966,812.83
Excess Expenditures over Revenues			$216,055.37
Fund Balance - Beginning of Year			$318,711.65
Fund Balance - End of Year			$102,656.28

The notes which follow are an integral part of this statement.

SCHEDULE A-B-1

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Southeastern Wisconsin Regional Planning Commission Fund

Equipment Schedule

As at December 31, 1980

Description	Cost	Accumulated Depreciation	Net Book Value
Desks	$ 13,420.55	$10,285.89	$ 3,134.66
Chairs	8,839.93	6,358.96	2,480.97
Calculators and Adding Machines	11,742.86	7,839.48	3,903.38
Filing Cabinets	23,975.62	14,656.65	9,318.97
Typewriters	14,385.14	8,783.39	5,601.75
Book Cases	13,365.38	6,348.64	7,016.74
Tables	6,144.56	4,692.18	1,452.38
Data Processing Equipment	3,692.06	575.61	3,116.45
Major Equipment	17,415.40	9,890.52	7,524.88
Automobiles	42,567.10	21,423.97	21,143.13
Miscellaneous	10,701.92	3,616.33	7,085.59
	$166,250.52	$94,471.62	$71,778.90

Method of Depreciation

Autos are depreciated over five (5) years on the straight-line method, with a 10 percent salvage value used.

Equipment is depreciated over ten (10) years on the straight-line method.

EXHIBIT A-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Southeastern Wisconsin Regional Planning Commission Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Grant Available		$ 77,306.21
Furniture, Fixtures, Equipment, Autos, etc. (Schedule A-B-1)		71,778.90
Total Assets		$149,085.11
Liabilities		
Fringe Benefits	$ 892.26	
State Sales Tax	84.99	
Accounts Payable	42,544.54	
U. S. Savings Bonds	87.50	
Annuity	2,819.54	
Total Liabilities		46,428.83
Fund Balance		
Unappropriated Fund Balance		102,656.28
Total Liabilities and Fund Balance		$149,085.11

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Southeastern Wisconsin Regional Planning Commission
(SEWRPC Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the SEWRPC Fund are used to partially support the following continuing planning programs: land use, transportation, planning research; air quality; floodland management; water quality; housing; community assistance, and coastal zone management. In addition, the Commission enters into special contracts and may provide partial support to other special planning programs such as: the Milwaukee Area Primary Transit Systems Alternatives Analysis and the University of Wisconsin-Milwaukee Work Study Project. This fund also includes the office equipment, unemployment compensation, and operating fund balances of the Commission.

   Included in the SEWRPC Fund are revenues generated from the following sources: the constituent seven counties in the form of tax levy requests; revenues from contracts and/or service agreements; interest income; sale of maps, publications and aerial photographs; and other miscellaneous income sources.

   Revenues generated in the SEWRPC Fund are not only used to provide partial support to the referenced planning programs, but are also used in concert with other state and local funding agencies to satisfy appropriate local matching requirements mandated by the Commission's federal funding agencies. Receipt of the revenues reflected in the SEWRPC Fund is obtained by the Commission by letter requests to the constituent seven counties, customary invoicing procedures, or in accordance with specific terms and conditions set forth in individual contracts or service agreements.

2. Revenues
   The grant revenue from previous years includes $14,908 from the Wisconsin Department of Development and $20,463 from the U. S. Department of Transportation, Urban Mass Transportation Administration.

EXHIBIT A-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Housing and Urban Development Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Grant Number CPA-WI-05-39-1092 (Note 2)		$ 94,400.00	
Grant Number CPA-WI-05-39-1088 (Note 3)		-0-	
Total Revenues			$ 94,400.00
Expenditures			
Salaries and Fringe Benefits		$ 40,789.19	
Office and Other Expenses			
Outside Salaries and Services	$ 1,740.40		
Data Processing Services	24,476.55		
Newsletter Publication	803.38		
Office Drafting and DP Supplies	94.29		
Reproduction and Publication	143.21		
Travel Expense	541.60		
Other Operating Expenses	1.03		
Total Office and Other Expenses		$ 27,800.46	
Indirect Expense		$ 26,484.48	
Total Expenditures			$ 95,074.13
Excess Expenditures over Revenues			$ 674.13
Fund Balance - Beginning of Year			$ 803.92
Fund Balance - End of Year			$ 129.79

The notes which follow are an integral part of this statement.

EXHIBIT A-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Housing and Urban Development Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Grant Available	$ 11,372.77
Total Assets	$ 11,372.77
Liabilities	
Accounts Payable	$ 11,242.98
Total Liabilities	11,242.98
Fund Balance	
Fund Balance	129.79
Total Liabilities and Fund Balance	$ 11,372.77

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Housing and Urban Development Fund
(HUD Fund)
Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the HUD Fund are used to partially support the continuing planning programs of: land use; housing; and community assistance. In addition, under a separate grant HUD provides partial support to the Commission for the administration of the Univeristy of Wisconsin-Milwaukee Work-Study Project.

   Included in the HUD Fund are revenues generated from two separate grants. The required local match is provided by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) Fund and the Department of Local Affairs and Development (DLAD) Fund.

   Receipt of the revenues in the HUD Fund is obtained by the Commission in accordance with U. S. Department of Treasury letter of credit procedures.

2. Revenues
   Grant No. CPA-WI-05-39-1092 Fund balance - $129.79. Balance of 1980 expenditures plus expenditures incurred in 1981 to be received in calendar year 1981 in the amount of $7,650 under U. S. Treasury Letter of Credit Number 86-00-5848.

3. Revenues
   Grant No. CPA-WI-05-39-1088 HUD Work Study Funds to be received in calendar year 1981.

EXHIBIT C-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Transportation
Urban Mass Transportation Administration Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Grant Number WI-09-0032		$262,720.00	
Grant Number WI-09-0026		7,362.81	
Grant Number WI-09-0033		221,356.00	
Grant Number WI-09-0034		525,676.00	
Grant Number WI-09-0004		214,016.00	
Total Revenues (Note 2)			$1,231,130.81
Expenditures			
Salaries and Fringe Benefits		$342,287.58	
Office and Other Expenses			
Technical Consultants	$ 18,178.32		
Services by Other Public Agencies	1,455.51		
Outside Salaries and Services	23,022.97		
Data Processing Services	216,883.70		
Office Drafting and DP Supplies	1,087.97		
Library Acquisition and Dues	73.40		
Reproduction and Publication	2,904.50		
Publication of Report	12,100.23		
Travel Expense	6,152.42		
Other Operating Expenses	1,118.27		
Automobile/Office Equipment Maintenance	3,783.33		
Total Office and Other Expenses		$286,760.62	
Indirect Expense		$221,863.66	
Total Expenditures			$850,911.86
Excess Revenues over Expenditures			$380,218.95
Fund Balance - Beginning of Year			$ 9,193.00
Fund Balance - End of Year			$389,411.95

The notes which follow are an integral part of this statement.

EXHIBIT C-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Transportation
Urban Mass Transportation Administration Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Grant Available	$411,283.04
Total Assets	$411,283.04
Liabilities	
Accounts Payable	$ 21,871.09
Total Liabilities	$ 21,871.09
Fund Balance	
Fund Balance	389,411.95
Total Liabilities and Fund Balance	$411,283.04

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Transportation
Urban Mass Transportation Administration Fund
(UMTA Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the UMTA Fund are used to partially support the continuing planning programs of: transportation; planning research; and air quality. In addition, under separate contract UMTA provides partial support to the Commission for the conduct of the Milwaukee Area Primary Transit Systems Alternatives Analysis Study (A/A).

   Included in the UMTA Fund are revenues generated from two separate grants with the required local match provided by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) Fund, the Wisconsin Department of Transportation (WISDOT) Fund, and in the A/A study, the Milwaukee County Fund.

   For the referenced continuing planning programs, UMTA revenue is used in concert with the Federal Highway Administration (FHWA) Fund and receipt of the revenues in the UMTA fund is obtained by the Commission in accordance with the terms and conditions of the U. S. Department of Treasury letter of credit procedures.

2. Revenues

Total 1980 Revenue as set forth in Audit Statement -	$1,231,130.81
Less Previous Years Grants Received in 1980 -	262,720.00
Less Amount to be Passed Through in 1981 to Milwaukee County and the City of Milwaukee -	226,624.92
Plus 1980 Grant Monies to be Received in 1981 -	109,125.97
Actual 1980 Revenue -	850,911.86
1980 Expenditures -	850,911.86
Fund Balance -	$ -0-

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Transportation
Federal Highway Administration Fund
(FHWA Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the FHWA Fund are used to partially support the continuing planning programs of: transportation; planning research; and air quality.

   The required local match for the revenues reflected in the FHWA Fund is provided by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) Fund and the Wisconsin Department of Transportation (WISDOT) Fund.

   For referenced continuing planning programs, FHWA revenues are used in concert with the Urban Mass Transportation Administration (UMTA) Fund and receipt of the revenues in the FHWA Fund is obtained by the Commission from the Wisconsin Department of Transportation in accordance with an agreed-upon method of invoicing.

2. Revenues

1980 Revenue as set forth in Audit Statement -	$228,832.23
1980 Revenue to be Received in Calendar Year 1981 -	65,952.13
Actual 1980 Revenue -	294,784.36
1980 Expenditures -	285,744.10
1980 Fund Balance -	$ 9,040.26

EXHIBIT D-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Transportation
Federal Highway Administration Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Federal Grant		$228,832.23	
Total Revenues (Note 2)			$228,832.23
Expenditures			
Salaries and Fringe Benefits		$116,525.89	
Office and Other Expenses			
Technical Consultants	$10,120.63		
Services by Other Public Agencies	796.20		
Outside Salaries and Services	4,346.18		
Data Processing Services	68,599.69		
Office Drafting and DP Supplies	534.91		
Library Acquisition and Dues	40.15		
Reproduction and Publication	1,292.56		
Publication of Report	3,189.18		
Travel Expense	2,020.95		
Other Operating Expenses	587.14		
Automobile/Office Equipment Maintenance	2,164.95		
Total Office and Other Expenses		$ 93,692.54	
Indirect Expense		$ 75,525.67	
Total Expenditures			$285,744.10
Excess Expenditures over Revenues			$ 56,911.87
Fund Balance - End of Year			$(56,911.87)

The notes which follow are an integral part of this statement.

EXHIBIT D-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Transportation
Federal Highway Administration Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Total Assets	$ --
Liabilities	
Accounts Payable	$ 7,053.78
Grant Balance	49,858.09
Total Liabilities	$ 56,911.87
Fund Balance	
Fund Balance	$(56,911.87)
Total Liabilities and Fund Balance	$ --

The notes which follow are an integral part of this statement.

EXHIBIT E-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Environmental Protection Agency Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Grant Number WI-09-0002 (Note 2)		$ 60,984.00	
Total Revenues			$ 60,984.00
Expenditures			
Salaries and Fringe Benefits		$ 93,872.91	
Office and Other Expenses			
Technical Consultants	$ 5,292.51		
Services by Other Public Agencies	4,241.14		
Outside Salaries and Services	2,424.07		
Data Processing Services	59,526.27		
Newsletter Publication	12,225.00		
Office Drafting and DP Supplies	89.40		
Library Acquisition and Dues	216.09		
Reproduction and Publication	524.50		
Publication of Report	18,430.89		
Travel Expense	2,103.41		
Other Operating Expenses	209.60		
Total Office and Other Expenses		$105,282.88	
Indirect Expense		$ 60,824.53	
Total Expenditures			$ 259,980.32
Excess Expenditures over Revenues			$ 198,996.32
Fund Balance - End of Year			$(198,996.32)

The notes which follow are an integral part of this statement.

EXHIBIT E-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Environmental Protection Agency Section 175 Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Total Assets	$ --
Liabilities	
Accounts Payable	$ 3,969.02
Grant Balance	195,027.30
Total Liabilities	198,996.32
Fund Balance	
Fund Balance	(198,996.32)
Total Liabilities and Fund Balance	$ --

The notes which are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Environmental Protection Agency Section 175 Fund
(EPA 175 Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the EPA - 175 Fund are used to partially support the continuing planning programs of: transportation; planning research; and air quality.

   For the referenced continuing planning programs, receipt of the EPA revenues is obtained by the Commission in accordance with the terms and conditions of the U. S. Department of Treasury letter of credit procedures.

2. Revenues

1980 Revenue as set forth in Audit Statement -	$ 60,984.00
1980 Revenue to be Received in 1981 -	198,996.32
Actual 1980 Revenue -	259.980.32
1980 Expenditures -	$259,980.32
Fund Balance -	$ -0-

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Transportation
Federal Rail Administration Fund
(FRA Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the FRA Fund are used to partially support a special rail transportation project in the continuing transportation planning program.

   For the referenced continuing planning program, receipt of the revenues in the FRA Fund is obtained by the Commission from the Wisconsin Department of Transportation in accordance with an agreed-upon method of invoicing.

2. Revenues

1980 Revenues -	$1,825.52
1980 Expenditures -	1,914.45
Fund Balance -	$ (88.93)

EXHIBIT F-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Transportation
Federal Rail Administration Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Federal Grant		$1,825.52	
Total Revenues (Note 2)			$1,825.52
Expenditures			
Salaries and Fringe Benefits		$ 551.54	
Office and Other Expenses			
Outside Salaries and Services	$ 76.80		
Data Processing Services	720.00		
Travel Expense	27.84		
Other Operating Expenses	201.60		
Total Office and Other Expenses		$1,026.24	
Indirect Expense		$ 336.67	
Total Expenditures			$1,914.45
Excess Expenditures over Revenues			$ 88.93
Fund Balance - End of Year			$ (88.93)

The notes which follow are an integral part of this statement.

EXHIBIT G-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Administration Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Contract Revenue		$11,583.09	
Total Revenues (Note 2)			$11,583.09
Expenditures			
Salaries and Fringe Benefits		$6,772.84	
Office and Other Expenses			
Data Processing Services	$5,880.00		
Travel Expense	716.54		
Total Office and Other Expenses		$6,596.54	
Indirect Expense		$4,376.67	
Total Expenditures			$17,746.05
Excess Expenditures over Revenues			$ 6,162.96
Fund Balance - End of Year			$(6,162.96)

The notes which follow are an integral part of this statement.

EXHIBIT F-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Department of Transportation
Federal Rail Administration Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Total Assets		$ --
Liabilities		
Accounts Payable	$ 80.64	
Grant Balance	8.29	
Total Liabilities		88.93
Fund Balance		
Fund Balance		$(88.93)
Total Liabilities and Fund Balance		$ --

The notes which follow are an integral part of this statement.

EXHIBIT G-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Administration Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Total Assets		$ --
Liabilities		
Accounts Payable	$ 45.47	
Grant Balance	6,117.49	
Total Liabilities		6,162.96
Fund Balance		
Fund Balance		$(6,162.96)
Total Liabilities and Fund Balance		$ --

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Administration Fund
(DOA Fund)

Notes to Financial Statement
December 31, 1980

1. The revenues reflected in the DOA Fund are used to partially support the continuing Coastal Zone Management Program.

   The revenues in the DOA Fund are U. S. National Oceanic and Atmospheric Administration (NOAA) grant funds that are administered by the DOA.

   The required local match is provided by the Southeastern Wisconsin Regional Planning Commission (SEWRPC) Fund.

   Receipt of the revenues in the DOA Fund is obtained by the Commission from the Wisconsin Department of Administration in accordance with an agreed-upon method of invoicing.

2. Revenues
   1980 Revenue - $11,583.09
   1980 Expenditures - 17,746.05
   1980 Fund Balance - $(6,162.96)

   Federal Fiscal Year Contract.
   Balance of 1980 expenditures to be received in calendar year 1981.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Transportation Fund
(WISDOT Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the WISDOT Fund are used to partially support the continuing planning programs of: transportation, planning research; and air quality. In addition, under a separate agreement, WISDOT provides partial support to the Commission for the conduct of the Milwaukee Area Primary Transit Systems Alternatives Analysis Study.

   Included in the WISDOT Fund are revenues generated from two separate agreements, both of which provide partial support of the required local match for funding by the Urban Mass Transportation Administration (UMTA) Fund and the Federal Highway Administration (FHWA) Fund.

   For the referenced continuing planning programs, receipt of revenues in the WISDOT Fund is obtained by the Commission in accordance with the terms and conditions of an agreed-upon method of invoicing patterned after the U. S. Department of Treasury letter of credit system.

2. Revenues

1980 Revenue as set forth in Audit Statement -	$ 83,918.68
Less Revenue Received for 1979 Expenses -	(3,518.17)
Plus 1980 Revenue to be Received in 1981 -	30,010.14
Actual 1980 Revenue -	$110,410.65
1980 Expenditures -	106,050.76
Fund Balance -	$ 4,359.89

EXHIBIT H-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Transportation Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
State Grant		$83,918.68	
Total Revenues (Note 2)			$ 83,918.68
Expenditures			
Salaries and Fringe Benefits		$42,137.89	
Office and Other Expenses			
Technical Consultants	$ 3,530.41		
Services by Other Public Agencies	282.02		
Outside Salaries and Services	1,686.10		
Data Processing Services	27,230.26		
Office Drafting and DP Supplies	180.51		
Library Acquisition and Dues	14.18		
Reproduction and Publication	473.01		
Publication of Report	1,591.72		
Travel Expense	669.01		
Other Operating Expenses	237.49		
Automobile/Office Equipment Maintenance	748.12		
Total Office and Other Expenses		$36,642.83	
Indirect Expense		$27,270.04	
Total Expenditures			$106,050.76
Excess Expenditures over Revenues			$ 22,132.08
Fund Balance - End of Year			$(22,132.08)

The notes which follow are an integral part of this statement.

EXHIBIT I-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Natural Resources Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
State Grant		$ 1,963.53	
Total Revenues (Note 2)			$ 1,963.53
Expenditures			
Salaries and Fringe Benefits		$34,639.14	
Office and Other Expenses			
Outside Salaries and Services	$3,037.50		
Office Drafting and DP Supplies	157.44		
Reproduction and Publication	230.05		
Travel Expense	163.16		
Other Operating Expenses	44.24		
Total Office and Other Expenses		$ 3,632.39	
Indirect Expense		$22,444.48	
Total Expenditures			$ 60,716.01
Excess Expenditures over Revenues			$ 58,752.48
Fund Balance - End of Year			$(58,752.48)

The notes which follow are an integral part of this statement.

EXHIBIT H-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Transportation Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Total Assets		$ --
Liabilities		
Accounts Payable	$ 2,534.70	
Grant Balance	19,597.38	
Total Liabilities		22,132.08
Fund Balance		
Fund Balance		(22,132.08)
Total Liabilities and Fund Balance		$ --

The notes which follow are an integral part of this statement.

EXHIBIT I-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Natural Resources Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Total Assets		$ --
Liabilities		
Accounts Payable	$ 12,856.53	
Grant Balance	45,895.95	
Total Liabilities		58,752.48
Fund Balance		
Fund Balance		$(58,752.48)
Total Liabilities and Fund Balance		$ --

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Natural Resources Fund
(DNR Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the DNR Fund are used to partially support the continuing Floodland Management Planning Program.

   Receipt of revenues in the DNR Fund is obtained by the Commission from the Wisconsin Department of Natural Resources in accordance with an agreed-upon method of invoicing.

2. Revenues

1980 Revenue -	$ 1,963.53
1980 Expenditures -	60,716.01
Fund Balance -	$(58,752.48)

   Fiscal year contract for floodland management support and multi-year contract for special studies. Balance of 1980 expenditures to be received in calendar year 1981.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Local Affairs and Development Fund
(DLAD Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the DLAD Fund are used to partially support the continuing planning programs of: land use; housing; and community assistance.

   Included in the DLAD Fund are revenues generated from three separate funding sources of the Department of Local Affairs and Development. Funding to the Commission from DLAD is made up of Secretary's Discretionary Funding, State Planning Aides, and U. S. Department of Housing and Urban Development Section 701 funds administered by the Department of Local Affairs and Development.

   The receipt of the revenues in the DLAD Fund is obtained by the Commission in accordance with an agreed-upon method of invoicing.

2. Revenues

Fiscal Year Grants	
Project Number CPA-1089-3170.0	
State Planning Aides	
Project Number SPA-9068	
Secretary's Discretionary Fund	
1980 Revenue as set forth in Audit Statement -	$ 47,092.00
1980 Revenue to be Received in 1981 -	31,750.00
Actual 1980 Revenue -	$ 78,842.00
1980 Expenditures -	105,366.86
Fund Balance -	$(26,524.86)

EXHIBIT I-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Local Affairs and Development Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
State Grant		$47,092.00	
Total Revenues (Note 2)			$ 47,092.00
Expenditures			
Salaries and Fringe Benefits		$44,606.34	
Office and Other Expenses			
Outside Salaries and Services	$ 1,793.57		
Data Processing Services	28,182.60		
Newsletter Publication	895.35		
Office Drafting and DP Supplies	140.78		
Reproduction and Publication	276.53		
Publication of Report	16.74		
Travel Expense	501.57		
Total Office and Other Expenses		$31,807.14	
Indirect Expense		$28,953.38	
Total Expenditures			$105,366.86
Excess Expenditures over Revenues			$ 58,274.86
Fund Balance - End of Year			$(58,274.86)

The notes which follow are an integral part of this statement.

EXHIBIT K-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Milwaukee County Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Contract Revenue		$24,710.57	
Total Revenues (Note 2)			$24,710.57
Expenditures			
Salaries and Fringe Benefits		$ 8,682.45	
Office and Other Expenses			
Outside Salaries and Services	$1,077.79		
Data Processing Services	6,120.00		
Office Drafting and DP Supplies	13.23		
Reproduction and Publication	31.57		
Publication of Report	197.90		
Travel Expense	210.29		
Other Operating Expenses	1.06		
Total Office and Other Expenses		$ 7,651.84	
Indirect Expense		$ 5,611.12	
Total Expenditures			$21,945.41
Excess Revenues over Expenditures			$ 2,765.16
Fund Balance - End of Year			$ 2,765.16

The notes which follow are an integral part of this statement.

EXHIBIT I-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Local Affairs and Development Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Total Assets		$ --
Liabilities		
Accounts Payable	$ 164.61	
Grant Balance	58,110.25	
Total Liabilities		58,274.86
Fund Balance		
Fund Balance		(58,274.86)
Total Liabilities and Fund Balance		$ --

The notes which follow are an integral part of this statement.

EXHIBIT K-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Milwaukee County Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Grant Available		$2,921.26
Total Assets		$2,921.26
Liabilities		
Accounts Payable		$ 156.10
Total Liabilities		$ 156.10
Fund Balance		
Fund Balance		$2,765.16
Total Liabilities and Fund Balance		$2,921.26

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Milwaukee County Fund

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the Milwaukee County Fund are used to partially support the Milwaukee Area Primary Transit Systems Alternatives Analysis Study.

   Milwaukee County, in concert with the Wisconsin Department of Transportation (WISDOT) Fund and the Southeastern Wisconsin Regional Planning Commission (SEWRPC) Fund, provides the required local match for the Urban Mass Transportation Administration (UMTA) Grant to conduct the Milwaukee Area Primary Transit System Alternatives Analysis Study.

   For the referenced study, receipt of the revenues is obtained by the Commission from Milwaukee County in accordance with an agreed-upon method of invoicing.

2. Revenues

1980 Revenue as set forth in Audit Statement -	$24,710.57
Less Revenue Received for 1979 Expenditures -	3,518.17
Actual 1980 Revenue -	$21,192.40
1980 Expenditures -	21,945.41
Fund Balance	$ (753.01)

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Service Agreements Fund

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the Service Agreements Fund are used to partially support special studies or work efforts in a variety of program areas including: land use; transportation; watershed studies; and community assistance planning.

   Included in the Service Agreements Fund are revenues generated from letter agreements, memorandums of understanding, and contracts. Work efforts undertaken under the service agreements heading rarely require local matching.

   For the referenced programs, receipt of the revenues in the Service Agreements Fund is obtained by the Commission in accordance with the terms and conditions set forth in an individual agreement.

2. Revenues

1980 Revenue as set forth in Audit Statement -	$48,420.98
Less Revenue Received for 1979 Expenditures -	47,218.30
Plus 1980 Revenue to be Received in 1981 -	28,113.40
Actual 1980 Revenue -	29,316.08
1980 Expenditures -	28,767.55
Fund Balance -	$ 548.53

EXHIBIT L-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Service Agreements Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Community Assistance Agreements		$48,420.98	
Total Revenues (Note 2)			$48,420.98
Expenditures			
Salaries and Fringe Benefits		$13,521.44	
Office and Other Expenses			
Services by Other Public Agencies	$ 95.12		
Outside Salaries and Services	1,007.69		
Office Drafting and DP Supplies	802.67		
Library Acquisition and Dues	43.54		
Reproduction and Publication	672.92		
Publication of Report	2,592.00		
Travel Expense	397.85		
Other Operating Expenses	880.97		
Total Office and Other Expenses		$ 6,492.76	
Indirect Expense		$ 8,753.35	
Total Expenditures			$28,767.55
Excess Revenues over Expenditures			$19,653.43
Fund Balance - End of Year			$19,653.43

The notes which follow are an integral part of this statement.

EXHIBIT L-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Service Agreements Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Grant Available	$19,676.46
Total Assets	$19,676.46
Liabilities	
Accounts Payable	$ 23.03
Total Liabilities	$ 23.03
Fund Balance	
Fund Balance	$19,653.43
Total Liabilities and Fund Balance	$19,676.46

The notes which follow are an integral part of this statement.

EXHIBIT A-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Environmental Protection Agency 208 Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Grant Number P005474-01-01		$136,000.00	
Grant Number P005-519-010		218,000.00	
Total Revenues (Note 2)			$354,000.00
Expenditures			
Salaries and Fringe Benefits		$72,009.03	
Office and Other Expenses			
Services by Other Public Agencies	$ 7,278.54		
Outside Salaries and Services	1,233.40		
Data Processing Services	46,440.00		
Library Acquisition and Dues	242.86		
Reproduction and Publication	128.72		
Publication of Report	8,322.36		
Travel Expense	1,513.46		
Other Operating Expenses	36.30		
Total Office and Other Expenses		$65,195.64	
Indirect Expense		$46,684.51	
Total Expenditures			$183,889.18
Excess Revenues over Expenditures			$170,110.82
Fund Balance - End of Year			$170,110.82

The notes which follow are an integral part of this statement.

EXHIBIT A-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Environmental Protection Agency 208 Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Grant Available	$177,858.53
Total Assets	$177,858.53
Liabilities	
Accounts Payable	$ 7,747.71
Total Liabilities	$ 7,747.71
Fund Balance	
Fund Balance	170,110.82
Total Liabilities and Fund Balance	$177,858.53

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

U. S. Environmental Protection Agency
(EPA 208 Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the EPA 208 Fund are used to partially support the Continuing Water Quality Management Planning Program.

   The Wisconsin Department of Natural Resources - Water (DNR - Water) Fund, in concert with the Southeastern Wisconsin Regional Planning Commission (SEWRPC) Fund, provide the required local match for the EPA 208 Fund.

   For the referenced continuing planning program, receipt of the revenues in the EPA 208 Fund is obtained by the Commission in accordance with the terms and conditions of the U. S. Federal Reserve Bank letter of credit procedures.

2. Revenues
   1980 Revenue - $354,000.00
   1980 Expenditures - 183,889.18
   Fund Balance - $170,110.82

   Grants time period does not expire on December 31, 1980. Balance of grants to be expended and received in 1981.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Natural Resources Fund
(DNR - Water)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the DNR - Water Fund are used to partially support the Continuing Water Quality Management Planning Program.

   The DNR - Water Fund, in concert with the Southeastern Wisconsin Regional Planning Commission (SEWRPC) Fund, provides the required local match for the U. S. Environmental Protection Agency Section 208 grant.

2. Revenues
   1980 Revenue - $ --
   1980 Expenditures - 39,591.07
   Fund Balance - $(39,591.07)

   Fiscal year state funding to match EPA Water Quality Grants. Revenue to be received in calendar year 1981.

EXHIBIT N-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Natural Resources Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Total Revenues (Note 2)			$ --
Expenditures			
Salaries and Fringe Benefits		$10,294.36	
Office and Other Expenses			
Services by Other Public Agencies	$ 1,216.67		
Outside Salaries and Services	205.56		
Data Processing Services	19,560.00		
Library Acquisition and Dues	40.57		
Reproduction and Publication	21.44		
Publication of Report	1,386.93		
Travel Expense	238.38		
Other Operating Expenses	6.04		
Total Office and Other Expenses		$22,675.59	
Indirect Expense		$ 6,621.12	
Total Expenditures			$ 39,591.07
Excess Expenditures over Revenues			$ 39,591.07
Fund Balance - End of Year			$(39,591.07)

The notes which follow are an integral part of this statement.

EXHIBIT N-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Natural Resources Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Total Assets	$ --
Liabilities	
Accounts Payable	$ 1,294.90
Grant Balance	38,296.17
Total Liabilities	39,591.07
Fund Balance	
Fund Balance	$(39,591.07)
Total Liabilities and Fund Balance	$ --

The notes which follow are an integral part of this statement.

EXHIBIT O-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Data Processing Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Other Income (Note 2)		$1,173,625.63	
Total Revenues			$1,173,625.63
Expenditures			
Salaries and Fringe Benefits		$ 373,135.04	
Office and Other Expenses			
Outside Salaries and Services	$ 452.50		
Data Processing Machine Rental	518,623.71		
Office Drafting and DP Supplies	43,331.99		
Library Acquisition and Dues	30.00		
Travel Expense	2,506.14		
Telephone Expense	2,528.85		
Other Operating Expenses	227.00		
Total Office and Other Expenses		$ 567,700.19	
Indirect Expense		$ 241,839.24	
Total Expenditures			$1,182,674.47
Excess Expenditures over Revenues			$ 9,048.84
Fund Balance - End of Year			$ (9,048.84)

The notes which follow are an integral part of this statement.

EXHIBIT O-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Data Processing Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Due from Service Agreements	$101,551.86
Due from Sale of Equipment	83,917.79
Total Assets	$185,469.65
Liabilities	
Accounts Payable	$ 92,089.20
Sales Tax	4.97
Grant Balance	102,424.32
Total Liabilities	194,518.49
Fund Balance	
Fund Balance	(9,048.84)
Total Liabilities and Fund Balance	$185,469.65

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Data Processing Fund
(DP Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the DP Fund are used to support the Commission's data processing operations.

   The cost of supporting the Commission's Data Processing Operations is apportioned between the Continuing Planning Programs and the Community Assistance Data Processing Customers. Costs for data processing are distributed to the Continuing Planning Programs according to a "Direct Cost Allocation Plan" approved by the U. S. Environmental Protection Agency (USEPA) acting in the capacity as the Commission's cognizant agency. Cost for data processing services are directly billed to the Community Assistance Data Processing customers.

   Receipt of the revenues in the DP Fund is obtained by the Commission by including the costs distributed to the Commission's Continuing Planning Programs as a direct expense item on all letters of credit or requests for reimbursement. Revenue is also obtained in the DP Fund by directly billing the Community Assistance Data Processing Customers in accordance with an agreed-upon method of invoicing.

2. Revenue - Other Income

Direct Cost Allocation	
SEWRPC Fund -	$147,500.94
HUD Fund -	24,476.55
UMTA Fund -	216,883.70
FHWA Fund -	68,599.69
EPA/AIR - 175 Fund -	59,526.27
FRA Fund -	720.00
DOA Fund -	5,880.00
WisDOT Fund -	27,230.26
DLAD Fund -	28,182.60
Milwaukee County Fund -	6,120.00
EPA/Water - 208 Fund -	46,440.00
WisDNR -	19,560.00
Milwaukee Metropolitan Fund -	11,760.00
Total From Direct Cost Allocation -	$ 662,880.01
Sale of Equipment -	83,917.79
Service Agreements -	$ 426,827.83
Total Revenue	$1,173,625.63

The excess revenue over expenditures for calendar year 1980 will be carried forward into calendar year 1981.

EXHIBIT P-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Milwaukee Metropolitan Sewerage District Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Contract Revenue		$13,600.33	
Total Revenues (Note 2)			$ 13,600.33
Expenditures			
Salaries and Fringe Benefits		$20,838.33	
Office and Other Expenses			
Services by Other Public Agencies	$ 1,918.96		
Outside Salaries and Services	607.50		
Data Processing Services	11,760.00		
Library Acquisition and Dues	1.86		
Travel Expense	270.57		
Total Office and Other Expenses		$14,558.89	
Indirect Expense		$13,466.69	
Total Expenditures			$ 48,863.91
Excess Expenditures over Revenues			$ 35,263.58
Fund Balance - End of Year			$(35,263.58)

The notes which follow are an integral part of this statement.

EXHIBIT P-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Milwaukee Metropolitan Sewerage District Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Total Assets	$ --
Liabilities	
Accounts Payable	$ 83.05
Grant Balance	35,180.53
Total Liabilities	35,263.58
Fund Balance	
Fund Balance	(35,263.58)
Total Liabilities and Fund Balance	$ --

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Milwaukee Metropolitan Sewerage District Fund
(MMSD Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the MMSD Fund are used to partially support the work effort performed at the request of the Milwaukee Sewerage Commission staff.

   Included in the MMSD Fund are revenues from an original contract with amendments 1-3.

   Revenues generated in the MMSD Fund do not require a local match and receipt of the revenues in the MMSD Fund are obtained by the Commission in accordance with terms and conditions set forth in the grant contract.

2. Revenues

1980 Revenue as set forth in Audit Statement -	$13,600.33
Plus Revenue to be received in 1981 -	38,336.00
Actual 1980 Revenue -	51,936.33
1980 Expenditures -	48,863.91
Fund Balance -	$ 3,072.42

Multi-year contract--balance to be utilized in calendar year 1981.

EXHIBIT P-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Stream Gaging Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Total Revenues (Note 2)			$ --
Expenditures			
Office and Other Expenses			
Services by Other Public Agencies	$8,825.00		
Outside Salaries and Services	9,025.00		
Total Office and Other Expenses		$17,850.00	
Total Expenditures			$17,850.00
Excess Expenditures over Revenues			$17,850.00
Fund Balance - Beginning of Year			$20,801.91
Fund Balance - End of Year			$ 2,951.91

The notes which follow are an integral part of this statement.

EXHIBIT Q-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Stream Gaging Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Grant Available	$2,951.91
Total Assets	$2,951.91
Liabilities	
	$ --
Total Liabilities	--
Fund Balance	
Fund Balance	2,951.91
Total Liabilities and Fund Balance	$2,951.91

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Stream Gaging Fund
(SG Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the SG Fund are used to partially support the continuing stream flow gaging station operations in calendar year 1980. During calendar year 1980, the Commission administered the stream gaging program for the United States Geological Survey (USGS) and the local participants.

   During 1980, the Commission administered 22 stream flow gages. One-half of the cost of this project is borne by the USGS, with the remaining one-half borne by the local participants.

   Receipt of the revenues in the SG Fund is obtained by the Commission in the format of a letter request to USGS and the local participants annually.

2. Revenues
   1980 Revenue - $ --
   1980 Expenditures - 17,850.00
   Fund Balance - $(17,850.00)

   Fiscal year contract balance to be received in calendar year 1981.

EXHIBIT R-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Kenosha County Topographic Mapping - DOA Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues		
Contract Revenue		$14,532.58
Total Revenues (Note 2)		$14,532.58
Expenditures		
Office and Other Expenses		
Technical Consultants	$14,532.58	
Total Office and Other Expenses		$14,532.58
Total Expenditures		$14,532.58
Excess Revenues over Expenditures		$ --
Fund Balance - End of Year		$ --

The notes which follow are an integral part of this statement.

EXHIBIT R-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Kenosha County Topographic Mapping - DOA Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Total Assets	$ --
Liabilities	
Total Liabilities	$ --
Fund Balance	
Fund Balance	$ --
Total Liabilities and Fund Balance	$ --

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Kenosha County Topographic Mapping - DOA Fund
(KCTM - DOA Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the KCTM - DOA Fund are used to support a portion of the Kenosha County Topographic Mapping Project conducted in Kenosha County supported by the Wisconsin Department of Administration (DOA). The Commission performs a ministerial function in this project insofar as it acts in behalf of the County in administering and overseeing the work performed by a professional contractor.

   The receipt of the revenues in the KCTM - DOA Fund is obtained by the Commission upon receipt of an invoice from the professional contractor which is in turn forwarded to the responsible party at the DOA. Upon receipt of payment by the DOA, the Commission transmits payment to the professional contractor in accordance with the terms and conditions of the contract.

2. Revenues
   1980 Revenue - $14,532.58
   1980 Expenditures - 14,532.58
   Fund Balance - $ -0-

   1980 calendar year project

EXHIBIT S

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Indirect Expense Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Grant Available	$50,474.26
Total Assets	$50,474.26
Liabilities	
Accounts Payable	$50,474.26
Total Liabilities	50,474.26
Fund Balance	
Fund Balance	$ --
Total Liabilities and Fund Balance	$50,474.26

The note which follows is an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Indirect Expense Fund
(Indirect Fund)

Note to Financial Statement
December 31, 1980

1. The Indirect Fund is created annually for the purpose of identifying, categorizing, and distributing individual cost items which are not directly allocable to a specific project or program. Costs accumulated in the Indirect Fund are distributed to all of Commission's funding agencies in accordance with an Indirect Cost Proposal as approved by the U. S. Environmental Protection Agency acting in the capacity of the Commission's cognizant agency.

EXHIBIT F-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Pike River Watershed Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Contract Revenue		$58,300.00	
Total Revenues (Note 2)			$ 58,300.00
Expenditures			
Salaries and Fringe Benefits		$42,566.24	
Office and Other Expenses			
Outside Salaries and Services	$3,645.00		
Reproduction and Publication	18.00		
Travel Expense	397.85		
Other Operating Expenses	19.13		
Total Office and Other Expenses		$ 4,079.98	
Indirect Expense		$27,606.71	
Total Expenditures			$ 74,252.93
Excess Expenditures over Revenues			$ 15,952.93
Fund Balance - End of Year			$(15,952.93)

The notes which follow are an integral part of this statement.

EXHIBIT F-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Pike River Watershed Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Total Assets		$ --
Liabilities		
Accounts Payable	$ 612.29	
Grant Balance	15,340.64	
Total Liabilities		15,952.93
Fund Balance		
Fund Balance		(15,952.93)
Total Liabilities and Fund Balance		$ --

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Pike River Watershed Fund
(Pike River Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the Pike River Fund are used to support a special watershed planning project for the Pike River. The study conducted by the Commission, and funded by Racine and Kenosha Counties, is a multi-year project which is estimated to be completed in calendar year 1981.

   Receipt of the revenues in the Pike River Fund is obtained by the Commission in accordance with specific terms and conditions set forth in the Pike River Watershed contract.

2. Revenues
   1980 Revenue - $ 58,300.00
   1980 Expenditures - 74,252.93
   Fund Balance - $(15,952.93)

   Multi-year contract with Kenosha and Racine Counties.
   Balance to be received in calendar year 1981.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Village of Slinger Mapping Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Contract Revenue		$ 6,320.00	
Total Revenues (Note 2)			$ 6,320.00
Expenditures			
Salaries and Fringe Benefits		$ 8.48	
Office and Other Expenses			
Technical Consultants	$28,225.00		
Outside Salaries and Services	1,000.00		
Total Office and Other Expenses		$29,225.00	
Total Expenditures			$ 29,233.48
Excess Expenditures over Revenues			$ 22,913.48
Fund Balance - End of Year			$(22,913.48)

The notes which follow are an integral part of this statement.

EXHIBIT J-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Village of Slinger Mapping Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Total Assets	$ --
Liabilities	
Accounts Payable	$ 9,580.00
Grant Balance	13,333.48
Total Liabilities	$ 22,913.48
Fund Balance	
Fund Balance	(22,913.48)
Total Liabilities and Fund Balance	$ --

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Village of Slinger Mapping Fund
(Slinger Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the Slinger Fund are used to support a special mapping project for the Village of Slinger. The project administered by the Commission and funded by the Village is estimated to be completed in calendar year 1981.

   Receipt of the revenues in the Slinger Fund is obtained by the Commission in accordance with specific terms and conditions set forth in the Village of Slinger contract.

2. Revenues
   1980 Revenue - $ 6,320.00
   1980 Expenditures - 29,233.48
   Fund Balance - $(22,913.48)

   Multi-year contract with the Village of Slinger. Balance to be received in calendar year 1981.

EXHIBIT V-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Kenosha County Topographic Mapping Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Contract Revenue		$69,942.39	
Total Revenues (Note 2)			$ 69,942.39
Expenditures			
Office and Other Expenses			
Technical Consultants	$90,137.09		
Total Office and Other Expenses		$90,137.09	
Total Expenditures			$ 90,137.09
Excess Expenditures over Revenues			$ 20,194.70
Fund Balance - End of Year			$(20,194.70)

The notes which follow are an integral part of this statement.

EXHIBIT V-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Kenosha County Topographic Mapping Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Grant Available		$ 22,335.00
Total Assets		$ 22,335.00
Liabilities		
Accounts Payable		$ 42,529.70
Total Liabilities		42,529.70
Fund Balance		
Fund Balance		$(20,194.70)
Total Liabilities and Fund Balance		$ 22,335.00

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Kenosha County Topographic Mapping Fund
(Kenosha Mapping Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the Kenosha Mapping Fund are used to support a special topographic mapping project in Kenosha County. Project costs of this mapping effort are also reflected in the Kenosha County Topograhic Mapping-DOA Fund, which reflects those costs being borne by the Wisconsin Department of Administration (DOA).

   Receipt of the revenues in the Kenosha Mapping Fund is obtained by the Commission in accordance with specific terms and conditions set forth in the Kenosha County Topographic Mapping Contract.

2. Revenues
   1980 Revenue - $ 69,942.39
   1980 Expenditures 90,137.09
   Fund Balance $(20,194.70)

   Multi-year contract with Kenosha County.
   Balance to be received in calendar year 1981.

EXHIBIT W-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Natural Resources
Inspection and Maintenance Project Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Total Revenues (Note 2)			$ --
Expenditures			
Salaries and Fringe Benefits		$3,853.81	
Office and Other Expenses			
Other Operating Expenses	$6.79		
Total Office and Other Expenses		$ 6.79	
Indirect Expense		$2,468.89	
Total Expenditures			$ 6,329.49
Excess Expenditures over Revenues			$ 6,329.49
Fund Balance - End of Year			$(6,329.49)

The notes which follow are an integral part of this statement.

EXHIBIT W-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Natural Resources
Inspection and Maintenance Project Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Total Assets		$ --
Liabilities		
Grant Balance		$ 6,329.49
Total Liabilities		6,329.49
Fund Balance		
Fund Balance		$(6,329.49)
Total Liabilities and Fund Balance		$ --

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Wisconsin Department of Natural Resources
Inspection and Maintenance Project
(DNR I and M Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the DNR I and M Fund are used to support a special vehicle inspection and maintenance project in Southeastern Wisconsin.

   Receipt of the revenues in the DNR I and M Fund is obtained by the Commission in accordance with specific terms and conditions set forth in the Wisconsin Department of Natural Resources Contract.

2. Revenues
   1980 Revenue - $ -0-
   1980 Expenditures - 6,329.49
   Fund Balance - $(6,329.49)

   Multi-year contract.
   Balance to be received in calendar year 1981.

EXHIBIT X-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Nationwide Urban Runoff Pollution Study Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Contract Revenue		$10,768.00	
Total Revenues (Note 2)			$ 10,768.00
Expenditures			
Salaries and Fringe Benefits		$12,153.47	
Office and Other Expenses			
Technical Consultants	$2,800.00		
Services by Other Public Agencies	721.47		
Outside Salaries and Services	5.10		
Office Drafting and DP Supplies	308.45		
Reproduction and Publication	491.99		
Travel Expense	1,018.40		
Other Operating Expenses	125.40		
Total Office and Other Expenses		$ 5,470.81	
Indirect Expense		$ 7,855.57	
Total Expenditures			$ 25,479.85
Excess Expenditures and Revenues			$ 14,711.85
Fund Balance - End of Year			$(14,711.85)

The notes which follow are an integral part of this statement.

EXHIBIT Y-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Oak Creek Mapping Study Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Total Revenues (Note 2)			$ --
Expenditures			
Office and Other Expenses			
Technical Consultants	$27,810.50		
Total Office and Other Expenses		$27,810.50	
Total Expenditures			$ 27,810.50
Excess Expenditures over Revenues			$ 27,810.50
Fund Balance - End of Year			$(27,810.50)

The notes which follow are an integral part of this statement.

EXHIBIT X-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Nationwide Urban Runoff Pollution Study Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Total Assets		$ --
Liabilities		
Accounts Payable	$ 738.92	
Grant Balance	13,972.93	
Total Liabilities		$ 14,711.85
Fund Balance		
Fund Balance		(14,711.85)
Total Liabilities and Fund Balance		$ --

The notes which follow are an integral part of this statement.

EXHIBIT Y-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Oak Creek Mapping Study Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets		
Total Assets		$ --
Liabilities		
Accounts Payable	$ 19,378.00	
Grant Balance	8,432.50	
Total Liabilities	27,810.50	
Fund Balance		
Fund Balance	(27,810.50)	
Total Liabilities and Fund Balance		$ --

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Nationwide Urban Runoff Pollution Study Fund
(NURPS Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the NURPS Fund are used to support a special urban runoff pollution study funded by the U. S. Environmental Protection Agency (USEPA).

   Receipt of the revenues in the NURPS Fund is obtained by the Commission in accordance with specific terms and conditions set forth in the contract with the USEPA.

2. Revenues
   1980 Revenue - $ 10,768.00
   1980 Expenditures - 25,479.85
   Fund Balance - $(14,711.85)

   Fiscal year contract. Balance to be received in calendar year 1981.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Oak Creek Mapping Study Fund
(Oak Creek Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the Oak Creek Fund support a special mapping project for the Oak Creek Watershed. This project is supported under separate contract, by the Milwaukee Metropolitan Sewerage District (MMSD).

   Receipt of the revenues in the Oak Creek Fund is obtained by the Commission in accordance with the terms and conditions set forth in the contract with MMSD.

2. Revenues
   1980 Revenues - $ --
   1980 Expenditures - 27,810.50
   Fund Balance - $(27,810.50)

   Multi-year contract with Metropolitan Milwaukee Sewerage District.
   Balance to be received in calendar year 1981.

EXHIBIT 7-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Milwaukee Inner Harbor Estuary Fund (Note 1)

Statement of Revenues, Expenditures, and Changes in Fund Balance
for the Year Ended December 31, 1980

Revenues			
Total Revenues (Note 2)			$ --
Expenditures			
Salaries and Fringe Benefits		$17,797.72	
Office and Other Expenses			
Office Drafting and DP Supplies	$ 12.03		
Travel Expense	134.97		
Other Operating Expenses	8.84		
Total Office and Other Expenses		$ 155.84	
Indirect Expense		$11,558.91	
Total Expenditures			$ 29,512.47
Excess Expenditures over Revenues			$ 29,512.47
Fund Balance - End of Year			$(29,512.47)

The notes which follow are an integral part of this statement.

EXHIBIT 7-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Milwaukee Inner Harbor Estuary Fund (Note 1)

Balance Sheet

As at December 31, 1980

Assets	
Total Assets	$ --
Liabilities	
Accounts Payable	$ 11.36
Grant Balance	29,501.11
Total Liabilities	29,512.47
Fund Balance	
Fund Balance	(29,512.47)
Total Liabilities and Fund Balance	$ --

The notes which follow are an integral part of this statement.

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Milwaukee Inner Harbor Estuary Fund
(Inner Harbor Fund)

Notes to Financial Statements
December 31, 1980

1. The revenues reflected in the Inner Harbor Fund support a special study of the Milwaukee Inner Harbor. This project is supported under a separate contract with the U. S. Environmental Protection Agency (USEPA).

   Receipt of the revenues in the Inner Harbor Fund is obtained by the Commission in accordance with U. S. Department of Treasury letter of credit procedures.

2. Revenues
   1980 Revenues - $ --
   1980 Expenditures - 29,512.47
   Fund Balance - $(29,512.47)

   USEPA Grant No. R005563-010.
   Balance to be received under letter of credit #68-13-0503 in calendar year 1981.

KURT W. BAUER
EXECUTIVE DIRECTOR

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