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FIFTIETH ANNUAL REPORT

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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October 2011

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SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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KENOSHA MILWAUKEE OZAUKEE RACINE WALWORTH WASHINGTON WAUKESHA

October 1, 2011

TO: The Governor and Wisconsin Legislature and the Legislative Bodies of the County and Local Units of government within the Southeastern Wisconsin Region

In accordance with the requirements of Section 66.0309(8)(b) of the *Wisconsin Statutes*, this Commission each calendar year prepares and certifies an annual report to the Wisconsin Legislature and to the Legislative bodies of the constituent counties and municipal governments within the Region. This, the 50th Annual Report of the Commission, as usual, summarizes the progress made by the Commission during 2010 in carrying out its three basic functions: data collection, analysis and dissemination; regional plan preparation; and promotion of plan implementation. It contains a statement of the financial position of the Commission as of the end of the year as certified by an independent auditor, and provides much useful information on the development of the Region. While the Commission Annual Report is prepared to meet the Legislative requirements noted above, the report also serves as an annual report to the State and Federal agencies that fund some of the Commission work program. The Report is also intended to provide county and municipal officials and interested citizens with a comprehensive overview of Commission activities, thereby providing a focus for the active participation of those officials and citizens in regional plan preparation and implementation.

This report, as the 50th Annual Report of the Commission, also marks an important milestone in the life of the Commission. Therefore, a brief history of the creation, organization, and work of the Commission over the past 50 years has been appended to this report. As Chairman, I would urge all recipients of this report to carefully review that appended history which reviews the reasons for the creation of the Commission, the principles underlying the Commission's approach to its work, and some of the accomplishments of the Commission over its first 50 years of existence.

For those officials and interested citizens who may be interested in a more detailed history of the Commission over the past 50 years, we would suggest the book entitled "*Master Planners – 50 years of Regional Planning in Southeastern Wisconsin: 1960-2010,*" authored by Paul G. Hayes, an award-winning journalist who covered the Commission's activities during its formative years and beyond as a reporter for *The Milwaukee Journal*. The book, published by Marquette University Press, places the Commission's pioneering planning innovations, and its efforts to protect the Region's natural environment, to contain urban sprawl, and to promote the cost effective development of transportation, sewerage, flood control, park and open space, and water supply facilities within the Region. Copies of the book are available from the Marquette University Press and from the Commission offices.

The Commission hopes the constituent units and agencies of government concerned are pleased with its work not only during 2010, but over the past half century. The Commission looks forward to continuing to serve its constituent communities and municipal units of government, as well as the State and Federal agencies concerned by providing the areawide planning services required to address the environmental and developmental problems facing Southeastern Wisconsin, and by promoting the intergovernmental cooperation intended to resolve those problems.

Very truly yours,

David L. Stroik Chairman

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ABOUT THE COMMISSION

AUTHORITY

The Southeastern Wisconsin Regional Planning Commission was established in 1960 under Section 66.0309 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 Southeastern Wisconsin Region.

AREA SERVED

The Commission serves the Southeastern Wisconsin Region, which consists of the seven counties of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha (see Map 1). 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 over 2 million persons, or about 35 percent of the total population of the State. The seven counties provide about 1.18 million jobs, or about 35 percent of the total

Map 1





employment of the State, and contain real property worth about \$182.6 billion as measured in equalized valuation, or about 37 percent of all the tangible wealth of the State as measured by such valuation. There are 153 general-purpose local units of government in the seven-county Region, all of which participate in the work of the Commission.

BASIC CONCEPTS

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

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

Private as well as public interests are vitally affected by these kinds of areawide problems and by proposed solutions to these problems, and it appears neither desirable nor possible for any one level or agency of government to impose the decisions required to resolve these kinds of problems. Such decisions can better come from consensus among the public and private interests concerned, based on a common interest in the welfare of the entire Region. Regional planning is necessary to promote this consensus and the necessary cooperation among 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.

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

BASIC FUNCTIONS

The Commission conceives regional planning as having three basic functions. The first involves the collection, analysis, and dissemination of basic planning and engineering data on a uniform, areawide basis in order that better development decisions can be made in both the public and private sectors. The Commission believes that the establishment and utilization of such data can in and of itself contribute to better development decision making within the Region. The second function involves the preparation of a framework of long-range areawide plans for the physical development of the Region. This function is mandated by State enabling legislation. While the scope and content of these plans can extend to all phases of regional development, the Commission believes that emphasis should be placed on the preparation of plans for land use and supporting transportation, utility, and community facilities. The third function involves the provision of a center for the coordination of day-to-day planning and plan implementation activities of all of the units and levels of government operating within the Region. Through this function, the Commission seeks to integrate regional and local plans and planning efforts and thereby to promote regional plan implementation.

ORGANIZATION

The Commission consists of 21 members, three from each of the seven member counties. One Commissioner from each county is appointed or, in those counties where a county executive appoints, confirmed by the county board and is usually an elected county board supervisor. The remaining two from each county are appointed by the Governor, one from a list prepared by the county.

The Commission, as a body, 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 oversees 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 regional plan elements. The Administrative Committee oversees the routine but essential housekeeping activities of the Commission. The Planning and Research Committee reviews 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 communicating with the constituent county boards. Commission and committee rosters are set forth in Appendix A. The Commission is assisted in its work by a series of 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. Advisory committee rosters are 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 under way. At the end of 2010, the Commission staff totaled 68, including 62 full-time and six part-time employees.

As shown in Figure 1 and in Appendix C, the Commission was in 2010 organized into nine divisions. Five of these divisions, Transportation Planning, Environmental Planning, Land Use Planning, Community Assistance Planning, and Economic Development Assistance, had direct responsibility for the conduct of the Commission's major planning programs. The remaining four divisions, Administrative Services, Cartographic and Graphic Arts, Geographic Information Systems, and Public Involvement and Outreach, provided day-to-day support of the five planning divisions.

FUNDING

Basic financial support for the Commission's work program is provided by county tax levies apportioned on the basis of equalized valuation. These basic funds are supplemented by State and Federal aids. Revenues received by the Commission during 2010 totaled about \$7.96 million. County tax levies in 2010 totaled about \$2.3 million, or about \$1.18 per capita. The sources of this revenue for 2010 and the trend in funding since the inception of the Commission in 1960 are shown in Figures 2 through 5. There has been little change in the tax levy for regional planning since 1963 when that levy is expressed in constant dollars.

The Commission has a complete financial audit performed each year by a certified public accountant. The report of this audit for 2010 is set forth in full in Appendix E. Under the Federal Single Audit Act of 1984, the Commission's audit is subject to the review and approval of the Commission's Federal cognizant agency, the Federal Highway Administration.

DOCUMENTATION

Documentation in the form of published reports is considered very important, if not absolutely essential, to any public planning effort. Printed planning reports represent the best means for disseminating inventory data that have permanent historical 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. Figure 1

SEWRPC ORGANIZATIONAL STRUCTURE: 2010



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, streamwater 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 Wisconsin Legislature 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 U.S. and Wisconsin Departments of Transportation. The Commission's annual report is also intended to provide local public officials and interested citizens with a comprehensive overview of the Commission's activities and thereby to provide a focal point for the promotion of regional plan implementation.

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

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

Figure 2 FUNDING TREND: 1961-2010



Figure 3 SOURCES OF REVENUES TREND: 1961-2010



Figure 4 EXPENDITURES TREND: 1961-2010



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

Figure 5

REVENUES AND EXPENDITURES: 2010

REVENUES



- LAND USE PLANNING 35%

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THE EVOLVING COMPREHENSIVE PLAN FOR THE REGION

PLAN DESIGN FUNCTION

The Commission is charged by law with the function and duty of "making and adopting a master plan for the physical development of the [R]egion." 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 that together can comprise the required comprehensive plan. Each element is intended to deal with an identified areawide developmental or environmental problem. The individual elements are coordinated by being related to an areawide land use plan. Thus, the land use plan comprises the most basic regional plan element, an element on which all other elements are based. The Commission believes that 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; all planning and plan implementation techniques are based upon, or related to, the comprehensive plan.

The Commission believes that the comprehensive plan is 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 multijurisdictional urbanizing region having essentially a single community of interest, but also 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: 2010

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 1970s, this plan design function has included major plan reappraisal as well as the preparation of new plan elements.

By the end of 2010, the adopted regional plan consisted of 31 individual plan elements. These plan elements are identified in Table 1. Five of these elements are land use-related: the regional land use plan, the regional housing plan, the regional library facilities and services plan, the regional park and open space plan, and the regional telecommunications plans.

Twelve 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, the

Table 1

THE ADOPTED REGIONAL PLAN: DECEMBER 31, 2010

		-	
Functional Area	Plan Element	Plan Document	Date of Adoption
Land Use, Housing,	Regional Land Use Plan ^a	Planning Report No. 48, A Regional Land Use Plan for Southeastern Wisconsin: 2035	June 21, 2006
Facility Planning	Regional Library Facilities	Planning Report No. 19, A Library Facilities	September 12, 1974
	Regional Housing Plan	Planning Report No. 20, A Regional Housing	June 5, 1975
	Amendment—Waukesha County	Plan for Southeastern Wisconsin Community Assistance Planning Report No. 209,	December 4, 1996
	Regional Park and	A Development Plan for Waukesha County, Wisconsin Planning Report No. 27, A Regional Park and Open	December 1, 1977
	Open Space Plan Amendment—Ozaukee County Park	Space Plan for Southeastern Wisconsin: 2000 Community Assistance Planning Report No. 133,	September 12, 2001
	and Open Space Plan	(2nd Edition), A Park and Open Space Plan for Ozaukee County	•
	Amendment—Kenosha County Park and Open Space Plan	Community Assistance Planning Report No. 131, A Park and Open Space Plan for Kenosha County	December 5, 1988
	Amendment—Racine County Park and Open Space Plan	Community Assistance Planning Report No. 134, (2nd Edition), A Park and Open Space Plan for Racine County	December 5, 2001
	Amendment—Washington County Park and Open Space Plan	Community Assistance Planning Report No. 136 (3rd Edition), A Park and Open Space Plan for Washington County	June 16, 2004
	Amendment—Waukesha County Park	Community Assistance Planning Report No. 137,	March 7, 1990
	Amendment—Walworth County Park and Open Space Plan	Community Assistance Planning Report No. 135 (2nd Edition), A Park and Open Space Plan for Walworth County	December 6, 2000
	Amendment—Milwaukee County Park	Community Assistance Planning Report No. 132,	June 17, 1992
	Amendment—Waukesha County	Community Assistance Planning Report No. 209,	December 4, 1996
	Amendment—Regional Natural Areas and Critical Species	Planning Report No. 42, A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southandra Wincorpoin	September 10, 1997
	and Management Plan		M
	Amendment—Cedarburg Woods- West Critical Species Habitat Site	Amendment to the Regional Natural Areas and Critical Species Habitat Protection and Management Plan, City of Cedarburg and Environs	March 4, 1998
	Amendment—Regional Natural Areas and Critical Species Habitat Protection	Amendment to Planning Report No. 42, A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin	December 1, 2010
	and Management Plan Regional Telecommunications Plans	Planning Report No. 51, A Wireless Antenna Siting and Related Infrastructure Plan for Southeastern Wisconsin	September 13, 2006
		Planning Report No. 53, A Regional Broadband Telecommunications Plan for Southeastern Wisconsin	December 5, 2007
Transportation Planning	Regional Transportation Plan ^b	Planning Report No. 49, A Regional Transportation System Plan for Southeastern Wisconsin: 2035	June 21, 2006
	Amendment—Washington County	Planning Report No. 23 (2 nd Edition), A Jurisdictional Highway System Plan for Washington County	March 4, 2009
	Amendment—Regional Transportation Plan	Memorandum Report No. 187, Review, Update, and Reaffirmation of the Year 2035 Regional Transportation Plan	June 16, 2010
	Racine Area Transit Development Plan ^c	Community Assistance Planning Report No. 233, Racine Area Transit System Development Plan:	September 16, 1998
	Regional Airport System Plan ^d	Planning Report No. 38 (2nd Edition), A Regional Airport System Plan for Southeastern Wisconsin: 2010	December 4, 1996
	Kenosha Area Transit Development Plan ^e	Community Assistance Planning Report No. 231, Kenosha Area Transit System Development Plan: 1908-2002, City of Kenosha, Wicconsin	March 3, 1999
	Transportation Systems Management Plan	Community Assistance Planning Report No. 50, A Transportation Systems Management Plan for the Kenosha, Milwaukee, and Racine Urbanized Areas in	December 4, 1980
	Amendment—Milwaukee Northwest Side/	Planning Report No. 34, A Transportation System Plan for the Milwaukee Northwest Side/Ozaukee	September 8, 1983
	Amendment—Milwaukee Area	Planning Report No. 39, A Freeway Traffic	December 5, 1988
	Elderly-Handicapped Transportation Plan ^f	Iviariagement System Plan for the Milwaukee Area 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

Functional Area	Plan Element	Plan Document	Date of Adoption
Transportation	Amendment—Kenosha Area	Memorandum Report No. 107 A Paratransit Service	January 24, 1996
Planning (continued)	Amendmente Renosha Area	Plan for Disabled Persons: 1996 Update/City of Kenosha Transit System	541041y 24, 1550
(communed)	Amendment—Racine Area	Memorandum Report No. 108, A Paratransit Service Plan for Disabled Persons: 1996 Update/City of Racine Transit System	January 24, 1996
	Amendment—City of Waukesha	Memorandum Report No. 109, A Paratransit Service Plan for Disabled Persons: 1996 Update/City of Waukesha Transit System Utility	January 24, 1996
	Amendment—Waukesha County	Memorandum Report No. 110, A Paratransit Service Plan for Disabled Persons: 1996 Update/Waukesha County Transit System	January 24, 1996
	Amendment—Milwaukee County	Memorandum Report No. 119, A Paratransit Service Plan for Disabled Persons: 1997 Update/ Milwaukee County Transit Sustem	January 24, 1997
	Waukesha Transit Development Plan	Community Assistance Planning Report No. 154, A Transit System Development Plan for the City of Waykesha: 1988-1992	September 12, 1990
	West Bend Transit Development Plan	Community Assistance Planning Report No. 189, A Transit System Feasibility Study and Development Plan for the City of West Bend: 1902-1996	March 4, 1992
	Bicycle and Pedestrian Facilities System Plan	Planning Report No. 43, A Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wissonsin: 2010	January 25, 1995
	Amendment—Region Update and	Amendment to the Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2020	December 5, 2001
	Ozaukee County Transit Service Plan ^g	Community Assistance Planning Report No. 265, Ozaukee County Transit System Development Plan: 2002-2006	December 6, 1995
	Washington County Public Transit Service Plan	Community Assistance Planning Report No. 223, A Public Transit Service Plan for Washington County: 1998-2002	March 5, 1997
	Waukesha County Transit Development Plan	Community Assistance Planning Report No. 245, Waukesha County Transit System Development Plan: 2002-2006	December 4, 2002
Environmental	Root River Watershed Plan	Planning Report No. 9, A Comprehensive Plan	September 22, 1966
Planning	Fox River Watershed Plan	for the Root River Watershed Planning Report No. 12, A Comprehensive Plan for the Fox River Watershed, Volume One, Inventory Findings and Forecasts; Volume Two, Alternative Plans	June 4, 1970
	Amendment—Water Pollution	Amendment to the Comprehensive Plan for	September 13, 1973
	Control Time Schedule Amendment—Lower Watershed Drainage Plan	the Fox River Watershed 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	Community Assistance Planning Report No. 14, Elocaland Management Plan for the Village of Pewaukee	June 1, 1978
	Milwaukee River Watershed Plan	Planning Report No. 13, A Comprehensive Plan for the Milwaukee River Watershed, Volume One, Inventory Findings and Forecasts; Volume Two, Alternative Plans and Recommended Plan	March 2, 1972
	Amendment—Lincoln Creek Flood Control Plan	Community Assistance Planning Report No. 13 (2nd Edition), Flood Control Plan for Lincoln Creek Milwaukee County, Wisconsin	December 1, 1983
	Amendment—Milwaukee Harbor Estuary Plan	Planning Report No. 37, A Water Resources Management Plan for the Milwaukee Harbor Estuary, Volume One, Inventory Findings; Volume Two, Alternative and Recommended Plans	December 7, 1987
	Menomonee River Watershed Plan	Planning Report No. 26, A Comprehensive Plan for the Menomonee River Watershed, Volume One, Inventory Findings and Forecasts; Volume Two, Alternative Plans and Recommended Plan	January 20, 1977
	Amendment—Milwaukee Harbor Estuary Plan	Planning Report No. 37, A Water Resources Management Plan for the Milwaukee Harbor Estuary, Volume One, Inventory Findings; Volume Two, Alternative and Recommended Plans	December 7, 1987
	Regional Wastewater Sludge	Planning Report No. 29, A Regional Wastewater Sludge Management Plan for Southeastern Wisconsin	September 14, 1978
	Kinnickinnic River Watershed Plan	Planning Report No. 32, A Comprehensive Plan for the Kinnickinnic River Watershed	March 1, 1979
	Amendment—Milwaukee Harbor Estuary Plan	Planning Report No. 37, A Water Resources Management Plan for the Milwaukee Harbor Estuary, Volume One, Inventory Findings; Volume Two, Alternative and Recommended Plans	December 7, 1987

	1		1
Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental	Regional Water Quality	Planning Report No. 30, A Regional Water Quality	July 12, 1979
Planning	Management Plan ⁿ	Management Plan for Southeastern Wisconsin, Volume	
(continued)		One, Inventory Findings; Volume Two, Alternative Plans;	
		Volume Three, Recommended Plan	
	Amendment—Root River Watershed	Community Assistance Planning Report No. 37,	March 6, 1980
		A Nonpoint Source Water Pollution Control Plan for the	
	Amondmont Malworth County	Community Assistance Planning Papart No. 56	December 4, 1001
	Amenument—Walworth County Metropolitan Sewerage	(2nd Edition) Sanitary Sewer Service Areas for	December 4, 1991
	District	the Walworth County Metropolitan Severage District	
		Walworth County. Wisconsin	
	Amendment—Cities of Brookfield	Amendment to the Regional Water Quality	December 3, 1981
	and Waukesha	Management Plan—2000, Cities of Brookfield	
		and Waukesha	
	Amendment—Kenosha County	Community Assistance Planning Report No. 45,	June 17, 1982
		County Wisconsin	
	Amendment—Racine County	Community Assistance Planning Report No. 46.	June 17, 1982
		A Farmland Preservation Plan for Racine	
		County, Wisconsin	
	Amendment—City of Muskego	Community Assistance Planning Report No. 64	December 3, 1997
		(3rd Edition), Sanitary Sewer Service Area for the City of	
	American descent Ashimmun Labo	Muskego, Waukesha County, Wisconsin	Questa mb an Q. 4000
	Amendment—Asnippun Lake, Waukosha County	Community Assistance Planning Report No. 48,	September 9, 1982
	Waukesha County	Waukesha County Wisconsin	
	Amendment—Okauchee Lake.	Community Assistance Planning Report No. 53.	September 9, 1982
	Waukesha County	A Water Quality Management Plan for Okauchee Lake,	
		Waukesha County, Wisconsin	
	Amendment—Lac La Belle,	Community Assistance Planning Report No. 47,	September 9, 1982
	Waukesha County	A Water Quality Management Plan for Lac La	
	Amendment—North Lake	Community Assistance Planning Report No. 54	December 2, 1982
	Waukesha County	A Water Quality Management Plan for North	
		Lake, Waukesha County, Wisconsin	
	Amendment—West Bend Area	Community Assistance Planning Report No. 35	June 17, 1998
		(2nd Edition), Sanitary Sewer Service Area for the	
		City of West Bend and Environs, Washington	
	Amondmont Village of Crafton	County, Wisconsin	December 2, 1082
	Amendment—village of Granton	Management Plan—2000 Village of Grafton	December 2, 1962
	Amendment—City of Brookfield	Amendment to the Regional Water Quality	December 2, 1982
		Management Plan—2000, City of Brookfield	
	Amendment—Village of Sussex	Community Assistance Planning Report No. 84	September 7, 1994
		(2nd Edition), Sanitary Sewer Service Area for the Village	
	Amondmont Ozoukoo County	of Sussex, Waukesha County, Wisconsin	lupo 16, 1092
	Amendment—Ozaukee County	A Farmland Preservation Plan for Ozaukee	Julie 10, 1965
		County, Wisconsin	
	Amendment—Village of Germantown	Community Assistance Planning Report No. 70,	September 8, 1983
	_	Sanitary Sewer Service Area for the Village of	
		Germantown, Washington County, Wisconsin	
	Amendment—Village of Saukville	Community Assistance Planning Report No. 90,	December 1, 1983
		Ozaukee County Wisconsin	
	Amendment—Port Washington Area	Community Assistance Planning Report No. 95	December 6, 2000
	gi i i i i gi i i i	(2nd Edition), Sanitary Sewer Service Area for the	
		City of Port Washington and Environs, Ozaukee	
		County, Wisconsin	D
	Amendment—Pewaukee	Community Assistance Planning Report No. 76,	December 1, 1983
		2000 Waukesha County Wisconsin	
	Amendment—Belgium Area	Amendment to the Regional Water Quality	December 1, 1983
	, anonamont Doigian , aoa	Management Plan—2000. Onion River Priority	
		Watershed Plan	
	Amendment—Geneva Lake Area	Amendment to the Regional Water Quality	December 1, 1983
		Management Plan—2000, Geneva Lake Area	
		Communities	
	Amendment—Village of Butler	Community Assistance Planning Report No. 99,	March 1, 1984
		Waukesha County Wisconsin	
	Amendment—City of Hartford	Community Assistance Planning Report No. 92	September 12, 2001
	,	(3rd Edition), Sanitary Sewer Service Area for the City of	. ,
		Hartford, Washington County, Wisconsin	
	Amendment—Mukwonago Area	Amendment to the Regional Water Quality	June 21, 1984
		Ivianagement Plan—2000, VIIIage of Mukwonago, Towns of East Troy and Mukwonago	
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Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental	Amendment—Village of Fredonia	Community Assistance Planning Report No. 96,	March 3, 2004
Planning (continued)	Amendment—East Troy Area	(2nd Edition), Sanitary Sewer Service Area for the Village of Fredonia, Ozaukee County, Wisconsin Community Assistance Planning Report No. 112 (3rd Edition). Sanitary Sewer Service Area for the Village	December 6, 2000
	Amendment—City of Milwaukee	of East Troy and Environs, Walworth County, Wisconsin Amendment to the Regional Water Quality Management Plan—2000. City of Milwaukee	September 13, 1984
	Amendment—Town of Pleasant Prairie	Community Assistance Planning Report No. 88, A Land Use Management Plan for the Chiwaukee Prairie- Carol Beach Area of the Town of Pleasant Prairie, Kenosha County. Wisconsin	March 11, 1985
	Amendment—Village of Belgium	Community Assistance Planning Report No. 97 (3rd Edition), Sanitary Sewer Service Area for the Village of Belgium, Ozaukee County, Wisconsin	September 15, 1993
	Amendment—Town of Addison	Community Assistance Planning Report No. 103, (2nd Edition), Sanitary Sewer Service Area for the Allenton Area Washington County Wisconsin	March 3, 2004
	Amendment—Town of Yorkville	Amendment to the Regional Water Quality Management Plan—2000, Town of Yorkville	March 11, 1985
	Amendment—Village of Williams Bay	Amendment to the Regional Water Quality Management Plan—2000, Village of Williams	March 11, 1985
	Amendment—Town of Trenton/ City of West Bend	Bay/Walworth County Metropolitan Sewerage District Amendment to the Regional Water Quality Management Plan—2000, City of West Bend/ Town of Trenton	March 11, 1985
	Amendment—Village of Hartland	Community Assistance Planning Report No. 93, Sanitary Sewer Service Area for the Village of Hartland, Waukesha County, Wisconsin	June 17, 1985
	Amendment—Village of Jackson Area	Community Assistance Planning Report No. 124 (2nd Edition), Sanitary Sewer Service Area for the Village of Jackson and Environs, Washington County, Wisconsin	September 10, 1997
	Amendment—Pewaukee Area	Community Assistance Planning Report No. 113, Sanitary Sewer Service Area for the Town of Pewaukee Sanitary District No. 3, Lake Pewaukee Sanitary District, and Villega of Boung kee Neukape County, Wiggoppin	June 17, 1985
	Amendment—City of Waukesha Area	Community Assistance Planning Report No. 100 (2nd Edition), Sanitary Sewer Service Area for the City of Waukesha and Environs, Waukesha County, Wisconsin	March 3, 1999
	Amendment—Village of Slinger and Environs	Community Assistance Planning Report No. 128 (3rd Edition), Sanitary Sewer Service Area for the Village of Slinger and Environs. Washington County, Wisconsin	December 2, 1998
	Amendment—Kenosha Area	Community Assistance Planning Report No. 106, Sanitary Sewer Service Areas for the City of Kenosha and Environs, Kenosha County, Wisconsin	December 2, 1985
	Amendment—Town of Eagle	Amendment to the Regional Water Quality Management Plan—2000, Eagle Spring Lake Sanitary District	December 2, 1985
	Amendment—Town of Salem	Community Assistance Planning Report No. 143, Sanitary Sewer Service Area for the Town of Salem Utility District No. 2, Kenosha County, Wisconsin	March 3, 1986
	Amendment—Friess Lake, Washington County	Community Assistance Planning Report No. 98, A Water Quality Management Plan for Friess Lake, Washington County, Wisconsin	March 3, 1986
	Amendment—Geneva Lake, Walworth County	Community Assistance Planning Report No. 60, A Water Quality Management Plan for Geneva Lake, Walworth County, Wisconsin	March 3, 1986
	Amendment—Pewaukee Lake, Waukesha County	Community Assistance Planning Report No. 58, A Water Quality Management Plan for Pewaukee Lake, Waukesha County, Wisconsin	March 3, 1986
	Amendment—Waterford/ Rochester Area	Community Assistance Planning Report No. 141 (2nd Edition), Sanitary Sewer Service Area for the Waterford/Rochester Area, Racine County, Wisconsin	April 24, 1996
	Amendment—City of Burlington	Community Assistance Planning Report No. 78, (2nd Edition), Sanitary Sewer Service Area for the City of Burlington, Racine County, Wisconsin	December 5, 2001

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Functional Area	Amendment—City of Waukesba/	Plan Document	Date of Adoption
Planning (continued)	Town of Pewaukee	Management Plan—2000, City of Waukesha/ Town of Pewaukee	December 1, 1900
	Amendment—Salem/Paddock Lake/Bristol Area	Community Assistance Planning Report No. 145, Sanitary Sewer Service Area for the Town of Salem Utility District No. 1, Village of Paddock Lake, and Town of Bristol Utility District Nos. 1 and 1B, Kenosha County, Wisconsin	December 1, 1986
	Amendment—Racine Area	Community Assistance Planning Report No. 147, Sanitary Sewer Service Area for the City of Racine and Environs, Racine County, Wisconsin	December 1, 1986
	Amendment—Town of Lyons	Amendment to the Regional Water Quality Management Plan—2000, Country Estates Sanitary District/Town of Lvons	March 2, 1987
	Amendment—Village of Silver Lake and Environs	Community Assistance Planning Report No. 119, (2nd Edition), Sanitary Sewer Service Area for the Village of Silver Lake and Environs, Kenosha County, Wisconsin	December 2, 1998
	Amendment—Village of Twin Lakes	Community Assistance Planning Report No. 149, Sanitary Sewer Service Area, Village of Twin Lakes, Kenosha County, Wisconsin	June 15, 1987
	Amendment—Cedarburg/ Grafton Area	Community Assistance Planning Report No. 91 (2nd Edition), Sanitary Sewer Service Areas for the City of Cedarburg and the Village of Grafton, Ozaukee County, Wisconsin	June 19, 1996
	Amendment—Town of Walworth	Amendment to the Regional Water Quality Management Plan—2000, Town of Walworth Utility District No. 1/Walworth County Metropolitan Sewerage District	June 15, 1987
	Amendment—City of West Bend	Amendment to the Regional Water Quality Management Plan—2000, City of West Bend	June 15, 1987
	Amendment—City of Whitewater	Community Assistance Planning Report No. 94 (2nd Edition), Sanitary Sewer Service Area for the City of Whitewater, Walworth County, Wisconsin	March 1, 1995
	Amendment—Town of Lyons	Community Assistance Planning Report No. 158 (2nd Edition), Sanitary Sewer Service Area for the Town of Lyons Sanitary District No. 2, Walworth County, Wisconsin	September 15, 1993
	Amendment—City of Hartford	Amendment to the Regional Water Quality Management Plan—2000, City of Hartford	September 14, 1987
	Amendment—Milwaukee Harbor Estuary Plan	Planning Report No. 37, A Water Resources Management Plan for the Milwaukee Harbor Estuary, Volume One, Inventory Findings, Volume Two, Alternative and Recommended Plans	December 7, 1987
	Amendment—City of New Berlin	Community Assistance Planning Report No. 157, Sanitary Sewer Service Area for the City of New Berlin, Waukesha County, Wisconsin	December 7, 1987
	Amendment—Village of Sussex	Amendment to the Regional Water Quality Management Plan—2000, Village of Sussex	December 7, 1987
	Amendment—Kenosha Area	Amendment to the Regional Water Quality Management Plan—2000, City of Kenosha and Environs	December 7, 1987
	Amendment—Village of Kewaskum	Community Assistance Planning Report No. 161, Sanitary Sewer Service Area for the Village of Kewaskum, Washington County, Wisconsin	March 7, 1988
	Amendment—Town of Darien	Amendment to the Regional Water Quality Management Plan—2000, Town of Darien/ Walworth County Metropolitan Sewerage District	June 20, 1988
	Amendment—Village of Sussex	Amendment to the Regional Water Quality Management Plan—2000, Village of Sussex	June 20, 1988
	Amendment—Village of Darien	Community Assistance Planning Report No. 123, (2nd Edition), Sanitary Sewer Service Area for the Village of Darien, Walworth County, Wisconsin	September 23, 1992
	Amendment—West Bend Area	Amendment to the Regional Water Quality Management Plan—2000, City of West Bend/ Town of West Bend	September 12, 1988
	Amendment—Hartford Area	Amendment to the Regional Water Quality Management Plan—2000. City of Hartford	September 12, 1988
	Amendment—Town of Waterford	Amendment to the Regional Water Quality Management Plan—2000, Western Racine County Sewerage District	September 12, 1988
	Amendment—Hartford Area	Amendment to the Regional Water Quality Management Plan—2000, City of Hartford	December 5, 1988
	Amendment—City of Waukesha	Amendment to the Regional Water Quality Management Plan—2000, City of Waukesha	December 5, 1988

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	Amendment—Oconomowoc Area	Community Assistance Planning Report No. 172, (2nd Edition), Sanitary Sewer Service Area for the City of Oconomowoc and Environs, Waukesha County. Wisconsin	September 15, 1999
	Amendment—Village of Genoa City	Community Assistance Planning Report No. 175, (2nd Edition), Sanitary Sewer Service Area for the Village of Genoa City, Kenosha and Walworth Counties, Wisconsin	June 19, 1996
	Amendment—Village of Germantown	Amendment to the Regional Water Quality Manage- ment Plan—2000, Village of Germantown	March 6, 1989
	Amendment—Racine Area	Amendment to the Regional Water Quality Management Plan—2000, City of Racine and Environs	March 6, 1989
	Amendment—Upper Fox River Watershed	Amendment to the Regional Water Quality Management Plan—2000, Upper Fox River Watershed— Brookfield and Sussex Sewage Treatment Plants	May 15, 1989
	Amendment—Racine Area	Amendment to the Regional Water Quality Manage- ment Plan—2000 City of Racine and Environs	June 19, 1989
	Amendment—Lake Geneva Area	Amendment to the Regional Water Quality Manage- ment Plan_2000 City of Lake Geneva and Environs	June 19, 1989
	Amendment—Town of Geneva	Amendment to the Regional Water Quality Manage- ment Plan—2000, Town of Geneva, Walworth County Metropolitan Sewerage District	November 6, 1989
	Amendment—Town of Waterford	Amendment to the Regional Water Quality Management Plan—2000, Western Racine County Sewerage District	December 4, 1989
	Amendment—Delavan Lake Area	Amendment to the Regional Water Quality Manage- ment Plan—2000, Delavan Lake Sanitary District/	December 4, 1989
	Amendment—East Troy Area	Walworth County Metropolitan Sewerage District Amendment to the Regional Water Quality Manage- ment Plan—2000, Towns of East Troy, LaFayette, and Spring Prairie, and Village of East Troy.	December 4, 1989
	Amendment—Waukesha Area	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of Waukesha and Town of Waukesha	June 20, 1990
	Amendment—Village of Silver Lake	Amendment to the Regional Water Quality Manage- ment Plan—2000, Village of Silver Lake and Salem Utility District No. 2	June 20, 1990
	Amendment—Village of Union Grove	Community Assistance Planning Report No. 180, Sanitary Sewer Service Area for the Village of Union Grove and Environs, Racine County, Wisconsin	September 12, 1990
	Amendment—Town of Somers	Amendment to the Regional Water Quality Manage- ment Plan—2000, Kenosha and Racine Sanitary Sewer Service Areas	September 12, 1990
	Amendment—City of Franklin	Community Assistance Planning Report No. 176, Sanitary Sewer Service Area for the City of Franklin, Milwaukee County, Wisconsin	December 5, 1990
	Amendment—Village of Mukwonago	Community Assistance Planning Report No. 191, Sanitary Sewer Service Area for the Village of Mukwonago, Waukesha County, Wisconsin	December 5, 1990
	Amendment—Dousman Area	Community Assistance Planning Report No. 192, (3rd Edition), Sanitary Sewer Service Area for the Village of Dousman and Environs. Waukesha County, Wisconsin	March 7, 2007
	Amendment—Towns of Yorkville and Mt. Pleasant	Amendment to the Regional Water Quality Manage- ment Plan—2000, Towns of Yorkville and Mt. Pleasant	December 5, 1990
	Amendment—Town of Bristol	Amendment to the Regional Water Quality Manage- ment Plan—2000, Town of Bristol	March 6, 1991
	Amendment—Village of Pewaukee	Amendment to the Regional Water Quality Manage- ment Plan—2000, Village of Pewaukee	March 6, 1991
	Amendment—Town of Brookfield	Amendment to the Regional Water Quality Manage- ment Plan—2000, Brookfield and Waukesha Sanitary Sewer Service Areas	March 6, 1991
	Amendment—Delavan Area	Amendment to the Regional Water Quality Manage- ment Plan—2000, Walworth County Metropolitan Sewerage District/Delavan-Delavan Lake Sanitary Sewer Service Area	March 6, 1991
	Amendment—Oconomowoc Lake, Waukesha County	Community Assistance Planning Report No. 181, A Water Quality Management Plan for Oconomowoc Lake. Waukesha County, Wisconsin	June 19, 1991
	Amendment—Town of Salem	Amendment to the Regional Water Quality Manage- ment Plan—2000, Town of Salem	June 19, 1991

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental	Amendment—Town of Caledonia	Amendment to the Regional Water Quality Manage-	June 19, 1991
Planning (continued)	Amendment—Village of Hartland	ment Plan—2000, I own of Caledonia Amendment to the Regional Water Quality Manage- ment Plan—2000 Village of Hartland	June 19, 1991
	Amendment—Town of Caledonia	Amendment to the Regional Water Quality Manage-	September 11, 1991
	Amendment—Town of Norway	Amendment to the Regional Water Quality Manage- ment Plan-2000 Town of Norway	September 11, 1991
	Amendment—Town of Rochester	Amendment to the Regional Water Quality Management Plan—2000. Town of Rochester	September 11, 1991
	Amendment—Town of Norway	Amendment to the Regional Water Quality Manage- ment Plan—2000, Town of Norway	September 11, 1991
	Amendment—Brookfield/ Elm Grove Area	Community Assistance Planning Report No. 109, Sanitary Sewer Service Area for the City and Town of Brookfield and the Village of Elm Grove, Waukesha County, Wisconsin	December 4, 1991
	Amendment—Racine Area	Amendment to the Regional Water Quality Manage- ment Plan—2000. City of Racine and Environs	December 4, 1991
	Amendment—Pewaukee Lake Area	Amendment to the Regional Water Quality Manage- ment Plan: 2000, Lake Pewaukee Sanitary District	December 4, 1991
	Amendment—West Bend Area	Amendment to the Regional Water Quality Manage- ment Plan: 2000, City of West Bend/Town of West Bend	December 4, 1991
	Amendment—Town of Salem	Amendment to the Regional Water Quality Manage- ment Plan: 2000, Town of Salem	December 4, 1991
	Amendment—City of Mequon and Village of Thiensville	Community Assistance Planning Report No. 188, Sanitary Sewer Service Area for the City of Mequon and the Village of Thiensville. Ozaukee County, Wisconsin	January 15, 1992
	Amendment—City of West Bend/ Town of West Bend/ Silver Lake Sanitary District	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of West Bend/Town of West Bend/Silver Lake Sanitary District	March 4, 1992
	Amendment—Town of Somers	Amendment to the Regional Water Quality Management Plan—2000, Town of Somers	June 17, 1992
	Amendment—Delafield- Nashotah Area	Community Assistance Planning Report No. 127, Sanitary Sewer Service Area for the City of Delafield and the Village of Nashotah and Environs, Waukesha County, Wisconsin	January 18, 1993
	Amendment—City of Lake Geneva and Environs	Community Assistance Planning Report No. 203, Sanitary Sewer Service Area for the City of Lake Geneva and Environs, Walworth County, Wisconsin	January 18, 1993
	Amendment—Eagle Lake Sewer Utility District	Community Assistance Planning Report No. 206, Sanitary Sewer Service Area for the Eagle Lake Sewer Utility District, Racine County, Wisconsin	January 18, 1993
	Amendment—Village of Hartland	Amendment to the Regional Water Quality Management Plan: 2000, Village of Hartland	January 18, 1993
	Amendment—Village of Newburg	Community Assistance Planning Report No. 205, Sanitary Sewer Service Area for the Village of Newburg, Ozaukee and Washington Counties, Wisconsin	March 3, 1993
	Amendment—Village of Twin Lakes	Amendment to the Regional Water Quality Manage- ment Plan—2000, Village of Twin Lakes	March 3, 1993
	Amendment—City of Muskego	Amendment to the Regional Water Quality Manage- ment Plan: 2000, City of Muskego	March 3, 1993
	Amendment—Villages of Lannon and Menomonee Falls	Community Assistance Planning Report No. 208, Sanitary Sewer Service Areas for the Villages of Lannon and Menomonee Falls, Waukesha County, Wisconsin	June 16, 1993
	Amendment—City of New Berlin	Amendment to the Regional Water Quality Manage- ment Plan—2000. City of New Berlin	June 16, 1993
	Amendment—Racine Area	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of Racine and Environs	June 16, 1993
	Amendment—Powers Lake, Kenosha and Walworth Counties	Community Assistance Planning Report No. 196, A Management Plan for Powers Lake, Kenosha and Walworth Counties, Wisconsin	September 15, 1993
	Amendment—Wind Lake, Racine County	Community Assistance Planning Report No. 198, A Management Plan for Wind Lake, Racine County, Wisconsin	September 15, 1993
	Amendment—Walworth County Metropolitan Sewerage District	Amendment to the Regional Water Quality Manage- ment Plan—2000, Town of Geneva, Walworth County Metropolitan Sewerage District	December 1, 1993
	Amendment—City of New Berlin	Amendment to the Regional Water Quality Management Plan—2000, City of New Berlin	March 9, 1994

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	Amendment—Walworth County Metropolitan Sewerage District	Amendment to the Regional Water Quality Manage- ment Plan—2000, Walworth County Metropolitan Sewerage District/Delavan-Delavan Lake Sanitary Sewer Service Area	March 9, 1994
	Amendment—Village of Fontana	Amendment to the Regional Water Quality Manage- ment Plan—2000, Village of Fontana	March 9, 1994
	Amendment—Village of Hartland/ Lake Pewaukee Sanitary District	Amendment to the Regional Water Quality Manage- ment Plan—2000, Village of Hartland and Lake Pewaukee Sanitary District	March 9, 1994
	Amendment—City of Waukesha	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of Waukesha	June 15, 1994
	Amendment—City of Burlington/ Bohner Lake Area	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of Burlington/Bohner Lake Sanitary Sewer Service Areas	June 15, 1994
	Amendment—City of Oak Creek	Community Assistance Planning Report No. 213, Sanitary Sewer Service Area for the City of Oak Creek, Milwaukee County, Wisconsin	September 7, 1994
	Amendment—Walworth County Metropolitan Sewerage District/ Village of Darien/ Town of Darien	Amendment to the Regional Water Quality Manage- ment Plan, Walworth County Metropolitan Sewerage District/Village of Darien/Town of Darien	September 7, 1994
	Amendment—Pell Lake and Powers-Benedict- Tombeau Lakes Areas	Amendment to the Regional Water Quality Manage- ment Plan—2000, Pell Lake Area and Powers- Benedict-Tombeau Lakes Area, Kenosha and Walworth Counties	December 7, 1994
	Amendment—Walworth County Metropolitan Sewerage District/ City of Elkhorn	Amendment to the Regional Water Quality Manage- ment Plan, Walworth County Metropolitan Sewerage District/Elkhorn Sanitary Sewer Service Area	March 1, 1995
	Amendment—Villages of Fontana and Walworth and Environs	Community Assistance Planning Report No. 219, Sanitary Sewer Service Area for the Villages of Fontana and Walworth and Environs, Walworth County, Wisconsin	June 21, 1995
	Amendment—City of Mequon	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of Meguon	June 21, 1995
	Amendment—Walworth County Metropolitan Sewerage District	Amendment to the Regional Water Quality Manage- ment Plan, Walworth County Metropolitan Sewerage District/Williams Bay-Geneva National-Lake Como Sanitary Sewer Service Area	June 21, 1995
	Amendment—City of West Bend	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of West Bend/Wallace Lake Sanitary District	June 21, 1995
	Amendment—Racine Area	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of Racine and Environs	September 13, 1995
	Amendment—Village of Belgium	Amendment to the Regional Water Quality Manage- ment Plan—2000, Village of Belgium	December 6, 1995
	Amendment—Hartland/ Pewaukee Areas	Amendment to the Regional Water Quality Manage- ment Plan—2000, Village of Hartland and Lake Pewaukee Sanitary District	December 6, 1995
	Amendment—Greater Kenosha Area	Amendment to the Regional Water Quality Manage- ment Plan—2010, Greater Kenosha Area	March 6, 1996
	Amendment—Pell Lake Area	Community Assistance Planning Report No. 225, Sanitary Sewer Service Area for the Pell Lake Sanitary District No. 1, Walworth County, Wisconsin	June 19, 1996
	Amendment—Delafield-Nashotah Area	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of Delafield	December 4, 1996
	Amendment—Pewaukee Area	Amendment to the Regional Water Quality Manage- ment Plan—2000, Town of Pewaukee Sanitary District No. 3	March 5, 1997
	Amendment—City of Waukesha	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of Waukesha	March 5, 1997
	Amendment—City of New Berlin	Amendment to the Regional Water Quality Manage- ment Plan—2000, City of New Berlin	June 18, 1997
	Amendment—Village of Sussex- Town of Lisbon Area	Amendment to the Regional Water Quality Manage- ment Plan—2000, Village of Sussex/Town of Lisbon	June 18, 1997
	Amendment—Town of Salem	Amendment to the Regional Water Quality Manage- ment Plan—2000, Town of Salem	June 18, 1997
	Amendment—Town of Bristol	Amendment to the Regional Water Quality Manage- ment Plan, Town of Bristol	September 10, 1997

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Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental	Amendment—City of New Berlin	Amendment to the Regional Water Quality Manage-	December 3, 1997
(continued)	Amendment—Village of Slinger	Amendment to the Regional Water Quality Manage- ment Plan Village of Slinger	December 3, 1997
	Amendment—Village of Germantown	Amendment to the Regional Water Quality Manage- ment Plan. Village of Germantown	March 4, 1998
	Amendment—Walworth County	Amendment to the Regional Water Quality Manage-	March 26, 1998
	District/Delavan-	Sewerage District/Delavan-Delavan Lake Sanitary Sewer	
	Delavan Lake Area	Service Area	June 17, 1998
	Area	ment Plan, City of Brookfield	
	Amendment—Eagle Lake Sewer Utility District	Amendment to the Regional Water Quality Manage- ment Plan, Eagle Lake Sewer Utility District	June 17, 1998
	Amendment—Village of	Amendment to the Regional Water Quality Manage-	June 17, 1998
	Amendment—Village of Sussex	Amendment to the Regional Water Quality Manage- ment Plan, Village of Sussex	June 17, 1998
	Amendment—Pewaukee Area	Amendment to the Regional Water Quality Manage- ment Plan, Lake Pewaukee Sanitary District	September 16, 1998
	Amendment—Village of Belgium	Amendment to the Regional Water Quality Manage- ment Plan, Village of Belgium	December 2, 1998
	Amendment—Village of East Troy	Amendment to the Regional Water Quality Manage- ment Plan. Village of East Troy	December 2, 1998
	Amendment—City of New Berlin	Amendment to the Regional Water Quality Manage- ment Plan. City of New Berlin	March 3, 1999
	Amendment—Town of Norway	Community Assistance Planning Report No. 247,	June 16, 1999
	and Environs	Sanitary Sever Service Area to the Town of Norway Sanitary District No. 1 and Environs, Racine and Waukesha Counties, Wisconsin	
	Amendment—Village of Genoa City	Amendment to the Regional Water Quality Manage- ment Plan Village of Genna City	June 16, 1999
	Amendment—Oconomowoc Area	Amendment to the Regional Water Quality Manage- ment Plan, City of Oconomoworc	June 16, 1999
	Amendment—Village of Hartland	Amendment to the Regional Water Quality Manage- ment Plan Village of Hartland	June 16, 1999
	Amendment—City of Hartford	Amendment to the Regional Water Quality Manage- ment Plan. City of Hartford and Environs	September 15, 1999
	Amendment—Eagle Lake Sewer Utility District	Amendment to the Regional Water Quality Manage- ment Plan. Eagle Lake Sewer Utility District	September 15, 1999
	Amendment—City of Muskego	Amendment to the Regional Water Quality Manage- ment Plan, City of Muskego	December 1, 1999
	Amendment—Village of Mukwonago	Amendment to the Regional Water Quality Manage- ment Plan, Village of Mukwonago	December 1, 1999
	Amendment—Racine Area	Amendment to the Regional Water Quality Manage- ment Plan, City of Racine and Environs	December 1, 1999
	Amendment—City of Burlington	Amendment to the Regional Water Quality Manage- ment Plan, City of Burlington	March 1, 2000
	Amendment—Village of Paddock Lake	Amendment to the Regional Water Quality Manage- ment Plan, Village of Paddock Lake	June 21, 2000
	Amendment—Waterford-Rochester Area	Amendment to the Regional Water Quality Manage- ment Plan, Western Racine County Sewerage District	June 21, 2000
	Amendment—Village of Darien	Amendment to the Regional Water Quality Manage- ment Plan, Village of Darien	June 21, 2000
	Amendment—Village of Sussex	Amendment to the Regional Water Quality Manage- ment Plan, Village of Sussex	December 6, 2000
	Amendment—City of Waukesha	Amendment to the Regional Water Quality Manage- ment Plan, City of Waukesha	February 1, 2001
	Amendment—Town of Salem	Amendment to the Regional Water Quality Manage- ment Plan, Town of Salem	March 7, 2001
	Amendment—Northwestern Waukesha County	Amendment to the Regional Water Quality Manage- ment Plan and Summary Report—Northwestern	March 7, 2001
	Amendment—Walworth County Metropolitan Sewerage District	Amendment to the Regional Water Quality Manage- ment Plan, Walworth County Metropolitan Sewerage District/City of Elkhorn	June 20, 2001
	City or Elknorn Amendment—Villages of Fontana	Amendment to the Regional Water Quality Manage-	June 20, 2001
	Amendment—Village of Hartland and Town of Delafield	Amendment to the Regional Water Quality Manage- ment Plan Village of Hartland and Town of Delafield	June 20, 2001
	Amendment—Village of Kewaskum	Amendment to the Regional Water Quality Manage-	June 20, 2001
	Amendment—City of Muskego	Amendment to the Regional Water Quality Manage- ment Plan, City of Muskego	June 20, 2001

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental	Amendment—City of St. Francis	Amendment to the Regional Water Quality Manage-	August 1, 2001
(continued)	Amendment—Village of Belgium	Amendment to the Regional Water Quality Manage- ment Plan Village of Belgium	September 12, 2001
	Amendment—Village of Jackson	Amendment to the Regional Water Quality Manage- ment Plan Village of Jackson	September 12, 2001
	Amendment—Village of Saukville	Amendment to the Regional Water Quality Manage-	September 12, 2001
	Amendment—City of Oconomowoc	Amendment to the Regional Water Quality Manage-	December 5, 2001
	Amendment—Greater Kenosha Area	Amendment to the Regional Water Quality Manage-	December 5, 2001
	Amendment—Village of Paddock Lake	Amendment to the Regional Water Quality Manage- ment Plan, Village of Paddock Lake	December 5, 2001
	Amendment-Village of Fredonia	Amendment to the Regional Water Quality Manage-	March 6, 2002
	Amendment—Village of Hartland	Amendment to the Regional Water Quality Manage-	March 6, 2002
	Amendment—Village of Saukville	Amendment to the Regional Water Quality Manage-	March 6, 2002
	Amendment—City of Pewaukee	Amendment to the Regional Water Quality Manage-	June 19, 2002
	Amendment—Village of Slinger	Amendment to the Regional Water Quality Manage- ment Plan, Village of Slinger	June 19, 2002
	Amendment—City of Burlington	Amendment to the Regional Water Quality Manage- ment Plan, City of Burlington	September 11, 2002
	Amendment—City of Muskego	Amendment to the Regional Water Quality Manage- ment Plan, City of Muskego	September 11, 2002
	Amendment—Walworth County Metropolitan Sewerage District/	Amendment to the Regional Water Quality Manage- ment Plan, Walworth County Metropolitan Sewerage District/Elkhorn Sanitary Sewer Service Area	September 11, 2002
	City of Elkhorn Amendment—Village of Mukwonago	Amendment to the Regional Water Quality Manage-	December 4, 2002
	Amendment—City of Racine and	Amendment to the Regional Water Quality Manage-	December 4, 2002
	Amendment—Village of Jackson	Amendment to the Regional Water Quality Manage-	June 18, 2003
	Amendment—City of Racine	Amendment to the Regional Water Quality Manage- ment Plan, City of Racine Server Service Area	June 18, 2003
	Amendment—Town of Salem	Amendment to the Regional Water Quality Manage- ment Plan Town of Salem Server Service Area	September 10, 2003
	Amendment—City of Whitewater	Amendment to the Regional Water Quality Manage- ment Plan, City of Whitewater Sanitary Sewer Service Area	September 10, 2003
	Amendment—City of Waukesha	Amendment to the Regional Water Quality Manage- ment Plan, City of Waukesha Sanitary Sewer Service Area	September 10, 2003
	Amendment—Village of Mukwonago	Amendment to the Regional Water Quality Manage- ment Plan, Village of Mukwonago Sanitary Sewer Service Area	September 10, 2003
	Amendment—Pell Lake	Amendment to the Regional Water Quality Manage- ment Plan, Pell Lake Sanitary District No. 1 Sewer Service Area	September 10, 2003
	Amendment—Village of Slinger	Amendment to the Regional Water Quality Manage- ment Plan, Village of Slinger Sewer Service Area	September 10, 2003
	Amendment—Allenton Sanitary District	Amendment to the Regional Water Quality Manage- ment Plan, Allenton Sanitary District	December 3, 2003
	Amendment—Village of Germantown	Amendment to the Regional Water Quality Manage- ment Plan, Village of Germantown Sewer Service Area	December 3, 2003
	Amendment—Waterford and Rochester Area	Amendment to the Regional Water Quality Manage- ment Plan, Waterford-Rochester Area Sewer Service Area	December 3, 2003
	Amendment—Village of Pewaukee	Amendment to the Regional Water Quality Manage- ment Plan. Village of Pewaukee	March 3, 2004
	Amendment—Elkhorn Area	Amendment to the Regional Water Quality Manage- ment Plan, Walworth County Metropolitan Sewerage District/Elkhorn Sanitary Sewer Service Area	March 3, 2004
	Amendment—Village of Menomonee Falls	Amendment to the Regional Water Quality Manage- ment Plan, Village of Menomonee Falls	June 16, 2004
	Amendment—Jackson Area	Amendment to the Regional Water Quality Manage- ment Plan, Village of Jackson	June 16, 2004
	Amendment—Lake Como Area	Amendment to the Regional Water Quality Manage- ment Plan, Walworth County Metropolitan Sewerage District-Lake Como Sanitary Sewer Service Area	June 16, 2004

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental	Amendment—Williams Bay Area	Amendment to the Regional Water Quality Manage-	September, 15, 2004
Planning (continued)		ment Plan, Walworth County Metropolitan Sewerage	
(continued)		Sanitary Sewer Service Area	
	Amendment—Twin Lakes Area	Amendment to the Regional Water Quality Manage- ment Plan, Village of Twin Lakes	September 15, 2004
	Amendment—City of Waukesha	Amendment to the Regional Water Quality Manage- ment Plan, City of Waykesha	September 15, 2004
	Amendment—Kewaskum Area	Amendment to the Regional Water Quality Manage-	December 1, 2004
	Amendment—Burlington Area	Amendment to the Regional Water Quality Manage- ment Plan, City of Burlington/Bohner Lake Sanitary	December 1, 2004
	Amendment—Lake Geneva Area	Sewer Service Areas Amendment to the Regional Water Quality Manage-	December 1, 2004
	Amendment—Delavan/Delavan Lake Area	Amendment to the Regional Water Quality Manage- ment Plan, Walworth County Metropolitan Sewerage	December 1, 2004
	Amendment—Village of Dousman	Amendment to the Regional Water Quality Manage-	March 2, 2005
	Amendment—City of Oconomowoc	Ament Plan, Village of Dousman Amendment to the Regional Water Quality Manage-	March 2, 2005
	Amendment—Village of Mukwonago	Ament Plan, City of Oconomowoc Amendment to the Regional Water Quality Manage-	March 2, 2005
	Amendment—City of Hartford	Ament Plan, Village of Mukwonago Amendment to the Regional Water Quality Manage-	June 15, 2005
	Amendment—City of New Berlin	Amendment to the Regional Water Quality Manage-	June 15, 2005
	Amendment—Waterford-Rochester Area	Amendment to the Regional Water Quality Manage-	June 15, 2005
	Amendment—Village of Paddock Lake	Amendment to the Regional Water Quality Manage-	June 15, 2005
	Amendment—Caddy Vista Sanitary	Amendment to the Regional Water Quality Manage-	June 15, 2005
	Amendment—City of Muskego	Amendment to the Regional Water Quality Manage-	June 15, 2005
	Amendment—City of Oconomowoc	Amendment to the Regional Water Quality Manage-	September 14, 2005
	Amendment—City of Waukesha	Amendment to the Regional Water Quality Manage-	September 14, 2005
	Amendment—Town of Bristol	Amendment to the Regional Water Quality Manage-	December 7, 2005
	Amendment—Village of Twin Lakes	Amendment to the Regional Water Quality Manage-	December 7, 2005
	Amendment—City of Hartford	Amendment to the Regional Water Quality Manage-	December 7, 2005
	Amendment—Village of Dousman	Amendment to the Regional Water Quality Manage-	December 7, 2005
	Amendment—Village of Union Grove	Amendment to the Regional Water Quality Manage-	December 7, 2005
	Amendment—City of Pewaukee	Amendment to the Regional Water Quality Manage-	December 7, 2005
	Amendment—Village of Darien	Amendment to the Regional Water Quality Manage-	December 7, 2005
	Amendment—Town of Caledonia	Amendment to the Regional Water Quality Manage-	December 7, 2005
	Amendment—Village of Kewaskum	Amendment to the Regional Water Quality Manage- ment Plan, Village of Kewaskum	December 7, 2005
	Amendment—Village of Menomonee Falls	Amendment to the Regional Water Quality Manage- ment Plan, Village of Menomonee Falls	December 7, 2005
	Amendment—Greater Kenosha Area/Town of Somers	Amendment to the Regional Water Quality Manage- ment Plan, Greater Kenosha Area/Town of Somers	December 7, 2005
	Amendment—Village of Mukwonago	Amendment to the Regional Water Quality Manage- ment Plan Village of Mukwonago	March 1, 2006
	Amendment—Village of Sussex	Amendment to the Regional Water Quality Manage- ment Plan, Village of Sussex	March 1, 2006
	Amendment—City of Mequon	Amendment to the Regional Water Quality Manage- ment Plan City of Meguon	March 1, 2006
	Amendment—Town of Salem	Amendment to the Regional Water Quality Manage- ment Plan Town of Salem	June 21, 2006
	Amendment—City of Muskego	Amendment to the Regional Water Quality Manage- ment Plan, City of Muskerro	June 21, 2006
	Amendment—City of Hartford	Amendment to the Regional Water Quality Manage-	September 13, 2006
	Amendment—Town of Salem	Amendment to the Regional Water Quality Manage-	September 13, 2006
	Amendment—Town of Bristol/ Utility District No. 1	Amendment to the Regional Water Quality Manage- ment Plan, Town of Bristol/Utility District No. 1	September 13, 2006

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental	Amendment—Village of Grafton	Amendment to the Regional Water Quality Manage- ment Plan, Village of Grafton	September 13, 2006
(continued)	Amendment—City of Waukesha/ Village of Wales	Amendment to the Regional Water Quality Manage- ment Plan, City of Waykesha/Village of Wales	September 13, 2006
	Amendment—Village of Caledonia	Amendment to the Regional Water Quality Manage- ment Plan Village of Caledonia	December 6, 2006
	Amendment—Village of Sussex	Amendment to the Regional Water Quality Manage- ment Plan Village of Sussex	December 6, 2006
	Amendment—Town of Bristol/Utility	Amendment to the Regional Water Quality Manage- ment Plan Town of Bristol / Itility District No. 1	March 7, 2007
	Amendment—City of Brookfield	Amendment to the Regional Water Quality Manage- ment Plan City of Brooklield	March 7, 2007
	Amendment—Town of Salem	Amendment to the Regional Water Quality Manage- ment Plan, Town of Salem	March 7, 2007
	Amendment—Walworth County Metropolitan Sewerage District/Elkhorn Sanitary Sewer Service Area	Amendment to the Regional Water Quality Manage- ment Plan, Walworth County Metropolitan Sewerage District/Elkhorn Sanitary Sewer Service Area	March 7, 2007
	Amendment—Village of Caledonia/Village of Mount Pleasant	Amendment to the Regional Water Quality Manage- ment Plan, Villages of Caledonia and Mount Pleasant	June 20, 2007
	Amendment—Greater Kenosha Area	Amendment to the Regional Water Quality Manage- ment Plan, Greater Kenosha Area	June 20, 2007
	Amendment—Village of Twin Lakes	Amendment to the Regional Water Quality Manage- ment Plan, Village of Twin Lakes	June 20, 2007
	Amendment—Walworth County Metropolitan Sewerage District/Elkhorn Sanitary Sewer Service Area	Amendment to the Regional Water Quality Manage- ment Plan, Walworth County Metropolitan Sewerage District/Elkhorn Sanitary Sewer Service Area	June 20, 2007
	Amendment—City of Burlington	Amendment to the Regional Water Quality Manage- ment Plan. City of Burlington	September 12, 2007
	Amendment—City of Oak Creek	Amendment to the Regional Water Quality Manage- ment Plan, City of Oak Creek	September 12, 2007
	Amendment—Village of Sussex and Environs	Amendment to the Regional Water Quality Manage- ment Plan, Village of Sussex and Environs	September 12, 2007
	Amendment—City of Muskego	Amendment to the Regional Water Quality Manage- ment Plan. City of Muskego	December 5, 2007
	Amendment—Village of Wales/City of Waukesha	Amendment to the Regional Water Quality Manage- ment Plan, Village of Wales/City of Waukesha	December 5, 2007
	Amendment—Greater Milwaukee Watersheds	Planning Report No. 50, A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds	December 5, 2007
	Amendment—Village of Paddock Lake Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan, Village of Paddock Lake Sanitary Sewer Service Area	March 5, 2008
	Amendment—City of Mequon Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan, City of Mequon Sewer Service Area	March 5, 2008
	Amendment—Village of Jackson and Environs Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan, Village of Jackson and Environs Sewer Service Area	June 18, 2008
	Amendment—Brookfield – Elm Grove Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan, Brookfield – Elm Grove Sanitary Sewer Service Area	June 18, 2008
	Amendment—City of Burlington Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan, City of Burlington Sanitary Sewer Service Area	June 18, 2008
	Amendment—City of New Berlin Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan, City of New Berlin Sanitary Sewer Service Area	December 3, 2008
	Amendment—City of Muskego Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan. City of Muskego Sanitary Sewer Service Area	March 4, 2009
	Amendment—Village of Caledonia Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan, Village of Caledonia Sanitary Sewer Service Area	June 17, 2009
	Amendment—Village of Germantown Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan, Village of Germantown Sanitary Sewer Service Area	June 17, 2009
	Amendment—Village of Genoa City Sanitary Sewer Service	Amendment to the Regional Water Quality Management Plan, Village of Genoa City Sanitary Sewer Service Area	September 9, 2009
	Amendment—Village of Genoa City Sanitary Sewer Service	Amendment to the Regional Water Quality Management Plan, Village of Genoa City Sanitary Sewer Service Area	March 10, 2010
	Amendment – Village of Big Bend and Environs Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan, Village of Big Bend and Environs Sanitary Sewer Service Area	March 10, 2010

Functional Area	Plan Element	Plan Document	Date of Adoption
Environmental Planning (continued)	Amendment – City of New Berlin Sanitary Sewer Service Area	Amendment to the Regional Water Quality Management Plan, City of New Berlin Sanitary Sewer Service Area	December 1, 2010
	Regional Air Quality Plan	Planning Report No. 28, A Regional Air Quality Attainment and Maintenance Plan for Southeastern Wisconsin: 2000	June 20, 1980
	Amendment—Emission Reduction Credit Banking and Trading System	Amendment to the Regional Air Quality Attainment and Maintenance Plan: 2000, Emission Reduction Credit Banking and Trading System	December 1, 1983
	Pike River Watershed Plan	Planning Report No. 35, A Comprehensive Plan for the Pike River Watershed	June 16, 1983
	Amendment—Town of Mt. Pleasant	Amendment to the Pike River Watershed Plan, Town of Mt. Pleasant	June 15, 1987
	Amendment—City of Kenosha/ Town of Somers	Amendment to the Pike River Watershed Plan, City of Kenosha/Town of Somers	June 15, 1987
	Amendment—Upper Pike River, Lower Pike River, Pike Creek, Airport Branch, and Tributary to Airport Branch	Amendment to the Pike River Watershed Plan, Kenosha and Racine Counties	March 6, 1996
	Oak Creek Watershed Plan	Planning Report No. 36, A Comprehensive Plan for the Oak Creek Watershed	September 8, 1986
	Des Plaines River Watershed Plan	Planning Report No. 44, A Comprehensive Plan for the Des Plaines River Watershed	June 18, 2003
	Regional Water Supply Plan	Planning Report No. 52, A Regional Water Supply Plan for Southeastern Wisconsin	December 1, 2010
Community Assistance Planning	Kenosha Planning District Comprehensive Plan	Planning Report No. 10, A Comprehensive Plan for the Kenosha Planning District, Volume One, Inventory Findings, Forecasts, and Recommended Plans; Volume Two, Implementation Devices	June 1, 1972
	Racine Urban Planning District Comprehensive Plan	Planning Report No. 14, A Comprehensive Plan for the Racine Urban Planning District, Volume One, Inventory Findings and Forecasts; Volume Two, The Recommended Comprehensive Plan; Volume Three, Model Plan Implementation Ordinances	June 5, 1975

^a The regional land use plan is a fifth-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, Land Use-Transportation Study, Volume Three, Recommended Regional Land Use and Transportation Plans-1990. The secondgeneration regional land use plan was adopted by the Commission on December 19, 1977, and documented in SEWRPC Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, Volume One, Inventory Findings, and Volume Two, Alternative and Recommended Plans, and was subsequently amended by the adoption on June 17, 1982, of the Kenosha County and Racine County farmland preservation plans documented, respectively, in SEWRPC Community Assistance Planning Report No. 45, A Farmland Preservation Plan for Kenosha County, Wisconsin, and SEWRPC Community Assistance Planning Report No. 46, A Farmland Preservation Plan for Racine County, Wisconsin; the adoption on June 16, 1983, of the Ozaukee County farmland preservation plan documented in SEWRPC Community Assistance Planning Report No. 87, A Farmland Preservation Plan for Ozaukee County, Wisconsin; the adoption on December 1, 1983, of a land use plan for the Town of Pewaukee and Village of Pewaukee documented in SEWRPC Community Assistance Planning Report No. 76. A Land Use Plan for the Town and Village of Pewaukee: 2000, Waukesha County, Wisconsin; the adoption on March 11, 1985, of a land use management plan for the Chiwaukee Prairie-Carol Beach area of the then Town of Pleasant Prairie documented in SEWRPC Community Assistance Planning Report No. 88, A Land Use Management Plan for the Chiwaukee Prairie-Carol Beach Area of the Town of Pleasant Prairie, Kenosha County, Wisconsin; and the adoption on January 15, 1992, of a land use and transportation system development plan for the IH 94 South Freeway Corridor in Kenosha, Milwaukee, and Racine Counties, documented in SEWRPC Community Assistance Planning Report No. 200, A Land Use and Transportation System Development Plan for the IH 94 South Freeway Corridor, Kenosha, Milwaukee, and Racine Counties. The third-generation regional land use plan was adopted by the Commission on September 23, 1992, and documented in SEWRPC Planning Report No. 40, A Regional Land Use Plan for Southeastern Wisconsin-2010, and was subsequently amended by the adoption on June 21, 1995, of a land use and transportation system development plan for the IH 94 West Freeway Corridor in Waukesha County, documented in SEWRPC Community Assistance Planning Report No. 201, A Land Use and Transportation System Development Plan for the IH 94 West Freeway Corridor: 2010, Waukesha County, Wisconsin, and the adoption on December 4, 1996, of a development plan for Waukesha County, documented in SEWRPC Community Assistance Planning Report No. 209, A Development Plan for Waukesha County, Wisconsin. The fourth-generation regional land use plan was adopted by the Commission on December 3, 1997, and documented in SEWRPC Planning Report No. 45, A Regional Land Use Plan for Southeastern Wisconsin: 2020, and was subsequently amended by the adoption on June 20, 2001, of a land use plan for Walworth County, documented in SEWRPC Community Assistance Planning Report No. 252, A Land Use Plan for Walworth County, Wisconsin: 2020.

^b The regional transportation plan is a fifth-generation plan. The initial regional transportation plan was adopted by the Commission on December 1, 1966, and documented in SEWRPC Planning Report No. 7, 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 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. The second-generation regional transportation system plan was adopted by the Commission on June 1, 1978, and documented in SEWRPC Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, Volume One, Inventory Findings, and Volume Two, Alternative and Recommended Plans, and was subsequently amended by the adoption on June 18, 1981, of the Amendment to the Regional Transportation Plan-2000, Lake Freeway South Corridor; the adoption on June 17, 1982, of an amendment pertaining to the Milwaukee area primary transit system documented in SEWRPC Planning Report No. 33, A Primary Transit System Plan for the Milwaukee Area; the adoption on December 2, 1982, of the Amendment to the Regional Transportation Plan-2000, Racine County, and that date's Amendment to the Regional Transportation Plan—2000, Waukesha County; the adoption on September 8, 1983, of an amendment pertaining to a transportation system plan for the northwest side

Table 1 Footnotes (continued)

of Milwaukee County and for Ozaukee County documented in SEWRPC Planning Report No. 34, A Transportation System Plan for the Milwaukee Northwest Side/Ozaukee County Study Area; the adoption on December 1, 1983, of the Amendment to the Regional Transportation Plan-2000, Lake Freeway North/Park Freeway East; the adoption on March 11, 1985, of the Amendment to the Regional Transportation Plan-2000, Stadium Freeway South Corridor; the adoption on June 20, 1988, of that date's Amendment to the Regional Transportation Plan-2000, Waukesha County; the adoption on June 20, 1990, of the Amendment to the Washington County Jurisdictional Highway System; Plan-2000; the adoption on December 5, 1990, of the Amendment to the Racine County Jurisdictional Highway System Plan-2000 and the Amendment to the Regional Transportation Plan-2000, Kenosha County; the adoption on January 15, 1992, of a land use and transportation system development plan for the IH 94 South Freeway Corridor in Kenosha, Milwaukee, and Racine Counties, documented in SEWRPC Community Assistance Planning Report No. 200, A Land Use and Transportation System Development Plan for the IH 94 South Freeway Corridor, Kenosha, Milwaukee, and Racine Counties; the adoption on March 4, 1992, of the Amendment to the Walworth County Jurisdictional Highway System Plan-2010; and the adoption on January 18, 1993, of the Amendment to the Ozaukee County Jurisdictional Highway System Plan: 2010. The third-generation regional transportation system Plan was adopted by the Commission on December 7, 1994, and documented in SEWRPC Planning Report No. 41, A Regional Transportation System Plan for Southeastern Wisconsin: 2010, and was subsequently amended by the adoption on June 21, 1995, of a land use and transportation system development plan for the IH 94 West Freeway Corridor in Waukesha County, documented in SEWRPC Community Assistance Planning Report No. 201, A Land Use and Transportation System Development Plan for the IH 94 West Freeway Corridor: 2010, Waukesha County, Wisconsin; the adoption on December 6, 1995, of an updated jurisdictional highway system plan for Waukesha County, set forth in a Commission document entitled Amendment to the Waukesha County Jurisdictional Highway System Plan-2010; and the adoption on December 4, 1996, of a development plan for Waukesha County, documented in SEWRPC Community Assistance Planning Report No. 209, A Development Plan for Waukesha County, Wisconsin. The fourth-generation regional transportation system plan was adopted by the Commission on December 3, 1997, and documented in SEWRPC Planning Report No. 46, A Regional Transportation System Plan for Southeastern Wisconsin: 2020, and was subsequently amended by the adoption on February 1, 2001, of the Amendment to the Year 2020 Regional Transportation System Plan and Year 2000-2002 Transportation Improvement Program for the Removal and Reconfiguration of the Park East Freeway; the adoption on June 19, 2002, of the Amendment to the Washington County Jurisdictional Highway System Plan: 2020; the adoption on March 20, 2003, of the Affirmation of Year 2020 Regional Transportation System Plan and Extension of Plan Design Year to 2025; and the adoption on May 21, 2003, of the Amendment to the Regional Transportation Plan (Regional Freeway System).

^cThe Racine area transit development plan is a fourth-generation plan. The initial plan was adopted by the Commission on September 12, 1974, and documented in SEWRPC Community Assistance Planning Report No. 3, Racine Area Transit Development Program: 1975-1979. The second-generation plan was documented in SEWRPC Community Assistance Planning Report No. 79, Racine Area Transit System Plan and Program: 1984-1988. The third-generation plan was adopted by the Commission on March 9, 1994, and documented in SEWRPC Community Assistance Planning Report No. 79, Racine Area Transit System Plan and Program: 1984-1988. The third-generation plan was adopted by the Commission on March 9, 1994, and documented in SEWRPC Community Assistance Planning Report No. 204, Racine Transit System Development Plan: 1993-1997, City of Racine, Wisconsin.

^dThe regional airport system plan is an amended and updated second-generation plan. The first-generation plan was adopted by the Commission on March 4, 1976, and documented in SEWRPC Planning Report No. 21, A Regional Airport System Plan for Southeastern Wisconsin. The second-generation plan was initially adopted by the Commission on June 15, 1987, and documented in the first edition of SEWRPC Planning Report No. 38, A Regional Airport System Plan for Southeastern Wisconsin: 2010.

^e The Kenosha area transit development plan is a fourth-generation plan. The initial plan was adopted by the Commission on June 3, 1976, and documented in SEWRPC Community Assistance Planning Report No. 7, Kenosha Area Transit Development Plan: 1976-1980. The second-generation plan was adopted by the Commission on March 11, 1985, and documented in SEWRPC Community Assistance Planning Report No. 101, Kenosha Area Transit System Plan and Program: 1984-1988, City of Kenosha, Wisconsin. The third-generation plan was adopted by the Commission on June 17, 1992, and documented in SEWRPC Community Assistance Planning Report No. 101, Kenosha Area Transit System Plan and Program: 1984-1988, City of Kenosha, Kenosha, Kenosha Transit System Development Plan: 1991-1995, City of Kenosha, Wisconsin.

¹The four 1996 amendments and the single 1997 amendment to the 1978 elderly-handicapped transportation plan supersede and supplement a series of earlier amendments to the 1978 plan. These earlier amendments are as follows: 1) an amendment adopted by the Commission on June 20, 1980, and documented in SEWRPC Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, Volume Two, Milwaukee Urbanized Area/Milwaukee County; 2) three amendments adopted by the Commission on September 11, 1980, and documented in SEWRPC Community Assistance Planning Report No. 39, A Public Transit System Accessibility Plan, respectively, in Volume One, Kenosha Urbanized Area; Volume Three, Racine Urbanized Area; and Volume Four, Milwaukee Urbanized Area/Waukesha County; 3) an amendment adopted by the Commission on June 18, 1981, and documented in the Amendment to the Public Transit Accessibility Plan for the Milwaukee Urbanized Area/Waukesha County, City of Waukesha Transit System; 4) five amendments adopted by the Commission on December 7, 1987, and documented, respectively, in SEWRPC Memorandum Report No. 17, A Public Transit Program for Handicapped Persons-City of Waukesha Transit System Utility; SEWRPC Memorandum Report No. 21, A Public Transit Program for Handicapped Persons—Milwaukee County Transit System; SEWRPC Memorandum Report No. 22, A Public Transit Program for Handicapped Persons, Waukesha County Transit System; SEWRPC Memorandum Report No. 23, A Public Transit Program for Handicapped Persons-City of Kenosha Transit System; and SEWRPC Memorandum Report No. 24, A Public Transit Program for Handicapped Persons-City of Racine Transit System; 5) five amendments adopted by the Commission on January 15, 1992, and documented, respectively, in SEWRPC Memorandum Report No. 58, A Paratransit Service Plan for Disabled Persons—Milwaukee County Transit System; SEWRPC Memorandum Report No. 59, A Paratransit Service Plan for Disabled Persons—City of Kenosha Transit System; SEWRPC Memorandum Report No. 60, A Paratransit Service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; Severation of the service Plan for Disabled Persons—City of Racine Transit System; 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SEWRPC Memorandum Report No. 75, A Paratransit Service Plan for Disabled Persons: 1993 Update/City of Racine Transit System; SEWRPC Memorandum Report No. 76, A Paratransit Service Plan for Disabled Persons: 1993 Update/City of Waukesha Transit System Utility; and SEWRPC Memorandum Report No. 77, A Paratransit Service Plan for Disabled Persons: 1993 Update/Waukesha County Transit System; 7) five amendments adopted by the Commission on January 24, 1994, and documented, respectively, in SEWRPC Memorandum Report No. 88, A Paratransit Service Plan for Disabled Persons: 1994 Update/Milwaukee County Transit System; SEWRPC Memorandum Report No. 89, A Paratransit Service Plan for Disabled Persons: 1994 Update/City of Kenosha Transit System; SEWRPC Memorandum Report No. 90, A Paratransit Service Plan for Disabled Persons: 1994 Update/City of Racine Transit System; SEWRPC Memorandum Report No. 91, A Paratransit Service Plan for Disabled Persons: 1994 Update/City of Waukesha Transit System Utility; and SEWRPC Memorandum Report No. 92, A Paratransit Service Plan for Disabled Persons: 1994 Update/Waukesha County Transit System; 8) five amendments adopted by the Commission on January 25, 1995, and documented, respectively, in SEWRPC Memorandum Report No. 96, A Paratransit Service Plan for Disabled Persons: 1995 Update/Milwaukee County Transit System; SEWRPC Memorandum Report No. 97, A Paratransit Service Plan for Disabled Persons: 1995 Update/City of Kenosha Transit System; SEWRPC Memorandum Report No. 98. A Paratransit Service Plan for Disabled Persons: 1995 Update/City of Racine Transit System; SEWRPC Memorandum Report No. 99, A Paratransit Service Plan for Disabled Persons: 1995 Update/City of Waukesha Transit System Utility; and SEWRPC Memorandum Report No. 100, A Paratransit Service Plan for Disabled Persons: 1995 Update/Waukesha County Transit System; and 9) an amendment adopted by the Commission on January 24, 1996, and documented in SEWRPC Memorandum Report No. 106, A Paratransit Service Plan for Disabled Persons: 1996 Update/Milwaukee County Transit System.

⁹The Ozaukee County Transit Plan is an amended and updated second generation plan. The first generation plan was adopted by the Commission on December 6, 1995, and documented in SEWRPC Community Assistance Planning Report No. 218, A Transit Service Plan for Ozaukee County: 1996-2000.

^hThe regional water quality management plan grew out of a first-generation regional sanitary sewerage plan 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.

regional bicycle and pedestrian facilities system plan, and detailed transit development plans for the Kenosha, Racine, Waukesha, and West Bend urban areas and for Ozaukee, Washington, and Waukesha Counties.

Twelve 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 watewater sludge management plan, the regional air quality attainment and maintenance plan, and comprehensive watershed development plans for the Root, Fox, Milwaukee, Menomonee, Kinnickinnic, Des Plaines, and Pike River watersheds, for the Oak Creek watershed, and the regional water supply plan.

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

During 2010, the Commission adopted a regional water supply plan, an amendment to the regional natural areas plan, an amendment to the regional transportation plan and three amendments to the regional water quality management plan dealing with changes to planned sanitary sewer service areas at various locations throughout the Region.

THE CYCLICAL NATURE OF THE PLANNING PROCESS

The Commission views the planning process as cyclical in nature, alternating between systems, or areawide, planning, and project, or local, planning. Under this concept, for example, with respect to transportation planning, 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 resulting 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. In September 1992, the Commission adopted a thirdgeneration regional land use plan as part of the Commission's periodic review and reappraisal of the major elements of the comprehensive regional plan. In December 1994, the Commission adopted a thirdgeneration regional transportation system plan as part of this review and reappraisal process. In December 1997, the Commission adopted fourth generation design year 2020 regional land use and regional transportation system plans. Fifth generation regional land use and regional transportation system plans were adopted in 2006.

The fifth-generation, design year 2035 regional land use plan is based upon the same three basic concepts underlying the prior regional land use plans, 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. The fifth-generation regional land use plan is thus conceptually identical to the four previous regional land use plans.

The fifth-generation regional transportation system plan, which also has a design year of 2035, is designed to serve and support the adopted regional land use plan. The regional transportation system plan builds upon four earlier plans. The year 2035 plan embodies the basic structure of the year 2020 plan with only modest amendments as necessary to address additional travel needs expected to materialize over the extended planning period and to appropriately incorporate plan modifications advanced by local units of government since completion of the year 2020 plan.

The initial cycle of water quality management planning consisted of the regional sanitary sewerage system plan adopted by the Commission in 1974 and the projectlevel planning carried out by local water quality management agencies since that time. In July 1979, the Commission adopted a regional water quality management plan, taking into account the results of the project- and facility-level planning efforts of the first planning cycle. The regional water quality management plan differed from the regional sanitary sewerage system plan primarily in scope and complexity, the regional water quality management plan dealing with such areas as regional sludge management and the control of water pollution from nonpoint sources as well as with the control of water pollution from point sources, which was the focus of the first systems-level planning effort. A report documenting the status of the regional water quality management plan, collating and summarizing all implementation actions taken and plan amendments adopted since the adoption of the initial plan in 1979, was completed and published by the Commission in March 1995. A major plan amendment for the greater Milwaukee watersheds was adopted December 2007.

PLAN ELEMENTS UNDER PREPARATION

At the end of 2010, the Commission had under way a number of programs designed to refine, detail, amend, or extend the existing plan elements. These work efforts included the following:

- The preparation of an update to the regional land use inventory, initiating work on a major reevaluation and extension of the regional land use plan;
- The preparation of a regional origin and destination travel survey, initiating work on a major reevaluation and extension of the regional transportation plan;
- The preparation of new short-range transit system development plans for Kenosha, Milwaukee, and Racine Counties;

- The preparation of an update to the regional housing plan.
- The preparation of park plans for Kenosha, Milwaukee, Ozaukee, and Racine Counties.
- The preparation of an update to the Walworth County jurisdictional highway system plan.

FUTURE WORK PROGRAMS

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

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

LAND USE PLANNING DIVISION

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

- How many people live and work in the Region? How are the levels of population and employment changing over time?
- Where in the Region do people live and work? How are the population, household, and employment distribution patterns changing over time?
- What are the most probable future levels of population, households, and employment in the Region? Where will people live and work in the future?
- What is the existing pattern of land use development in the Region? How is this pattern changing over time?
- Where are the significant natural resource areas of the Region located, including the wetlands, woodlands, and wildlife habitat areas? What is happening to these resources over time?
- Where are the significant agricultural lands of the Region located? At what rate are these lands being converted to other uses?
- 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 in the Region 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 sites and facilities?

In an attempt to provide answers to these and similar questions, the Land Use Planning Division, during 2010, conducted a number of activities in three identifiable areas: land use planning, economic and demographic analysis, and park and open space planning.

LAND USE PLANNING

During 2010, Division efforts in land use planning were directed primarily toward implementation of the adopted regional land use plan. Much of this work involved the extension of regional land use plan data for use in subregional and local planning programs being undertaken by the Commission and by county and local units of government within the Region. The Division also continued to monitor subdivision platting activity within the seven-county Region during 2010.

Regional Land use Plan—An Overview

The regional land use plan for the year 2035 was adopted by the Commission in 2006. It is documented in SEWRPC Planning Report No. 48, *A Regional Land Use Plan for Southeastern Wisconsin: 2035.* The year 2035 regional land use plan is a fifth generation plan. The Commission adopted the first regional land use plan for Southeastern Wisconsin in 1966; that plan had a design year of 1990. In subsequent planning efforts the Commission updated and extended the land use plan to 2000 (adopted in 1977), to 2010 (adopted in 1992), and to 2020 (adopted in 1997).

The regional land use plan provides a long-range guide to land use development and open space preservation in the Region. The plan provides a basis for other elements of the regional plan, including the regional transportation plan, park and open space plan, water quality management plan, and water supply plan. The regional land use plan is also intended to serve as a framework for county and local comprehensive planning within the Region. The year 2035 regional land use plan is presented graphically on Map 2. The key features of the plan are described below.

Urban Land Use

Under the regional plan, urban lands-including land devoted to high, medium, and low density residential uses as well as to commercial, industrial, governmental, institutional, recreational, and transportation, communication, and utility uses-would increase by 93 square miles, or 13 percent, from 732 square miles in 2000 to 825 square miles in 2035. Urban development would occur within urban service areas served by public sanitary sewers and other public utilities and services. New urban land would be provided through the infilling and renewal of existing urban service areas and through the orderly expansion of such areas. Urban residential development and redevelopment would occur in a variety of residential neighborhood types and in mixed uses settings. About 88 percent of all new housing would occur at a medium density-averaging about four dwelling units per acre-or at a higher density. Under the plan, growth in the economic base would be accommodated through the development and redevelopment of major economic activity centers as well as community-level and neighborhood-level centers.

Sub-urban Density Residential Land

The regional plan discourages sub-urban density residential development, defined as a density of 0.2 to 0.6 dwelling unit per acre, with a typical lot size of two to three acres. Such development is neither truly urban nor rural in character. Development at this density generally precludes the provision of centralized sanitary sewer and water supply services. The plan recommends that additional sub-urban density residential development be confined to areas that have already been committed to such use through subdivision plats and certified surveys.

Environmentally Significant Lands

Under the regional plan, the land development needs of the Region would be met while preserving the best remaining elements of the natural resource base—most of which are located within environmental corridors and isolated natural resource areas. The plan recommends the preservation of primary environmental corridors—large, elongated areas in the

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landscape encompassing many of the best remaining woodlands, wetlands, prairies, wildlife habitat, and surface water and associated shorelands and floodlands, along with many related historic, scenic, and recreational sites. The plan recommends that these corridors be preserved in essentially natural, open use, recognizing, however, that certain limited development may be accommodated in upland corridor areas without jeopardizing their overall integrity; guidelines in this respect are included in the plan. The planned primary environmental corridors encompass 18 percent of the Region.

In addition to primary environmental corridors, other smaller concentrations of natural resources—referred to as secondary environmental corridors and isolated natural resource areas—have been identified as warranting strong consideration for preservation. The planned secondary environmental corridors encompass 3 percent of the Region while the planned isolated natural resource areas encompass 2 percent. The regional plan recommends that these areas be retained in natural, open use as determined in county and local plans.

The regional plan also recommends the preservation of all sites identified as natural areas or critical species habitat sites in the regional natural areas and critical species habitat inventory, described later in this section. Most of these sites are located within environmental corridors or isolated natural resource areas.

Prime Agricultural Lands and Other Rural Lands

The area shown in white on the regional land use plan map is recommended to remain in essentially rural use-primarily agriculture and rural density residential use. Prime agricultural land in this area-the land best suited for agriculture—is recommended to be preserved for farming, with residential development generally limited to no more than one dwelling unit per 35 acres. The regional plan recommends that counties in the Region, in cooperation with the concerned local units of government, carry out planning programs to identify prime agricultural land. The regional plan holds out the preservation of the most productive soils—soils in U.S. Natural Resources Conservation Service Agricultural Capability Class I and Class II-as a key consideration in the identification of prime farmland, recognizing that other factors, such as farm size and the overall size of the farming area, may also be considered.
ADOPTED REGIONAL LAND USE WISCONSIN REGION: 2035



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The regional plan also encourages the preservation of nonprime farmland for agricultural use. This could be in the form of traditional agriculture or alternative agricultural uses such as smaller hobby farms or specialty farms including community supported agricultural operations. The regional plan recognizes the potential for limited residential development on nonprime farmland in planned rural areas, recommending that any such development be limited to a density of no more than one dwelling unit per five acres. Where such development is accommodated, the plan encourages the use of conservation subdivision designs.

Residential Subdivision Platting Activity

The Commission annually monitors land subdivision activity within the Region. In all, 231 residential lots were created within the Region during 2010 by subdivision plat, compared with 464 lots so created in 2009, reflecting the continuing decline in housing construction (see Table 2 and Map 3). In the seven counties in Southeastern Wisconsin, the number of residential lots created through subdivision plats in 2010 ranged from a low of seven lots in Milwaukee and Racine Counties to a high of 85 lots in Washington County. The historical trend in residential platting activity since 1960 is shown for the Region and by county in Figure 6.

Of the residential lots created in 2010, 127 lots, or 55 percent, were to be served by public sanitary sewers; the remaining 104 lots, or 45 percent, were to be served by onsite sewage disposal systems. Of the 104 lots to be served by onsite sewage disposal systems, 25 lots, or 24 percent, occurred at a rural density—that is, an overall density of no more than one dwelling unit per five acres. The balance occurred at urban densities of more than one dwelling unit per five acres.

ECONOMIC AND DEMOGRAPHIC ANALYSIS

During 2010, the Division continued to monitor secondary data sources for changes in employment, population, and housing levels, and continued to provide socioeconomic data in support of its work and that of the Transportation, Environmental, and Community Assistance Planning Divisions.

RESIDENTIAL PLATTING ACTIVITY IN THE REGION: 2010



Monitoring Employment

Current Employment Levels

The number and type of jobs available are important measures of economic activity within the Region. Since jobs are enumerated at their location, the job data are often referred to in terms of "place-of-work" employment data. It should be noted that the enumeration of jobs does not distinguish between fulland part-time jobs or indicate whether a given job is held by a resident of the jurisdiction in which the job is enumerated or by a commuter. The information regarding employment levels presented in this report is drawn from secondary data sources. Future editions of the Commission's Annual Report may present slightly revised employment levels for the year 2010 and previous years in order to reflect new releases of secondary source employment data as they become available.

	Sewered Lots		Unsewe	red Lots ^a	Total Lots		
County	Number	Percent of Total	Number	Percent of Total	Number	Percent of Region	
Kenosha	0	0.0	28	100.0	28	12.1	
Milwaukee	7	100.0	0	0.0	7	3.0	
Ozaukee	54	100.0	0	0.0	54	23.4	
Racine	0	0.0	7	100.0	7	3.0	
Walworth	12	54.5	10	45.5	22	9.6	
Washington	33	38.8	52	61.2	85	36.8	
Waukesha	21	75.0	7	25.0	28	12.1	
Region	127	55.0	104	45.0	231	100.0	

RESIDENTIAL SUBDIVISION PLATTING ACTIVITY IN THE REGION: 2010

^aOf the 104 lots to be served by onsite sewage disposal systems, 25 lots, or 24 percent, occurred at a rural density of no more than one dwelling unit per five acres. This includes seven such lots in Racine County, five lots in Walworth County, six lots in Washington County and seven lots in Waukesha County.

Table 3

REGIONAL EMPLOYMENT BY CATEGORY: 1990, 2000, AND 2010

	Number of Jobs			1990-200	0 Change	2000-2010 Change	
Employment Category	1990	2000	2010 Estimate	Number	Percent	Number	Percent
Agriculture, Forestry, Fishing, and Mining ^a	14,300	17,600	18,600	3,300	23.1	1,000	5.7
Construction	45,100	53,800	41,300	8,700	19.3	-12,500	-23.2
Manufacturing	223,500	224,400	156,400	900	0.4	-68,000	-30.3
Transportation, Communication, and Utilities	46,300	54,800	48,000	8,500	18.4	-6,800	-12.4
Wholesale Trade	55,300	64,400	56,600	9,100	16.5	-7,800	-12.1
Retail Trade	185,400	193,700	192,000	8,300	4.5	-1,700	-0.9
Services ^b	386,500	499,700	553,900	113,200	29.3	54,200	10.8
Government and Government Enterprises ^C	106,200	114,400	117,900	8,200	7.7	3,500	3.1
Total Jobs	1,062,600	1,222,800	1,184,700	160,200	15.1	-38,100	-3.1

^aIncludes agriculture, agricultural services, forestry, commercial fishing, mining, and unclassified jobs.

^bIncludes services and finance, insurance, and real estate.

^CExcludes armed forces.

The number of jobs in the Region in 2010 was estimated at 1,184,700, a decrease of about 38,100 jobs, or 3.1 percent, from the 2000 level of 1,222,800 jobs. Year 2010 employment has declined from the 2000 level in over half of the employment categories, including manufacturing employment which was an estimated 68,000 jobs less than the 2000 level (see Table 3).

Estimated employment levels by county in 2010 are indicated in Table 4. Despite the continuing economic

downturn, 2010 employment levels in five counties— Kenosha, Ozaukee, Walworth, Washington, and Waukesha—remained above year 2000 levels, ranging from an increase of 1,400 jobs in Walworth County to an increase of 7,200 jobs in Kenosha County. Racine County employment in 2010 was estimated to have declined by about 5,200 jobs, while Milwaukee County employment was estimated to have declined by about 48,700 jobs, or almost 8 percent.

RESIDENTIAL LOTS PLATTED IN THE REGION AND ITS COUNTIES: 1960-2010



	Number of Jobs			1990-200	00 Change	2000-2010 Change	
County	1990	2000	2010 Estimate	Number	Percent	Number	Percent
Kenosha Milwaukee Ozaukee Racine Walworth Washington Waukesha	52,200 609,800 35,300 89,600 39,900 46,100 189,700	68,700 624,600 50,800 94,400 51,800 61,700 270,800	75,900 575,900 53,700 89,200 53,200 64,000 272,800	16,500 14,800 15,500 4,800 11,900 15,600 81,100	31.6 2.4 43.9 5.4 29.8 33.8 42.8	7,200 -48,700 2,900 -5,200 1,400 2,300 2,000	10.5 -7.8 5.7 -5.5 2.7 3.7 0.7
Region	1,062,600	1,222,800	1,184,700	160,200	15.1	-38,100	-3.1

REGIONAL EMPLOYMENT BY COUNTY: 1990, 2000, AND 2010

Comparison of Actual and Projected Employment Levels

In 2004, the Commission prepared a new set of employment level projections for the Region to the vear 2035. These projections are documented in SEWRPC Technical Report No. 10 (4th Edition), The Economy of Southeastern Wisconsin, July 2004. Because of the uncertainty surrounding future employment levels, the Commission projected a range of future employment levels-high, intermediate, and low-for the Region. The intermediate projection is considered the most likely to be achieved for the Region overall. The high and low projections are intended to provide an indication of the range of employment levels which could conceivably be achieved under significantly higher and lower, but nevertheless plausible, growth scenarios for the Region. The intermediate employment level projected for the Region was used as a basis for the preparation of the year 2035 regional land use plan. In the preparation of the regional land use plan, adjustments were made to the projected county-level employment levels presented in Technical Report No. 10, based upon a consideration of the local land use plans of communities within the Region. The intermediate employment projection used in the regional land use plan, along with the high-growth and low-growth employment projections, are presented on Figure 7.

Employment in the Region in 2010 was anticipated to total 1,270,600 jobs under the high-growth scenario; 1,240,100 jobs under the intermediate-growth

scenario; and 1,213,300 jobs under the low-growth scenario. The estimated 2010 level of 1,184,700 jobs is about 7 percent, 4 percent, and 2 percent below the high, intermediate, and low growth projections, respectively (see Table 5 and Figure 7).

Monitoring Population

Current Population Levels

The 2010 resident population of the Region as enumerated in the decennial census was about 2,019,900 persons, exceeding the 2 million mark for the first time. As indicated in Table 6, the regional population increased by about 88,700 persons, or about 4.6 percent, over 2000. Every county in the Region experienced a population increase between 2000 and 2010, ranging from a low of about 4,100 persons, or about 5 percent, in Ozaukee County, to a high of about 29,100 persons, or about 8 percent, in Waukesha County.

Between the Census dates of April 1, 2000, and April 1, 2010, the total population increase of about 88,700 persons is estimated to have resulted from a natural increase of about 110,400 persons and a net out-migration of about 21,700 persons. During this time, Milwaukee County and Racine County experienced net out-migration, while the remaining counties in the Region experienced net in-migration, ranging from about 1,900 persons in Ozaukee County to about 15,700 persons in Waukesha County.

		Projected 2010 Jobs							
County	Estimated	High-Growth	Intermediate-Growth	Low-Growth					
	2010 Jobs	Scenario	Scenario	Scenario					
Kenosha	75,900	77,100	76,200	73,600					
Milwaukee	575,900	615,600	601,900	587,900					
Ozaukee	53,700	55,700	54,400	53,100					
Racine	89,200	97,900	96,200	93,500					
Walworth	53,200	58,500	57,700	55,900					
Washington	64,000	69,600	68,000	66,500					
Waukesha	272,800	296,200	285,700	282,800					
Region	1,184,700	1,270,600	1,240,100	1,213,300					

ACTUAL AND PROJECTED NUMBER OF AVAILABLE JOBS BY COUNTY: 2010

Table 6

POPULATION IN THE SOUTHEASTERN WISCONSIN REGION BY COUNTY: 1990, 2000, AND 2010

	Population			1990-200	0 Change	2000-2010 Change	
County	1990 Census	2000 Census	2010 Census	Number	Percent	Number	Percent
Kenosha Milwaukee Ozaukee Racine Walworth Washington Waukesha	128,200 959,300 72,800 175,100 75,000 95,300 304,700	149,600 940,200 82,300 188,800 92,000 117,500 360,800	166,400 947,700 86,400 195,400 102,200 131,900 389,900	21,400 -19,100 9,500 13,700 17,000 22,200 56,100	16.7 -2.0 13.0 7.8 22.7 23.3 18.4	16,800 7,500 4,100 6,600 10,200 14,400 29,100	11.2 0.8 5.0 3.5 11.1 12.3 8.1
Region	1,810,400	1,931,200	2,019,900	120,800	6.7	88,700	4.6

Comparison of Actual and Projected Population Levels

In 2004, the Commission prepared a new set of population projections for the Region to the year 2035. The projections are documented in SEWRPC Technical Report No. 11 (4th Edition), The Population of Southeastern Wisconsin, July 2004. As in the preparation of employment projections, the Commission projected a range of future population levels for the Region to the year 2035. The intermediate projection is considered the most likely to be achieved for the Region overall. The high and low projections are intended to provide an indication of the range of population levels which could conceivably be achieved under significantly higher and lower, but nevertheless plausible, growth scenarios for the Region. The high, intermediate, and low population projections are consistent with the corresponding employment projections for the year 2035. The intermediate population projection was used as a basis for the preparation of the year 2035 regional land use plan. The intermediate population projection, along with the high-growth and low-growth population projections, are presented for the Region and each county on Figure 8.

Under the high-growth scenario, the population level of the Region was anticipated to reach about 2,107,700 persons in 2010. The actual 2010 regional population level of 2,019,900 persons was about 4 percent below this anticipated level. Under the low-growth scenario, the population level of the Region was anticipated to be about 1,965,900 persons in 2010. The actual 2010 population level was about 3 percent above this level. Under the intermediate-growth scenario, the population level of the Region was anticipated to reach about 2,032,500 persons in 2010. The actual 2010 population level was about 1 percent below this level (see Table 7 and Figure 8).



ACTUAL AND PROJECTED POPULATION LEVELS BY COUNTY: 2010

		Projected 2010 Population						
County	2010	High-Growth	Intermediate-Growth	Low-Growth				
	Population	Scenario	Scenario	Scenario				
Kenosha	166,400	173,600	166,100	160,500				
Milwaukee	947,700	978,900	953,900	921,000				
Ozaukee	86,400	93,400	88,700	86,100				
Racine	195,400	205,400	195,200	190,800				
Walworth	102,200	108,400	105,300	100,600				
Washington	131,900	137,700	131,800	127,100				
Waukesha	389,900	410,600	391,500	379,800				
Region	2,019,900	2,107,700	2,032,500	1,965,900				

Table 8

1990-2000 Change 2000-2010 Change Households 1990 2000 2010 County Census Census Census Number Percent Number Percent Kenosha..... 47.000 56,100 62,600 9.100 19.4 6.500 11.6 Milwaukee 373,100 377,700 383,600 4,600 1.2 5,900 1.6 Ozaukee 25,700 30,900 34,200 5,200 20.2 3,300 10.7 Racine..... 63,700 70,800 75,700 7,100 11.1 4,900 6.9 Walworth 27,600 34,500 39,700 6,900 25.0 5,200 15.1 Washington 33,000 43,800 51,600 10,800 32.7 7,800 17.8 Waukesha 106,000 135,200 152,700 29,200 27.5 17,500 12.9 676,100 749,000 800,100 72,900 10.8 51,100 6.8 Region

HOUSEHOLDS IN THE SOUTHEASTERN WISCONSIN REGION BY COUNTY: 1990, 2000, AND 2010

Monitoring Household Levels

Current Household Levels

As shown in Table 8, the 2010 decennial census indicates that the number of households in the Region increased from about 749,000 in 2000 to about 800,100 in 2010, an increase of about 51,100 households, or 6.8 percent. Each county in the Region experienced an increase in household levels from 2000 to 2010, ranging from about 3,300 households, or 11 percent, in Ozaukee County, to about 17,500 households, or 13 percent, in Waukesha County.

Comparison of Actual and Projected Household Levels

In conjunction with the aforereferenced population projections, the Commission in 2004 prepared a new set of household projections for the Region to the year 2035. These projections are also documented in SEWRPC Technical Report No. 11 (4th Edition), *The Population of Southeastern Wisconsin*, July 2004. The Commission prepared high, intermediate, and low household projections, corresponding to the high, intermediate, and low population projections. The intermediate household projection was used as a basis for the preparation of the year 2035 regional land use plan. The intermediate household projection, along with the high-growth and low-growth household projections, are presented for the Region and each county on Figure 9.

Under the high-growth scenario, it was anticipated that there would be 838,600 households in the Region in 2010. The 2010 regional household level of 800,100 is about 5 percent below this anticipated level. Under the low-growth scenario, it was anticipated that there would be 782,400 households in the Region in 2010. The 2010 regional household level is about 2 percent





YEAR

		Projected 2010 Households						
County	2010 Households	High-Growth Scenario	Intermediate-Growth Scenario	Low-Growth Scenario				
Kenosha	62,600	66,400	63,600	61,400				
Milwaukee	383,600	404,200	393,900	380,400				
Ozaukee	34,200	36,100	34,300	33,300				
Racine	75,700	78,900	74,900	73,200				
Walworth	39,700	41,700	40,600	38,800				
Washington	51,600	53,200	50,900	49,100				
Waukesha	152,700	158,100	150,800	146,200				
Region	800,100	838,600	809,000	782,400				

ACTUAL AND PROJECTED HOUSEHOLD LEVELS BY COUNTY: 2010

above this level. Under the intermediate-growth scenario, it was anticipated that there would be 809,000 households in the Region in 2010. The 2010 regional household level is about 1 percent below this level (see Table 9 and Figure 9).

Census Coordination

During 2010, the Commission continued to participate in the U.S. Census Bureau State Data Center Program, a nationwide program under which the governor of each state designates an agency or group of agencies within the state government to serve as the lead agency within that state-known as the state data center-for the dissemination of the large volume of information collected and reported by the Census Bureau. Within the State of Wisconsin, the provision of the state data center is a joint function of the Wisconsin Department of Administration and the University of Wisconsin-Madison. Under an agreement between the Commission and the Wisconsin state data center, the Commission serves as an affiliate member of the data center and supplies Census data access and technical assistance to Census data users within the seven-county Southeastern Wisconsin Region.

As part of its continuing Census coordinating function within the Region, the Commission also serves as a clearinghouse and central repository for a wide variety of Census data holdings. A computer-readable geographic base file containing Census statistical

tabulating and reporting unit boundaries for the Region is maintained by the Commission. Included in the Census material held by the Commission are all published reports, maps, DVDs, and CD-ROMs containing data for the Southeastern Wisconsin Region. Assistance is provided to local units of government, the public, and local businesses in accessing these materials. During 2010, the U.S. Bureau of the Census conducted its decennial census of population and housing and the Division staff prepared for the dissemination of the results of that census in the spring of 2011, including reviewing the Census Bureau's proposed criteria for the identification of urban areas in the Region, specifically in regard to the effect such criteria may have on the regional transit providers.

PARK AND OPEN SPACE PLANNING

Regional Park and Open Space Plan

On December 1, 1977, the Commission adopted a regional park and open space plan for Southeastern Wisconsin consisting of two basic elements: an open space preservation element and an outdoor recreation element. The open space preservation element consisted of recommendations for the preservation of primary environmental corridors within the Region. The outdoor recreation element consisted of the following: 1) a resource-oriented outdoor recreation plan providing recommendations for the number and location of large parks, recreation corridors to



YEAR



YEAR

accommodate trail-oriented activities, and wateraccess facilities to enable the recreational use of rivers, inland lakes, and Lake Michigan; and 2) an urban outdoor recreation plan, providing recommendations for the number and distribution of local parks and outdoor recreational facilities required in urban areas of the Region. The initial regional park and open space plan is documented in SEWRPC Planning Report No. 27, *A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000*, November 1977.

The Commission has assisted the counties in the Region in preparing county-level park and open space plans which refine and extend the regional park and open space plan. Upon adoption by the Commission, such plans serve as amendments to the regional park and open space plan.

The major outdoor recreation sites and recreation corridors recommended under the regional park and open space plan, as refined and detailed in county park and open space plans, are shown on Map 4.¹ Shown on this map are large parks—parks of at least 100 acres in area which provide facilities for a variety of resourceoriented outdoor recreational activities; major recreation corridors accommodating trail-oriented activities; and major special purpose outdoor recreation sites, such as Henry W. Maier Festival Park in the City of Milwaukee and Old World Wisconsin in the Town of Eagle.

In 2010, the Commission staff initiated work on an update and extension of the park and open space plan for Ozaukee County.

Regional Natural Areas and Critical Species Habitat Protection and Management Plan

A regional natural areas and critical species habitat protection and management plan for Southeastern Wisconsin was adopted as an amendment to the regional park and open space plan in September 1997. The regional natural areas and critical species habitat plan is documented in SEWRPC Planning report No. 42, A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin, September 1997.

The planning effort was undertaken to identify the most significant remaining natural areas—essentially, remnants of the pre-European-settlement landscape— as well as other areas vital to the maintenance of endangered, threatened, and rare plant and animal

species in the Region. The plan represents an important additional element of the evolving comprehensive plan for Southeastern Wisconsin. It also provides an important supplement to the open space preservation recommendations of the regional land use and park and open space plans.

Under the plan, natural areas are defined as tracts of land or water so little modified by human activity, or which have sufficiently recovered from the effects of such activity, that they contain intact native plant and animal communities believed to be representative of the pre-European-settlement landscape. Critical species habitats are defined as additional tracts of land or water which support endangered, threatened, or rare plant or animal species.

¹Map 4 incorporates major outdoor recreation sites and recreation corridors recommended in the following reports: SEWRPC Community Assistance Planning Report No. 131, A Park and Open Space Plan for Kenosha County, November 1987, as amended, for the portion of Kenosha County located west of IH 94, and SEWRPC Community Assistance Planning Report No. 212, A Comprehensive Plan for the Kenosha Urban Planning District, Kenosha County, Wisconsin, December 1995, for the portion of Kenosha County located east of IH 94; SEWRPC Community Assistance Planning Report No. 132, A Park and Open Space Plan for Milwaukee County, November 1991; SEWRPC Community Assistance Planning Report No. 133 (2nd Edition), A Park and Open Space Plan for Ozaukee County, June 2001; SEWRPC Community Assistance Planning Report No. 134 (2nd Edition), A Park and Open Space Plan for Racine County, July 2001; SEWRPC Community Assistance Planning Report No. 135 (2nd Edition), A Park and Open Space Plan for Walworth County, September 2000, as amended; SEWRPC Community Assistance Planning Report No. 136 (3rd Edition), A Park and Open Space Plan for Washington County, March 2005: and SEWRPC Community Assistance Planning Report No. 209, A Development Plan for Waukesha County, Wisconsin, August 1996.

Map 4

MAJOR OUTDOOR RECREATION SITES AND CORRIDORS RECOMMENDED UNDER THE REGIONAL PARK AND OPEN SPACE PLAN, AS AMENDED AND AS UNDER PROPOSED AMENDMENTS PENDING AS OF DECEMBER 31, 2009



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As of the end of 2010, the natural areas and critical species habitat protection and management plan had been adopted by all seven counties in the Region, as well as by four cities, eight villages, and four towns in the Region, and had been endorsed by the Wisconsin Natural Areas Preservation Council. In addition, the Wisconsin Natural Resources Board has created a committee to investigate the implementation of those portions of the natural areas plan which pertain to the Wisconsin Department of Natural Resources. The Commission staff assisted the Department's committee with its investigation, which has now been completed.

In 2005, the Commission staff began work on an update to the regional natural areas and critical species habitat protection and management plan for Southeastern Wisconsin. This update was conducted to permit consideration of changes which have occurred with respect to population growth, land use development, climate change, and discernable changes to the fauna and flora populations and their associated habitat conditions, since the original plan was completed. The update amendment to the original plan was completed in 2010. As a result of these updates, the total number of identified natural areas has increased from 447 to 494 sites, and the total number of identified critical species habitat areas has increased from 142 to 271 sites. The distribution of these sites within the Region is shown on Map 5. In addition, during 2010 there were several additions made to the original natural area sites. The Wisconsin Department of Natural Resources acquired four parcels totaling 27.4 acres in the Chiwaukee Prairie/Carol Beach area of Kenosha County, and 41 acres of the Milwaukee River Swamp in Washington County.

The plan update recommends that each of the 765 natural areas and critical species habitat sites be protected and preserved to the maximum extent practicable as urban and rural development in the Region proceeds. The amended plan further recommends that 677 sites, or 88 percent of the total, be placed in public or private protective conservation ownership and that the other 88 sites be protected, insofar as it is possible, through zoning and other regulatory means without protective ownership.

Descriptive information for each natural area and critical species habitat site, along with recommended means for preservation, is presented in the amendment to SEWRPC Planning Report No. 42.

DATA PROVISION AND TECHNICAL ASSISTANCE

Economic and Demographic Data

The Land Use Planning Division devotes considerable time each year to answering requests for demographic, economic, and related data. This function also includes the provision of technical assistance to local units of government, public agencies, and school districts in the conduct of special data acquisition activities and in the analysis of data.

During 2010, the Division continued to respond to data requests for population, economic, and related information from the Commission data files. These requests came from county and local units of government, Federal and State agencies, private firms, and individual citizens. The following are some examples of Division activity during 2010 in performing the data provision and technical assistance function:

- Provided existing year 2000 and planned year 2035 population and household data by U.S. Public Land Survey one-quarter section for a portion of the State Trunk Highway 100 corridor in Granville Township in Milwaukee County to a consultant working with the Wisconsin Department of Transportation on an Environmental Justice Study.
- Provided income and housing value data from the 2000 census for the Village and Town of Sharon to the Sharon school board for planning purposes.
- Provided land use data for the Town of Dover to the Kansasville Fire and Rescue Department for a grant application.
- Provided data on population, households, jobs, and vehicle availability for neighborhoods in the vicinity of the Lake Interchange in Milwaukee to a transportation planning consultant for preparation of a grant proposal.
- Provided current population estimates to the Kenosha County Department of Human Services for program planning purposes.

Map 5

NATURAL AREAS AND CRITICAL SPECIES HABITAT SITES IDENTIFIED IN THE ADOPTED NATURAL AREAS AND CRITICAL SPECIES HABITAT PROTECTION AND MANAGEMENT PLAN FOR SOUTHEASTERN WISCONSIN UNDER THE ADOPTED PLAN AMENDMENT

LEGEND

SITES IDENTIFIED IN THE ADOPTED PLAN

- NATURAL AREA OF STATEWIDE OR GREATER SIGNIFICANCE (NA-1) NATURAL AREA OF COUNTYWIDE OR REGIONAL SIGNIFICANCE (NA-2)
- NATURAL AREA OF LOCAL SIGNIFICANCE (NA-3)
- \bigcirc CRITICAL SPECIES HABITAT SITE

SITES ADDED UNDER THE ADOPTED PLAN AMENDMENT

- NATURAL AREA OF COUNTY-WIDE OR REGIONAL SIGNIFICANCE (NA-2)
- NATURAL AREA OF LOCAL SIGNIFICANCE (NA-3) \wedge
- CRITICAL SPECIES HABITAT SITE
- ENVIRONMENTAL CORRIDORS

PRIMARY ENVIRONMENTAL CORRIDOR







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Land Use, Natural Resource, and Park and Open Space Data

The Commission land use, natural resource, and park and open space data files are used extensively by State, county, and local governmental units and agencies and by private interests. In 2010, the Division responded to 113 requests for land use, natural resource, and park and open space data. Examples of the provision of land use, natural resource, and park and open space data during 2010 include the following:

- Provided mapped information on selected environmental features surrounding the Kenosha Regional Airport to a private consultant for use in the preparation of an airport facilities plan.
- Provided information on potential development restrictions within environmental corridors to a private consultant and landowner for a site in the Village of Pewaukee.
- Provided digital mapping information for existing park and open space sites abutting Lake Michigan to the Wisconsin Department of Natural Resources for use in the planning of a multi-state water trail along the Lake Michigan shoreline.
- Provided land use inventory data for the Lake Michigan Direct Drainage Area within Racine County to the City of Racine Health Department for use in a beach study grant application.
- Provided information on trail development standards to the City of Milwaukee Department of City Development.

Special Environmental Inventories, Assessments and Evaluations

A continuing demand is placed upon the Commission to help Federal, State, and local units and agencies of government in evaluating and assessing the environmental significance and quality of specific development sites throughout the Region. Each of these evaluations involves field inspection work and requires that a report be prepared and transmitted to the requesting party. During 2010, the Commission fulfilled a total of 125 requests for such information. Most of this work effort may be divided into the following categories:

- Requests for the field identification and staking of wetland and primary environmental corridor boundaries on individual parcels in order to facilitate consideration by local governments of private development proposals. During 2010, 13 such requests were fulfilled for sites located throughout the Region (see Map 6). Each of these requests was made by a county or local planner or engineer who needed detailed field information in order to properly carry out local planning and land use control responsibilities. Once delineated in the field by the Commission staff, the precise boundaries of environmentally significant areas were surveyed by private land surveyors retained by the local unit of government or landowner concerned and the results of the survey were placed on land subdivision plats, certified survey maps, and plats of survey.
- Requests for field evaluation, identification, and delineation of wetlands and primary environmental corridors on large sites proposed for residential, commercial, and industrial development to determine whether environmentally sensitive areas of concern occur on such sites. The Commission encourages such evaluations prior to any commitment to detailed site planning. During 2010, such requests were fulfilled for a total of 36 sites located throughout the Region (see Map 6). Once delineated in the field by the Commission staff, the precise boundaries of the environmentally significant areas concerned were surveyed by private land surveyors retained by the local unit of government or landowner concerned and the results of the survey were placed on plats of survey.
- Requests for the field identification and evaluation of environmentally sensitive areas, including wetlands, associated with transportation improvement projects. During 2010, 44 such project-related requests were fulfilled in response to requests by the Wisconsin Department of Transportation, the Kenosha



County Division of Highways, the Waukesha County Department of Public Works, the City of Franklin, the City of Mequon, the City of Milwaukee, the City of Oconomowoc, the City of Waukesha, the City of West Bend, the Town of Lisbon, the Town of Oconomowoc, and the Village of Grafton (see Map 6).

- Requests for the field identification and evaluation of environmentally sensitive areas, including wetlands, associated with municipal and private utility and community facility development projects. During 2010, 21 such requests were fulfilled in Milwaukee, Walworth, and Waukesha Counties (see Map 6).
- Requests for the field identification and evaluation of environmentally sensitive areas,

including wetlands, with particular attention to the evaluation of the flora and fauna present on existing and proposed public park sites in order to assist in the development, redevelopment, and, in some cases, disposal of such sites. During 2010, nine such requests were fulfilled in Milwaukee, Ozaukee, Walworth, Washington, and Waukesha Counties (see Map 6).

• Finally, the Commission fulfilled requests for the survey of specific sites to identify and evaluate the flora and fauna present, including a determination as to whether any rare, threatened, or endangered species occur on the subject sites. During 2010, two such requests were fulfilled in Walworth and Waukesha Counties (see Map 6).

TRANSPORTATION PLANNING DIVISION

DIVISION FUNCTIONS

The Commission is the official metropolitan transportation planning agency for the Southeastern Wisconsin Region. The Commission's Transportation Planning Division conducts studies and makes recommendations concerning various aspects of transportation system development within the Region. The kinds of basic questions addressed by the Division include the following:

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

In attempting to find sound answers to these and other questions, to formulate plans containing recommendations concerning these questions, and to monitor transportation system development activities in the Region, the Transportation Planning Division during 2010 conducted a number of activities in four major areas: transportation planning support and assistance, which includes data collection and development, model refinement, and technical assistance; transportation systems management and programming; long-range planning; and detailed corridor study projects.

TRANSPORTATION PLANNING SUPPORT AND ASSISTANCE

Data Collection and Development

During 2010, the Division continued to monitor secondary data sources and review transportation system performance with respect to changes in personal-use vehicle and commercial truck availability; public transit ridership, stations, and subsidies; carpool parking facility capacity and use; and traffic volumes. In 2009, as part of the review, update, and reaffirmation of the year 2035 regional transportation plan, the Division reviewed transportation system performance with respect to pavement and bridge condition; traffic congestion; vehicle traffic crashes; arterial highway and transit travel times; transportation air pollutant emissions; and transit service reliability. These transportation system performance measures will be updated as part of a plan update (every four years) and a major plan reevaluation (every 10 years).

Personal-Use Vehicle and Commercial Truck Availability¹

The number of personal-use vehicles—that is, automobiles, trucks, and vans used by residents of the Region for personal transportation—in 2010 totaled about 1,377,700. This represents an increase of 10,700, or about 0.4 percent, compared to the 2009 level of 1,367,000 (see Table 10). Increases in personal-use vehicle availability in 2010 occurred in all counties in the Region. Over the past 40 years, there has been a generally steady, long-term trend of continued increases

¹The classifications used to estimate vehicle availability in this Annual Report differ from those used in Commission Annual Reports for years prior to 1994. In this report, motor vehicles are divided into "personaluse vehicles" and "commercial trucks". Personal-use vehicles include not only automobiles, but also vans and light trucks available for personal use. Commercial trucks include municipal trucks and light and heavy trucks available for commercial use. In Annual Reports for years prior to 1994, vans and light trucks available for personal use were classified with light trucks available for commercial use.

County	1963	1972	2009	2010
Kenosha Milwaukee Ozaukee Racine Walworth Washington	37,240 316,350 16,780 52,040 22,220 18,340 60,300	51,100 392,000 28,030 73,350 33,450 30,390	118,410 544,140 68,490 145,090 83,430 102,900 204,540	119,720 546,310 69,560 146,880 83,750 104,460 206,070
Total	532,360	722,770	1,367,000	1,377,660

PERSONAL-USE VEHICLE AVAILABILITY IN THE REGION^a

^aThe classification of automobiles and trucks used in this Annual Report differs from that used in Commission Annual Reports for years prior to 1994. For an explanation of the differences, see footnote 1, page 47.

Figure 10



Figure 11



DIFFERS FROM THAT USED IN COMMISSION ANNUAL REPORTS FOR YEARS PRIOR TO 1994. FOR AN EXPLANATION OF THE DIFFERENCES, SEE FOOTNOTE 1, PAGE 47.

in the number of personal-use vehicles available to residents of the Region. The average annual rate of growth in personal-use vehicle availability within the Region from 1963 through 2010 was 2.0 percent.

The number of persons per personal-use vehicle within the Region was estimated to be 1.47 in 2010, up slightly from the 1.46 estimated for 2009, as shown in Figure 10. The number of persons per personal-use vehicle has been relatively stable for over a decade, with minor fluctuations up and down annually. The forecast of the number of persons per personal-use vehicle expects long term stability as well. The forecast of total personal-use vehicle availability developed under the long-range regional transportation system plan, is shown in Figure 11, along with historic annual personal-use vehicle availability. The 2010 forecast personal-use vehicle availability level was 1,325,600 under the adopted regional transportation system plan. The estimated 2010 regional personal-use vehicle availability level of 1,377,700 was 52,100 vehicles, or about 3.9 percent, higher than the personal-use vehicle availability level envisioned under the adopted regional transportation system plan.

County	1963	1972	2009	2010
Kenosha Milwaukee Ozaukee Racine Walworth Washington	4,370 25,910 2,270 5,670 4,190 3,210	4,490 26,710 2,550 6,460 4,840 4,080	11,140 47,500 6,500 14,910 10,930 10,790	10,170 42,160 5,650 13,690 10,220 10,000
Waukesha	7,780	10,280	33,140	29,560
Total	53,400	59,410	134,910	121,450

COMMERCIAL TRUCK AVAILABILITY IN THE REGION^a

^aThe classification of automobiles and trucks used in this Annual Report differs from that used in Commission Annual Reports for years prior to 1994. For an explanation of the differences, see footnote 1, page 47.



The number of commercial and municipal trucks available in the Region during 2010 totaled about 121,450, a decrease of about 13,460, or about 10.0 percent, below the 2009 level of 134,910 trucks (see Table 11 and Figure 12). In 2010, decreases in commercial motor-truck availability occurred in all counties within the Region. Light commercial trucks accounted for about 54 percent of all commercial trucks in 1963, 56 percent of all commercial trucks in 1972, 59 percent of all commercial trucks in 2009, and 56 percent of all commercial trucks in 2010. The number of light commercial trucks available in 2010 totaled about 67,470, a decrease of 12,350, or about 15.4 percent, from the 2009 level of 78,820. The number of heavy trucks and municipal trucks totaled 53,980 in 2010, a decrease of about 1,110 trucks, or about 2.0 percent from the 2009 level of 55,090. The average annual rate of growth in commercial motor-truck availability within the Region from 1963 through 2010 was 2.0 percent.

Public Transit Ridership

Publicly owned mass transit service was provided in the Region in 2010 through 10 intracounty systems and five intercounty systems (see Table 12 and Figures 13 and 14). As shown in Table 12, the total reported ridership on public transit services in the Region decreased from 45.0 million revenue passengers in 2009 to 43.0 million revenue passengers in 2010, a decrease of about 4.2 percent. This decrease is attributable primarily to service cuts and fare increases on the Milwaukee County Transit System in 2010.

Intracounty Bus Services

City of Kenosha

Ridership on the fixed-route public transit system serving the City of Kenosha decreased during 2010 (see Figure 15) to approximately 1,469,500 revenue passengers, about 1 percent less than the 2009 ridership of about 1,483,600 revenue passengers. The transit system provides fixed-route service within the City and

REPORTED PUBLIC TRANSIT REVENUE RIDERSHIP

			Revenue F	Passengers ^a		
Transit Services	1963	1972	1991	2009	2010	Percent Change 2009-2010
Bus Systems				2000		2000 2010
Intracounty						
City of Kenosha	1,876,000	503,000	1,128,000	1,483,600	1,469,500	-1.0
Milwaukee County	88,546,000	52,141,000	53,025,000	40,575,900	38,641,600	-4.8
City of Racine	2,907,000	526,000	1,829,000	1,139,500	1,152,800	1.2
City of Waukesha	451,000	227,000	434,000	627,100	531,400	-15.3
Subtotal	93,780,000	53,397,000	56,416,000	43,826,100	41,795,300	-4.6
Intercounty						
Kenosha-Racine Milwaukee Counties	230,000 ^b	153,000	82,000	76,300	76,100	-0.3
Ozaukee-Milwaukee Counties	127,000	64,000		110,900	113,600	2.4
Washington-Milwaukee Counties				106,500	111,200	4.4
Waukesha-Milwaukee Counties	534,000 ^b	240,000	290,000	480,100	582,900	21.4
Western Kenosha County				10,100	14,400	42.6
Subtotal	891,000	457,000	372,000	783,900	898,200	14.6
Total Bus Systems	94,671,000	53,854,000	56,788,000	44,610,600	42,693,500	-4.3
Shared-Ride Taxi Systems - Intracounty						
City of Hartford			8,000	20,300	20,600	1.5
Ozaukee County				71,800	74,600	3.9
City of Port Washington				19,500	19,200	-1.5
Washington County				90,100	94,000	4.3
City of West Bend				116,100	120,400	3.7
City of Whitewater			38,000	26,100	29,700	13.8
Subtotal			46,000	343,900	358,500	4.2
Region Total	94,671,000	53,854,000	56,834,000	44,953,900	43,052,000	-4.2

^a The ridership figures shown in this table reflect transit revenue passengers as reported to the Wisconsin Department of Transportation by each transit operator. Since 1978, the annual revenue ridership figures reported to the State by the urban bus systems have included transfer trips made by passengers using a transit pass instead of a transfer slip to transfer between bus routes. The bus ridership figures shown here are somewhat higher than the estimates of linked transit passenger trips shown in Figure 13 and reported in other published Commission documents and reports. Linked passenger trips approximate the number of one-way trips made on the transit system between specific origins and destinations with transit passengers being counted only once for each origin and destination. Transfers between bus routes are not counted as they are a continuation of a single trip. By way of comparison with the transit revenue passengers shown in this table, the Commission estimated the total annual linked transit passenger trips in the Region at about 35,237,400 in 2010, about 36,757,400 in 2009, and about 48,350,000 in 1991.

environs and electric streetcar service within the downtown business district and the Harbor Park development on the lakefront. The total number of vehicle-miles operated in revenue service during 2010 totaled about 1,044,500, representing a decrease of less than 1 percent from the 1,049,100 vehicle-miles operated during 2009. The basic cash fare for the Kenosha system remained at \$1.25 per one-way trip

in 2010. A fare of \$0.25 per one-way trip continued to be charged for street car service in 2010, unchanged from 2009.

To comply with Federal ADA paratransit regulations, the City of Kenosha participates in the Kenosha County Care-A-Van program. This paratransit service provides door-to-door transportation to disabled indi-





³LINKED TRANSIT PASSENGER TRIPS APPROXIMATE THE NUMBER OF ONE-WAY TRIPS MADE ON THE TRANSIT SYSTEM BETWEEN SPECIFIC ORIGINS AND DESTINATIONS. PASSENGERS ARE COUNTED ONLY ONCE FOR EACH ORIGIN AND DESTINATION, AND TRANSFERS BETWEEN ROUTES ARE NOT COUNTED AS THEY ARE A CONTINUATION OF A SINGLE TRIP. THE ANNUAL LINKED TRANSIT PASSENGER FIGURES REPRESENTED IN THIS GRAPH DIFFER SOMEWHAT FROM THE ANNUAL REVENUE RIDERSHIP FIGURES REPORTED TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION BY THE PUBLIC TRANSIT OPSESTIGER FIGURES REPRESENTED SHOWN IN TABLE 12. THE RIDERSHIP SHOWN IN TABLE 12 FOR THE URBAN BUS SYSTEMS FOR 1991 AND SUBSEQUENT YEARS INCLUDES ALIMITED NUMBER OF PASSENGERS THAT USED ATRANSIT PASS INSTEAD OF TRANSFER SUP TO TRANSFER BETWEEN BUS ROUTES. CONSEQUENTLY, THE BUS RIDERSHIP FIGURES SHOWN IN TABLE 12 FOR 1991, 2009, AND 2010 ARE SOMEWHAT HIGHER THAN THE ESTIMATES OF LINKED TRANSFER SUP TO TRANSFER BETWEEN BUS ROUTES.

viduals in eastern Kenosha County. The City annually contributes funds to the Care-A-Van program, which is administered by the Kenosha County Department of Human Services, Division of Aging Services, and provided on a contract basis by the Kenosha Achievement Center, Inc. The City funds annually contributed to the program are used specifically to support the provision of paratransit service for disabled persons who are certified as unable to use the City's fixed-route transit system and who use the service to travel within only that portion of Kenosha County east of IH 94 plus an area of commercial development within the County located west of IH 94 at the IH 94-STH 50 interchange. During 2010, about 26,800 one-way trips were made on the paratransit service, an increase of about 21 percent from the 22,100 one-way trips made on the service during 2009.

The Commission, at the request of the City, has routinely prepared short-range transit system development plans setting forth recommendations for service changes and capital improvements. Each such plan has covered a five-year period. The current plan for the Kenosha transit system is documented in SEWRPC Community Assistance Planning Report No. 231, Kenosha Area Transit System Development Plan: 1998-2002, City of Kenosha, Wisconsin, April 1998, and was summarized in the Commission's 1998 Annual Report. The Commission adopted this plan as an updated element of the comprehensive regional plan on March 3, 2000. Most of the recommended changes to the City's local bus routes were implemented in August 1998. The Commission staff also provided assistance in developing the restructuring of the City's west side bus routes implemented in late 2002.





Figure 15 TRANSIT REVENUE RIDERSHIP **CITY OF KENOSHA TRANSIT SYSTEM** 10 q REVENUE PASSENGERS IN MILLIONS PUBLIC OPERATION BEGAN SEPTEMBER 197 0 L 1950 1970 1955 1960 1965 1975 1980 1985 1990 1995 2000 2005 2010 YEAR

During 2010, the Commission continued work on a Kenosha County Transit Plan that will include recommendations for service changes and capital improvements for a five-year planning period. That effort is described in a later section of this *Annual Report*.

Milwaukee County

Ridership on the Milwaukee County Transit System decreased during 2010 to about 38.6 million revenue

passengers from about 40.6 million revenue passengers in 2009, or by about 5 percent (see Figure 16). Service cuts, fare increases, and high unemployment all contributed to the ridership decline.

The number of bus-miles operated by the Milwaukee County Transit System decreased by about 2 percent during 2010, from about 16.0 million bus-miles in 2009 to about 15.6 million bus-miles in 2010. The service reduction in 2010 continued the trend of reductions in service that have occurred annually on the system since 2001. The basic cash fare for the Milwaukee County Transit System increased to \$2.25 per one-way trip during 2010. Fares for freeway flyer bus service rose from \$3.00 to \$3.25 per one-way trip, and the price of an adult weekly bus pass increased from \$16.50 to \$17.50 during 2010.

During 2010, Milwaukee County operated freeway flyer bus service from 12 outlying parking terminals, the same number as in 2009, to either the Milwaukee central business district or the University of Wisconsin-Milwaukee (UWM). Ridership on the freeway flyer bus service totaled about 930,200 revenue passengers in 2010, up 2.8 percent over the 905,300 revenue passengers carried in 2009 (see Figure 17).

To comply with Federal regulations implementing the requirements of the American's with Disabilities Act



(ADA) of 1990, the Milwaukee County Transit System includes a paratransit service component called Transit Plus. The paratransit service provided through Transit Plus was available to disabled users through private van service providers and taxicab operators. Two private carriers, First Transit and Transit Express, Inc., provided accessible van service to the northern and the southern halves of the County, respectively. American United Taxi Cab Company provided taxicab service under the program throughout the County. Several private, nonprofit agencies serving disabled persons also provided service under the program for agency clients. During 2010, about 1,106,700 one-way trips were made on the Transit Plus paratransit service, a decrease of about 6 percent from the 1.170,500 one-way trips made on the service during 2009. Fares for the Transit Plus program remained the same, at \$3.25 per one-way trip during 2010.

To assist in the public operation of the system, the Commission, at the request of Milwaukee County, has prepared a short-range transit system development plan for the Milwaukee County Transit System. The plan is the first transit system development plan prepared by the Commission for Milwaukee County and recommends service changes and capital improvements for the transit system for a five-year planning period. The recommendations are described in a later section of this *Annual Report*.

City of Racine

During 2010, ridership on the public transit system serving the City of Racine and environs increased by

Figure 17



FREEWAY FLYER RIDERSHIP: MILWAUKEE AND WAUKESHA COUNTY TRANSIT SYSTEMS

about 1 percent from approximately 1,139,500 revenue passengers in 2009 to about 1,152,800 revenue passengers in 2010 (see Figure 18). The total number of bus-miles operated in revenue service decreased by about 1 percent, from about 1,142,100 bus-miles in 2009 to about 1,131,000 bus-miles in 2010. The adult base cash fare stayed the same, at \$1.50 per one-way trip in 2010.

The City of Racine also provides a paratransit service for disabled individuals to comply with Federal ADA regulations. The paratransit service provides door-todoor transportation to disabled individuals who are unable to use the City's fixed-route bus service. The Belle Urban System provides paratransit service for eligible disabled persons—Dial-a-Ride Transportation (DART)—to areas within three-quarters of a mile of a City bus route.

During 2010, about 30,200 one-way trips were made on the paratransit service, a decrease of about 14 percent from the 35,000 one-way trips made on the service in 2009.

To assist in the public operation of the system, the Commission, at the request of the City of Racine, has routinely prepared short-range transit system development plans setting forth recommendations for service changes and capital improvements. Each such plan has covered a five-year period. The current plan for the Racine transit system is documented in SEWRPC Community Assistance Planning Report No. 233, *Racine Area Transit System Development Plan: 1998-2002, City of Racine, Wisconsin,* October 1997, and was



Figure 19

summarized in the Commission's *1997 Annual Report*. The Commission adopted this plan as an updated element of the comprehensive regional plan in September 1998. Most of the service changes recommended under the transit system development plan were implemented in May 1998.

During 2010, the Commission continued work on a Racine County Transit Plan that will provide recommendations for service changes and capital improvements for a five-year planning period. That effort is described in a later section of this *Annual Report*.

City of Waukesha

During 2010, the fixed-route public transit system serving the City of Waukesha carried approximately 531,400 revenue passengers, a decrease of about 15 percent from the 627,100 revenue passengers carried on the system during 2009 (see Figure 19). The number of bus-miles operated in revenue service during 2010 totaled about 675,400, nearly the same as the 675,000 bus-miles operated in 2009. Adult base cash fares remained at \$2.00 per trip in 2010.

Paratransit service was also provided by the City of Waukesha to comply with the Federal ADA paratransit regulations. The City's Metrolift program provides curbto-curb transportation to disabled individuals who are unable to use the City's fixed-route bus service and is operated by a private firm with which the City contracts to manage and operate its fixed-route bus system. During 2010, disabled individuals made about 20,200 one-way trips on the paratransit service, about 5 percent less than the 21,500 trips made in 2009.

1980 1985

YEAR

1990 1995 2000 2005 2010

Short-range transit system development plans, which each include recommendations for service changes and capital improvements for a five-year period, have been routinely prepared for the City transit system by the Commission when requested by the City. The current plan for the City transit system is documented in SEWRPC Community Assistance Planning Report No. 246, *Waukesha Area Transit System Development Plan:* 2003-2007, October 2003.

During 2010, the Commission initiated work on a City of Waukesha Transit Operations Analysis and Service Change Plan that will provide recommendations for service changes and capital improvements over a fiveyear planning period. That effort is described in a later section of this annual report.

Intercounty Bus Services

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1950

1955 1960 1965 1970 1975

Kenosha-Racine-Milwaukee Service

During 2010, the City of Racine, in a joint effort with the City of Kenosha and with Racine and Kenosha Counties, continued to provide commuter bus service between downtown Milwaukee and the Racine and Kenosha areas. The commuter bus service was provided through a contract with a private transit operator, Wisconsin Coach Lines, Inc./Coach USA.

TRANSIT REVENUE RIDERSHIP: KENOSHA-



RACINE-MILWAUKEE AREA TRANSIT SYSTEM 160 **REVENUE PASSENGERS IN THOUSANDS** 14(PUBLIC OPERATION BEGAN JANUARY 198 120 100 80 60 40 20 1970 1980 1985 1975 1990 1995 2000 2005 2010 YEAR



NOTE: THE GRAPH REFLECTS TWO PERIODS OF PUBLIC OPERATION: FROM JANUARY 1976 THROUGH JUNE 1978 DURING WHICH OZAUKEE COUNTY PROVIDED STATE AND COUNTY FUNDS TO A PRIVATE TRANSIT OPERATOR, WISCONSIN COACH LINES, INC., FOR AN EXISTING COMMUTER BUS ROUTE BETWEEN OZAUKEE AND MILWAUKEE COUNTIES; AND FROM AUGUST 1996 FORWARD DURING WHICH THE COUNTY HAS PROVIDED FEDERAL, STATE AND COUNTY FUNDS FOR A NEW COMMUTER BUS SERVICE BETWEEN THE TWO COUNTIES, FOR ABOUT NINE MONTHS IN 1985 AND 1986, A DIFFERENT PRIVATE COMPANY, OZAUKEE METROPOLITAN TRANSIT, PROVIDED COMMUTER BUS SERVICE BETWEEN THE TWO COUNTIES WITHOUT ANY PUBLIC SPONSORSHIP OR FUNDING.

Ridership on the service approximated 76,100 revenue passengers during 2010, nearly the same as the 2009 ridership level of about 76,300 revenue passengers (see Figure 20). The number of bus-miles operated in revenue service decreased by about 5 percent in 2010 to 253,700 bus-miles, from about 265,900 bus-miles in 2009. Fares for the rapid commuter bus service ranged from \$1.25 to \$4.25 per one-way trip during 2010, the same as in 2009.

Ozaukee County

Ridership increased during 2010 on the commuteroriented rapid bus service between Milwaukee and Ozaukee Counties sponsored by Ozaukee County. During 2010, a total of about 113,600 revenue passengers were carried on the Ozaukee County commuter bus service, up 2 percent from the 110,900 revenue passengers carried in 2009 (see Figure 21). Fares for the bus service increased in 2009 to \$3.25 per one-way trip. The transfer fee for connecting with the County's shared-ride taxi system remained at \$1.00 per trip. The County's commuter bus operated a total of about 180,300 revenue vehicle-miles in 2010, an increase of about 1 percent from the 179,000 vehiclemiles operated in 2009. The County contracted with the Milwaukee County Transit System to operate the rapid bus service using buses owned by Ozaukee County.

The implementation of the Ozaukee County commuter bus service was guided by a transit service plan prepared by the Commission in 1995. Work on a new, updated plan for the County system was completed during 2002 and is documented in SEWRPC Community Assistance Planning Report No. 265, *Ozaukee County Transit System Development Plan: 2002-2006*, October 2002. The plan is described in a section of the Commission's 2002 Annual Report.

Washington County

During 2010, about 111,200 revenue passengers were carried on the Washington County commuter bus service, an increase of about 4 percent from the 106,500 revenue passengers carried on the service during 2009 (see Figure 22). The County's commuter bus system operated a total of about 253,600 revenue vehicle-miles in 2010, down 1 percent from the 255,900 vehicle-miles operated in 2009. The fare on the County commuter bus service remained at \$3.25 in 2010. The transfer fee for connecting with the County's shared-ride taxi system remained at \$1.00 per trip.

The County contracts with Riteway Bus Service, Inc., for the operation of the express bus service. The institution of the service was guided by a transit service plan prepared by the Regional Planning Commission in 1996 at the request of the County. The plan is documented in SEWRPC Community Assistance Planning Report No. 223, *A Public Transit Service Plan for*

TRANSIT REVENUE RIDERSHIP

WASHINGTON COUNTY EXPRESS BUS SYSTEM 120 110 **REVENUE PASSENGERS (IN THOUSANDS)** 100 90 80 70 60 50 40 30 20 10 0 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 1999 2000 YFAR

Washington County: 1998-2002, November 1996. This plan was described in the Commission's *1996 Annual Report* and was adopted by the Commission as an element of the comprehensive regional plan in March 1997.

Waukesha County

During 2010, total ridership on the Waukesha County transit system increased from about 480,100 revenue passengers in 2009 to about 582,900 revenue passengers in 2010 (see Figure 23), a 21 percent increase. The number of bus-miles operated in revenue service also increased from about 632,300 bus-miles in 2009 to about 699,100 bus-miles in 2010, or by about 11 percent. The increase in ridership reflects the effects of service increases on the routes between Waukesha and Milwaukee Counties and the removal of zone fares and transfer fees for riders of MCTS Route 10 and Waukesha Metro Route 1. Waukesha County contracts with Wisconsin Coach Lines. Inc.: the Milwaukee County Transit System; and the City of Waukesha Metro Transit System for the operation of the routes comprising the Waukesha County system. The County also contracts for the administration and management of the transit system, using the staff of the City of Waukesha Metro Transit System.

Adult cash fares on the Waukesha County transit system local bus Route 10, operated by the Milwaukee County Transit System, increased from \$2.00 in 2009 to \$2.25 per one-way trip in 2010. Adult cash fares for the freeway flyer service operated between Menomonee Falls and downtown Milwaukee rose from \$3.35 per trip

Figure 23 TRANSIT REVENUE RIDERSHIP



in 2009 to \$3.60 per trip in 2010. The fares charged on the routes operated by Wisconsin Coach Lines, Inc., remained the same in 2010, with adult cash fares ranging from \$3.25 to \$4.00 per one-way trip.

Adult cash fares on the two routes operated by the City of Waukesha Metro Transit System remained at \$2.00 per one-way trip in 2010.

As shown in Figure 17, total ridership on freeway flyer routes operated by Waukesha County in 2009 was about 266,700 revenue passengers, a decrease of about 9 percent from the estimated 293,300 revenue passengers carried on Waukesha County-operated freeway flyer routes in 2009. The freeway flyer service in Waukesha County served a total of 13 outlying terminals in 2010.

To comply with the Federal ADA paratransit regulations, Waukesha County also operated the parallel commuter bus program. This program provided paratransit service for disabled persons unable to use the vehicles that provide the County's fixed-route bus service in the corridor between the City of Waukesha and downtown Milwaukee. The program offers door-todoor lift-equipped van service to disabled individuals for trips with origins and destinations within one mile on either side of the noncommuter bus route—Route 901 that is subsidized by Waukesha County in this major travel corridor. The paratransit service is also administered by the staff of the Waukesha Metro Transit System, and provided through contracts with a private transit operator, Transit Express. During 2010, about 8,500 one-way trips were made on the County's paratransit service, a decline of about 11 percent from the 9,500 one-way trips made on the services during 2009.



The Commission, at the request of the County, has routinely prepared short-range transit system development plans for the County transit system, each setting forth recommendations for service changes and capital improvements for a five-year period. A new plan for the Waukesha County transit system was completed by the Commission in 2001 and is documented in SEWRPC Community Assistance Planning Report No. 245, *Waukesha County Transit System Development Plan:* 2002-2006, November 2001. That plan is summarized in the Commission's 2001 Annual Report.

Western Kenosha County

In September 2007, the Kenosha County Human Services Department initiated operation of public transit services for the general public in western Kenosha County. Three bus routes operate each weekday within the Twin Lakes, Silver Lake, and Paddock Lake areas, with extensions to locations on the western edge of the City of Kenosha, to the Metra station in the City of Antioch, Illinois, and to Lake Geneva in Walworth County. In addition to the fixed bus routes, the County provides advance reservation, door-to-door transit service for individuals that cannot use the regular bus routes.

During 2010, the service carried about 14,400 revenue passengers and operated about 285,500 revenue-miles. This compares to about 10,100 revenue passengers carried, and 227,400 revenue-miles operated during 2009. Western Kenosha County Transit is a new service and is still seeing ridership gains as more people learn about the service. New Saturday service and trips Figure 25



designed to serve commuters going to the Metra station in Antioch, Illinois, also contributed to an increase in ridership during 2010. During 2009 and 2010, the base adult cash fare was \$2.00 per one-way trip for bus service and \$3.00 per one-way trip for the door-to-door service. The County contracts with the Kenosha Achievement Center, Inc., a nonprofit organization, to operate the services.

Intracounty Shared-Ride Taxi Services

City of Hartford

Publicly-operated transit service was also provided during 2010 by the City of Hartford, which operated a shared-ride taxicab service through its Municipal Recreation Department. During the year, the Hartford taxicab service carried approximately 20,600 revenue passengers, about the same level as 2009 (see Figure 24). The service operated about 52,700 total vehicle-miles, slightly less than the 55,000 total vehicle-miles operated during 2009. Base adult cash passenger fares remained at \$2.75 per one-way trip during 2010.

Ozaukee County

During 2010, about 74,600 revenue passengers were carried on the Ozaukee County taxicab system, an increase of about 4 percent from 2009 when 71,800 revenue passengers were carried (see Figure 25). The system operated a total of about 895,000 total vehicle-miles, a 32 percent increase from the 679,500 total vehicle-miles in 2009. Fares for the service in 2010



TRANSIT REVENUE RIDERSHIP WASHINGTON COUNTY TAXI SYSTEM 100 90 REVENUE PASSENGERS IN THOUSANDS 80 70 60 50 40 30 20 10 0 2002 1998 2004 2006 2008 2010 2000

Figure 27

remained unchanged from 2009, with the base adult cash fare ranging from \$2.75 per trip for travel within one zone, to \$6.50 per trip for cross-county travel encompassing four or more zones. The County contracts with Specialized Transportation Services, Inc., to provide the taxicab service. The Ozaukee County system does not serve trips that can be made on the Port Washington taxicab system.

The creation of the Ozaukee County taxi service was guided by a transit service plan prepared by the Regional Planning Commission in 1995 at the request of the County and described in the Commission's *1995 Annual Report.* Work on a new, updated plan for the County was completed in 2002. The new plan is documented in SEWRPC Community Assistance Planning Report No. 265, *Ozaukee County Transit System Development Plan: 2002-2006*, October 2002, and is described in the Commission's *2002 Annual Report.* The new plan was adopted by the Commission as an element of the comprehensive regional plan in June 2003.

City of Port Washington

During 2010, the City of Port Washington taxicab service carried approximately 19,200 revenue passengers, representing a decrease of about 2 percent from the 19,500 revenue passengers carried in 2009 (see Figure 26). In 2010, the taxi service operated about 87,500 total vehicle-miles, up 7 percent from 82,000 vehicle-miles operated during 2009. The base adult cash fare remained at \$3.25 per one-way trip in 2010.

The creation of publicly subsidized shared-ride taxicab service in the City of Port Washington was guided by an analysis completed by the Regional Planning Commission in 1993 at the request of the City. The analysis, described in the Commission's *1993 Annual Report*, identified the potential ridership, fare-box revenue, operating and capital costs, and local subsidies required for a shared-ride taxicab system based upon assumptions provided by the City concerning proposed fares and desired service characteristics. The City system is operated on a contract basis by Specialized Transport Services, Inc.

YEAR

Washington County

During 2010, about 94,000 revenue passengers were carried on the Washington County taxi system, about 4 percent more than the 90,100 revenue passengers carried in 2009 (see Figure 27). The system operated about 1,298,500 total vehicle miles in 2010, up about 4 percent from the 1,252,700 miles in 2009. Fares for the service remained the same as in 2009. The base adult cash fare ranged from \$4.00 per trip, for trips five miles or less, to \$8.75 per trip, for cross-county trips over 20 miles. The County contracts with Specialized Transportation Services, Inc., to provide the taxicab service. The Washington County system does not serve trips that can be made using the Hartford or West Bend taxicab systems.

The institution of the Washington County taxi service was guided by a transit service plan prepared by the Regional Planning Commission in 1996 at the request



Figure 29



of the County. The plan is documented in SEWRPC Community Assistance Planning Report No. 223, *A Public Transit Service Plan for Washington County:* 1998-2002, November 1996. This plan was described in the Commission's 1996 Annual Report and was adopted by the Commission as an element of the comprehensive regional plan in March 1997.

City of West Bend

During 2010, the City of West Bend taxicab service carried approximately 120,400 revenue passengers, about 4 percent more than the 116,400 revenue passengers carried in 2009 (see Figure 28). The total vehicle-miles of service increased by about 1 percent from the 381,000 operated during 2009, to 383,800 operated in 2010. The base adult cash fare remained at \$3.50 in 2010.

The West Bend taxicab system was initiated based on the recommendations of a transit system development plan prepared by the Regional Planning Commission in 1991 at the request of the City. This plan is documented in SEWRPC Community Assistance Planning Report No. 189, A Transit System Feasibility Study and Development Plan for the City of West Bend: 1992-1996, February 1991, and was described in the Commission's 1991 Annual Report. The plan was adopted by the Commission as an element of the comprehensive regional plan in March 1992. The taxicab service was operated on a contract basis by Specialized Transport Services, Inc.

City of Whitewater

The shared-ride public taxicab system serving the City of Whitewater is operated on a contract basis by Brown Cab Service of Fort Atkinson. The Whitewater taxicab service carried approximately 29,700 revenue passengers in 2010, an increase of about 14 percent from the 26,100 revenue passengers carried in 2009 (see Figure 29). It operated about 73,800 total vehiclemiles during 2010, about 12 percent more than the 66,200 total vehicle-miles operated in 2009. During 2010, adult fares for the service remained unchanged at \$3.00 per one-way trip.

Park-Ride Facilities and Transit Stations

Progress in providing the park-ride lots and transit stations recommended in the adopted year 2035 transportation plan is summarized on Map 7.

Of the 55 existing park-ride lots and transit stations, 39 were served by rapid transit service and 16 were not served by transit and were used exclusively by carpoolers. Eight of the 55 park-ride lots and transit stations were shared-use facilities that were not specifically constructed to serve as a park-ride lot, such as a parking lot at a private retail business or a municipal parking lot or garage.

Table 13 provides data on both the number of parking spaces available and the number of parking spaces used



AVERAGE WEEKDAY USE OF PARK-RIDE LOTS AND TRANSIT STATIONS: 2010

		1					
						Autos Parked	
						on an	
Nivershaar					Available	Average	Percent of
Number		Served by	Not served		Parking	Weekday:	Spaces
on Map 7	Location	Transit	by Transit	Shared Use	Spaces	2010	Used
	Kenosha County						
1	Metra Station (Kenosha)	Х		Х	145	^a	^a
	Ozaukee County						
2	STH 57 and CTH H (Fredonia)		Х		60	14	23
3	IH 43 and STH 32-CTH H (Port Washington)	Х			50	19	38
4	Wal-Mart (Saukville)	х		х	50	20	40
5	IH 43 and CTH V (Grafton)	х			85	27	32
6	IH 43 and CTH C (Grafton)	x			65	73	112
Ũ		~			00	10	112
	Milwaukee County					l I	
7	STH 100 and N. SEth Street (Milwaukee)		v		100	а	а
1	Kable (Draws Deer)	V	^	V	100	404	400
0	Ronis (Brown Deer)	^ 		^	130	134	103
9	Brown Deer (River Hills)	X			360	60	17
10	W. Good Hope Road (Milwaukee)	X			135	55	41
11	Timmerman Field (Milwaukee)	Х			140	34	24
12	North Shore (Glendale)	Х			195	86	44
13	W. Watertown Plank Road (Wauwatosa)	Х			240	96	40
14	State Fair Park (Milwaukee)	Х			285	196	69
15	Downtown Milwaukee Intermodal Amtrak Station	Х			240	^a	^a
	Milwaukee County Transit System					l I	
16	Downtown Transit Center (Milwaukee)	Х		Х	^b	^a	^a
17	National Avenue and IH 43/94(Milwaukee)		х		160	128	80
18	W Holt Avenue (Milwaukee)	х			235	86	37
19	Whitnall (Hales Corners)	x			360	203	56
20	W Loomis Road (Greenfield)	X			410	70	10
20	Southridge (Creendele)	X		v	410	15	13
21	Southinge (Greendale)	^ 		^	170	00	39
22	W. College Avenue (Willwaukee)	X			650	231	30
23	Mitchell Airport Amtrak Station (Milwaukee)	Х			280	162	54
24	W. Ryan Road (Oak Creek)	Х			305	173	57
						1	
	Racine County					l I	
25	Racine Metro Transit Center (Racine)	Х			120	^a	^a
26	IH 94 and STH 20 (Ives Grove)		Х		75	47	63
27	IH 94 and STH 11 (Mount Pleasant)		х		60	38	63
28	Sturtevant Amtrak Station (Sturtevant)	х			180	a	a
20		~				l I	
	Walworth County					l I	
29	East Troy Municipal Airport (East Troy)		×		40	5	13
23	LISH 12 and STH 67 (Elkborn)		X		40	10	25
30					40	10	25
31	USH 12 and CTH P (Genda City)		^		40	10	25
	Westington Oracle					l I	
	wasnington County					l '	
32	USH 41 and STH 33 (Allenton)		X		35	41	117
33	USH 41 and CTH K (Addison)		Х		50	13	26
34	USH 45 and Paradise Drive (West Bend)	Х			100	91	91
35	Washington County Fair Park (Polk)	Х		Х	100	17	17
36	STH 60 and CTH P (Jackson)		Х		30	3	10
37	Pioneer Road and Mayfield Road (Richfield)	Х			30	50	167
38	USH 41 and Lannon Road (Germantown)	Х			100	64	64
						l I	
	Waukesha County					l I	
39	Pilgrim Road (Menomonee Falls)	x			70	41	63
40	STH 67 and Lang Road (Oconomouroe)	~	v		25	2	00
40	Calling Street Parking Let (Ocenemower)	v	~	v	55 b	a	a
41		×		^			
42	STH 16 and CTH P (Oconomowoc)	X			45	15	33
43	STH 16 and CTH C (Nashotah)	X			60	9	15
44	STH 16 and STH 83 (Chenequa)		Х		35	5	14
45	STH 67 and CTH DR (Summit)	Х			100	54	54
46	IH 94 and CTH C (Delafield)		Х		30	26	87
47	IH 94 and STH 83 (Delafield)	Х			200	74	37
48	IH 94 and CTH G/CTH SS (Pewaukee)	Х			245	80	33
49	IH 94 and CTH F (Pewaukee)		х		85	31	36
50	Goerke's Corners (Brookfield)	х			315	199	63
51	Waukesha Metro Transit System				510	.00	
5.	Downtown Transit Center (Waukesha)	х		х	b	a	^a
52	IH 43 and Moorland Road (New Barlin)	Ŷ			175	22	10
52	IH 13 and CTH V (New Berlin)	^	v		115	10	27
55	H = 43 and $C = 1 + (New Definition)$	v	^		40	12	21
54		X			145	5/	39
55	III 43 and STH 83 (Mukwonago)	X			165	/4	45
1	Lotal				7 600	2 0 4 7	40

^aData not available.

^bParking available within larger public lot or structure.

on an average weekday in 2010 at all park-ride lots and transit stations by patrons of freeway flyer bus service and carpoolers. The total number of spaces available at park-ride lots in the Region was 7,600 in 2010, including 6,740 at park-ride lots served by transit, and 860 at the lots not served by transit.

Of the 6,740 spaces available at the 39 park-ride lots served by transit, 2,675 spaces were used on an average weekday during 2010, a utilization rate of about 40 percent. Of the 860 spaces available at the lots not served by transit, 372 spaces were utilized during 2010, a utilization rate of about 43 percent. Four lots had utilization rates of 100 percent or higher, indicating they were at or over their capacity.

Public Transit Operating Assistance

Information on transit operating assistance in the Region is shown in Table 14. Because 2010 year-end financial data for most transit systems were not available at the time data were compiled for this *2010 Annual Report*, such information is reported for calendar years 2008 and 2009. Transit operating subsidies approximated \$143.5 million during 2009 in the Region, compared with about \$134.0 million in 2008.

Traffic Count Data

During the year, the Commission conducted traffic counts for use in the analysis and planning activities conducted as part of the community assistance and traffic engineering services provided to municipalities within the Region. At selected sites, data were collected on vehicle classification, turning movements, peak-hour factors, and other traffic engineering considerations.

Pavement and Bridge Condition

The assessment of existing pavement condition in southeastern Wisconsin is typically accomplished through one of two pavement evaluation techniques. The *Pavement Surface Evaluation and Rating* (*PASER*) technique is used for county and municipal roads. The PASER system is a rating system which employs visual inspection techniques to assess pavement condition. Pavement ratings range from 1 (which is a failed roadway that needs total reconstruction) to 10 (which is a pavement in excellent condition and typically reflects new construction). In

general, the rating system is such that those pavements rated 8 through 10 require little to no maintenance; a rating of 7 indicates a pavement that requires routine maintenance such as crack filling; ratings of 5 or 6 indicate a pavement where preservative treatments such as sealcoating or overlays are considered; ratings of 3 or 4 indicate a pavement where structural improvement such as recycling or overlay is required; and ratings of 1 or 2 indicate a pavement which is severely deteriorated and requires reconstruction. In Southeastern Wisconsin the PASER system is used by County and local governments to evaluate the condition of the roads under their jurisdiction every two years as required under State Statute. Map 8 documents the pavement condition of the county and local arterial streets and highways in the Region under the PASER system for the year 2008. Pavement condition of the county and local arterial street system in the Region remained about the same between 2006 and 2008, as shown in Table 15.

The Wisconsin Department of Transportation (WisDOT) uses the International Roughness Index (IRI) to assess pavement condition and the quality of riding comfort of state highways, including Interstate Highways, United States Highways, and State Highways. WisDOT uses special equipment which physically measures the profile of a roadway along the traveled way. The IRI is measured on a scale of 0 to 12, with pavements with a 0 to 2.5 rating having no ride problems, a 2.5 to 2.75 rating having minor ride problems, a 2.75 to 3.0 having moderate ride problems, and greater than 3.0 having severe ride problems. Map 9 documents the IRI rating of the arterial streets and highway in the Region under State jurisdiction for the year 2009. Pavement condition of state highways in the Region remained about the same between 2006 and 2009, as shown in Table 16.

WisDOT also maintains an assessment of the sufficiency of the bridge structures within Southeastern Wisconsin. Bridge sufficiency ratings are calculated using four separate factors to obtain a numeric value which, when combined, provide the overall sufficiency rating. The four factors are (1) structural adequacy and safety; (2) serviceability and functional obsolescence (including consideration of number of lanes, average daily traffic, approach roadway width, and bridge roadway width); (3) essentiality for public use; and (4) special reductions. Bridge structure sufficiency ratings range from 0 to 100, with 0 being a failing structure and 100 being a

PUBLIC TRANSIT OPERATING ASSISTANCE WITHIN THE REGION: 2008-2009

			Public	Transit Operati	ng Assistance (d	ollars)		
		2008 Actua	I/Estimated	· · ·	2009 Actual/Estimated			
Transit Services	Federal	State	Local	Total	Federal	State	Local	Total
Bus Systems								
Intracounty								
City of Kenosha	2,276,100	1,723,900	1,838,100	5,838,100	2,419,100	1,812,300	1,742,400	5,973,800
Milwaukee County	21,110,300	67,281,300	18,759,300	107,150,900	26,705,000	67,281,300	23,584,400	117,570,700
City of Racine	2,257,800	1,932,400	1,948,100	6,138,300	2,497,500	1,850,500	1,314,100	5,662,100
City of Waukesha	778,100	2,051,600	1,287,000	4,116,700	524,500	2,171,000	1,068,300	3,763,800
Subtotal	26,422,300	72,989,200	23,832,500	123,244,000	32,146,100	73,115,100	27,709,200	132,970,400
Intercounty								
Kenosha-Racine-Milwaukee Counties		642,900	224,20	867,100		681,400	208,400	889,800
Ozaukee-Milwaukee Counties	135,100	399,500	304,200	838,800	1,400	8,700	907,300	917,400
Washington-Milwaukee Counties	125,600	383,500	223,600	732,700	77,100	181,700	551,500	810,300
Waukesha-Milwaukee Counties	518,300	1,739,000	1,207,800	3,465,100	548,600	2,009,100	735,600	3,293,300
Western Kenosha County	385,700	63,700	53,900	503,300	440,600	90,500	17,700	548,800
Subtotal	1,164,700	3,228,600	2,013,700	6,407,000	1,067,700	2,971,400	2,420,500	6,459,600
Total Bus Systems	27,587,000	76,217,800	25,846,200	129,651,000	33,213,800	76,086,500	30,129,700	139,430,000
Shared-Ride Taxi Systems - Intracounty								
City of Hartford	77,500	69,800	900	148,200	81,800	65,500	11,800	159,100
Ozaukee County	239,100	878,900	366,900	1,484,900	100,200	632,000	457,600	1,189,800
City of Port Washington	92,000	82,800	30,600	205,400	103,300	71,500	46,100	220,900
Washington County	284,300	1,103,300	270,100	1,657,700	408,900	964,000	230,600	1,603,500
City of West Bend	356,500	337,300	19,100	712,900	379,400	341,300	38,100	758,800
City of Whitewater	79,500	71,500	26,600	177,600	69,900	59,100	12,200	141,200
Subtotal	1,128,900	2,543,600	714,200	4,386,700	1,143,500	2,133,400	796,400	4,073,300
Region Total	28,715,900	78,761,400	26,560,400	134,037,700	34,357,300	78,219,900	30,926,100	143,503,300

	Public Transit Operating Assistance (dollars)							
	2008 Actual/Estimated				2009 Actual/Estimated			
Transit Services	Federal	State	Local	Total	Federal	State	Local	Total
Bus Systems								
Intracounty								
City of Kenosha	\$ 1.44	\$ 1.09	\$1.17	\$ 3.70	\$ 1.63	\$ 1.22	\$1.18	\$ 4.03
Milwaukee County	\$ 0.48	\$ 1.52	\$0.42	\$ 2.42	\$ 0.66	\$ 1.66	\$0.58	\$ 2.90
City of Racine	\$ 1.86	\$ 1.60	\$1.61	\$ 5.07	\$ 2.19	\$ 1.62	\$1.16	\$ 4.97
City of Waukesha	\$ 1.14	\$ 3.02	\$1.89	\$ 6.05	\$ 0.84	\$ 3.46	\$1.70	\$ 6.00
Subtotal	\$ 0.50	\$ 1.53	\$0.50	\$ 2.58	\$ 0.73	\$ 1.67	\$0.63	\$ 3.03
Intercounty								
Kenosha-Racine-Milwaukee Counties		\$ 7.83	\$2.73	\$10.56		\$ 8.93	\$2.73	\$11.66
Ozaukee-Milwaukee Counties	\$ 1.07	\$ 3.15	\$2.40	\$ 6.62	\$ 0.01	\$ 0.08	\$8.18	\$ 8.27
Washington-Milwaukee Counties	\$ 1.13	\$ 3.44	\$2.01	\$ 6.58	\$ 0.72	\$ 1.71	\$5.18	\$ 7.61
Waukesha-Milwaukee Counties	\$ 0.72	\$ 2.42	\$1.69	\$ 4.83	\$ 1.14	\$ 4.18	\$1.54	\$ 6.86
Western Kenosha County	\$62.21	\$10.27	\$8.70	\$81.18	\$43.62	\$ 8.96	\$1.76	\$54.34
Subtotal	\$ 1.11	\$ 3.09	\$1.93	\$ 6.13	\$ 1.36	\$ 3.79	\$3.09	\$ 8.24
Total Bus Systems	\$ 0.57	\$ 1.56	\$0.53	\$ 2.66	\$ 0.74	\$ 1.71	\$0.68	\$ 3.13
Shared-Ride Taxi Systems - Intracounty								
City of Hartford	\$ 3.82	\$ 3.44	\$0.04	\$ 7.30	\$ 4.03	\$ 3.23	\$0.58	\$ 7.84
Ozaukee County	\$ 3.18	\$11.70	\$4.89	\$19.77	\$ 1.40	\$ 8.80	\$6.37	\$16.57
City of Port Washington	\$ 4.55	\$ 4.10	\$1.52	\$10.17	\$ 5.30	\$ 3.67	\$2.36	\$11.33
Washington County	\$ 2.90	\$11.26	\$2.76	\$16.92	\$ 4.54	\$10.70	\$2.56	\$17.80
City of West Bend	\$ 2.99	\$ 2.82	\$0.16	\$ 5.97	\$ 3.27	\$ 2.94	\$0.33	\$ 6.54
City of Whitewater	\$ 2.74	\$ 2.47	\$0.91	\$ 6.12	\$ 2.68	\$ 2.26	\$0.47	\$ 5.41
Subtotal	\$ 3.12	\$ 7.03	\$1.97	\$12.12	\$ 3.33	\$ 6.20	\$2.31	\$11.84
Region Total	\$ 0.58	\$ 1.60	\$0.55	\$ 2.73	\$ 0.76	\$ 1.74	\$0.69	\$ 3.19

structure in perfect condition. Generally, the structure sufficiency ratings relate to need, and Federal funding eligibility, for rehabilitation and replacement. A bridge structure is not eligible for Federal funds for rehabilitation if its sufficiency rating is between 80 and 100. A bridge structure is eligible for Federal funds for


LOCAL AND COUNTY STREET AND HIGHWAY MILEAGE BY PASER PAVEMENT RATING COMPARISON: 2006 AND 2008

	20	06	20	08	1		
PASER Pavement Rating	Local and County Arterial Mileage	Percent of Total	Local and County Arterial Mileage	Percent of Total	Percent of Change		
1 and 2	132	5.7	81	3.5	-38.6		
3 and 4	233	10.2	212	9.2	-9.0		
5 and 6	431	18.8	561	24.5	30.2		
7	376	16.4	423	18.4	12.5		
8, 9, and 10	907	39.5	846	36.9	-6.7		
No Rating	215	9.4	171	7.5	-20.5		
Total	2,294	100.0	2,294	100.0			

rehabilitation of the bridge structure if its sufficiency rating is between 50 and 79. A bridge structure must have a sufficiency rating less than 50 to be eligible to receive Federal funds to replace the bridge structure. Table 17 displays the number of bridge structures in Southeastern Wisconsin within each of the above mentioned ranges of sufficiency rating for the years 2009 and 2006. Map 10 displays the 2009 sufficiency ratings for bridge structures in Southeastern Wisconsin. Some improvement in bridge sufficiency is apparent over the last few years.

Traffic Congestion

Traffic congestion on the arterial street and highway system may be categorized as moderate, severe, or extreme with each level described by travel speed, operating conditions, and level of service, as shown in Table 18. Freeway system traffic congestion can be further described and quantified. The freeway system represents less than 10 percent of total arterial system mileage, but carries nearly 40 percent of total regional average weekday vehicle-miles of travel. A much greater proportion of the freeway system-as compared to the surface arterial street systemexperiences extreme and severe peak hour traffic congestion, and experiences traffic congestion during hours of the weekday other than the peak traffic hours. The additional measurement of traffic congestion on the freeway system identifies for each segment of the freeway system the number of hours of congestion experienced on an average weekday at each level of congestion: extreme, severe, and moderate.

Assessment of Historic and Existing Traffic Congestion

The recurring existing and historic traffic congestion on the arterial street and highway system was estimated during the preparation of the year 2035 regional transportation plan, and is documented in Chapter III, "Inventory of Transportation Facilities and Services," of SEWRPC Planning Report No. 49. Table 19 and Map 11 present the existing level of traffic congestion experienced in the year 2005 on the arterial street and highway system, and compare that level of congestion to the level experienced in 2001. Traffic congestion did not significantly change between 2001 and 2005. (Traffic congestion is estimated approximately every five years, as WisDOT conducts traffic counts of the arterial street and highway system on a cycle of approximately three years.).

Table 20 and Figure 30 compare the estimated change in traffic congestion on the arterial street and highway system over the years 1963, 1972, 1991, 2001, and 2005. The miles of arterials experiencing traffic congestion declined from 217 miles in 1963 to 160 miles in 1972, even though traffic increased during that period by over 50 percent. The decline in traffic congestion may be attributed to the completion of the freeway system during that period. Between 1972 and 1991, the miles of arterials experiencing traffic congestion is estimated to have increased from 160 miles to 273 miles, as traffic increased during that period by nearly 65 percent, as regional employment and households increased by about 30 percent, and vehicle



	20	06	20		
International Roughness Index (IRI)	State Trunk Highway Mileage	Percent of Total	State Trunk Highway Mileage	Percent of Total	Percent of Change
0.00 to 2.50	916	74.2	883	71.4	-3.6
2.50 to 2.75	76	6.2	89	7.2	17.1
2.75 to 3.00	61	4.9	64	5.2	4.9
3.00 to 12.00	161	13.1	176	14.2	9.3
No Rating	20	1.6	25	2.0	25.0
Total	1,234	100.0	1,237	100.0	0.2

STATE TRUNK HIGHWAY PAVEMENT CONDITION: 2006 AND 2009

occupancy and carpooling significantly declined. The decline in vehicle occupancy from an average of 1.39 persons per vehicle to 1.22 persons per vehicle alone is estimated to have resulted in nearly a 15 percent increase in vehicle traffic. As well, limited transportation system improvement and expansion was completed between 1972 and 1991 in southeastern Wisconsin. The miles of arterials carrying traffic volumes exceeding their design capacity and experiencing traffic congestion is estimated to have increased modestly from 273 miles in 1991 to 290 miles in 2001, and to 310 miles in 2005. From 1991 to 2001, traffic is estimated to have increased by about 21 percent, and from 2001 to 2005 by about 6 percent. The modest increase in traffic congestion from 1991 to 2005 may be attributed to the implementation of an extensive number of significant surface arterial street and highway widening and new construction projects between 1991 and 2005. The estimated modest increase in congestion between 1991 and 2005 is not uniform systemwide, as the extent and severity of congestion on the Milwaukee area freeway system is estimated to have substantially increased between 1991 and 2005.

Table 21, Figure 31, and Map 12 present more detail on existing and historic congestion on the freeway system, including the number of hours of congestion experienced on congested freeway segments on an average weekday.

Congestion on Designated Truck Routes and National Highway System

Table 22 and Map 13 present the existing level of traffic congestion experienced on designated truck routes and the National Highway System in the year 2005 and compared to the congestion level experience in 2001. The State of Wisconsin maintains a truck operations map that identifies streets and highways for operation of vehicles and combination of vehicles for

which the overall lengths cannot be limited. In addition, the truck operations map identifies restricted truck routes where the overall lengths are limited. The National Highway System includes highways important to the nation's economy, defense, and mobility. The miles of designated truck routes and National Highway System carrying traffic volumes exceeding their design capacity increased from 202 miles in 2001 to 221 miles in 2005, or by about 9 percent. As congestion on these roadways increase, the travel time of freight movement is adversely affected.

Vehicle Traffic Crashes

Historic vehicular crash data for 2006, 2007, and 2008 for the seven-county Southeastern Wisconsin Region were collated from data maintained for WisDOT by the Wisconsin Traffic Operations and Safety Laboratory at the University of Wisconsin. A total of about 133,100 vehicular crashes were reported over the three year period on the street and highway system.² The number of reported crashes for 2006, 2007, and 2008 are shown in Table 23 by county, by freeway and nonfreeway, and by crash severity.

Approximately 90,600 vehicular crashes, or about two-thirds of the total 133,100 vehicular crashes reported in Southeastern Wisconsin during the three year period from 2006 through 2008, resulted in property damage only. The remaining nearly 42,500

²A reportable crash is any crash resulting in: 1) an injury to or death of any person; 2) damage to government-owned, non-vehicle property to an apparent extent of \$200 or more: and, 3) damage to a government-owned vehicle or to property owned by any one person to an apparent extent of \$1,000 or more.

SUFFICIENCY RATINGS FOR BRIDGE STRUCTURES LOCATED WITHIN SOUTHEASTERN WISCONSIN: 2006 AND 2009

Sufficiency Rating ^a	2006 Number of Bridges	2009 Number of Bridges
Less than 50.0	98	68
50.0 to 79.9	520	506
80.0 to 100.0	1,244	1,313
Total	1,862	1,887

^aSufficiency ratings for bridges ranges from 0 to 100 and are used to determine the eligibility of Federal funding for improvement of a particular bridge. A bridge is eligible for rehabilitation when its sufficiency rating is less than 80 and is eligible for replacement funding when its sufficiency rating is less than 50. A bridge is not eligible for Federal funding when its sufficiency rating is from 80 to 100.

vehicular crashes, or approximately one-third of all crashes, resulted in either injury or death. Less than one third of 1 percent of all reported vehicular crashes, or 422 crashes during the three-year period, resulted in one or more deaths. Map 14 displays the location of these 422 crashes during 2006, 2007, and 2008 which resulted in a fatality. The 422 fatal vehicular crashes resulted in 460 deaths and about 380 injured persons. Additionally, about 59,300 persons were injured in the nearly 42,100 injury-only crashes in Southeastern Wisconsin during that three-year period.

Transit Crashes and Passenger Injuries

Table 24 provides a comparison of the number and rate of transit crashes resulting in property damage and the number of passenger injuries for the years 2006, 2007, and 2008. Following a slight reduction of the rate of transit crashes from 3,728 crashes per 100 million revenue miles in 2006 to 3,720 crashes per 100 million revenue miles in 2007, the rate of transit crashes then increased to 4,514 crashes per 100 million revenue miles in 2008, or an increase of about 21 percent between 2006 and 2008. Following the slight increase in the rate of passenger injuries from 2,864 passenger injuries per 100 million revenue miles in 2006 to 2,871 passenger injuries per 100 million revenue miles, the rate decreased to 2,792 passenger injuries per 100 million revenue miles, or a decrease of about 3 percent between 2006 and 2008.

Arterial Highway and Transit Travel Times

Map 15 compares the year 2001 and 2005 estimated peak hour travel speeds for selected freeway and surface arterial street segments. Map 16 compares estimated peak hour arterial street and highway travel time contours for years 2001 and 2005 for two locations: the Milwaukee central business district and the Milwaukee regional medical center. Year 2001 and 2005 arterial street and highway travel times are very similar, displaying little change.

Map 17 presents the ratio of total overall transit travel time to and automobile travel time between selected locations during the weekday morning peak period and midday off-peak period in 2005. Transit travel time is longer than automobile travel time, because it includes not only the time spent in the transit vehicle, but also includes the time spent walking to a bus stop, waiting for a bus, transferring between routes including waiting for another bus, and walking to a destination. Much of the transit out-of-vehicle time is related to waiting time for each bus used. Automobile travel time includes the time spent in vehicle parking and walking between parking location and trip origin and destination.

The travel time ratios developed for travel between the selected locations indicate that the lowest ratios—and most competitive transit travel times—are for short transit trips made between areas within and adjacent to downtown Milwaukee, and the highest ratios—and least competitive transit travel times—are generally for transit trips to and from outlying portions of Milwaukee County, including locations in the northwest, southeast, and southwest portions of the Milwaukee County area. Some reduction in transit service has occurred since 2005; however, the travel time ratios from 2005 likely have not changed significantly.

Transportation Air Pollutant Emissions

Table 25 presents the estimated transportation system air pollutant emissions and motor fuel consumption within southeastern Wisconsin for the years 2001 and 2010. Estimated air pollutant emissions have declined for all pollutants, particularly volatile organic compounds and nitrogen oxides due to cleaner, more efficient vehicles, with the exception being carbon dioxide emissions and ammonia which are estimated to have increased from 2001 to 2010 as fuel consumption has increased during these years.



FREEWAY AND SURFACE ARTERIAL TRAFFIC CONGESTION

			Freeway
Level of Traffic Congestion	Level of Service	Average Speed	Operating Conditions
None	A and B	Freeway free-flow speed	No restrictions on ability to maneuver and change lanes.
None	С	Freeway free flow speed	Ability to maneuver and change lanes noticeably restricted.
Moderate	D	1 to 2 mph below free flow speed	Ability to maneuver and change lanes more noticeably limited; reduced driver physical and psychological comfort levels.
Severe	E	Up to 10 mph below free flow speed	Virtually no ability to maneuver and change lanes. Operation at maximum capacity. No usable gaps in the traffic stream to accommodate lane changing.
Extreme	F	Typically 20 to 30 mph or less	Breakdown in vehicular flow with stop-and-go, bumper-to-bumper traffic.

			Surface Arterial
Level of Traffic Congestion	Level of Service	Average Speed	Operating Conditions
None	A and B	70 to 100 percent of free flow speed	Ability to maneuver within traffic stream is unimpeded. Control delay at signalized intersections is minimal.
None	С	50 to 100 percent of free flow speed	Restricted ability to maneuver and change lanes at midblock locations.
Moderate	D	40 to 50 percent of free flow speed	Restricted ability to maneuver and change lanes. Small increases in flow lead to substantial increases in delay and decreases in travel speed.
Severe	E	33 to 40 percent of free flow speed	Significant restrictions on lane changes. Traffic flow approaches instability.
Extreme	F	25 to 33 percent of free flow speed	Flow at extremely low speeds. Intersection congestion with high delays, high volumes, and extensive queuing.

Table 19

TRAFFIC CONGESTION ON THE ARTERIAL STREET AND HIGHWAY SYSTEM IN THE REGION BY COUNTY: 2001 AND 2005

2001

	Under or	Under or At Design		Over Design Capacity						
	Cap	acity	Moderate Congestion Severe Cone		ongestion Extreme (Congestion			
County	Mileage	Percent of Total	Mileage	Percent of Total	Mileage	Percent of Total	Mileage	Percent of Total	Total Mileage	
Kenosha	303.2	95.5	9.9	3.1	1.5	0.5	3.0	0.9	317.6	
Milwaukee	641.1	82.0	72.1	9.2	24.7	3.2	43.4	5.6	781.3	
Ozaukee	244.2	97.4	4.3	1.7	1.5	0.6	0.8	0.3	250.8	
Racine	341.3	96.8	9.4	2.7	0.5	0.1	1.4	0.4	352.6	
Walworth	430.1	98.4	5.1	1.2	1.1	0.3	0.3	0.1	436.6	
Washington	391.1	96.2	15.4	3.8					406.5	
Waukesha	650.9	87.2	70.7	9.5	11.4	1.5	13.4	1.8	746.4	
Region	3,001.9	91.2	186.9	5.7	40.7	1.2	62.3	1.9	3,291.8	

2005

	Under or	At Design			Over Desig	gn Capacity			
	Сар	acity	Moderate Congestion Severe Congestion		ongestion	Extreme (
County	Mileage	Percent of Total	Mileage	Percent of Total	Mileage	Percent of Total	Mileage	Percent of Total	Total Mileage
Kenosha	303.6	94.9	12.8	4.0	1.0	0.3	2.6	0.8	320.0
Milwaukee	620.6	79.0	83.5	10.6	25.6	3.3	55.6	7.1	785.3
Ozaukee	243.4	97.0	6.6	2.6	0.1	0.0	0.7	0.3	250.8
Racine	338.1	95.9	9.3	2.6	1.1	0.3	4.1	1.2	352.6
Walworth	433.0	98.3	6.2	1.4	1.0	0.2	0.3	0.1	440.5
Washington	394.5	97.0	11.4	2.8			0.6	0.1	406.5
Waukesha	659.0	88.3	62.5	8.4	12.9	1.7	12.0	1.6	746.4
Region	2,992.2	90.6	192.3	5.8	41.7	1.3	75.9	2.3	3,302.1

CONGESTION ON THE ARTERIAL STREET AND HIGHWAY SYSTEM IN THE REGION: YEARS 2001 AND 2005



TRAFFIC CONGESTION ON THE ARTERIAL STREET AND HIGHWAY SYSTEM IN THE REGION: 1963, 1972, 1991, 2001, AND 2005

	Arterial Street and Highway Mileage					
Traffic Congestion	1963	1972	1991	2001	2005	
Under or At Design Capacity	2,971	2,959	2,986	3,002	2,993	
Over Design Capacity and Experiencing Traffic Congestion	217	160	273	290	310	
Total	3,188	3,119	3,259	3,292	3,303	

Table 21

ESTIMATED EXISTING SOUTHEASTERN WISCONSIN FREEWAY SYSTEM TRAFFIC CONGESTION ON AN AVERAGE WEEKDAY: 1972, 1991, 2001, AND 2005

		Miles of	Congested Freeways	Average H	lours of Congesti	on on an Average	e Weekday
Year	Highest Level of Hourly Congestion Experienced	Number	Percent of Freeway System	Extreme	Severe	Moderate	Total
	Extreme	29	10.7	1.2	2.7	3.7	7.6
2005	Severe	23	8.5		1.2	2.3	3.5
2005	Moderate	16	6.0			2.2	2.2
	Total	68	25.2				
	Extreme	24	8.9	1.4	3.3	4.4	9.1
2001	Severe	18	6.7		1.5	2.5	4.0
2001	Moderate	22	8.1			2.1	2.1
	Total	64	23.7				
	Extreme	11	4.4	1.0	2.1	3.1	6.2
1001	Severe	12	4.8		1.1	2.9	4.0
1991	Moderate	23	9.1			2.3	2.3
	Total	46	18.3				
	Extreme						
1070	Severe	2	1.2		1.0	3.0	4.0
1972	Moderate	7	4.3			2.8	2.8
	Total	9	5.5				

Figure 30

TRAFFIC CONGESTION ON THE ARTERIAL STREET AND HIGHWAY SYSTEM IN THE REGION: 1963, 1972, 1991, 2001, AND 2005



Figure 31

ESTIMATED EXISTING SOUTHEASTERN WISCONSIN FREEWAY SYSTEM TRAFFIC CONGESTION ON AN AVERAGE WEEKDAY: 1972, 1991, 2001, AND 2005



MODERATE CONGESTION - FREEWAY SEGMENT EXPERIENCES FOR AT LEAST ONE HOUR IN EACH DIRECTION ON AN AVERAGE WEEKDAY AVERAGE TRAVEL SPEEDS OF ONE TO TWO MILES PER HOUR BELOW THE FREE-FLOW SPEED, AND SUBSTANTIAL RESTRICTIONS ON THE ABILITY TO MANEUVER AND CHANGE LANES.

SEVERE CONGESTION - FREEWAY SEGMENT EXPERIENCES FOR AT LEAST ONE HOUR IN EACH DIRECTION ON ANAVERAGE WEEKDAY AVERAGE TRAVEL SPEEDS UP TO 10 MILES PER HOUR BELOW THE FREE-FLOW SPEED WITH VIRTUALLY NO ABILITY TO MANEUVER AND CHANGE LANES.

EXTREME CONGESTION - FREEWAY SEGMENT EXPERIENCES FOR AT LEAST ONE HOUR IN EACH DIRECTION ON AN AVERAGE WEEKDAY TRAVEL SPEEDS WHICH ARE TYPICALLY 20 TO 30 MILES PER HOUR OR LESS WITH BREAKDOWNS IN TRAFFIC FLOW AND STOP-AND-GO, BUMPER-TO-BUMPER TRAFFIC.

HISTORIC TRAFFIC CONGESTION ON THE SOUTHEASTERN WISCONSIN FREEWAY SYSTEM





MOST SEVERE LEVEL OF WEEKDAY HOURLY CONGESTION EXPERIENCED ESTIMATED HOURS OF CONGESTION ON AN AVERAGE ESTIMATED AVERAGE WEEKDAY HOURS OF CONGESTION BY CONGESTION LEVEL EXTREME SEVERE MODERATE WEEKDAY NO CONGESTION MODERATE --MODERATE SEVERE SEVERE -SEVERE -EXTREME EXTREME EXTREME EXTREME EXTREME EXTREME EXTREME EXTREME







CONGESTION ON DESIGNATED TRUCK ROUTES AND THE NATIONAL HIGHWAY SYSTEM IN THE REGION: YEARS 2001 AND 2005



TRAFFIC CONGESTION ON DESIGNATED TRUCK ROUTES AND THE NATIONAL HIGHWAY SYSTEM IN THE REGION: 2001 AND 2005

		Over Design Capacity							
Year	Under or At Design Capacity	Moderate Congestion	Severe Congestion	Extreme Congestion	Total Mileage				
2001	1,114	119	32	51	1,316				
2005	1,105	121	36	64	1,324				

Table 23

STREET AND HIGHWAY CRASHES BY COUNTY AND BY LOCAL OR STATE JURISDICTION IN SOUTHEASTERN WISCONSIN: 2006, 2007, AND 2008

						Cras	shes ^a					
	Count	y Highways a Streets/Roa	and Local ds	Non-Fre	eeway State States Highv	and United vays	Intersta	ate and Non-l Freeways	Interstate		Total	
County	Fatal	Injury	Total (Including Property Damage)	Fatal	Injury	Total (Including Property Damage)	Fatal	Injury	Total (Including Property Damage)	Fatal	Injury	Total (Including Property Damage)
Kenosha			U /			U ,						, o ,
2006	10	787	2,138	13	531	1,206	1	50	161	24	1,368	3,505
2007	12	792	2,286	3	572	1,311	3	61	268	18	1,425	3,865
2008	15	763	2,421	10	516	1,348	1	39	215	26	1,318	3,984
Milwaukee												
2006	38	5,644	16,450	11	893	2,271	6	1,020	3,626	55	7,557	22,347
2007	34	4,752	15,038	12	1,740	4,828	7	1,189	4,019	53	7,681	23,885
2008	35	4,225	14,070	8	1,695	4,891	3	1,129	3,940	46	7,049	22,901
Ozaukee												
2006	2	211	709	1	105	354	4	56	205	7	372	1,268
2007	2	208	625	3	96	349	2	56	244	7	360	1,218
2008	3	188	793	1	102	355	1	54	265	5	344	1,413
Racine												
2006	7	886	2,395	10	600	1,449	1	63	172	18	1,549	4,016
2007	10	810	2,393	5	609	1,599	0	53	173	15	1,472	4,165
2008	10	679	2,214	9	555	1,529	1	58	205	20	1,292	3,948
Walworth												
2006	6	305	885	8	189	570	1	49	194	15	543	1,649
2007	5	294	1,082	5	204	651	1	65	248	11	563	1,981
2008	3	270	1,060	1	194	628	0	52	270	4	516	1,958
Washington												
2006	5	385	1,408	4	272	872	0	62	283	9	719	2,563
2007	6	398	1,448	1	336	1,095	1	109	396	8	843	2,939
2008	2	371	1,389	4	283	954	1	85	423	7	739	2,766
Waukesha												
2006	13	1,230	4,184	6	607	1,898	2	232	963	21	2,069	7,045
2007	15	1,269	4,395	8	638	2,081	6	324	1,263	29	2,231	7,739
2008	10	1,170	4,560	6	556	2,011	8	329	1,335	24	2,055	7,906
Region												
2006	81	9,448	28,169	53	3,197	8,620	15	1,532	5,604	149	14,177	42,393
2007	84	8,523	27,267	37	4,195	11,914	20	1,857	6,611	141	14,575	45,792
2008	78	7,666	26,507	39	3,901	11,716	15	1,746	6,653	132	13,313	44,876

^a Includes all vehicular crashes including transit vehicle crashes which occurred on all street and highway classes, and including arterials, collectors, and land access streets. Does not include parking lot or private property crashes. A reportable crash is any crash resulting in: 1) an injury to or death of any person; 2) damage to government-owned nonvehicle property to an apparent extent of \$200 or more; 3) damage to a government-owned vehicle to apparent extent of \$1,000 or more; 4) or total damage to property owned by any one person to an apparent extent of \$1,000 or more.



FATAL CRASHES ON ARTERIAL HIGHWAYS IN KENOSHA COUNTY: 2006, 2007, AND 2008

CRASH YEAR

- 2006
- 2007
- 2008



FATAL CRASHES ON ARTERIAL HIGHWAYS IN MILWAUKEE COUNTY: 2006, 2007, AND 2008



R 22 E R 23 E R 21 E SHEBOYGAN OZAUKEE CO. KW LANE T12N BELGIUM T 12 N O BELGIUM FREDONIA CRASH YEAR WBURG 1 sea 2006 0 T 11 N 2007 TIIN MICHIGAN 2008 • Po5 SAUKVIL SAUKVILLE T 10 N C TION B -60 CEDARE LAKE 0 -T 0 TON TON 0 MEQUON (167 0 Ş BAYSIDE OZAUREE CON MILWAUREE CO R 21 E

FATAL CRASHES ON ARTERIAL HIGHWAYS IN OZAUKEE COUNTY: 2006, 2007, AND 2008



FATAL CRASHES ON ARTERIAL HIGHWAYS IN RACINE COUNTY: 2006, 2007, AND 2008



FATAL CRASHES ON ARTERIAL HIGHWAYS IN WALWORTH COUNTY: 2006, 2007, AND 2008

CRASH YEAR

- **O** 2006
- 2007
- 2008





FATAL CRASHES ON ARTERIAL HIGHWAYS IN WASHINGTON COUNTY: 2006, 2007, AND 2008



FATAL CRASHES ON ARTERIAL HIGHWAYS IN WAUKESHA COUNTY: 2006, 2007, AND 2008



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2006 2007

2008

COMPARISON OF TRANSIT CRASHES AND PASSENGER INJURIES: 2006, 2007, AND 2008

Characteristic	2006	2007	2008
Crashes ^a	621	609	726
Crashes ^a per 100 million Revenue Miles	3,728	3,720	4,514
Passenger Injuries	477	470	449
Passenger Injuries per 100 million Revenue Miles	2,864	2,871	2,792

^aIncludes crashes resulting in property damage.

Transit Service Reliability

In 2009, the average age of revenue vehicles operated by transit operators in the Region was 10.2 years, compared to 6.5 years in 2006. The average annual number of transit service calls for revenue vehicles within the Region increased from 6,455 in 2006 to 8,092 in 2008, or an increase of about 25 percent. Over the same period of time, the average revenue vehiclemiles travelled between service calls decreased from 3,305 in 2006 to 2,513, or a decrease of about 24 percent. A service call is defined as any repair made to a revenue vehicle correcting a mechanical failure that either prevents the vehicle from completing a scheduled revenue trip or from starting its next scheduled revenue trip because actual movement is limited, because of safety concerns, or because of transit operator policy.

Data Provision and Technical Assistance

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

The following is a sample listing of the assistance provided by the Division in 2010:

• At the request of local municipalities, Commission staff provided year 2035 forecasts in support of engineering studies throughout the Region.

- The Commission staff, at the request of the Wisconsin Department of Transportation, prepared year 2035 forecasts and attendant origin/destination trip tables for various build scenarios in support of the Department's microsimulation modeling of the Zoo Interchange alternatives being considered during the preliminary engineering study of the interchange.
- Commission staff, at the request of Milwaukee County, initiated a study of the potential extension of the Lake Parkway (STH 794) from its current terminus at Edgerton Avenue to STH 100.
- Commission staff attends and participates in Technical Advisory Committees and Operational Planning meetings in support of various transportation projects within southeastern Wisconsin.
- The Commission staff, at the request of the Wisconsin Department of Transportation, assisted with the review and scoring of applications for transit assistance under the WETAP and the Federal Section 5317 New Freedom program that were submitted during 2010 by agencies and organizations within the Milwaukee urbanized area.

Staffing of the Southeastern Wisconsin Regional Transit Authority

Prior to 2010, Commission staff served as the staff to the Southeastern Wisconsin Regional Transit Authority (RTA) created by the Wisconsin State Legislature and Governor. The RTA was charged with making recommendations to the Legislature and the Governor by November 2008 addressing public transit and commuter rail transit in Kenosha, Racine, and Milwaukee Counties including: on the establishment of a permanent regional funding source to provide local funds for the operating and capital costs of both commuter rail and public transit; on whether the responsibilities of the RTA should be limited to transit funding or should also include transit operations; on how any regional funding should be distributed among the transit operators in the three RTA Counties: on how coordination of public transit, commuter rail, and passenger rail services in the region could be improved; on the use of bonding for commuter rail and public transit in the Region and the role of the RTA in such



ESTIMATED PEAK HOUR ARTERIAL STREET AND HIGHWAY TRAVEL TIME CONTOURS: YEARS 2001 AND 2005



MILWAUKEE CENTRAL BUSINESS DISTRICT



MILWAUKEE REGIONAL MEDICAL CENTER

RATIOS OF OVERALL TRANSIT TRAVEL TIMES TO OVERALL AUTOMOBILE TRAVEL TIMES BETWEEN SELECTED LOCATIONS IN MILWAUKEE COUNTY FOR WEEKDAY PEAK AND OFF-PEAK PERIODS: 2005



ESTIMATED SOUTHEASTERN WISCONSIN REGION TRANSPORTATION SYSTEM AIR POLLUTANT EMISSION AND FUEL CONSUMPTION: 2001 AND 2010

	Estimated Air Pollutant Emissions (Tons per Hot Summer Weekday)							
Year	Volatile Organic Compounds ^a	Nitrogen Oxides ^a	Carbon Monoxide	Carbon dioxide	Fine Particulate Matter	Sulfur Dioxide	Ammonia	
2001	50.03	114.23	592.48	18,050	1.77	2.77	4.84	
2010	27.30	60.92	358.29	18,500	1.18	0.51	5.62	

	Est	imated Air Pollutant	Estimated Fuel Consumption				
Year	Butadiene	Acetaldehyde	Acrolein	Benzene	Formaldehyde	(Gallons per Average Weekday)	
2001	0.20	0.43	0.03	1.40	0.63	1,805,000	
2010	0.09	0.20	0.01	0.66	0.30	1,865,000	

^a Estimated 1990 emissions were 154.6 tons of volatile organic compounds and 136.3 tons of nitrogen oxides. Estimated 1999 emissions were 61.3 tons of volatile organic compounds and 118.0 tons of nitrogen oxides.

bonding; and on whether the authority should continue in existence after September 30, 2009. The RTA began meeting in February 2006, with formal meetings continuing through March 2009, and the RTA officially dissolving on October 1, 2009, per *Wisconsin Statute* 59.58(6). The Commission staff served as staff to the RTA throughout that period and performed numerous activities to support and assist the RTA in making its recommendations. A more detailed discussion of the activities performed as staff to the RTA can be found in the Commission Annual Reports from 2006 to 2009.

The final report of the RTA to the Governor and State Legislature as required by the State Statute that created the RTA, presented the legislation change for the RTA, the composition of the Board, the information that had been considered by the Board in preparing the report, and the recommendations of the RTA for the preservation, improvement, expansion, and enhanced coordination of transit service within and between Kenosha, Racine, and Milwaukee counties, that were approved by the RTA on November 10, 2008. Specifically, the RTA recommended:

> 1. That it continue as the permanent RTA for southeastern Wisconsin, to initially include the Counties of Kenosha and Milwaukee, and the urbanized area of Racine, which is currently defined as the area east of IH 94 in Racine County, with enabling legislation to provide a mechanism whereby other urbanized areas and/or counties may be added at some future date.

- That the RTA be enabled to levy up to a 0.5 2. percent sales tax as a dedicated source of funding to support transit, commuter rail and other transit projects in the Region, and that transit be removed from the property tax, resulting in a mandatory reduction in those taxes. The RTA recommended that all revenue generated from a sales tax raised in each county stay within each county and be used to pay for each county's recommended transit service plan. In addition, the RTA supported that local municipalities be granted authority to enact up to an additional 0.15 percent sales tax for public safety purposes at the request of each individual municipality and taxable only within that municipality.
- 3. A majority of the RTA board members recommended that the RTA be empowered by the state to maintain oversight of transit service and operations in the RTA region and become the sole designated recipient in the region to receive Federal transit aids from the U.S. Department of Transportation, Federal Transit Administration, state transit funding and the dedicated local funding source for transit raised in each municipality.
- 4. That the RTA subcontract with the current operators for local bus transit service, or assume operations as deemed appropriate. The RTA also supported establishment of a local transit planning group in each county

consisting of members appointed by local elected officials. These groups would develop a transit service plan and budget to be submitted to the RTA. The RTA would then use the transit revenue to fund the recommended transit plans, including existing transit needs within and between the counties, as well as new elements recommended by the local transit groups. The local transit groups and systems would be expected to participate in annual audits with the RTA.

5. Lastly, that the RTA be granted bonding authority by the Governor and Legislature to cover capital improvements.

During the preparation of the 2009-2011 Wisconsin State budget, Governor James Doyle proposed legislation that would have created a permanent RTA in southeastern Wisconsin, authorized to develop a Kenosha-Racine-Milwaukee (KRM) commuter rail line as well as provide local bus transit service in Kenosha and Milwaukee Counties and the urbanized area of Racine County. The Wisconsin State Legislature rejected the proposed legislation and offered substitute legislation creating a Milwaukee County Transit Authority authorized to provide local transit service only in Milwaukee County, and a separate KRM commuter rail authority—the Southeastern Regional Transit Authority (SERTA)—authorized to create, construct, and manage a KRM commuter rail line.

Staffing of the Southeastern Regional Transit Authority

A major effort of the Commission staff in 2010 was to continue to serve as staff to the Southeastern Regional Transit Authority (SERTA) created by the Governor and Wisconsin State Legislature in the 2009-2011 State budget to create, construct, and manage a Kenosha-Racine-Milwaukee (KRM) commuter rail line. The SERTA Board was provided the authority to enact up to an \$18 vehicle rental fee per transaction (indexed to inflation) in Kenosha, Racine, and Milwaukee Counties for this purpose, although SERTA had not yet enacted a vehicle rental fee in 2010. SERTA was also provided with the authority to use the remaining balance of funds from the former "temporary" and "limited authority" Southeastern Wisconsin Regional Transit Authority (RTA) to assist in KRM commuter rail planning, as well as the authority to issue up to \$50 million in bonds to provide the local share of funds necessary to initiate KRM commuter rail service. In addition, SERTA is the sole authority permitted to apply to the Federal Transit Administration (FTA) for approval to advance the KRM commuter rail project to preliminary engineering and potentially obtain a Federal discretionary grant, with the application to be submitted by June 29, 2010. This application was submitted by SERTA to the FTA on June 24, 2010. The Commission staff has served as temporary staff to SERTA and has performed the following activities since the SERTA Board began meeting in November 2009:

- Assisted with organizational activities at the initiation of SERTA operations. These activities included drafting a set of by-laws; proposing a meeting schedule for completing the required work of SERTA; briefing the Board on requirements governing the scheduling and conduct of public meetings as specified under State regulations; and assisting with the transfer of the remaining balance of funds from the former RTA and the establishment of appropriate fiscal management procedures addressing record keeping and expending of these funds. Commission staff assumed responsibility for publishing the minutes of Board meetings and also maintains a website (www.sewisrta.org) on behalf of SERTA to provide comprehensive information regarding SERTA and its meetings and also to provide the opportunity for interested persons and groups to comment on SERTA's work.
- Prepared materials for SERTA review describing the existing public transit systems, including the current approach to funding public transit services in the three SERTA counties, in particular, the heavy dependence on State and Federal funding, and the financial crisis facing the Region's existing transit systems, particularly the Milwaukee County Transit System. Staff also provided information on how the funding sources for a KRM commuter rail line could potentially impact funding of existing transit systems. Staff also provided a breakdown of estimated capital and operating and maintenance costs for KRM, as well as information on the expansion and improvements proposed for the transit systems in Kenosha, Racine, and Milwaukee Counties, and their integration with a KRM commuter rail line.
- Provided regular briefings to the Board on the work being performed for the KRM project, including an update on the studies completed to date; a summary of the evaluation and comparison of commuter rail and bus alternatives in the KRM corridor; and current efforts to

update and refine the Alternatives Analysis/Draft Environmental Impact Statement, as well as to update and refine a "New Starts" application to the FTA requesting entry into preliminary engineering. Staff assisted with the preparation of the "New Starts" application, which was submitted by SERTA to the FTA on June 24, 2010. Subsequent to the submittal, staff worked with the consultant for the KRM project-AECOM, Inc.-to respond to questions and requests for additional information from FTA staff and the consultants hired by the FTA to review specific aspects of the "New Starts" application. The responses and additional information were provided to the FTA in October 2010.

- Provided information to the Board on the potential funding needs for a vehicle rental fee, including to fund the local share of preliminary engineering on the KRM project, to hire permanent SERTA staff, to retain a communications consultant, and to fund the capital and operating and maintenance costs for a KRM commuter rail line. Staff also researched how much revenue may be raised in each individual county—Kenosha, Racine, and Milwaukee—and what proportion may be expected to be generated from residents in the three-county area compared to residents outside the three-county area. SERTA had not yet enacted a vehicle rental fee in 2010.
- Provided briefings and information to the Board in relation to efforts by members of the Wisconsin State Legislature, the SERTA Board, and various transit advocates in southeastern Wisconsin, to attempt to address the financial crisis facing the Region's existing transit systems. One such effort was an attempt to pass proposed regional transit authority legislation, which would have provided dedicated local funding for the existing transit systems in southeastern Wisconsin. This proposed legislation was considered but not passed by the Wisconsin State Legislature in April 2010.

TRANSPORTATION SYSTEMS MANAGEMENT AND PROGRAMMING

Transportation Systems Management Planning and Traffic Engineering

During 2010, the Commission continued a work effort to carry out transportation systems management or traffic engineering studies for communities in Southeastern Wisconsin. The Commission worked on three transit system development planning efforts in 2010:

• Commission staff completed work on the shortrange (five-year) transit development plan for the Milwaukee County Transit System (MCTS). The final plan was approved by the Milwaukee County Public Transit Planning Advisory Committee, whose members were appointed by the Milwaukee County Executive, in October 2010. Publication of the final report was underway at the end of the year.

The final recommended transit system development plan for the MCTS would restore the service which was eliminated over the last several years and would focus on transit improvements that would make public transit in Milwaukee County more competitive with travel by private automobile and increase transit ridership by improving both the convenience and speed of transit service. The plan proposes to expand existing transit service by about 22 percent. Dedicated local funding such as a 0.5 percent sales tax will be necessary to implement this service expansion. The specific improvements to MCTS bus services that are recommended under the plan include:

New Local Bus Routes and Adjustments to the Alignments of Existing Local Bus Routes. The plan proposes to extend or add several bus routes to provide an east-west route to serve the commercial and office development along Brown Deer Road; better transit service coverage in north-central and western Milwaukee County; an extension of local bus service to the Village of Hales Corners; and an extension of local bus service to industrial and office parks in Franklin and Oak Creek.

Elimination of Bus Turn-back Points Along Local Routes. The plan proposes the elimination of bus turn-back points along local routes where some buses turn around before reaching the terminus of the route thereby providing less frequent service at the ends of the route.

Extension of Service Hours for Local Bus Routes on Weekdays and Weekends. Service hours for selected local bus routes would be extended under the plan to cover 20 hours a day on weekdays and weekends. Weekday schedules would be extended for two routes, and Saturday and Sunday schedules would be lengthened on the 15 highest-ridership local routes, and on the five routes converted to express service.

Increases in Service Frequency on Local Bus Routes. Under the plan, the frequency of service would be increased on the 15 highest-ridership local routes, in addition to the five routes which are to be converted to express service. The plan recommends that "headways", or the amount of time between bus arrivals at a stop, should be no more than 10 minutes during weekday peak periods; no more than 20 minutes during weekday off-peak periods; and no more than 30 minutes on weekends.

Upgrades to Freeway Flyer Service. The plan proposes upgrading freeway flyer service to ensure a minimum of 10 bus trips over each freeway flyer route during weekday morning and afternoon peak periods.

New Express Bus Service. The plan recommends converting local bus service to express bus service over parts of five local routes serving high ridership corridors in order to improve transit travel times. The three express routes recommended under the plan include: Route 10/30X running from the Milwaukee Regional Medical Center in Wauwatosa to the University of Wisconsin-Milwaukee (UWM) over portions of Route Nos. 10 and 30; Route 18/23X operating between Summit Place (S. 70th Street and W. Greenfield Avenue) and Midtown Center (N. 60th Street and Fond du Lac Avenue) over portions of Route Nos. 18 and 23; and Route 27X extending from the Bayshore Town Center to Wal-Mart over Route No. 27. A possible fourth express bus route could be Route 11X running from the near north side at W. Capitol Drive and Holton Street through downtown to Milwaukee County's General Mitchell International Airport. All routes would operate between 5:00 a.m. and 1:00 a.m. seven days a week, with frequent service (seven to 10 minutes during weekday peak periods, nine to 16 minutes during weekday off-peak periods, and 10 to 20 minutes on weekends). See map 18.

Passenger Fares. The plan also proposes that increases in passenger fares for both bus and for paratransit services be limited to an increase of

no more than the rate of overall price inflation over the planning period. Adult cash bus fare would be increased by \$0.25 from \$2.25 to \$2.50 per trip, the weekly pass price would rise by \$1.00 from \$17.50 to \$18.50, and fares for people with disabilities using Transit Plus would be increased by \$0.50 from \$3.25 to \$3.75 per trip. The increases allow fares to keep pace with increases in operating expenses.

Operating and Capital Costs. Factors affecting costs and funding for the transit system were analyzed by Commission staff along with projections for the next several years. The recommended plan will require total annual operating assistance of approximately \$160.4 million in the fifth year of the planning period. The total cost of capital investments over the five-year planning period was estimated at about \$113.5 million, with the County's share estimated at about \$19.6 million. An analysis of the capital and operating funding required for the recommended plan clearly indicated that the current local property tax levy funding would be inadequate to improve and expand the system. A 0.5 percent sales tax would be sufficient to address the backlog in bus replacement needs and expand transit services as proposed under this plan. In the absence of local dedicated funding, the continued reduction in transit service and increases in transit fares well beyond the rate of general price inflation may be expected. Moreover, a reduction in transit service may be expected when the transit system replaces up to 198 buses over the next few years. The reduction could be as high as 25 to 35 percent if all 198 buses need to be replaced. Fewer replacement buses may be needed if the size of the bus fleet is reduced by future service reductions.

• Commission staff continued work on the Racine County Transit Plan: 2012-2016. The plan will include an update of the transit system development plan for the City of Racine's Belle Urban System (the last such plan was for the period 1998-2002). The study is also investigating the potential need for public transportation service within the portion of Racine County west of IH 94; for service connecting Racine County to Milwaukee, Kenosha, and Walworth Counties, and for service connecting western and eastern Racine County. During 2010, staff compiled a record of public comments from three public meetings held in late 2009.

EXPRESS BUS ROUTES PROPOSED UNDER THE RECOMMENDED PLAN



Source: Milwaukee County Transit System and SEWRPC.

- Commission staff continued work on the Kenosha County Transit Development Plan: 2012-2016. The plan will include a full review of the Kenosha Area Transit system operated by the City of Kenosha, which was last evaluated in the short-range transit plan the Commission prepared for the years 1998-2002. In addition, the plan is also examining for the first time the operations of the County-run western Kenosha County transit system, a rural fixed-route service that began in 2007. During 2010, staff completed an evaluation of the Kenosha Area Transit system.
- The Commission also initiated work on the City of Waukesha Transit Operations Analysis and Service Changes Plan: 2012-2016. The plan will review the operations of the Waukesha Metro Transit system and propose alternative transit service changes. During 2010, staff inventoried the existing transit system and identified objectives, standards, and performance measures for transit service.

Transportation Improvement Programming

In March 2009, the Commission and the appropriate Commission Advisory Committees adopted an updated four-year transportation improvement program (TIP) for Southeastern Wisconsin, as required by the U.S. Department of Transportation. The program was set forth in a Commission document titled *A Transportation Improvement Program for Southeastern Wisconsin: 2009-2012.* The new program was developed with the assistance of the Wisconsin Department of Transportation staff and through the cooperation of various local units and agencies of government in the Region, including the Cities of Kenosha, Milwaukee, and Racine and the Counties of Milwaukee and Waukesha as the operators of special mass transportation systems in their respective areas.

The 2009-2012 TIP identifies all highway and mass transportation projects in the two transportation management areas of the Region, the Milwaukee transportation management area, which includes Milwaukee, Ozaukee, Washington, and Waukesha Counties, and the Kenosha-Racine-Walworth transportation management area, programmed for implementation during the three-year period with the aid of U.S. Department of Transportation funds administered through the Federal Highway Administration and the Federal Transit Administration.

The 2009-2012 TIP was amended 11 times during 2010, adding or revising a total of 186 projects. The total potential investment in transportation improvements and services over the programming period is about \$3.78 billion. Of this total, \$1.81 billion, or about 49 percent, is proposed to be provided in Federal funds; \$1.40 billion, or about 37 percent, in State funds; and \$447 million, or about 12 percent, in local funds. Proposed expenditures for 2011 total about \$739 million. A cost summary for these projects is shown in Table 26.

In order to provide a basis for a better understanding of the types of transportation improvements proposed to be undertaken in the Region, projects have been grouped into nine categories: 1) highway preservation, or reconstruction of existing facilities to maintain present capacities; 2) highway improvement, or reconstruction of existing facilities to increase present capacities; 3) highway expansion, or construction of new facilities; 4) highway safety; 5) highway-related environmental enhancement projects; 6) highway improvement off the Federal aid system; 7) transit preservation; 8) transit improvement; and 9) transit expansion projects. Figure 32 reflects graphically the proposed expenditures in 2011 for these nine project categories for each of the two transportation management areas. At least three of the expenditure patterns apparent from this figure deserve comment:

- A significant proportion of financial resources is to be devoted to the preservation of the existing transportation facilities and services in the Region, about 66 percent. This allocation of resources is especially notable considering that virtually none of the funding for routine highway maintenance activities—snow plowing, ice control, grass cutting, power for street lighting, and litter pick-up—is included in the TIP.
- The expenditures for highway improvement to increase present highway capacities total approximately \$80 million, or 11 percent of total expenditures. This compares to the \$281 million programmed for expenditures on highway preservation, or about 38 percent of total expenditures. No funds in the 2009-2012 TIP, as amended, are programmed in 2011 for highway expansion.

COST SUMMARY OF PROJECTS WITHIN 2011 OF THE 2009 THROUGH 2012 TRANSPORTATION IMPROVEMENT PROGRAM BY TRANSPORTATION MANAGEMENT AREA, COUNTY, AND FUNDING SOURCE

Transportation Management Area	Proposed 2011 Expenditures
Milwaukee Area	
Milwaukee County Federal	\$292,112,600
State Local	118,859,700 76,625,700
Total	487,598,000
Ozaukee County	4 687 400
State	4,687,100 766,500
Local	724,400
Total	6,178,000
Washington County	0 880 200
State	13.686.700
Local	1,556,500
Total	25,132,400
Waukesha County	
Federal	83,079,200
Local	12.886.200
Total	117,757,700
Milwaukee Area Subtotal	000 700 400
Federal	389,768,100
Local	91,792,800
Total	\$636,666,100
Kenosha-Racine-Walworth Area	
Kenosha County	\$27,147,000
State	1,916,200
Local	8,242,600
Total	37,306,700
Racine County Federal	13.982.000
State	11,166,300
Local	2,239,300
Total	27,387,600
Walworth County Federal	7 901 400
State	28,991,400
Local	680,700
Total	37,573,500
Kenosha-Racine-Walworth Area Subtotal	40.004.000
Federal	49,031,300 42,073,900
Local	11,162.600
Total	\$102,267,600
Region Total	· · · · · ·
Federal	\$438,799,400
Local	102,955,400
Total	\$738.933.900
1000	ų. 50,000,000

DISTRIBUTION OF EXPENDITURES IN 2011 OF THE 2009-2012 TRANSPORTATION IMPROVEMENT PROGRAM BY PROJECT CATEGORY

FRANSIT EXPANSION

\$11.542.500 OR 11.3%

MILWAUKEE TRANSPORTATION MANAGEMENT AREA



TOTAL: \$636,666,100

TRANSIT IMPROVEMENT \$45,000 OR LESS THAN 0.1% TRANSIT PRESERVATION \$18,472,900 OR 18.1% HIGHWAY IMPROVEMENT \$16,108,600 OR 15.8% NOTE: FOR 2011, NO EXPENDITURES ARE EXPECTED TO BE INCURRED FOR HIGHWAY EXPANSION OR FOR OFF-SYSTEM IMPROVEMENTS.

KENOSHA-RACINE-WALWORTH TRANSPORTATION MANAGEMENT AREA

SAFETY \$2,370,300 OR 2,3%



• A significant proportion of total financial resources is devoted to public transit projects, which account for about 48 percent of programmed resources for 2011. Of the total programmed resources for public transit, 58 percent is for preservation, 7 percent is for service improvement, and 35 percent is for service expansion. Transit service expansion projects in the amended TIP principally consisted of the Milwaukee County bus rapid transit project and the City of Milwaukee streetcar project.

LONG-RANGE PLANNING

Regional Transportation System Plan

In June 2006 the Commission published and formally adopted the year 2035 regional transportation system plan, the fifth generation of such plans in the Region. The adopted regional transportation plan is documented in SEWRPC Planning Report No. 49, *A Regional Transportation System Plan for Southeastern Wisconsin: 2035.* The development of the plan was guided by the following vision for the transportation system of southeastern Wisconsin: A multimodal transportation system with high-quality public transit, bicycle and pedestrian, and arterial street and highway elements which add to the quality of life of Region residents and support and promote expansion of the Region's economy, by providing for convenient, efficient, and safe travel by each mode, while protecting the quality of the Region's natural environment, minimizing disruption of both the natural and manmade environment, and serving to support implementation of the regional land use plan, while minimizing the capital and annual operating costs of the transportation system.

The adopted year 2035 regional transportation system plan is designed to serve, and to be consistent with, the year 2035 regional land use plan. Projections of future growth in population, households, and employment from the year 2035 regional land use plan were used to develop forecast travel on the planned year 2035 regional transportation system plan. Consistency between the regional transportation plan and the regional land use plan was evaluated by comparing the accessibility and location of improvements proposed under the transportation plan to the location of development and redevelopment proposed under the land use plan. The development of each element of the year 2035 regional transportation system plan—public transit, bicycle and pedestrian, travel demand management, transportation system management, and arterial streets and highways—builds upon the former year 2020 regional transportation plan, recognizing the successful implementation of approximately 15 to 20 percent of each element of the year 2020 plan since 1997.

The transportation system planning process began by consideration and development of the public transit, bicycle and pedestrian facilities, transportation systems management, and travel demand management elements of the plan. Arterial street and highway improvement and expansion were only then considered to address any residual congestion—highway traffic volumes and congestion which would not be expected to be alleviated by the recommended public transit, bicycle and pedestrian, transportation systems management, and travel demand management improvements.

Since its adoption in 2006, the year 2035 regional transportation system plan has been amended on three occasions:

- In 2007, the year 2035 regional transportation system plan was amended at the request of the then Southeastern Wisconsin Regional Transit Authority following a completion of a corridor study to incorporate the recommendations of the Kenosha-Racine-Milwaukee commuter rail study, as shown on Map 19.
- In 2009, the Commission adopted the new Washington County jurisdictional highway system plan as an amendment to the regional transportation system plan. The new plan is set forth in SEWRPC Planning Report No. 23 (Second Edition) titled, *A Jurisdictional Highway System Plan for Washington County*. The new plan is described in the Commission's 2009 Annual Report.
- In June 2010, the Commission completed an interim review, update, and reaffirmation of the year 2035 regional transportation system plan, as documented in SEWRPC Memorandum Report No. 197, *Review, Update, and Reaffirmation of the Year 2035 Regional Transportation Plan.* This interim review, update and reaffirmation included an assessment of the implementation to date of the regional transportation plan, a review of the

forecasts underlying the plan, and a monitoring of transportation system performance. The review also examined whether it remains reasonable for the recommendations in the year 2035 plan to be accomplished over the next 30 years, given implementation of the plan to date and available and anticipated funding. The review and update also provided amendments to the year 2035 plan.

The five elements of the year 2035 regional transportation plan—public transit, bicycle and pedestrian facilities, transportation systems management, travel demand management, and arterial streets and highways—as amended are summarized below.

Public Transit Element

The public transit element of the year 2035 transportation plan recommends a doubling of transit service from 69,000 vehicle-miles of service on an average weekday in 2005, to 138,000 in the year 2035. The plan, as amended, also recommends development of high-speed rail, development of true rapid and express transit systems, and expansion of transit service to serve the entire metropolitan region to serve travel on weekdays and weekends, to provide service in both traditional and reverse commute directions, and to provide service throughout the day and evening at convenient service frequencies. Map 19 displays the proposed transit system coverage for each of the four transit system components described below:

- High Speed Rail is recommended to operate between Chicago, Milwaukee, and Minneapolis-St. Paul that would be developed and overseen by the Wisconsin Department of Transportation.
- Rapid transit would primarily consist of buses operating over freeways between urban centers and outlying areas with stops every three to five miles. The plan proposes increasing weekday vehicle-miles of rapid transit service by over 200 percent and operating throughout the day and evening in both directions, at convenient frequencies, to facilitate both the traditional and reverse direction commute to work travel. In addition, the recommended rapid service also includes a commuter rail line connecting Milwaukee, Racine, and Kenosha, as well as the Chicago area through existing Chicago-Kenosha Metra commuter rail. The commuter rail would operate similar to the bus rapid transit service,



providing service at convenient frequencies in both directions throughout the day and evening with stops spaced about three to five miles apart.

- Express transit would operate as higher-speed limited-stop bus routes with frequent service and stops every one-quarter to one-half mile. The plan envisions express transit as being initially provided with buses operating over arterial streets in mixed traffic, and would over time be upgraded to buses on reserved street lanes with priority treatment at traffic signals. The recommended express service also includes the City of Milwaukee downtown streetcar line.
- Local transit operates with frequent stops over arterial and collector streets in the Kenosha, Milwaukee, and Racine urbanized areas. The plan proposes an approximate 59 percent increase in weekday vehicle-miles of service. The expanded service area and service hours would require an increase in paratransit service, which would be provided consistent with the Federal Americans with Disabilities Act (ADA) of 1990.

In addition to the high speed rail, and rapid, express, and local transit service recommendations, the plan recommends conducting corridor studies to consider upgrading bus rapid transit service to commuter rail service, and express bus service to bus guideway or light rail service. Map 20 displays three potential future commuter rail lines and six potential future light rail/bus guideway lines within southeastern Wisconsin. At the request of the responsible transit operator or government entity, the Commission would amend the regional plan to include the study recommendations. In 2010, there were two efforts underway in southeastern Wisconsin considering an upgrade to fixed guideways. The City of Milwaukee, as the potential transit operator of the streetcar line and having completed corridor planning examining transit alternatives, and concluding that they will be implementing the streetcar alternative, has applied for Federal funding for the streetcar project, to advance it to preliminary engineering. Advancement of the commuter rail line connecting Kenosha, Racine, and Milwaukee areas to preliminary engineering was being considered.

Implementation of the proposed expansion of public transit service in southeastern Wisconsin will require funding at sufficient levels to allow the transit system to expand, which will be dependent on both the continued commitment of the State to fund public transit, and on obtaining dedicated local funding for transit.

Bicycle and Pedestrian Facilities Element

The bicycle and pedestrian facilities element of the recommended plan is intended to promote safe accommodation of bicycle and pedestrian travel and encourage it as an alternative to personal vehicle travel. The amended plan recommends that bicycle accommodation-paved and widened shoulders, widened outside travel lanes, bicycle lanes, or separate bicycle paths-should be considered as each segment of the 3,600-mile surface arterial street system is resurfaced, reconstructed, or constructed. The amended plan also recommends expanding the existing 238 miles of offstreet bicycle paths in 2010 to a planned 575-mile system of off-street bicycle paths that would connect the cities and villages within the Region having populations over 5,000. The proposed system of onand off-street bicycle ways is shown on Map 21.

The pedestrian facilities portion of the bicycle and pedestrian facilities element is a policy, rather than a system, plan. It recommends that southeastern Wisconsin units of government adopt and follow a set of recommended standards and guidelines with regard to the development of those facilities. The recommended guidelines and standards are designed to facilitate safe and efficient pedestrian travel.

Transportation Systems Management Element

The transportation systems management element recommends a number of measures to operate and manage the existing street and highway facilities to their maximum capacity and efficiency. The proposed measures are described below:

• Freeway traffic management: There are three classes of recommended measures to improve the operation and management of the regional freeway system: operational control, advisory information, and incident management. The proposed operational control measures include maintaining existing freeway system traffic detectors and installing additional detectors on most segments of the regional freeway system at one-half-mile intervals; installing ramp meters on all freeway on-ramps within the Region with some exceptions; and expanding the ramp meter control strategy of varying vehicle release rates

POTENTIAL RAPID TRANSIT **COMMUTER RAIL AND EXPRESS** TRANSIT GUIDEWAYS UNDER **THE RECOMMENDED YEAR 2035 REGIONAL TRANSPORTATION PLAN**



EXISTING COMMUTER RAIL

POTENTIAL COMMUTER RAIL-CORRIDOR STUDY COMPLETED, TO BE ADVANCED INTO PRELIMINARY ENGINEERING

POTENTIAL COMMUTER RAIL-TO BE CONSIDERED IN CORRIDOR STUDIES

FREEWAY

NOTE:

BUS GUIDEWAY OR LIGHT RAIL FACILITY ALIGNMENTS SHOWN ON MAP ARE CON-CEPTUAL. CORRIDOR STUDIES WOULD BE CON-DUCTED TO DETERMINE WHETHER TO IMPLEMENT GUIDEWAYS AND TO SELECT A PREFERRED ALIGNMENT. UPON COMPLETION OF EACH CORRIDOR STUDY, THE LOCAL GOVERNMENT SPONSOR WOULD DETERMINE WHETHER TO IMPLEMENT EXCLUSIVE FIXED GUIDEWAY TRANSIT AND WHETHER TO PROCEED TO PRELIMINARY ENGI-NEERING. AT THE REQUEST OF THE LOCAL GOVERNMENT SPONSOR AND TRANSIT OPERATOR, THE COMMISSION WOULD THEN FORMALLY AMEND THE REGIONAL PLAN TO INCLUDE THE FIXED GUIDEWAY



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WALWORTH

N Sharon



^aDuring the preparation of the Walworth County Comprehensive plan in 2009, the Towns of LaFayette, Richmond, Spring Prairie, Troy, and Whitewater but ing the piperation of the walwork county completensive part in 2009, the rowns of Larayette, Richmond, Spring Prairie, rroy, and whitewater indicated opposition to segments of the off-street bicycle path system proposed in the regional transportation plan. These segments are shown on Map 20. In some cases, the affected town prefers not to have a bike trail. In others, the affected town questions the proposed location of the trail, but may not object to having a trail if the location is changed. The Walworth County Comprehensive plan noted the objections of the affected towns, and explained that the plan does not establish a definite location or layout for the trails shown. Prior to construction, trail location will have to be determined with more specificity. Moreover, it was recommended that the rights-of-way or easements for the trails will not be acquired by eminent domain proceedings or by dedications required as a condition of plat approval or as a condition of any other zoning action. Local municipalities shall have final approval of any bike trail plan. Further, it was agreed that the review and update of the Walworth County Park and Open Space Plan to be conducted in 2011 will reexamine and amend the proposed off-street bicycle trails in Walworth County, specifically addressing the concerns of the five towns. The Walworth County Board of Supervisors Parks Committee has recommended that the off-street bicycle paths concerned be removed from the County Park and Open Space Plan. The updated County plan will be used to

based on adjacent freeway traffic volume and congestion. The proposed advisory information measures include maintaining the existing variable message signs and providing additional variable message signs on the entire freeway system and on surface arterials leading to the most heavily-used freeway on-ramps; and maintaining the regional traveler information system which allows the public to dial "511" and receive automated messages about current travel conditions. The proposed incident management measures include maintaining and expanding the network of closed circuit television cameras which allow for the rapid detection of, and appropriate response to, an incident; expanding the provision of enhanced reference markers to be placed at one-tenth mile intervals along the entire regional freeway system; and expanding freeway service patrols to aid in the rapid removal of disabled vehicles and assist in incident clearance.

- Surface arterial street and highway traffic management: Proposed measures to improve the operation of the regional surface arterial street and highway system include improving and expanding coordinated traffic signal systems; implementing intersection improvements, such as adding right- and/or left-turn lanes, or upgrading the type of traffic control at the intersection; implementing curb-lane parking restrictions during peak traffic periods as needed; applying access management standards for the location, spacing, and operation of driveways, median openings, and street connections; and expanding the advisory information network to include surface arterial street and highway travel.
- Major activity center parking management and guidance: This recommended transportation system management measure would attempt to improve traffic operation conditions by reducing the traffic circulation of motorists seeking parking in major activity centers through the use of static and dynamic signing that would indicate the location of parking structures and the availability of parking in those structures.
- Regional Transportation Operations Program (RTOP): The Wisconsin Department of Transportation (WisDOT) in cooperation with SEWRPC and all transportation system operators in the Region would work to prepare a

program of high priority short-range operational improvement projects for implementation, in part, based upon the transportation systems management recommendations in the regional transportation system plan.

Travel Demand Management Element

The travel demand management element includes measures intended to reduce personal and vehicular travel, or to shift travel to alternative times and modes. Seven categories of travel demand management measures are proposed in the plan:

- Preferential treatment for high-occupancy vehicles is recommended through the provision of high-occupancy vehicle queue bypass lanes at metered freeway on-ramps in the Region; expansion of the use of reserved bus lanes along congested surface arterial streets and highways; inclusion of transit priority signal systems along all express and major local transit routes; and voluntary employer-provided preferential parking for employees who carpool or vanpool.
- Park-ride lots are recommended along all major routes at their major intersections and interchanges where sufficient demand may be expected to warrant provision of an off-street parking facility. Map 7 shows the proposed system of 81 park-ride lots including the existing 55 park-ride lots.
- Transit pricing programs are recommended to encourage greater use of transit and vanpool programs. The plan recommends that the annual transit pass program negotiated between the Milwaukee County Transit System and four colleges and universities be expanded to include the other local public transit operators in the Region and additional colleges and universities within the Region. The plan also recommends the annual pass program be expanded to employers, who could negotiate the cost of providing each employee an annual transit pass, or discounted monthly and weekly passes. The plan also proposes expansion of the existing vanpool program currently operated by the Milwaukee County Transit System, in which a group of employees who live in the same general area split the operation, maintenance, and a portion of the capital costs of a van.
- Personal vehicle pricing which would allocate more of the full construction and maintenance costs of parking, street and highway facilities to personal vehicle users is recommended. Proposed vehicle pricing measures include cashout of employer paid parking, in which employers currently providing free/subsidized parking to employees would voluntarily begin charging their employees the market value of parking (and offset this charge through an increase in salary); and continued and expanded use of user fees which currently primarily include motor fuel tax and vehicle registration fees.
- Aggressive promotion of transit use, bicycle use, ridesharing, pedestrian travel, telecommuting, and work-time rescheduling.
- Transit information and marketing is proposed, including the continuation and expansion of the joint marketing efforts of the transit operators within southeastern Wisconsin, and the development of a single website where potential transit users could enter information such as the starting and ending points of a desired trip within the Region, and obtain the most feasible transit routing of the desired trip including all fares, transfers, and schedules. The plan also proposes that transit operators utilize global positioning system (GPS) data to provide real-time transit information to transit riders at transit centers and transit stops.
- Detailed site-specific neighborhood and major activity center land use plans are recommended to be prepared and implemented by local governmental units as recommended in the regional land use plan, in order to facilitate travel by transit, bicycle, and pedestrian movement, and reduce dependence on automobile travel.

Arterial Street and Highway Element

The arterial street and highway element of the year 2035 transportation plan, as amended, totals 3,652 route miles. Highway improvements were recommended to address the residual congestion which may not be expected to be alleviated by recommended land use, public transit, bicycle and pedestrian facilities, systems management, and travel demand management measures in the recommended plan.

Approximately 3,228 miles, or 88 percent of these route miles, are recommended to be resurfaced and

reconstructed to their same capacity. Approximately 344 route miles, or less than 10 percent, of the total recommended year 2035 arterial street and highway system are recommended for widening to provide additional through-traffic lanes, including 127 miles of freeways. The remaining 80 route miles, or 2 percent, are proposed new arterial facilities. Thus, the amended plan includes recommendations for a capacity expansion of 12 percent of the total arterial system over the next 30 years, and when viewed in terms of lane miles, the plan includes less than a 10 percent expansion of lane-miles over the next 30 years.

Map 22 displays, by County, the arterial street and highway system preservation, improvement, and expansion measures recommended under the amended plan. Each proposed arterial street and highway improvement, and expansion project would need to undergo preliminary engineering and environmental studies by the responsible State, county, or municipal government prior to implementation. The preliminary engineering and environmental studies will consider alternatives and impacts, and the responsible government entity will make the final decision on whether and how a planned project will proceed to implementation.

Evaluation of the Recommended Transportation Plan

The year 2035 regional transportation plan, as adopted by the Commission in 2006, contains an evaluation of the recommended plan, including its estimated capital and operating costs, effect on the convenience and efficiency of travel, impact on the environment, and safety. Three alternative transportation system plans were evaluated and compared as part of the evaluation process: a No-build plan alternative, which would maintain the existing transportation system as it existed in the year 2005 with the resurfacing and reconstruction without additional lanes of the existing arterial street and highway system; a Transportation System Management (TSM) plan alternative, which would include all proposed improvements to the transportation system with the exception of the arterial street and highway capacity expansion; and a Transportation Systems Management plus arterial street and highway capacity expansion (TSM Plus Highway) plan, which has been adopted as the recommended year 2035 regional transportation plan. Some of the key benefits and costs of the recommended plan are listed below.

• Map 23 compares existing traffic congestion with forecast future traffic congestion under the No Build and recommended plans. If improvements

Map 22



engineering.

IC SCALE

18.000 FEET

8,000 12.000 2. The 127 miles of freeway widening proposed in the plan, and in particular the 19 miles of widening in the City of Milwaukee (IH 94 between the Zoo and

Marquette interchanges and IH 43 between the Mitchell and Silver Spring

interchanges), will undergo preliminary engineering and environmental impact statement by the Wisconsin Department of Transportation. During preliminary

engineering, alternatives will be considered, including rebuild as-is, various

options of rebuild to modern design standards, compromises to rebuilding to

modern design standards, rebuilding with additional lanes, and rebuilding with

the existing number of lanes. Only at the conclusion of preliminary engineering would a determination be made as to how the freeway would be reconstructed.

interchange at CTH ML with IH 94. Should the preliminary engineering study conclude with a recommendation to construct one or both of the interchanges, the Regional Planning Commission, upon request of the concerned local governments and the Wisconsin Department of Transportation, would take action to amend the regional plan to recommend the construction of the interchange.

4. Sufficient right-of-way should be reserved along STH 158 from CTH H to STH 31 to accommodate its ultimate improvement to six travel lanes.

5. Sufficient right-of-wayshould be reserved along CTH K from IH 94 to STH 31 to accommodate its ultimate improvement to six travel lanes.

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RESURFACING OR RECONSTRUCTION TO

PROVIDE ESSENTIALLY THE SAME CAPACITY

NUMBER OF TRAFFIC LANES FOR NEW OR

WIDENED AND/OR IMPROVED FACILITY

(2 LANES WHERE UNNUMBERED)

4



FUNCTIONAL IMPROVEMENTS TO THE ARTERIAL STREET AND HIGHWAY SYSTEM IN MILWAUKEE COUNTY: 2035 RECOMMENDED REGIONAL TRANSPORTATION PLAN



THE FOLLOWING NOTES SUPPLEMENT THE RECOMMENDATIONS PORTRAYED ON THIS MAP:

1. Each proposed arterial street and highway improvement, expansion, or preservation project would need to undergo preliminary engineering and environmental studies by the responsible State, county, or municipal government prior to implementation. The preliminary engineering and environmental studies will consider alternatives and impacts, and final decisions as to whether and how a plan and project will proceed to implementation will be made by the responsible State, county, or municipal government (State for state highways, County for county in highways, and municipal arterial streets) at the conclusion of preliminary engineering.

2. The 127 miles of freeway widening proposed in the plan, and in particular the 19 miles of widening in the City of Milwaukee (iH 94 between the Zoo and Marquette interchanges and iH 43 between the Mitchell and Silver Spring interchanges), will undergo preliminary engineering, and environmential impact statement by the Wisconsin Department of Transportation. During preliminary engineering, attematives will be considered, including rebuild as-is, various options of rebuild to modern design standards, compromises to rebuilding to modern design standards, rebuilding with additional lanes, and rebuilding would a determination be made as to how the freeway would be reconstructed.

 The plan also provides further recommendations with respect to freeway halfinterchanges. The plan recommends that the Wisconsin Department of Transportation, during the reconstruction of the freeway system:

--Convert the S. 27th Street with IH 94 interchange to a full interchange;

--Consider as an alternative (where conditions permit) combining selected halfinterchanges into one full interchange. (For example, STH 100 and S. 124th Street with IH 43.)

--Retain all other existing half-interchanges and examine during preliminary engineering the improvement of connection between adjacent interchanges.

4. The plan also recommends that during preliminary engineering for the reconstruction of STH 100 from W. Forest Home Avenue to IH 43, consideration be given to alternatives without additional traffic lanes, alternatives with additional traffic lanes, and alternatives with frontage roads.



FUNCTIONAL IMPROVEMENTS TO THE ARTERIAL STREET AND HIGHWAY SYSTEM IN OZAUKEE COUNTY: 2035 RECOMMENDED REGIONAL TRANSPORTATION PLAN





8.000 12.000

18.000 FEET

FUNCTIONAL IMPROVEMENTS TO THE ARTERIAL STREET AND HIGHWAY SYSTEM IN RACINE COUNTY: 2035 RECOMMENDED REGIONAL TRANSPORTATION PLAN

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FUNCTIONAL IMPROVEMENTS TO THE ARTERIAL STREET AND HIGHWAY SYSTEM IN WALWORTH COUNTY: 2035 RECOMMENDED REGIONAL TRANSPORTATION PLAN



ARTERIAL STREET OR HIGHWAY

EXISTING



THE FOLLOWING NOTES SUPPLEMENT THE RECOMMENDATIONS PORTRAYED ON THIS MAP:

1. Each proposed arterial street and highway improvement, expansion, or preservation project would need to undergo preliminary engineering and environmental studies by the responsible State, county, or municipal government prior to implementation. The preliminary engineering and environmental studies will consider alternatives and impacts, and final decisions as to whether and how a plan and project will proceed to implementation will be made by the responsible State, county, or municipal government (State for state highways, County for county highways, and municipal arterial streets) at the conclusion of preliminary engineering.

2. The 127 miles of freeway widening proposed in the plan, and in particular the 19 miles of widening in the City of Milwaukee (IH 94 between the Zoo and Marquette interchanges and IH 43 between the Mitchell and Silver Spring interchanges), will undergo preliminary engineering and environmental impact statement by the Wisconsin Department of Transportation. During preliminary engineering, atternatives will be considered, including rebuild as-is, various options of rebuild to modern design standards, compromises to rebuilding the existing number of lanes. Only at the conclusion of preliminary engineering would a determination be made as to how the freeway would be reconstructed.



FUNCTIONAL IMPROVEMENTS TO THE ARTERIAL STREET AND HIGHWAY SYSTEM IN WASHINGTON COUNTY: 2035 RECOMMENDED REGIONAL TRANSPORTATION PLAN



GRAPHIC BCALE T 2 3 MALES 4.000 8.000 12,000 16.000 20,000 FEET

FUNCTIONAL IMPROVEMENTS TO THE ARTERIAL STREET AND HIGHWAY SYSTEM IN WAUKESHA COUNTY: 2035 RECOMMENDED REGIONAL TRANSPORTATION PLAN



ARTERIAL STREET OR HIGHWAY



THE FOLLOWING NOTES SUPPLEMENT THE RECOMMENDATIONS PORTRAYED ON THIS MAP:

1. Each proposed arterial street and highway improvement, expansion, or preservation project would need to undergo preliminary engineering and environmental studies by the responsible State, county, or municipal government prior to implementation. The preliminary engineering and environmental studies will consider alternatives and impacts, and final decisions as to whother and how a plan and project will proceed to implementation will be made by the responsible State, county, or municipal government (State for state highways, County for county highways, and municipal arterial streets) at the conclusion of preliminary engineering.

2. The 127 miles of freeway widening proposed in the plan, and in particular the 19 miles of widening in the City of Milwaukee (IH 94 between the Zoo and Marquette interchanges and IH 43 between the Mitchell and Silver Spring interchanges), will undergo preliminary engineering and environmental impact statement by the Wisconsin Department of Transportation. During preliminary engineering, alternatives will be considered, including rebuild as-is, various options of rebuild to modern design standards, compromises to rebuilding to modern design standards, rebuilding with additional lanes, and rebuilding with the existing number of lanes. Only at the conclusion of preliminary engineering would a determination be made as to how the freeway would be reconstructed.

 The plan also provides further recommendations with respect to freeway half-interchanges. The plan recommends that the Wisconsin Department of Transportation during the reconstruction of the freeway system:

- Convert the CTH P with IH 94 interchange to a full interchange.

 Consider as an alternative (where conditions permit) the combination of selected half-interchanges into one full interchange; and

 Retain all other existing half-interchanges and examine during preliminary enginneering the improvement of connection between adjacen interchanges.

4. Subsequent to the completion of the regional transportation plan update and reevaluation, more detailed analysis will be conducted with the Waukesha County jurisdictional highway system planning advisory committee addressing STH 164 in the vVillage of Big Bend and potentially considering various alternatives, including do-nothing, restrict parking, widen with additional lanes, construct bypass, and improve/construct parallel arterials.

Map 23

COMPARISON OF EXISTING YEAR 2001 AND FORECAST FUTURE YEAR 2035 AVERAGE WEEKDAY TRAFFIC CONGESTION ON THE ARTERIAL STREET AND HIGHWAY SYSTEM IN THE REGION UNDER THE TSM AND TSM PLUS HIGHWAY ALTERNATIVE PLANS



TSM PLUS HIGHWAY PLAN





FACILITY CONGESTION STATUS

- AT OR UNDER DESIGN CAPACITY
- ----- MODERATELY CONGESTED
- SEVERELY CONGESTED
- EXTREMELY CONGESTED



were limited to the measures under the TSM plan, traffic congestion on an average weekday would be expected to double over the next 30 years—only slightly less than under a No-Build plan. The arterial street and highway system improvements proposed in the recommended plan may be expected to result in a significant reduction in traffic congestion when compared to the TSM plan, resulting in levels of congestion similar to, and somewhat less than, existing conditions.

- The annual cost of the recommended plan is about 30 percent greater than the cost of simply maintaining existing facilities and services, and about 10 percent greater than current expenditures.
- The plan's impact on air pollutant emissions is relatively modest. Air pollutant emissions from the transportation system have been significantly declining even with increasing traffic due to the normal replacement of aging vehicles with new vehicles using existing emission control technology. Furthermore, these emissions are projected to continue to substantially decline even with increasing traffic. Measures intended to encourage alternatives to personal and vehicular travel and increase public transit service are expected, in comparison, to have a small impact on projected air pollutant emissions from the transportation system.

Preparation of New County Jurisdictional Highway System Plans Underway

This work effort continued following the preparation of the new year 2035 regional transportation system plan. The new jurisdictional highway system plans will respond to planned changes in land use within each county to the year 2035 along with the traffic patterns attendant to the new 2035 regional land use plan.

Preparation of New Jurisdictional Highway System Plan for Walworth County Initiated

At the request of Walworth County, preparation of a new jurisdictional highway system plan for Walworth County was initiated in 2009. The new plan would be an update to the Walworth County Jurisdictional highway system plan that was originally adopted by the Walworth County Board of Supervisors in 1973, and later amended on four other occasions. The jurisdictional highway system plan would provide a review and reevaluation, and recommendations as to which level and agency of government-state, county, and local-should have jurisdictional responsibilities for each segment of arterial street and highway in Walworth County, and would identify which changes in jurisdictional responsibility, or jurisdictional transfers, are necessary to implement the plan. The new jurisdictional highway system plan would also constitute a refinement and amendment of the functional improvements-new arterial facilities and widening of existing facilities-recommended in Walworth County under the year 2035 regional transportation plan, as adopted by the Commission in June 2006, and is intended to be a functional, as well as jurisdictional, arterial street and highway system plan for Walworth County to the design year 2035. The preparation of a new jurisdictional plan will be guided by a 32-member Walworth County Jurisdictional Highway Planning Committee. The Committee includes representation from each of the 28 cities, villages, and towns in the County, the County itself, as well as from the Federal and state levels.

The new Walworth County Jurisdictional highway system plan is intended to help Walworth County:

- Cope with the growing traffic demands within the County;
- Adjust the existing jurisdictional highway systems to changes in land use development along their alignment;
- Maintain an integrated county trunk highway system within the County;
- Adjust the existing jurisdictional highway system to better serve the major changes in traffic patterns taking place within the County; and
- Achieve an equitable distribution of arterial street and highway development and maintenance costs and revenues among the various levels and agencies of government concerned.

Air Transportation Planning

The Commission monitors aviation activities within and surrounding the Region and provides technical assistance for airport master planning activities that implement the regional airport system plan. The adopted regional airport system plan is described in SEWRPC Planning Report No. 38 (2nd Edition), A *Regional Airport System Plan for Southeastern Wisconsin: 2010*, November 1996. Forecast trends in airport activity within southeastern Wisconsin were updated to the year 2030 and are documented in SEWRPC Memorandum Report 133, *Review and Update of Regional Airport System Plan Forecasts*, August 2004.

General trends in the level of aviation activity within Southeastern Wisconsin are indicated by the numbers of aircraft operations at, and of passengers using, Milwaukee County's General Mitchell International Airport, as well as by the number of aircraft based within the Region. In 2010, total aircraft operations at Mitchell International totaled about 191,600, representing about a 13 percent increase from 2009. The 2010 total is about 27 percent below the 261,100 operations forecast to occur at Mitchell International during that year under the adopted regional airport system plan.

From 2009 to 2010, the number of air carrier enplaning and deplaning passengers at Mitchell International increased by about 1,913,000, to about 9,848,000 passengers, or about 24 percent above the 2009 level of about 7,935,000 passengers. The 2010 level compared well with the 8,700,000 passengers forecast for that year under the adopted regional airport system plan.

General aviation activity can be measured in terms of the total number of general aviation aircraft operations -that is, takeoffs and landings-occurring on an annual basis at selected public-use airports in southeastern Wisconsin as reported by those airports. At all of the public airports other than General Mitchell International Airport, general aviation accounts for almost all activity. At Waukesha County-Crites Field, there were about 58,800 total operations during 2010, representing about a 2 percent decrease from the 59,900 total operations in 2009. At Kenosha Regional Airport, there were about 52,500 total operations during 2010, representing about a 3 percent decrease from the 54,300 total operations in 2009. At Lawrence J. Timmerman Airport, there were about 32,600 total operations during 2010, representing about an 8 percent decrease from the 35,600 total operations in 2009. At General Mitchell International Airport, where general aviation accounts for only a small portion of all activity, there were about 15,000 general aviation operations reported for 2010, representing about a 9 percent increase from the 13,700 general aviation operations reported for 2009.

Rail Transportation Planning

The Regional Planning Commission monitors the status of rail service within the Southeastern Wisconsin Region, proposals for service changes, and related issues, and provides technical assistance to local communities as requested. As of December 31, 2010, rail freight service was being provided within Southeastern Wisconsin over a total of about 492 miles of active main line as shown on Map 24.

Intercity passenger train service in the Region is provided by Amtrak between Chicago and Minneapolis-St. Paul over Canadian Pacific Railway trackage, with stops in Southeastern Wisconsin at Milwaukee, General Mitchell International Airport, and Sturtevant. Commuter rail service is provided between Kenosha and Chicago, with intermediate stops throughout the north shore suburbs of northeastern Illinois, by the Union Pacific Railroad under an agreement with Metra, the commuter rail division of the Regional Transportation Authority (RTA) in northeastern Illinois.

Kenosha-Racine-Milwaukee (KRM) Commuter Link Project

During 2010, significant progress was made to complete the Alternatives Analysis/Draft Environmental Impact Statement for the Kenosha-Racine-Milwaukee Commuter Link project, including preparation of a "New Starts" application requesting entry into preliminary engineering, which was submitted by the Southeastern Regional Transit Authority (SERTA) to the Federal Transit Administration (FTA) on June 24, 2010. The Commission staff acted as project manager and staff in the conduct of this phase of the project.

The conclusions of the evaluation and comparison of the costs and benefits of the commuter rail and bus alternatives were as follows, based on updated information developed for the Draft Environmental Impact Statement, as well as for the "New Starts" application to the U.S. Department of Transportation, Federal Transit Administration requesting entry into preliminary engineering:

Travel Time and Speed – Commuter rail will be much faster than bus in connecting the Kenosha, Milwaukee,



and Racine areas to each other and with northeastern Illinois. An example of the average speed and travel time is shown below:

- Commuter Rail: 38 mph average speed; 53 minutes average travel time
- Bus: 20 to 29 mph average speed; 83 to 108 minutes average travel time

In comparison, an automobile may be expected to make the same trip during peak traffic hours in about 54 minutes.

Travel Reliability – Commuter rail would provide the highest level of reliability:

- Operating over a separate nonhighway right-ofway, it would not be affected by the unpredictable nature of rush-hour automobile and truck traffic
- It would have priority over street and highway traffic at crossings and over freight traffic on railroads
- Inclement weather would have little impact, this being especially important during the winter season

Comfort and Convenience – Commuter rail would provide the highest level of comfort, convenience, and overall attractiveness:

- It can provide a smoother and more consistent ride due to the vehicles operating on a dedicated route alignment that does not have interference from other traffic
- Its route simplicity, dedicated route, and larger stations and equipment make it more visible and therefore easier to use

Ridership – Commuter rail may be expected to attract nearly four times the ridership of bus:

- On an average weekday, commuter rail will attract 8,300 trips vs. 2,200 for bus
- Annually, commuter rail will attract 2.12 million trips vs. 0.56 million for bus

Passenger-Miles – Passenger-miles from commuter rail ridership represent nearly four times the passenger-miles from bus:

- On an average weekday, commuter rail will attract 84,400 passenger-miles vs. 22,000 for bus
- Annually, commuter rail will generate 21.5 million passenger-miles vs. 5.6 million for bus

Impact on Highway System – Commuter rail will have a substantially greater impact on highway system traffic and traffic congestion:

• Commuter rail ridership and passenger-miles will each be nearly four times that of bus

Alternative During IH 94 Reconstruction – Commuter rail will provide a far superior alternative mode of travel during IH 94 reconstruction over the next 20 years compared to a bus alternative:

- Commuter rail will be able to attract significantly more traffic from IH 94 which will be limited in capacity during reconstruction.
- Commuter rail will offer an alternative which will be competitive with automobile travel time and will be unaffected by increased IH 94 freeway and corridor traffic congestion.

Air Pollutant Emissions and Energy Consumption – Commuter rail would contribute to a greater reduction in vehicle generated air pollutant emissions and vehicle energy consumption in proportion to its potential to attract greater transit ridership, longer trips by transit, and new transit trips:

• Additional reductions in air pollutant emissions and energy consumption may be expected due to commuter rail's potential to encourage more efficient higher density infill development and redevelopment

More Efficient Development and Redevelopment – Commuter rail will have the potential to result in more efficient higher density land development and redevelopment around its stations in the corridor and reduce urban sprawl:

• Encourage desirable needed and planned development in central cities of Milwaukee, Racine, and Kenosha and inner, older suburbs of Cudahy, St. Francis, and South Milwaukee • Encourage higher density, more efficient development in the developing communities of Oak Creek, Caledonia, and Somers

Accessibility to Jobs – Due to its higher average speeds and resulting lower travel times, commuter rail will provide greater accessibility to the significant number of jobs in the KRM/northeastern Illinois corridor:

- Corridor jobs within a one mile station radius in the year 2000:
 - Downtown Milwaukee 110,300
 - Milwaukee County 21,600
 - Kenosha and Racine Counties 28,200
 - Chicago North Shore Suburbs 95,100
 - Chicago North Side 58,500
 - Downtown Chicago 599,400

This corridor provides access to far more jobs than any other potential southeastern Wisconsin transit corridor, for example, compared to a Milwaukee Oconomowoc commuter rail or Milwaukee–Waukesha express bus corridor:

- More than four times more jobs
- More than 50 percent more jobs (if Downtown Chicago jobs not included)

The KRM commuter rail provides this job access to central city residents, and in particular minority populations, low income populations, and those without an automobile and dependent upon public transit:

- For example, an estimated 245,900 or 41percent of City of Milwaukee residents reside within three miles of the two proposed KRM train stations in the City of Milwaukee, some within walking distance and others within a short connecting bus or shuttle ride or drive or drop off by automobile. Of these city residents, about 30 percent, or 71,500 do not own an automobile; and 58 percent or 143,000 are minorities (slightly higher than the city as a whole) including 72,000 African Americans and 57,900 Hispanics.
- The number of jobs accessible to these City of Milwaukee residents (not including downtown Milwaukee) by the KRM commuter rail totals

over 800,000 jobs in total, 200,000 jobs not including downtown Chicago and 140,000 jobs not including the Downtown and North Side of Chicago. This can be compared to Milwaukee – Oconomowoc commuter rail and Milwaukee – Waukesha express bus at 80,000 and 100,000 jobs, respectively (also not including downtown Milwaukee).

Encouraging Corridor Economic Development and Growth in the Corridor – Due to its much higher average speeds and shorter travel times, commuter rail will do a significantly better job of more closely connecting Kenosha, Racine, and Milwaukee to each other and to northeastern Illinois and Chicago:

- This improved linkage between southeastern Wisconsin and the mega-metropolitan area of northeastern Illinois may be expected to result in more economic and population growth in the KRM corridor and in southeastern Wisconsin.
- The potential for future economic growth of southeastern Wisconsin through more closely linking to northeastern Illinois is one of a few major economic development themes being advanced for southeastern Wisconsin by the Milwaukee 7.
- Companies such as S.C. Johnson, one of the largest employers in southeastern Wisconsin and in the State of Wisconsin, have cited the importance of this link to northeastern Illinois to retaining and attracting qualified employees, and maintaining and expanding their presence in southeastern Wisconsin.

Capital and Operating Costs – Commuter rail would have higher capital costs and annual operating and maintenance (O&M) costs (in 2009 dollars) than bus:

- Capital cost—\$233 million for commuter rail compared to \$30 million for bus
- Annual O&M cost—\$13.4 million (including shuttles) for commuter rail compared to \$3.1 million for bus

The former Southeastern Wisconsin RTA, after carefully considering the costs and benefits of the commuter rail and bus alternatives, concluded that the benefits of commuter rail outweighed its operating

Map 25

PROPOSED KENOSHA-RACINE-MILWAUKEE COMMUTER RAIL



costs. On November 15, 2008, the RTA submitted recommendations to the Governor and State Legislature, per Wisconsin Statute 59.58(6), including the RTA's primary function of recommending a permanent, dedicated funding source for the local share of capital and operating costs of public transit, including commuter rail. The RTA also recommended that the RTA become the permanent RTA in southeastern Wisconsin and have the authority to sponsor, implement, and provide the local funding for a KRM commuter rail line. The RTA and Intergovernmental Partnership determined to continue to pursue implementation of a KRM commuter rail line by working towards completion of the Draft Environmental Impact Statement (DEIS) for the project, and preparing the necessary "New Starts" application to the FTA requesting entry into preliminary engineering,

with the potential to obtain a Federal discretionary capital grant for costs associated with initiating KRM commuter rail. The DEIS was completed and approved for public comment by the FTA in July 2009. Public hearings were held in September 2009 to obtain comments on the DEIS, and a public comment period during which comments could be submitted via the KRM website, or by email, mail, or fax, extended until October 5, 2009.

The Commission staff assisted the RTA and Intergovernmental Partnership in their efforts from 2006 to 2009, with the RTA officially dissolving on October 1, 2009, per *Wisconsin Statute* 59.58(6). In the 2009-2011 Wisconsin State budget, the Southeastern Regional Transit Authority (SERTA) was created by the Governor and Wisconsin State Legislature to oversee the development of a KRM commuter rail line. The Commission staff has served as temporary staff to SERTA since the SERTA Board began meeting in November, 2009, and on June 24, 2010, SERTA submitted a "New Starts" application to the FTA requesting entry into preliminary engineering for the KRM project.

The following provides a description of the proposed KRM commuter rail:

- Would use commuter rail service to connect Milwaukee and Racine to the existing Chicago-Kenosha commuter rail service
 - 33-mile route using existing Union Pacific Railroad (UP) and Canadian Pacific Railway (CP) freight lines (See Map 25)
 - Nine stations
 - Existing stations at Kenosha and Milwaukee and new transit center at Racine
 - New stations at Somers, Caledonia, Oak Creek, South Milwaukee, Cudahy-St. Francis, and Milwaukee South Side
- Level of service
 - Service provided in both directions during all time periods
 - 15 weekday trains in each direction
 - Operating speed up to 59 mph

- Average speed 38 mph
- Shuttle bus service
 - Dedicated service between Amtrak station and Milwaukee central business district
 - Dedicated service between General Mitchell International Airport and Cudahy-St. Francis station
- Train operation
 - Service provided by meeting existing Metra trains at Kenosha
 - Contract with UP Railroad and provide timetransfer (six minutes) at Kenosha to Metra
- Diesel-Multiple-unit cars ("DMUs" or selfpropelled coaches)

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 the following:

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

In attempting to find sound answers to these and related questions, to develop recommendations concerning environmental protection and enhancement, to monitor levels of environmental quality in the Region, and to respond to requests for data and technical assistance, activities were conducted in 2010 in four program areas: water quality management planning; water supply planning; watershed, floodland, and stormwater management planning; and coastal management planning.

WATER QUALITY MANAGEMENT PLANNING

During 2010, Commission water quality management planning efforts continued to be focused primarily on activities relating to implementation and updating of the adopted regional water quality management plan. Such activities included providing assistance in the preparation of inland lake management plans; preparing local sanitary sewer service area plans; and assisting counties and other local units of government in the Region in activities related to the abatement of nonpoint source pollution and in completing sewerage facilities plans in preparation for the construction of point source pollution abatement facilities. The Commission also continued to assist the Wisconsin Departments of Natural Resources and of Commerce in the review of proposed public sanitary sewer extensions, proposed private main sewers and building sewers, and proposed large onsite sewage disposal systems and holding tanks.

The Regional Water Quality Management Plan

In 1979, the Commission completed and adopted a regional water quality management plan. The plan, designed in part to meet the Congressional mandate that the waters of the United States be made to the extent practicable "fishable and swimmable," is set forth in SEWRPC Planning Report No. 30, *A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000*, Volume One, *Inventory Findings*, September 1978; Volume Two, *Alternative Plans*, February 1979; and Volume Three, *Recommended Plan*, June 1979. The plan provides recommendations for the control of water pollution from such point sources as wastewater treatment plants, points of separate and combined

sewer overflow, and industrial waste outfalls and from such nonpoint sources as urban and rural stormwater runoff. The regional water quality management plan is one of the more important plan elements adopted by the Commission, since, in addition to providing clear and concise recommendations for the control of water pollution, it provides the basis for the continued eligibility of local units of government for Federal and State loans in partial support of sewerage system development and redevelopment, for the review and approval of public sanitary sewer extensions by that Department, and for the review and approval of private sanitary sewer extensions and large onsite sewage disposal systems and holding tanks by the Wisconsin Department of Commerce.

The adopted regional water quality management plan for Southeastern Wisconsin consists of five major elements: a land use element, a point source pollution abatement element, a nonpoint source pollution abatement element, a sludge management element, and a water quality monitoring element. A descriptive summary of the initial regional water quality management plan was provided in the Commission's 1979 Annual Report. Subsequently, the Commission completed a report documenting the updated content and implementation status of the regional water quality management plan as amended over approximately the first 15 years since the initial adoption of the plan. This report, SEWRPC Memorandum Report No. 93, A Regional Water Quality Management Plan for Southeastern Wisconsin: An Update and Status Report, March 1995, provides a comprehensive restatement of the regional water quality management plan as thus amended. The plan status report reflects implementation actions taken and plan amendments adopted since the initial plan was completed. The status report also documents, as available data permit, the extent of progress which had been made toward meeting the water use objectives and supporting water quality standards set forth in the regional water quality management plan.

During 2007, the Commission completed work on an update of the regional water quality management plan for the Greater Milwaukee Watersheds (Kinnickinnic River, Menomonee River, Milwaukee River, Root River, and Oak Creek watersheds, the Milwaukee Harbor estuary, and the adjacent nearshore Lake Michigan area). As set forth on Map 26, the study area encompasses 1,127 square miles, and it contains all or part of 88 local municipalities and nine counties, including Dodge, Fond du Lac, and Sheboygan Counties which are outside the Southeastern Wisconsin Region. This effort was coordinated with a parallel sewerage facilities planning program carried out by the Milwaukee Metropolitan Sewerage District (MMSD) which was designed to utilize the watershed approach consistent with evolving U.S. Environmental Protection Agency (USEPA) policies. The approach of developing the regional water quality management plan in coordination with the MMSD facilities plan represents good public planning and administration, and is consistent with the requirements of Section 208 of the Federal Clean Water Act.

The coordinated approach to carrying out the regional water quality management plan update and the MMSD facilities planning program was developed cooperatively by the WDNR, the MMSD, and SEWRPC. The regional water quality management plan update resulted in the reevaluation and, as necessary, revision of the three major elements comprising the original plan—the land use element, the point source pollution abatement element, and the nonpoint source pollution abatement element. In addition, a groundwater element was added based largely upon companion work programs.

The regional water quality management plan update was documented in two reports;

- SEWRPC Planning Report No. 50 (PR No. 50), A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds, December 2007, and
- SEWRPC Technical Report No. 39 (TR No. 39), Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds, November 2007.

Planning Report No. 50 documents the development of the regional water quality management plan update including inventories, analyses of alternative plans and the recommended plan, and a plan implementation strategy. Detailed systems-level costs are set forth for the alternative plans and the recommended plan. The plan is developed for year 2020 land use and population conditions.

Map 26

FOND DU LAC

REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE/MMSD 2020 FACILITIES PLAN STUDY AREA

WATERSHED

KINNICKINNIC RIVER

MENOMONEE RIVER

MILWAUKEE RIVER

LAKE MICHIGAN DIRECT DRAINAGE AREA

NUMBER OF COUNTIES

NUMBER OF COUNTIES

NUMBER OF LOCAL MUNICIPALITIES

TOTAL AREA (SQUARE MILES)

NUMBER OF LOCAL MUNICIPALITIES

OAK CREEK

ROOT RIVER

TOTAL



GRAPHIC SCALE

Technical Report No. 39 presents detailed information on water and sediment quality conditions; includes detailed analyses of measured water quality data, including toxicity conditions in water, sediment, and the tissue of aquatic organisms; presents water quality modeling data regarding pollutant loads from point and nonpoint sources; describes stream channel and habitat and riparian corridor conditions; presents inventories and evaluations of fishery and macroinvertebrate conditions; evaluates water quality trends over the past 30 years; and assesses levels of compliance with regulatory water use objectives and associated water quality standards and criteria.

The reports can be accessed at <u>www. sewrpc.org</u>.

The recommended regional water quality management plan update for the greater Milwaukee watersheds:

- Incorporates almost all of the MMSD 2020 facilities plan recommendations;
- Includes recommendations regarding construction of trunk sewers and future facilities planning for public sewerage systems outside the MMSD planning area;
- Calls for the preservation of environmentally significant lands;
- Includes specific recommendations to establish or expand riparian buffers along streams adjacent to agricultural lands and to convert some marginally productive farmland to wetland and prairie conditions;
- Calls for voluntary county programs to oversee older private onsite wastewater treatment systems;
- Recommends enhanced programs to detect and eliminate illicit discharges to storm sewer systems and to control urban-sourced pathogens;
- Promotes programs to reduce both the use of fertilizers containing phosphorus and the discharge of chlorides to waterways from water softeners and through runoff from roads, highways, and parking lots;
- Recommends instream and inland lake measures to improve water quality; and

• Includes recommendations related to groundwater recharge and sustainability, expanded mapping of groundwater contamination areas, stormwater management measures affecting water quality, and water conservation.

The plan also includes detailed assessments of the degree to which the water quality standards and criteria that support the designated uses of the streams in the study area would be expected to be met under recommended plan conditions.

In 2010, the Commission staff promoted implementation of the water quality plan update through its continuing water quality planning program and through active participation in the Southeastern Wisconsin Watersheds Trust, Inc. (SWWT). SWWT is a collaborative effort to achieve healthy water resources throughout the greater Milwaukee watersheds through implementing the regional water quality management plan update for the greater Milwaukee watersheds. The Commission staff served on both the SWWT Steering Council and the Policy, Science, and Strategic Planning Committees.

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 and programs. Such plans and programs are to identify and implement the nonpoint source pollution control practices that should be applied to specific lands. This more refined and detailed level of planning was recommended because the design of nonpoint source pollution abatement practices should be a localized, highly detailed, and individualized effort, an effort that is based on site-specific knowledge of the physical, managerial, social, and fiscal considerations that affect the landowners concerned.

The Commission provides assistance in planning and project review activities for a number of programs which are considered to be steps toward implementation of the nonpoint pollution abatement recommendations set forth in the regional water quality management plan. These include programs administered by the WDNR and the Wisconsin Department of Agriculture, Trade and Consumer Protection, which provide cost-sharing funds for individual projects or land management practices to local governments and private landowners; the stormwater discharge permit system administered by the WDNR; and local-level stormwater management and land and water resource management planning programs. During 2010, the Commission provided assistance to the State agencies involved and the counties and other local units of government concerned in carrying out these programs. An example of this work was the Commission staff's continued service on the Root-Pike Watershed Initiative Network Agricultural and Urban Pollution Prevention Task Group, which reviews applications for grants to implement specific water quality-based projects, and on the Resource Group which approves funding of projects.

Lake Management Planning

The adopted regional water quality management plan recommends that detailed, comprehensive lake management plans be prepared for the areas directly tributary to each of the 101 major lakes lying within Southeastern Wisconsin and for selected smaller lakes in the Region.

The Commission and the WDNR work with local lake community organizations, including lake management associations and public inland lake protection and rehabilitation districts, to complete the preparation of such lake management plans. These lake management plans are documented in Commission community assistance planning reports. These reports describe the existing chemical, biological, and physical water quality conditions in each lake in question; existing and proposed uses of the lake and attendant water quality objectives and standards; recommended pollution abatement measures required in each lake watershed to protect and enhance lake water quality; and recommended drainage basin management and appropriate inlake measures needed to provide for a range of suitable recreational and other uses of the lake as envisioned in the Federal Clean Water Act and related State of Wisconsin water laws.

Prior to 2010, comprehensive lake management plans were completed for the following lakes within the Region: Powers in Kenosha and Walworth Counties; George and Elizabeth and Mary Lakes (the Twin Lakes) in Kenosha County; the Waterford Impoundment and Wind in Racine County; Geneva, and Whitewater and Rice, in Walworth County; Friess and Pike in Washington County; and Ashippun, Eagle Spring, Fowler, Keesus, Lac La Belle, Little Muskego, Nagawicka, North, Oconomowoc, Okauchee, Pewaukee, and Upper and Lower Phantom, all in Waukesha County. Of these, the comprehensive lake management plans for Wind Lake in Racine County; Geneva Lake in Walworth County; Friess Lake in Washington County; and, for Lac La Belle, Oconomowoc, Okauchee, and Pewaukee Lakes in Waukesha County were updated and refined, and published as second editions of these comprehensive plans, prior to 2010.

In addition, prior to 2010, a number of other, more narrowly focused plans and related reports were prepared. These plans and reports are published as Commission memorandum reports. These plans and reports include a lake use management plan for Waubeesee Lake and the Anderson Canal, which connects Long Lake (Kee Nong Go Mong Lake) to Waubeesee Lake, in Racine County; aquatic plant and recreational use management plans for Booth and Pell Lakes in Walworth County; aquatic plant management plans for Voltz Lake in Kenosha County, Green, Middle, and Mill Lakes (the Lauderdale Lakes), Pleasant Lake, and Wandawega Lake in Walworth County, Friess Lake in Washington County, and Crooked Lake, Fowler Lake, Nagawicka Lake, Pine and Beaver Lakes, Pretty Lake, and the Phantom Lakes in Waukesha County; an aquatic plant inventory for Pine Lake in Waukesha County; lake protection plans for Benedict and Tombeau Lakes in Walworth and Kenosha Counties and for Middle Genesee Lake, Silver Lake, Pretty Lake, and the Kelly Lakes in Waukesha County; a public boating access and waterway protection plan for Big Muskego Lake in Waukesha County; watershed inventory reports for Nagawicka and Upper Nemahbin Lakes in Waukesha County: lake protection and recreational use plans for Silver Lake in Washington County and Hunters Lake in Waukesha County; a lake protection and stormwater management plan for Big Cedar Lake in Washington County; a lakefront recreational use and waterway protection plan for that portion of the shoreline of Pewaukee Lake located within the Village of Pewaukee in Waukesha County; and an environmental analysis of lands at the headwaters of Gilbert Lake and Big Cedar Lake in Washington County. Prior to 2010, the Commission staff also assisted a number of communities in the conduct of questionnaire-based lake-use surveys, including the communities on, and adjacent to, the Phantom Lakes and Eagle Spring Lake in Waukesha County, and Powers Lake in Kenosha and Walworth Counties. The results of these surveys were reported to the communities in the form of Commission letter reports.

During 2010, the Commission participated in lakemanagement-related meetings convened by the University of Wisconsin-Extension (UWEX), the WDNR, and the Wisconsin Association of Lakes, Inc. (WAL), collectively, the Wisconsin Lakes Partnership. The Commission assisted in the development and conduct of the 2010 Lakes Convention, an annual informational and educational program of the Wisconsin Lakes Partnership, focusing on the specific risks related to the introduction and management of nonnative aquatic species.

Also during 2010, the Commission continued to provide technical assistance to certain municipalities, lake management associations, lake protection and rehabilitation districts, and town sanitary districts. Technical assistance relating to specific lake management needs was provided to municipalities, lake associations and districts, and sanitary districts for Hooker and Voltz Lakes in Kenosha County; the Waterford Impoundment and Wind Lake in Racine County; Lake Beulah, Cravath and Trippe Lakes, Delavan Lake, and the Lauderdale Lakes in Walworth County; Bark, Big Cedar, and Silver Lakes in Washington County; and, Beaver, Eagle Spring, Fowler, Little Muskego, Lower and Upper Nemahbin, Nagawicka, Pewaukee, Upper and Lower Phantom, School Section, and Silver Lakes in Waukesha County.

The Commission staff continued to serve on the Southeastern Wisconsin Fox River Commission as a nonvoting member pursuant to the provisions of Subchapter VI of Chapter 33 of the *Wisconsin Statutes*. Staff also participated on U.S. Environmental Protection Agency expert panels on climate change and water resources, and U.N. Environment Programme working groups for the development of transboundary waters assessment protocols.

Assistance in preparing applications for State of Wisconsin grants in partial support of lake protection and management planning was also provided during 2010 for several lakes. Over the years 1992 through 2010, the Commission staff assisted communities in preparing grant applications to support more than 80 lake-management-related projects on nearly 60 of the Region's lakes.

Comprehensive Lake Management Plans

Comprehensive lake management plans are intended to serve as guides to the making of decisions concerning the use and management of the Lakes, and recommend actions for the protection and rehabilitation of lake water quality through a combination of measures. Both lake-based and tributary area-based actions are reviewed, evaluated, and considered for inclusion in the plans, which address:

- Protection of the natural resource base,
- Protection and maintenance of water quality and aesthetic conditions,
- Protection and enhancement of fish and aquatic life,
- Enhancement of recreational opportunities, and
- Public information and education.

No comprehensive lake management plans were produced during 2010.

Aquatic Plant Management Plans

In addition to the preparation of comprehensive lake management plans, the Commission staff periodically prepares more specific plans that address issues of concern facing waterbodies within the Region. These plans include aquatic plant management plans and recreational boating access management plans that address single purpose planning needs, and lake protection plans that address a range of concerns facing the Region's lake communities. Aquatic plant management plans examine existing and anticipated watershed conditions, potential aquatic plant management problems, and recreational use concerns on the lakes, and set forth recommended actions to resolve those concerns. The shoreland protection and aquatic plant management elements of the plans recommend that actions be taken that would reduce human impacts on ecologically valuable areas in and adjacent to the lakes, encourage a biologically diverse community of native aquatic plants, and limit the spread of nonnative invasive plant species.

During 2010, aquatic plant management plans were completed for Benet Lake and Lake Shangrila (documented in SEWRPC Memorandum Report No. 192, *An Aquatic Plant Management Plan for Lake Shangrila and Benet Lake, Kenosha County, Wisconsin,* March 2010, which was prepared for the Town of Salem and the Lake Shangrila Woodlands Homeowners Association, Inc.); the Lauderdale Lakes (documented in SEWRPC Memorandum Report No. 143, 2nd Edition, *An Aquatic Plant Management Plan for the Lauderdale* Lakes, Walworth County, Wisconsin, July 2010, which was prepared for the Lauderdale Lakes Lake Management District); and Whitewater and Rice Lakes (documented in SEWRPC Memorandum Report No. 177, An Aquatic Plant Management Plan for Whitewater and Rice Lakes, Walworth County, Wisconsin, March 2010, which was prepared for the Whitewater-Rice Lakes Management District).

Each of these plans includes recommendations related to:

- Preservation of environmental corridors,
- Support of land management practices to reduce nonpoint source pollutant loads in stormwater runoff into the lake, and
- Promotion of appropriate shoreline management practices, including the use of riprap and vegetative buffer strips, where applicable and appropriate.
- Periodic in-lake aquatic plant surveys every three to five years to monitor changes in the aquatic plant community and assess effectiveness of aquatic plant management techniques.
- Consideration of mechanical harvesting of nuisance plants in areas where the depth of water and bottom substrate are sufficient to support such activity, limited use of chemical herbicides mainly in areas where nuisance levels of nonnative invasive species are present (Benet Lake and Lake Shangrila and Whitewater and Rice Lakes only), manual harvesting of aquatic plants around piers and docks, and monitoring of invasive species populations.
- Maintaining (Lauderdale Lakes and Whitewater and Rice Lakes) or establishing (Benet Lake and Lake Shangrila) public access sites in a manner consistent with Chapter NR 1 standards and Chapter NR 7 guidelines.
- Regular participation in the UWEX Citizen Lake Monitoring Network (CLMN) volunteer water quality monitoring program.
- Conduct of regular informational programs, focusing on providing riparian residents and lake users with an improved understanding of the lake ecosystem.

Stream Management Planning

The Commission works with local units of government and the WDNR and Department of Transportation (WisDOT) to develop local stream system management plans and provide technical assistance for stream protection and restoration, including rehabilitation of impaired streams and re-creation of streams that have historically been subjected to ditching or channelization. This work is often documented in reports which describe the existing chemical, biological, and physical water quality conditions of each stream reach in question; existing and proposed uses of the stream and attendant water quality objectives and standards; recommended pollution abatement measures required in each watershed to protect and enhance stream water quality and biological integrity and function; recommended fisheries management; and other appropriate measures needed to provide for a range of suitable uses of the stream.

Technical Assistance

Prior to 2010, the Commission provided technical assistance related to stream system management to WDNR and WisDOT, and certain municipalities and other organizations. Past stream restoration assessment and design recommendations for WisDOT roadway improvement projects involving stream relocation include the following: USH 45, Tributary to the Milwaukee River, Washington County; N. 124th Street and W. Brown Deer Road, Dretzka Park Creek, Waukesha County; S. 35th Street and W. Rawson Avenue, East Branch of the Root River, Milwaukee County; STH 120 Lake Geneva Bypass, West Branch Nippersink Creek, Walworth County; STH 83 Bypass, Karcher Creek, Kenosha County; USH 12/STH 67 Bypass, Tributary to Sugar Creek, Walworth County; Tri-County Road, Tributary to Galloway Creek, Walworth, Kenosha, and Jefferson Counties; and STH 16/67 Oconomowoc Bypass, Rosenow Creek, Waukesha County; Southeast Corridor Interchange (IH 94) at CTH KR, Tributary to Kilbourn Road Ditch, Kenosha County; and Southeast Corridor Interchange (IH 94) at CTH G, Tributary to the Root River, Racine County. The results of these investigations were reported to the communities in the form of Commission staff memoranda and letter reports.

Also, prior to 2010, the Commission provided technical assistance to the City of New Berlin, Village of Hales Corners, and the Kelly Lakes Association, Inc., during

the implementation of recommended lake protection measures set forth in SEWRPC Memorandum Report No. 135, A Lake Protection Plan for the Kelly Lakes, Milwaukee and Waukesha Counties, Wisconsin, published during October 2000. The assistance provided related to the re-creation of stream and floodplain ecosystems tributary to Upper Kelly Lake, and is documented in a 2nd Edition of SEWRPC Memorandum Report No. 135. In addition, Commission staff provided technical assistance to Washington County for the development of the Quaas Creek Watershed Protection Plan, completed in 2004. The assistance provided an assessment of channel stability and biological assessment of Quaas Creek and was summarized in SEWRPC Memorandum Report No. 151. In 2010, the Commission staff continued to support implementation of the recommended actions set forth in SEWRPC Community Assistance Planning Report No. 284, Pebble Creek Watershed Protection Plan, Part One, published in June 2008.

Also during 2010, the Commission staff provided ongoing technical assistance relating to stream system management to WDNR, WisDOT, and certain municipalities and other organizations. The Commission staff conducted the physical, chemical, and biological assessment and preliminary stream design including special provisions to improve fish and other aquatic organism passage recommendations for the bridge and/or culverts associated with the following projects: two Unnamed Tributaries to the West Branch Root River Canal in Walworth County associated with the USH 45 and STH 20 roadway improvement project; Spring Brook associated with the STH 83 project in Waukesha County; the CTH DD bridge replacement on Sugar Creek in the Town of Spring Prairie, Walworth County; the CTH X bridge replacement on Little Turtle River in the Town of Sharon, Walworth County; STH 60 from USH 41 to USH 45 culvert replacements on Lehner Creek and Cedar Creek in Washington County; the STH 24 culvert replacement on the Northwest Branch of Whitnall Park Creek in the Village of Hales Corners, Milwaukee County; and the STH 38 culvert replacement on Husher Creek tributary to the Root River, in Racine County. Commission staff also reviewed hydrologic and hydraulic analyses as well as provided stream channel cross section design recommendations for the headwater reaches of Villa Mann Creek in Milwaukee County associated with the IH 94 North-South Freeway project.

During 2010, technical assistance relating to specific stream management needs with respect to planning for,

and the potential consequences of, the removal of existing impoundments on major streams also was provided to municipalities and lake districts, notably for the Monterey dam on the Ashippun River in Waukesha County. Specifically, field inventories were conducted and the results shared with the Town of Oconomowoc and WDNR as part of the Environmental Assessment process.

In 2010, the Commission continued to provide technical support to the Southeastern Wisconsin Fox River Commission, as set forth under Subchapter VI of Chapter 33 of the *Wisconsin Statutes*.

In 2009 and 2010, SEWRPC staff assisted the Southeastern Wisconsin Watersheds Trust, Inc. (SWWT) and the Milwaukee Metropolitan Sewerage District (MMSD) in the development of watershed restoration plans (WRPs) for the Menomonee and Kinnickinnic River watersheds. Specifically, the Commission staff served as Chair of the Habitat Subcommittee as requested by the Science Committee of the SWWT. The Subcommittee was formed to develop recommendations to conserve and restore fisheries and wildlife habitat within the Menomonee and Kinnickinnic River watersheds.

During 2010, the Commission staff continued to participate in the Mukwonago River Fisheries Committee meetings that are held quarterly in partnership with the Nature Conservancy, Friends of the Mukwonago River, Eagle Spring Lake Management District, University of Wisconsin-Waukesha, Wisconsin Lutheran College, and WDNR.

In 2010, the Commission staff also provided technical assistance for a Milwaukee Metropolitan Sewerage District project to remove concrete to improve fish passage on the Menomonee River; and a Groundwork Milwaukee, Inc. habitat improvement project in the Menomonee and Kinnickinnic River portions of the Milwaukee Harbor estuary.

Stream Protection Plans

A Stream Habitat and Biological Condition Assessment for the Kinnickinnic and Menomonee River Watersheds

During 2010, the Commission staff completed a stream habitat and biological assessment of the Kinnickinnic River and Menomonee River watersheds. This assessment is documented in Memorandum Report No. 194, *Stream Habitat Conditions and Biological* Assessment of the Kinnickinnic and Menomonee River Watersheds: 2000-2009, published in January 2010. The assessment provides a strategic framework for decisionmaking and project prioritization by the SWWT and other organizations and agencies for the purposes of 1) protecting and improving recreation, water quality, and fisheries and 2) cost-effectively and efficiently implementing projects to meet those improvement goals. Each of these prioritization strategies is based upon the main premise of protecting the existing quality areas either in water or on land-and expanding those areas through reconnection of streams and/or riparian lands to reduce fragmentation. This framework is based upon a three-tiered approach, focused on the reconnection of waterways that have been historically isolated from the Lake Michigan stream system through construction of dams, roadways, and flow control structures, or modified through construction of single-purpose systems, such as stormwater conveyances:

- Tier 1–Restoring connectivity and habitat quality between the mainstem waterways and the Lake Michigan endpoint,
- Tier 2–Restoring connectivity and habitat quality between the tributary streams and the mainstems of the Menomonee and Kinnickinnic Rivers, and
- Tier 3–Expanding connection of highest-quality fish, invertebrate, and habitat sites within each of the watersheds.

The third tier is a "catch-all" that enables stakeholders to link the goals of habitat restoration and improvement of recreational options with ongoing activities throughout each watershed. This strategic element provides the flexibility for communities and stakeholders to take advantage of opportunities throughout each watershed that may arise independently of the primary strategy of restoring linkages with Lake Michigan and tributary streams. Land-based measures are prioritized in a manner similar to the Three-Tiered Instream fisheries approach, and are designed to focus on protecting the existing highest-quality terrestrial wildlife habitat areas as well as expanding riparian corridors to preserve instream quality for the short- and long-term.

A Stream Protection Plan for the Mukwonago River Watershed

During 2010, the Commission staff completed a river protection plan for the Mukwonago River watershed in Waukesha and Walworth Counties. This plan is documented in SEWRPC Community Assistance Planning Report No. 309, Mukwonago River Watershed Protection Plan, published in June 2010. The plan provides a strategic framework for decision-making and project prioritization for the purposes of 1) protecting and improving recreation, water quality, and fisheries and 2) cost-effectively and efficiently implementing projects to meet improvement goals for those purposes. The recommendations set forth therein focus on those measures which are applicable to the stakeholders and agencies with jurisdiction within the Mukwonago River watershed. General purpose units of government within the Mukwonago River watershed-counties, villages, and towns-are specifically encouraged to adopt the recommendations and implement this protection plan through local policies, practices, programs, and ordinances where appropriate. Many other actions can be implemented by other stakeholders, including special purpose units of government, nonprofit conservation organizations, and individual citizens.

Maintenance and improvement of habitat for fish and aquatic organisms in the Mukwonago River watershed is important to the quality of life of the residents throughout that area. The provision of fish and aquatic life passage is closely linked with the restoration and recreation of instream and riparian habitat. This habitat provides not only refuges for fishes and aquatic life, but also forms feeding and breeding areas necessary for the survival of these organisms. Shoreland habitat, in the form of vegetated buffers, contributes to the natural ambience of the river systems and their tributaries, and provides important ecosystem functions related to flood mitigation, groundwater recharge, water quality enhancement, and terrestrial wildlife. Maintaining connection of the rivers and streams to their floodplains provides ecological benefits and helps to protect and promote human activities in the watersheds, limiting flood damage and promoting good public health, while at the same time enhancing the visual landscape and providing the human inhabitants with recreational opportunities, including angling, boating, hunting, and scenic viewing opportunities. Protection of the lands through appropriate zoning provisions, purchase, and/or acquisition of easements as opportunities arise is an important aspect of the land-based and instream-based prioritization strategies developed to protect the Mukwonago River watershed.

Continued monitoring of aquatic (physical, chemical, biological) and terrestrial conditions are essential components of both the land-based and instream-based priority actions in order to document achievement of goals and objectives of this plan and to refine the objectives as necessary as remedial measures are implemented.

Ultimately, implementation of the recommended actions will ensure progress toward achievement of the fishable and swimmable goals of the Federal Clean Water Act, and will enhance the quality of life of the resident populations of the watershed and of visitors to the watershed.

Sewerage Facilities Planning

During 2010, the Commission continued to work with local engineering staffs and consultants in the preparation of detailed local sewerage facilities plans designed to meet the requirements of Section 201 of the Federal Clean Water Act, the requirements of the Wisconsin Clean Water Fund administered by the WDNR, and good engineering practice. Work activities during 2010 included the provision of basic economic, demographic, land use, and natural resource base data for use in the preparation of the facilities plans; the extension of the findings and recommendations of the regional water quality management plan, particularly those regarding sanitary sewer service areas, trunk sewer configurations, and treatment plant locations, capacities, and levels of treatment; and the review of, and comment on, the preliminary plans.

During 2010, the Commission staff continued to assist local units of government within the Region in developing facility plans for modifications to existing public sewerage systems. Local facilities plan amendments were reviewed for portions of the Cities of Franklin and Muskego in the Milwaukee Metropolitan Sewerage District service area, the City of West Bend, and the Villages of Mukwonago and Paddock Lake, Also, review comments were provided for a facilities plan for a proposed private wastewater treatment facility in the Village of Richfield.

Sanitary Sewer Extensions and Sewer Service Area Refinement Process

The adoption by the Commission during 1979 of a regional water quality management plan for Southeastern Wisconsin set into motion a process whereby, under rules promulgated by the WDNR, the Commission must review and comment on all proposed public sanitary sewer extensions. Such review and comment must relate a proposed public sewer extension to the sanitary sewer service areas identified in the adopted regional water quality management plan; and, under Section NR 110.08(4) of the Wisconsin Administrative Code, the WDNR may not approve any proposed public sanitary sewer extension unless such extension is found to be in conformance with the adopted areawide water quality management plan. In addition, rule changes promulgated by the then Wisconsin Department of Industry, Labor and Human Relations during 1985 require the Commission to comment on certain proposed private sanitary sewer extensions and large onsite sewage disposal systems and holding tanks relative to the adopted areawide water quality management plan. Under Section COMM 82.20(4) of the Wisconsin Administrative Code, the Wisconsin Department of Commerce may not approve any proposed private main sewer or building sewer extension unless such extension is found to be in conformance with an adopted areawide water quality management plan. A similar finding must be made for large-scale onsite sewage treatment and disposal systems and holding tanks under a cooperation agreement between the Wisconsin Departments of Commerce and Natural Resources.

When the regional water quality management plan was adopted in 1979, that plan included preliminary recommended sanitary sewer service areas tributary to each recommended public sewage treatment plant within the Region. A total of 85 such sanitary sewer service areas were delineated in the adopted plan. These initially recommended sanitary sewer service areas were based upon the second-generation regional land use plan for the plan design year 2000. As such, the preliminary delineations were general in nature and did not reflect detailed local planning considerations.

Accordingly, the Commission recommended that upon adoption of the regional water quality management plan, work be undertaken to refine and detail each of the sewer service areas in cooperation with the local units of government concerned. A process for refining and detailing the areas was set forth in the adopted regional plan, involving intergovernmental meetings with the affected units of government for each area and culminating in the holding of a public hearing on the refined and detailed sewer service area map. Such a map was to identify not only the planned perimeter of the sewer service area, but also the location and extent of the primary environmental corridors within that service area. Those corridors contain the best and most important elements of the natural resource base. Preserving the environmental corridor lands in essentially natural, open uses was considered essential to the maintenance of the overall quality of the environment and to avoidance of the creation of serious and costly developmental problems. Urban development was to be excluded from the corridors identified in the sewer service area plans, an important factor to be considered in the extension of sanitary sewer service.

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

As noted above, the regional water quality management plan as originally adopted in 1979 identified 85 sanitary sewer service areas. Subsequent to adoption of the original plan, the Commission, in cooperation with the local units of government concerned, has carried out a continuing work effort to refine and detail the planned sewer service areas within the Region and thereby amend the adopted regional water quality management plan. During 2010, this work effort included the following:

• Adoption by the Commission of amendments to the sanitary sewer service areas for the Village of Genoa City and environs in Walworth County and the City of New Berlin in Waukesha County.

By the end of 2010, as a result of the refinement and detailing process, a total of 73 of the 85 initially identified sanitary sewer service areas had been refined and detailed. Because the refinement and detailing process sometimes involves the redefinition and combination of previously defined areas, these 73 originally defined areas are represented by a total of 57 redefined areas.

In addition, the refinement and detailing process sometimes has resulted in the recognition of new sanitary sewer service areas that were either not envisioned in the original 1979 regional water quality management plan or were part of envisioned larger sewer service areas. As of the end of 2010, 13 such areas had been delineated by amendments to the regional water quality management plan. These 13 new areas include the following: the Powers-Benedict-Tombeau Lakes area, located in Kenosha and Walworth Counties; the City of Franklin and the City of Oak Creek portions of the Milwaukee Metropolitan Sewerage District (MMSD), located in Milwaukee County; the Bohner Lake area, located in Racine County; Alpine Valley, the Country Estates Sanitary District, the Pell Lake, and the Mallard Ridge Landfill areas, all located in Walworth County; the Eagle Spring Lake Sanitary District, the Village of Big Bend and environs, the Village of Lannon portion of the Lannon-Menomonee Falls area, and the Mukwonago County Park area, all located in Waukesha County; and the Rainbow Springs area, located in both Waukesha and Walworth Counties.

The planning status of the recommended sanitary sewer service areas within the Region is summarized in Table 27 and on Map 27. The table identifies the 85 initially identified sewer service areas; the 73 initially identified sewer service areas for which the recommended plan refinement process was completed at the end of 2010; and the 57 redefined areas and the 12 new areas resulting from the plan refinement process. The table also identifies the documents setting forth each refined and detailed sanitary sewer service area plan and the respective dates on which the Commission adopted those documents as amendments to the regional water quality management plan.

Pending the completion of such plan refinement studies in cooperation with the local units of government concerned, the Commission must use the more general sewer service area recommendations set forth in the adopted regional water quality management plan as basis for reviewing and commenting on individual proposed sanitary sewer extensions.

During 2010, review comments were provided on 49 proposed public sanitary sewer extensions and 45 proposed private main sewer or building sewer extensions, distributed by county as shown in Table 28.

WATER SUPPLY PLANNING

Regional Water Supply Planning Program

During 2010, the Commission water supply planning was focused primarily on completing a regional water supply plan for the seven-county Southeastern Wisconsin Region. The plan, which identifies the best means of providing a sustainable water supply for the

Table 27

PLANNED SANITARY SEWER SERVICE AREAS IN THE REGION: 2010

	Name(s) of Initially	Name(s) of Refined	Date of SEWRPC			
County	Sewer Service Area(s)	Sewer Service Area(s) ^a	Plan Amendment	Plan Amendment Document		
Kenosha	Bristol IH 94 Kenosha Pleasant Park Pleasant Prairie North Pleasant Prairie South Somers	Greater Kenosha	December 5, 2001	Amendment to the Regional Water Quality Management Plan, Greater Kenosha Area, December 2001		
	Bristol-George Lake	Bristol	December 1, 1986	SEWRPC Community Assistance Planning Report No. 145, Sanitary Sewer Service Area for the Town of Salem Utility District No. 1, Village of Paddock Lake, and Town of Bristol Utility District Nos. 1 and 1B, Kenosha County, Wisconsin, October 1986		
	Camp-Center Lakes Cross Lake Rock Lake Wilmot Hooker-Montgomery Lakes	Salem	March 7, 2001	Amendment to the Regional Water Quality Management Plan, Town of Salem, March 2001		
	Paddock Lake	Paddock Lake	December 1, 1986	SEWRPC Community Assistance Planning Report No. 145, Sanitary Sewer Service Area for the Town of Salem Utility District No. 1, Village of Paddock Lake, and Town of Bristol Utility District Nos. 1 and 1B, Kenosha County, Wisconsin, October 1986		
		Powers-Benedict- Tombeau Lakes	December 7, 1994	Amendment to the Regional Water Quality Management Plan—2000, Pell Lake Area and Powers-Benedict-Tombeau Lakes Area, Kenosha and Walworth Counties, December 1994		
	Silver Lake	Silver Lake	December 2, 1998	SEWRPC Community Assistance Planning Report No. 119, 2nd Edition, Sanitary Sewer Service Area for the Village of Silver Lake and Environs, Kenosha County, Wisconsin, December 1998		
	Twin Lakes	Twin Lakes	June 15, 1987	SEWRPC Community Assistance Planning Report No. 149, Sanitary Sewer Service Area for the Village of Twin Lakes, Kenosha County, Wisconsin, May 1987		
Milwaukee	Milwaukee Metropolitan Sewerage District (portion)	Franklin	December 5, 1990	SEWRPC Community Assistance Planning Report No. 176, Sanitary Sewer Service Area for the City of Franklin, Milwaukee County, Wisconsin, October 1990		
	Milwaukee Metropolitan Sewerage District (portion)	Oak Creek	September 7, 1994	SEWRPC Community Assistance Planning Report No. 213, Sanitary Sewer Service Area for the City of Oak Creek, Milwaukee County, Wisconsin, July 1994		
	Milwaukee Metropolitan Sewerage District (portion)					
	South Milwaukee					
Ozaukee	Belgium	Belgium	September 15, 1993	SEWRPC Community Assistance Planning Report No. 97, 3rd Edition, Sanitary Sewer Service Area for the Village of Belgium, Ozaukee County, Wisconsin, August 1993		
	Cedarburg Grafton	Cedarburg Grafton	June 19, 1996	SEWRPC Community Assistance Planning Report No. 91, 2nd Edition, Sanitary Sewer Service Areas for the City of Cedarburg and the Village of Grafton, Ozaukee County, Wisconsin, June 1996		
	Fredonia Waubeka	Fredonia Waubeka	March 3, 2004	SEWRPC Community Assistance Planning Report No. 96, 2nd Edition, Sanitary Sewer Service Area for the Village of Fredonia, Ozaukee County, Wisconsin, March 2004		
	Lake Church					

		Neme (a) of Defined			
County	Defined Sanitary Sewer Service Area(s)	and Detailed Sanitary Sewer Service Area(s) ^a	Adoption of Plan Amendment	Plan Amendment Document	
Ozaukee (continued)	Mequon Thiensville	Mequon Thiensville	January 15, 1992	SEWRPC Community Assistance Planning Report No. 188, Sanitary Sewer Service Area for the City of Mequon and the Village of Thiensville, Ozaukee County, Wisconsin, January 1992	
	Port Washington	Port Washington	December 6, 2000	SEWRPC Community Assistance Planning Report No. 95, 2nd Edition, Sanitary Sewer Service Area for the City of Port Washington, Ozaukee County, Wisconsin, December 2000	
	Saukville	Saukville	December 1, 1983	SEWRPC Community Assistance Planning Report No. 90, Sanitary Sewer Service Area for the Village of Saukville, Ozaukee County, Wisconsin, September 1983	
Racine	Burlington Bohner Lake	Burlington	December 5, 2001	SEWRPC Community Assistance Planning Report No. 78, 2nd Edition, Sanitary Sewer Service Area for the City of Burlington and Environs, Racine County, Wisconsin, December 2001	
	Eagle Lake	Eagle Lake	January 18, 1993	SEWRPC Community Assistance Planning Report No. 206, Sanitary Sewer Service Area for the Eagle Lake Sewer Utility District, Racine County, Wisconsin, December 1992	
	Racine Caddy Vista	Racine Caddy Vista	June 18, 2003	SEWRPC Community Assistance Planning Report No. 147, 2nd Edition, Sanitary Sewer Service Area for the City of Racine and Environs, Racine County, Wisconsin, June 2003	
	Southern Wisconsin Center	Southern Wisconsin Center	September 12, 1990	SEWRPC Community Assistance Planning Report No. 180, Sanitary Sewer Service Area for the Village of Union Grove and Environs, Racine County, Wisconsin, August 1990	
	Union Grove	Union Grove	September 12, 1990	SEWRPC Community Assistance Planning Report No. 180, Sanitary Sewer Service Area for the Village of Union Grove and Environs, Racine County, Wisconsin, August 1990	
	Waterford/Rochester Tichigan Lake	Waterford/Rochester	April 24, 1996	SEWRPC Community Assistance Planning Report No. 141, 2nd Edition, Sanitary Sewer Service Area for the Waterford/Rochester Area, Racine County, Wisconsin, April 1996	
	Wind Lake	Norway	June 16, 1999	SEWRPC Community Assistance Planning Report No. 247, Sanitary Sewer Service Area for the Town of Norway Sanitary District No. 1 and Environs, Racine and Waukesha Counties, Wisconsin, June 1999	
	Yorkville				
Walworth	Darien	Darien	September 23, 1992	SEWRPC Community Assistance Planning Report No. 123, 2nd Edition, Sanitary Sewer Service Area for the Village of Darien, Walworth County, Wisconsin, July 1992	
	Delavan Delavan Lake Elkhorn Walworth County Institutions Williams Bay Lake Como	Delavan-Delavan Lake Elkhorn Williams Bay-Geneva National- Lake Como Mallard Ridge Landfill	December 4, 1991	SEWRPC Community Assistance Planning Report No. 56, 2nd Edition, Sanitary Sewer Service Areas for the Walworth County Metropolitan Sewerage District, November 1991	
	East Troy Potter Lake Alpine Valley	East Troy	December, 2000	SEWRPC Community Assistance Planning Report No. 112, 3rd Edition, Sanitary Sewer Service Area for the Village of East Troy and Environs, Walworth County, Wisconsin, December 2000	

County	Name(s) of Initially Defined Sanitary	Name(s) of Refined and Detailed Sanitary	Date of SEWRPC Adoption of	Dian Amondment Desument
Walworth (continued)	Fontana Walworth	Fontana-Walworth	June 21, 1995	SEWRPC Community Assistance Planning Report No. 219, Sanitary Sever Service Area for the Villages of Fontana and Walworth and Environs, Walworth County, Wisconsin, June 1995
	Genoa City	Genoa City	June 19, 1996	SEWRPC Community Assistance Planning Report No. 175, 2nd Edition, Sanitary Sewer Service Area for the Village of Genoa City, Kenosha and Walworth Counties, Wisconsin, May 1996
	Lake Geneva	Lake Geneva	January 18, 1993	SEWRPC Community Assistance Planning Report No. 203, Sanitary Sewer Service Area for the City of Lake Geneva and Environs, Walworth County, Wisconsin, December 1992
	Lyons 	Lyons Country Estates Sanitary District	September 15, 1993	SEWRPC Community Assistance Planning Report No. 158, 2nd Edition, Sanitary Sewer Service Area for the Town of Lyons Sanitary District No. 2, Walworth County, Wisconsin, August 1993
		Pell Lake	June 19, 1996	SEWRPC Community Assistance Planning Report No. 225, Sanitary Sewer Service Area for the Pell Lake Sanitary District No. 1, Walworth County, Wisconsin, June 1996
	Sharon			
	Whitewater	Whitewater	March 1, 1995	SEWRPC Community Assistance Planning Report No. 94, 2nd Edition, Sanitary Sewer Service Area for the City of Whitewater, Walworth County, Wisconsin, March 1995
Washington	Allenton	Allenton	March 3, 2004	SEWRPC Community Assistance Planning Report No. 103, 2nd Edition, Sanitary Sewer Service Area for the Allenton Area, Washington County, Wisconsin, March 2004
	Germantown	Germantown	September 8, 1983	SEWRPC Community Assistance Planning Report No. 70, Sanitary Sewer Service Area for the Village of Germantown, Washington County, Wisconsin, July 1983
	Hartford	Hartford	September 12, 2001	SEWRPC Community Assistance Planning Report No. 92, 3rd Edition, Sanitary Sewer Service Area for the City of Hartford and Environs, Washington County, Wisconsin, September 2001
	Jackson	Jackson	September 10, 1997	SEWRPC Community Assistance Planning Report No. 124, 2nd Edition, Sanitary Sewer Service Area for the Village of Jackson and Environs, Washington County, Wisconsin, September 1997
	Kewaskum	Kewaskum	March 7, 1988	SEWRPC Community Assistance Planning Report No. 161, Sanitary Sewer Service Area for the Village of Kewaskum, Washington County, Wisconsin, December 1988
	Newburg	Newburg	March 3, 1993	SEWRPC Community Assistance Planning Report No. 205, Sanitary Sewer Service Area for the Village of Newburg, Ozaukee and Washington Counties, Wisconsin, March 1993
	Slinger	Slinger	December 2, 1998	SEWRPC Community Assistance Planning Report No. 128, 3rd Edition, Sanitary Sewer Service Area for the Village of Slinger and Environs, Washington County, Wisconsin, December 1998
	West Bend	West Bend	June 17, 1998	SEWRPC Community Assistance Planning Report No. 35, 2nd Edition, Sanitary Sewer Service Area for the City of West Bend and Environs, Washington County, Wisconsin, June 1998

County	Name(s) of Initially Defined Sanitary Sewer Service Area(s)	Name(s) of Refined and Detailed Sanitary Sewer Service Area(s) ^a	Date of SEWRPC Adoption of Plan Amendment	Plan Amendment Document
Waukesha	Beaver Lake			
	Village of Big Bend and Environs	Big Bend	March 10, 2010	SEWRPC Community Assistance Planning Report No. 308, Sanitary Sewer Service Area for the Village of Big Bend and Environs, Waukesha County, Wisconsin, March 2010
	Brookfield East Elm Grove Brookfield West	Brookfield East Brookfield West	December 4, 1991	SEWRPC Community Assistance Planning Report No. 109, Sanitary Sewer Service Area for the City and Town of Brookfield and the Village of Elm Grove, Waukesha County, Wisconsin, November 1991
	Butler	Butler	March 1, 1984	SEWRPC Community Assistance Planning Report No. 99, Sanitary Sewer Service Area for the Village of Butler, Waukesha County, Wisconsin, February 1984
	Delafield-Nashotah Nashotah-Nemahbin Lakes	Delafield-Nashotah	January 18, 1993	SEWRPC Community Assistance Planning Report No. 127, Sanitary Sewer Service Area for the City of Delafield and the Village of Nashotah and Environs, Waukesha County, Wisconsin, November 1992
	Dousman	Dousman	March 7, 2007	SEWRPC Community Assistance Planning Report No. 192, 3rd Edition, Sanitary Sewer Service Area for the Village of Dousman, Waukesha County, Wisconsin, March 2007
		Eagle Spring Lake	December 2, 1985	Amendment to the Regional Water Quality Management Plan—2000, Eagle Spring Lake Sanitary District, December 1985
	Hartland	Hartland	June 17, 1985	SEWRPC Community Assistance Planning Report No. 93, Sanitary Sewer Service Area for the Village of Hartland, Waukesha County, Wisconsin, April 1985
	Menomonee Falls	Menomonee Falls Lannon	June 16, 1993	SEWRPC Community Assistance Planning Report No. 208, Sanitary Sewer Service Areas for the Villages of Lannon and Menomonee Falls, Waukesha County, Wisconsin, June 1993
	Mukwonago	Mukwonago	December 5, 1990	SEWRPC Community Assistance Planning Report No. 191, Sanitary Sewer Service Area for the Village of Mukwonago, Waukesha County, Wisconsin, November 1990
		Mukwonago County Park	June 21, 1984	Amendment to the Regional Water Quality Management Plan—2000, Village of Mukwonago, Towns of East Troy and Mukwonago, June 1984
	Muskego	Muskego	December 3, 1997	SEWRPC Community Assistance Planning Report No. 64, 3rd Edition, Sanitary Sewer Service Area for the City of Muskego, Waukesha County, Wisconsin, December 1997
	New Berlin	New Berlin	December 7, 1987	SEWRPC Community Assistance Planning Report No. 157, Sanitary Sewer Service Area for the City of New Berlin, Waukesha County, Wisconsin, November 1987
	North Lake			
	North Prairie			
	Oconomowoc-Lac La Belle Silver Lake	Oconomowoc	September 15, 1999	SEWRPC Community Assistance Planning Report No. 172, 2nd Edition, Sanitary Sewer Service Area for the City of Oconomowoc and Environs, Waukesha County, Wisconsin, September 1999
	Oconomowoc Lake			
	Okauchee Lake			

County	Name(s) of Initially Defined Sanitary Sewer Service Area(s)	Name(s) of Refined and Detailed Sanitary Sewer Service Area(s) ^a	Date of SEWRPC Adoption of Plan Amendment	Plan Amendment Document
Waukesha (continued)	Pewaukee	Pewaukee	June 17, 1985	SEWRPC Community Assistance Planning Report No. 113, Sanitary Sewer Service Area for the Town of Pewaukee Sanitary District No. 3, Lake Pewaukee Sanitary District, and Village of Pewaukee, Waukesha County, Wisconsin, June 1985
	Pine Lake			
		Rainbow Springs	June 21, 1984	Amendment to the Regional Water Quality Management Plan—2000, Village of Mukwonago, Towns of East Troy and Mukwonago, June 1984
	Sussex-Lannon	Sussex	September 7, 1994	SEWRPC Community Assistance Planning Report No. 84, 2nd Edition, Sanitary Sewer Service Area for the Village of Sussex, Waukesha County, Wisconsin, September 1994
	Wales			
	Waukesha	Waukesha	March 3, 1999	SEWRPC Community Assistance Planning Report No. 100, 2nd Edition, Sanitary Sewer Service Area for the City of Waukesha and Environs, Waukesha County, Wisconsin, March 1999

^aThis category also includes unrefined sanitary sewer service areas that either were not envisioned in the original 1979 regional water quality management plan or were part of larger sanitary sewer service areas, but have since been delineated by amendments to the regional water quality management plan.

Table 28

SANITARY SEWER EXTENSION REVIEWS: 2010

County	Public Sanitary Sewer Extensions	Private Main Sewer or Building Sewer Extensions	Total
Kenosha	6	2	8
Milwaukee	2	14	16
Ozaukee	3	2	5
Racine	4	10	14
Walworth	3	5	8
Washington	5	3	8
Waukesha	15	9	24
Total	38	45	83

^a Hartford sewer service area.

^b Village of Lac La Belle.

^cThe Commission has delegated the responsibility for the review of building sewer extensions within the City of Milwaukee to the City. During 2010, 251 reviews of building sewer extensions were conducted by the City.

Region, was published as SEWRPC Planning Report No. 52, *A Regional Water Supply Plan for Southeastern Wisconsin*, December 2010.

The planning effort was overseen by the SEWRPC Regional Water Supply Planning Advisory Committee. Membership on this Committee includes knowledgeable and concerned representatives of the constituent counties and municipalities; of State and Federal agencies; of the academic community; and of businesses and industries. The water supply plan was initiated in 2005 and is scheduled to be completed in 2010.

The preparation of the regional water supply plan represents the third, and final, element of the Commission's water supply planning program. The first element-completed in 2002-consisted of basic groundwater resource inventories. The second element-completed in 2004-consisted of the development of a groundwater simulation model for the Region. The completion of these elements involved interagency partnership programs with the U.S. Geological Survey (USGS), the Wisconsin Geological and Natural History Survey (WGNHS), the University of Wisconsin-Milwaukee (UWM), the WDNR, and a number of the public water supply utilities serving the Region.

Summary of the Regional Water Supply Plan

The regional water supply plan includes recommendations concerning: 1) sources of water supply, 2) water conservation, 3) groundwater recharge area protection, 4) stormwater management practices, 5) high capacity well siting practices, and 6) enhanced rainfall Map 27

RECOMMENDED SANITARY SEWER SERVICE AREAS IN THE REGION: 2010



infiltration. In addition, the plan includes a series of auxiliary recommendations. These recommendations, taken together, are intended to serve as the basis for the provision of a long-term, sustainable water supply for the Southeastern Wisconsin Region.

Land Use Basis for the Regional Water Supply Plan

The adopted design year 2035 regional land use plan served as the basis for the preparation of the regional water supply plan. The regional land use plan seeks to encourage infill development and redevelopment in existing urban centers, and the location of new urban development adjacent to and outward from existing urban centers in areas which can be readily served by sanitary sewerage, public water supply systems, and mass transit facilities. The plan seeks to preserve the environmental corridors and isolated natural resource areas within the Region in essentially natural open uses, and to preserve the best remaining agricultural areas of the Region in agricultural uses.

Plan Recommendations Related to Sources of Water Supply

The regional water supply plan identifies 81 areas that by the plan design year are recommended to be served by public water utilities. These areas are shown on Map 28. The new facilities required to serve these areas are shown on Map 29.

These areas include 60 utilities, or portions of utilities, that have been determined to have adequate existing sources of water supply. These utilities are recommended to continue to use their existing sources of supply, with expansion of infrastructure, as needed, to serve the forecast demand in their existing and proposed plan design year 2035 service areas. Among these 60 utilities are 27 that rely on Lake Michigan as a source of supply, and 33 that rely on groundwater as a source of supply.

The plan recommends that four utilities—the City of Delavan Water and Sewage Utility, the City of Elkhorn Water Utility, the Village of Union Grove Water Utility, and the Village of Bristol Utility District No. 1—over time increase their reliance on the shallow aquifer and decrease their reliance on the deep aquifer as sources of supply. In addition, the plan recognizes that the City of Hartford completed a new shallow aquifer well and abandoned its one existing deep aquifer well in 2010, resulting in complete reliance upon the shallow aquifer. There are four utilities—the western portion of the City of Brookfield Water Utility, the City of Pewaukee Water Utility, the Village of Pewaukee Water Utility, and the Village of Sussex Water Utility—for which the plan recommends increased reliance on the shallow aquifer as a source of supply and treatment of the existing deep aquifer source of supply.

The plan recommends the development of a new water utility to serve the Village of Elm Grove. It is recommended that this utility utilize a Lake Michigan water supply.

The plan recommends that the existing Prairie Village Water Trust serving the Village of North Prairie be converted to a municipal water utility and serve the North Prairie water supply service area using groundwater supplies.

The Village of Lannon proposed water utility is recommended to be served by groundwater supplies.

The plan recommends that eight utilities which currently utilize groundwater as the source of supply, and have return flow to Lake Michigan in place, convert to Lake Michigan as a source of supply. Six of those service areas-the eastern portion of the City of Brookfield Water Utility, the City of Cedarburg Light & Water Commission, the Village of Germantown Water Utility, the Village of Grafton Water and Wastewater Commission, the Village of Saukville Municipal Water Utility, and the Town of Yorkville Utility District No. 1-are located east of the subcontinental divide which traverses the Region. While the other two service areas-the central portion of the City of New Berlin Water Utility service area and the City of Muskego Public Water Utility-serve communities that straddle the subcontinental divide, they are located within the Milwaukee Metropolitan Sewerage District service area and have provisions for return flow in place. With regard to the City of Muskego Public Water Utility, the regional water supply plan recognizes that more-detailed engineering, legal, and environmental information will be required to support any application for Lake Michigan water supply and to meet the requirements of the Great Lakes-St. Lawrence River Basin Water Resources Compact and 2007 Wisconsin Act 227.

For several of the utilities recommended for conversion to a Lake Michigan water supply, the regional water supply plan identifies and recognizes multiple viable options available for providing the service areas concerned with a Lake Michigan water supply. These options generally involve the availability of more than one potential supplier or means of connection to a potential supplier.

For the City of Waukesha Water Utility, the plan recommends the conversion to Lake Michigan as the source of water supply with the provision of return flow to Lake Michigan. Return flow could be provided by returning treated wastewater either directly by pipeline to Lake Michigan, or to streams tributary to Lake Michigan. The City of Waukesha would continue to operate its existing wastewater treatment plant which discharges to the Fox River. The plant would provide treated wastewater for the required return flow. Moreover, the continued operation of the plant would permit the quantities of return flow to be managed, so that under certain conditions treated wastewater could be temporarily discharged to the Fox River. With regard to the recommendation for the City of Waukesha, the regional water supply plan recognizes that more-detailed engineering, legal, and environmental information will be required to support any application for Lake Michigan water supply and to meet the requirements of the Great Lakes-St. Lawrence River Basin Water Resources Compact and 2007 Wisconsin Act 227. Such information should be assembled under the necessary facilities planning and preliminary engineering required for plan implementation. The more-detailed environmental analyses related to the return flow option should include assessment of potential impacts on floodlands, water quality, stream channel erosion, and stream habitat. The environmental analysis process as set forth in Chapter NR 150 of the Wisconsin Administrative Code will have to be followed as deemed appropriate by the Wisconsin Department of Natural Resources (WDNR). This process is designed to ensure proper environmental analysis of specific projects and may include preparation of a full environmental impact statement. Because of the need for further assessment, no final recommendations relating to specific return flow component is included in the recommended plan. Rather, the selection of the best return flow option is left open until completion of the required more-detailed assessments. For the purposes of developing the cost of the regional water supply plan, a range of costs was used to represent the potential costs of the return flow options.

With regard to the return flow component associated with the City of Waukesha Water Utility conversion to a Lake Michigan supply, the plan recommends that an oversight committee be formed by the WDNR to provide guidance in the planning, operation, and monitoring of the return flow. The committee would be comprised of representatives of the agencies and units of government most directly affected, including the WDNR, Milwaukee County, Racine County, Waukesha County, the Milwaukee Metropolitan Sewerage District, the City of Waukesha Water Utility, SEWRPC, and the local units of government, including the City of Milwaukee, within which the affected streams are located, with the final composition of the committee depending upon the return flow option involved.

There are 20 areas of existing urban-density development that are currently served by private, onsite wells, which are considered as potential areas for service by municipal groundwater supplies, either through the creation of new utilities which would be served by extension of service from existing utilities or, in some cases, by the creation of new utilities, with separate sources of supply. These areas are shown on Map 28. The development of municipal water supply systems in the areas concerned is envisioned only if a local demonstrated need were to arise based upon groundwater quality or quantity issues, and if a local initiative was then undertaken to implement a municipal system. In the absence of such a need and initiative, the residents and businesses in these areas would be expected to continue to rely on private wells. If conversion to a public supply takes place in accordance with local actions, it is recommended that, to the extent practicable, the areas be served by the extension of service by existing utilities. The Public Service Commission of Wisconsin has found that such extensions offer economies of scale and are often more favorable to rate payers.

The plan recommends that the existing, self-supplied water systems serving residential communities and most of the self-supplied systems serving commercial, institutional, and recreational land uses located within planned municipal water supply service areas connect to municipal systems by the plan design year of 2035. The plan recommends continued use of private domestic wells in areas beyond the planned water supply service areas.

Plan Recommendations Related to Water Conservation Programs

The plan recommends implementation of comprehensive water conservation programs, including both supply side efficiency measures and demand side conservation measures. The scope and content of these




Map 29

NOTES: The City of Oak Creek Sewer and Water Utility completed expansion and upgrading of its water treatment plant in 2010. The City of Hartford completed the recommended new well and storage tank in 2010. This map does not indicate the return flow options of the recommended plan. conservation programs are to be determined on a utilityspecific basis to reflect the type and sustainability of the source of supply and the probable future water supply infrastructure requirements.

Recommended levels of water conservation for individual utilities are summarized on Map 30.

Plan Recommendations Related to Groundwater Recharge Area Protection

The plan recommends the protection and preservation of groundwater recharge areas classified as having a high or very high recharge potential. Such protection may be largely achieved through the implementation of the adopted design year 2035 regional land use plan and supporting county comprehensive plans, since these plans recommend preservation of the environmental corridors, natural areas, prime and other agricultural areas of the Region that facilitate recharge. Depending on the zoning and development practices utilized, additional highly rated and very highly rated recharge areas may also be substantially protected in suburbandensity and low-density residential areas. In these areas, it is recommended that careful site design and the use of stormwater management practices designed to maintain the natural hydrology and maintain recharge be applied. This would increase the level of protection for the important recharge areas. It is also recommended that the recharge areas be considered for protection and preservation by agencies and organizations involved in land conservancy activities.

Plan Recommendations Related to Stormwater Management, High-Capacity Well Siting Practices, and Rainfall Infiltration

The plan recommends:

- Implementation of state-of-the-art stormwater management practices, including application of treatment and infiltration systems, which, to the extent practicable, would maintain the natural recharge of areas committed to urban land use development.
- That studies related to the siting of all new highcapacity wells include analyses of potential impacts, and subsequent monitoring of the actual impacts, of such wells on the shallow aquifer, existing wells, and surface waters.

• Enhanced rainfall infiltration in areas where evaluations conducted in conjunction with the siting of high-capacity wells in the shallow aquifer indicate probable reductions in baseflow on nearby streams and in water levels in lakes and wetlands due to installation and operations of these wells. Two means of providing for the enhanced recharge are recommended. One means of providing this infiltration is through the installation of constructed rainfall infiltration systems, and the other is through applications of farming practices that reduce or eliminate tillage of fields.

The recommended stormwater management, highcapacity well siting, and rainfall infiltration practices are intended to form the basis for the abatement of the potential negative impacts on surface water systems associated with high-capacity well development.

Socioeconomic Impact Analysis

During 2009, the Commission engaged the services of the University of Wisconsin-Milwaukee Center for Economic Development to conduct a socioeconomic impact analysis of the preliminary recommended water supply plan. The preparation of the socioeconomic study was recommended by the Commission's Environmental Justice Task Force. That socioeconomic impact analysis was completed in July 2010 and the final recommended water supply plan includes consideration of the findings of that study.

WATERSHED, FLOODLAND, AND STORMWATER MANAGEMENT PLANNING

During 2010, Commission efforts in watershed, floodland, and stormwater management planning consisted of continuing work on programs to update floodland maps for all of Milwaukee County and portions of Ozaukee, Washington, and Waukesha Counties adjacent to Milwaukee County; coordinating with the U.S. Army Corps of Engineers to ensure that the results of the Des Plaines River watershed study are incorporated into that agency's Upper Des Plaines River Illinois/Wisconsin Phase 2 Feasibility Study; coordinating with FEMA, WDNR, the FEMA study contractor, and the counties for the floodplain Map Modernization program in Kenosha, Racine, and Washington Counties; providing technical assistance to local governmental units in the development and implementation of floodland and



stormwater management plans, policies, and practices; providing hydrologic and hydraulic data, including flood flow and flood stage data, to consulting engineers and governmental agencies; and conducting a cooperative stream gaging program.

Watershed Planning

The Commission staff continued work on a project to prepare updated, digital floodplain and floodway maps for all of Milwaukee County and portions of Ozaukee, Washington, and Waukesha Counties that are adjacent to Milwaukee County. The project is being performed for the Milwaukee County Automated Land Information System Steering Committee (MCAMLIS) and the Milwaukee Metropolitan Sewerage District (MMSD). Under the first phase of the project, updated floodland maps are being prepared for streams in the Kinnickinnic, Menomonee, and Milwaukee River watersheds; the Oak Creek watershed; and the Legend Creek subwatershed. In 2009, hydraulic modeling and floodplain delineations were conducted for Brown Deer Park Creek, Honey Creek, Lyons Park Creek, Villa Mann Creek, Villa Mann Creek Tributary, and Woods Creek. In 2010, hydraulic modeling and preliminary floodplain and floodway maps were completed for Beaver Creek. The floodplain maps were provided to the affected municipalities for review, and the MCAMLIS Steering Committee was provided with updated electronic floodplain and floodway delineations for all mapped streams in the County in a single file developed in geodatabase format.

The Des Plaines River watershed study was published in June 2003 as SEWRPC Planning Report No. 44, A Comprehensive Plan for the Des Plaines River Watershed. The plan, which was formally adopted not only by the Commission, but also by Kenosha and Racine Counties, can be accessed on the Commission website. A summary of the plan is included in SEWRPC Newsletter, Vol. 41, No. 1, 2003. The implementation phase of the Des Plaines River watershed study began in 2004, and in 2010 the Commission staff continued to coordinate with the U.S. Army Corps of Engineers and local sponsors in Illinois 1) in developing the "Upper Des Plaines River and Tributaries Phase II, Illinois and Wisconsin Multi-Purpose Feasibility Study" and 2) evaluating potential floodwater storage sites along the main stem of the Des Plaines River and several tributaries in Wisconsin. The Commission staff also served on the Plan Formulation and Project Delivery

Teams that are involved in development and oversight of that feasibility study. The feasibility study will utilize the products of the SEWRPC Des Plaines River watershed study. Kenosha County will receive about \$500,000 in credits toward its portion of the Phase II project cost based on work performed under the watershed study.

Prior to 2010, the Commission staff provided hydrologic and hydraulic information and digital floodplain maps developed under various Commission studies for use in preparation of County-wide FEMA Digital Flood Insurance Rate Maps (DFIRMs) for Kenosha, Milwaukee, Racine, and Washington Counties. In 2010, the Commission staff continued coordination with the County departments, WDNR, FEMA, and FEMA's consultants regarding the ongoing work on the DFIRMs for Kenosha, Racine, and Washington Counties.

Map 31 indicates the coverage of the watershed studies conducted by the Commission through 2010.

Stormwater and Floodland Management Planning

During 2010, the Commission staff provided technical assistance to State and local governmental agencies in resolving stormwater and floodland management problems.

The following are examples of such work:

- As part of the assistance provided to Kenosha County and the municipalities within the County relative to review of the draft FEMA flood insurance study and digital flood insurance rate maps, the Commission staff performed additional hydraulic analyses of Unnamed Trinutary No. 1 to the Des Plaines River in the Village of Pleasant Prairie.
- At the request of the City of Milwaukee, Commission staff performed hydraulic and scour analyses for two proposed alternative bridge configurations for the W. Capitol Drive (STH 190) bridge over Grantosa Creek, hydraulic analyses for a proposed temporary N. 45th Street bridge over the Menomonee River, and hydraulic analyses for proposed modifications to the Milwaukee Riverwalk system in the vicinity of Wells Street and Kilbourn Avenue.



SEWRPC WATERSHED STUDIES COMPLETED: 2010



- At the request of the City of Milwaukee, the Commission staff initiated work on updating the City's FEMA Hazard Mitigation Plan. An updated plan is necessary for the City to qualify for disaster relief funds. In 2009, the Commission staff assisted the City in applying for grant funds to be used to prepare the plan update.
- At the request of the City of Milwaukee, the Commission staff prepared a letter report providing information on rainfall frequency duration studies for stormwater management and flooding analyses.

- SEWRPC Memorandum Report No. 172, A Watercourse System Plan for the Milwaukee River in Milwaukee County Upstream of the Milwaukee Harbor Estuary, which was prepared for MMSD, was finalized and published. At the request of MMSD, the Commission staff initiated work on watercourse system plans for the North Branch of Oak Creek, Villa Mann Creek, and the Villa Mann Creek Tributary.
- At the request of MMSD, and in collaboration with the University of Wisconsin-Milwaukee Great Lakes WATER Institute, the SEWRPC staff initiated work on a study of the potential effects of climate change on the frequency and volume of combined sewer overflows and sanitary sewer overflows from the MMSD sewerage system.
- The Commission staff provided the Detroit District of the U.S. Army Corps of Engineers (USCOE) with background on SEWRPC studies related to flood damage reduction and ecosystem restoration in the Kinnickinnic, Menomonee, and Milwaukee River watersheds. The information was to be used by the USCOE in conducting a reconnaissance level study to identify a range of flood damage reduction and environmental restoration alternatives in those watersheds.
- The Commission staff completed work on SEWRPC Community Assistance Planning Report No. 266, 2nd Edition, *Racine County Hazard Mitigation Plan Update*, June 2010. The updated plan is necessary for the County to qualify for disaster relief funds.
- The Commission staff worked with Washington County to 1) determine streams for which floodplain delineations should be updated or developed within the Rubicon River watershed in the County and 2) develop a scope of work for field survey measurements of hydraulic structures along streams within that watersheds, 3) select a contractor to perform the field surveys, and 4) coordinate the field survey effort with the contractor.
- At the request of Washington County, the Commission staff prepared a floodplain study technical data submittal to FEMA and WDNR covering approximately 30 miles of stream in the Oconomowoc River watershed. The study was completed by SEWRPC prior to 2010.

- At the request of Waukesha County, the Commission staff reviewed a floodplain study which analyzed the anticipated effects on the Bark River one-percent-annual-probability (100-year recurrence interval) floodplain of a proposed outlet for the Genesee Lakes in the Village of Summit.
- The Commission staff completed a preliminary floodplain delineation for Scuppernong Creek, and provided that information to Waukesha County.
- The Commission staff continued preparation of a watershed protection plan for the Pebble Creek watershed in Waukesha County. The Pebble Creek watershed protection plan is a collaborative effort with the Land Resources Division of the Waukesha County Department of Parks and Land Use. The plan addresses management of the surface water resources of the watershed which includes Pebble Creek and Brandy Brook. Part one of the plan report was published in 2008. In 2010, work was completed on delineation of the one-percent-annual-probability floodplain boundaries along Pebble Creek and Brandy Brook.
- The Commission staff routinely provides hydrologic and hydraulic data to Federal, State, and local agencies and units of government and to private consultants for use in the design of bridges and culverts and other facilities and improvements along streams in the Region, in the facilities design phases of projects recommended under Commission plans, and in other water resource and environmental projects. During 2010, data were provided for the following: 1) the Des Plaines River watershed in Kenosha County; 2) the Kilbourn Road Ditch in the City of Kenosha; 3) Mud Lake Outlet in the Village of Bristol; 4) the Des Plaines River and Jerome Creek in the Village of Pleasant Prairie; 5) the Fox River in the Village of Silver Lake; 6) Brighton Creek in the Town of Salem; 7) the Pike River and the Somers Branch in the Town of Somers; 8) the Pike River watershed in Kenosha and Racine Counties; 9) the Kinnickinnic, Menomonee, Milwaukee, and Root River watersheds, the Oak Creek watershed, and the Lake Michigan direct drainage area in Milwaukee County; 10) the Ryan Creek subwatershed in the City of Franklin; 11) Honey Creek in the City of

Greenfield; 12) the Kinnickinnic, Little Menomonee, and Milwaukee Rivers and Lincoln and Wilson Park Creeks in the City of Milwaukee; 13) Beaver Creek in the City of Milwaukee and the Village of Brown Deer; 14) the Menomonee River in the City of Wauwatosa; 15) Beaver Creek and Southbranch Creek in the Village of Brown Deer; 16) Whitnall Park Creek in the Village of Hales Corners; 17) the Little Menomonee River in the City of Mequon; 18) Waxdale Creek in the Villages of Mt. Pleasant and Sturtevant; 19) Kewaskum Creek in the Town of Kewaskum: 20) the South Branch of Butler Ditch in the City of Brookfield; 21) Big Muskego Lake in the City of Muskego; 22) Willow Creek in the Village of Menomonee Falls and the Town of Lisbon; 23) the Menomonee and Fox River watersheds in the Village of Menomonee Falls; and 24) the Mukwonago River in the Town of Mukwonago;

Floodplain Data Availability

The availability of flood hazard data within the Region is shown on Map 32. The Commission has completed comprehensive watershed plans for the Des Plaines, Fox (Illinois), Kinnickinnic, Menomonee, Milwaukee, Pike, and Root River watersheds, and for the Oak Creek watershed, resulting in definitive flood hazard data-in the form of peak flood flows and stages associated with the one-percent-annual-probability floods-for about 748 miles of stream channel, not including stream channels in the Milwaukee River watershed lying outside the Region in Sheboygan and Fond du Lac Counties. In addition, special Commission floodland management studies have resulted in the development of definitive flood hazard data for a total of about 116 additional miles of stream channel. Large-scale topographic maps displaying the location and extent of the one-percent-annual-probability flood hazard areas and prepared to Commission specifications are available for the riverine areas along about 708 miles of stream.

Flood Insurance Rate Studies

Under the National Flood Insurance Act of 1968, the Federal Emergency Management Agency was given authority to conduct studies to determine the location and extent of floodlands and the monetary damage risks related to the insurance of urban development in floodland areas. FEMA is proceeding with the conduct and periodic updating of such studies throughout the United States. While the Commission has not directly

Map 32

DELINEATION OF FLOODLANDS: 2010



Map 33

STATUS OF FLOOD INSURANCE STUDIES: 2010



contracted with FEMA for the conduct of such studies, the Commission does assist communities and counties in obtaining updated FEMA Digital Flood Insurance Rate Maps that incorporate Commission floodplain studies conducted for those communities. The Commission also cooperates with engineering firms involved in the conduct of such studies under contract to the Federal government, particularly in the provision of basic flood hazard data already developed by the Commission in a more comprehensive and costeffective manner through its series of watershed planning programs and stormwater management planning studies. The Commission provides to the contractors all of the detailed hydrologic and hydraulic data developed under the Commission watershed studies for the various streams in the Region and shares with the contractors the results of the analytical phases of such studies. Development by the Commission of such data makes it possible for FEMA to carry out the flood insurance rate studies more efficiently and at considerably less cost than if such data had to be developed on a community-by-community basis. Commission participation in and review of the study findings, moreover, assures consistency between studies for communities located along a given river or stream.

In the past, Federal flood insurance studies were generally carried out individually for incorporated cities and villages and for the unincorporated areas of counties; however, recent FEMA policies call for development of such studies on a countywide basis. The status of flood insurance rate studies in the Region at the end of 2010 is shown on Map 33.

As shown on Map 33, as of 2010, there were six villages in the Region for which FEMA had not conducted a flood insurance rate study. In one case, FEMA has, instead, published a "flood hazard boundary map," which shows the approximate location of floodlands without the support of detailed engineering studies. As of 2010, no final determination regarding the extent of the flood hazard had been made for the remaining five villages in the Region. In 2008, FEMA extended digital flood insurance rate map (DFIRM) coverage to the Cities of Cudahy and St. Francis and the Villages of Shorewood and Whitefish Bay in Milwaukee County and the Villages of Chenequa, Merton, Nashotah, and Wales in Waukesha County. In 2010, FEMA extended DFIRM coverage to the City of Elkhorn and the Villages of Darien, Fontana-on-Geneva Lake, and Genoa City in Walworth County.

Besides providing available data from the Commission files to the contractors conducting such studies for FEMA, the Commission staff helps to delineate floodplains and attends meetings with local officials and other citizens to discuss the results of flood insurance studies. Under its community assistance program, the Commission also assists local communities in enacting sound floodland regulations as required for participation in the National Flood Insurance Program. In 2010, the Commission staff assisted the WDNR, FEMA, communities, and/or counties in coordinating the FEMA Map Modernization Program in Kenosha, Racine, and Washington Counties.

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 within the Region. Since that time, the Commission has been instrumental in establishing, through cooperative, voluntary, intergovernmental action, a more adequate streamflow-gaging program (see Map 34). The USGS assists in the funding of the stream gages, operates the gages, and annually publishes the data collected under the streamflowmonitoring program. In 2010, there were 34 continuous-recording streamflow gages in operation on stream reaches entering, lying within, or originating within the Region. That represents a reduction of three gages relative to 2009. Of the 34 gages, 15 were financially supported by the Waukesha County Board of Supervisors, the MMSD, the City of Delafield, the City of Racine and the Racine Water and Wastewater Utilities, and the Kenosha Water Utility under the Commission's cooperative program. In addition, six gages were supported by the MMSD outside the Commission's cooperative program, four gages were supported by Milwaukee County, one gage was supported by the Fontana-Walworth Water Pollution Control Commission, two gages were supported by the WDNR, one gage was supported by the U.S. Army Corps of Engineers and the Walworth County Metropolitan Sewerage District, one gage was supported by the Walworth County Metropolitan Sewerage District, one gage was supported by the Geneva Lake Environmental Agency and the WDNR, one gage was supported by the City of Muskego, and two gages were supported by the Illinois Department of Transportation.

In addition, in 2010 there were two gages at which water levels, but not streamflow, were continuously recorded. These included one at Geneva Lake in the City of Lake Geneva and one at Wind Lake in the Town of Norway.

COASTAL MANAGEMENT PLANNING

During 2010, the Regional Planning Commission continued to provide assistance to the Wisconsin Department of Administration in the conduct of the Wisconsin Coastal Management Program. This program is intended to coordinate governmental activities in the management of the Lake Michigan and Lake Superior coastal zones of the State. The program is being carried out by the State pursuant to the Federal Coastal Zone Management Act of 1972 through the Wisconsin Coastal Management Council.

Under an agreement with the Wisconsin Department of Administration, the Commission has formed a Technical and Citizen Advisory Committee on Coastal Management in Southeastern Wisconsin. This Committee represents a variety of interests, including local elected and appointed officials, the university community, and recreational, navigational, and environmental interest groups. The primary function of this Committee is the review of State coastal studies and reports as they are proposed and produced.

One of the continuing functions of the Commission under the coastal management program is to assist the Wisconsin Coastal Management Program in the designation of special coastal areas. In 2010, no additional areas in the Region were formally designated as special coastal areas. The existing Lake Michigan shoreline special coastal areas are shown on Map 35. These special areas have natural, scientific, economic, cultural, or historical importance. Designation by the Wisconsin Coastal Management Council as a special coastal area ensures eligibility for financial or technical assistance for special coastal area management activities through the Wisconsin Coastal Management Program and focuses attention on a valuable coastal resource.

Map 34

LOCATION OF U.S. GEOLOGICAL SURVEY STREAM-GAGING STATIONS: 2010



Map 35

DESIGNATED COASTAL AREAS IN SOUTHEASTERN WISCONSIN: 2010



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ECONOMIC DEVELOPMENT ASSISTANCE DIVISION

DIVISION FUNCTIONS

The Economic Development Assistance Division assists local units of government in the Region in pursuing economic development activities and promotes the coordination of local economic development plans and programs. The Division provides five basic types of services: local economic development program planning; economic development data and information provision; economic development project planning services; Federal and State grant-in-aid procurement and administration; and revolving loan fund administration.

LOCAL ECONOMIC DEVELOPMENT PROGRAM PLANNING

The Commission provides economic development program planning services that assist communities with a range of local economic development measures. These include identifying the types of economic development compatible with overall community development goals and objectives and promoting economic development activities that have such compatibility. This function is intended to address a variety of local and regional economic development problems, including the following: 1) structural changes in the economy, as evidenced by a declining proportion of manufacturing employment and an increasing proportion of retail trade and service employment; 2) the lack of adequate community facilities and services to support local economic development; 3) the need to provide workers for the full range of employment opportunities; 4) the decisions by local businesses and industries to relocate to, or expand in, areas outside the Region; and 5) the need to assist local entrepreneurs with the start-up of new business enterprises.

During 2010, Commission local economic development program planning efforts were focused on the activities of the Regional Economic Partnership, an economic development initiative of the seven counties in the Southeastern Wisconsin Region, the City of Milwaukee, We Energies, the Metropolitan Milwaukee Association of Commerce, and the Commission. Activities undertaken by the Partnership in 2010 included, providing staff assistance to the Milwaukee 7 in the implementation of its regional economic development initiative. A Commission staff member co-chairs the Partnership effort.

ECONOMIC DEVELOPMENT DATA AND INFORMATION PROVISION

Commission staff provide economic developmentrelated data and information upon request. This function also includes the provision of short-term technical assistance to local units of government, public agencies, and local development corporations in the analysis of economic development data. During 2010, the Division prepared written responses from the Commission files to requests for economic development-related data and information. In addition, the Division responded to requests made by telephone and through personal visits to the Commission offices. These requests came from local units of government, Federal and State agencies, local development organizations, businesses, and individual citizens. The following are examples of Division activity in performing this function during 2010:

- Provision of Wisconsin Department of Workforce Development data identifying the number of industries and employees by industry type within communities in Southeastern Wisconsin. In addition, Wisconsin Department of Administration, U.S. Bureau of the Census, U.S. Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, and Southeastern Wisconsin Regional Planning Commission demographic and socio-economic data were provided upon request. These types of data were provided to various units and agencies of government, nonprofit organizations, and businesses in Southeastern Wisconsin.
- Provision of assistance to local community staff and representatives of businesses interested in locating or expanding in communities in Southeastern Wisconsin, utilizing information on State and Federal business loan and infrastructure development programs.

ECONOMIC DEVELOPMENT PROJECT PLANNING SERVICES

Economic development project planning involves conducting detailed economic development planning studies for local units of government, not-for-profit development corporations, and other organizations concerned with economic development and seeking Commission assistance.

FEDERAL AND STATE GRANT-IN-AID PROCUREMENT AND ADMINISTRATION OF GRANT-IN-AID AWARDS

The Commission staff provides assistance to local units of government in the preparation of Federal and State grant-in-aid applications and, after issuance of a grant award, in the administration of the related programs.

The grant applications seek State or Federal funding to provide below-market-interest-rate loans to businesses or grants to local units of government in an effort to expand employment opportunities and to increase the community tax base, to provide for the rehabilitation of existing housing for low- and moderate-income persons, to improve deficient public facilities serving low- and moderate-income persons, and to assist communities in recovering from natural disasters.

Grant-in-Aid Procurement

In 2010, the Commission assisted local units of government in obtaining the following grant-in-aid awards:

- The Town of Wheatland received approval for a \$346,985 Wisconsin Department of Natural Resources (DNR) Municipal Flood Control Grant Program application that was prepared with the assistance of Commission staff. The resulting grant award will be used to finance the acquisition and removal of residential structures located in the one percent annual probability (100-year) floodplain of the Fox River.
- Kenosha County received approval for an \$88,500 amendment for a 2008 grant from the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program. The amendment will be used to finance the acquisition and removal of residential structures

located in the one percent annual probability (100-year) floodplain of the Fox River.

• Kenosha County received approval for a \$600,108 amendment to a 2007 Wisconsin Community Development Block Grant (CDBG) award. The amendment will be used to finance the acquisition and removal of residential structures located in the one percent annual probability (100-year) floodplain of the Fox River, to repair homes that were damaged by flooding in June 2008, and to finance the acquisition and processing of LiDAR elevation data that is being used in the preparation of digital orthophotographs for the County.

Administration of Grant-in-Aid Awards

In addition to helping local communities apply for available Federal and State funds, the Commission will, upon request, contract with successful applicants for the administration of the grant awards. A number of activities are involved in managing these grant awards, including ensuring that the terms of each grant award or funding program are met. During 2010, the Commission provided contract services to administer the following grant awards:

- A Wisconsin Community Development Block Grant (CDBG) for Economic Development grant award totaling \$206,000 obtained by Ozaukee County with the assistance of Commission staff. This grant award was used to finance the purchase of dairy cows for Trinity Holsteins, LLC.
- A Federal Emergency Management Agency-Hazard Mitigation Grant Program (HMGP) award and supplement totaling \$677,337 obtained by Kenosha County in 2005 with the assistance of Commission staff, along with a \$52,967 supplement obtained in 2008. This grant award and supplement are being used to finance the acquisition and removal of residential structures that are located in the one percent annual probability (100-year) floodplain of the Fox River.
- A Wisconsin Community Development Block Grant (CDBG) Emergency Assistance program grant award totaling \$300,000 obtained by Kenosha County in 2007 with the assistance of

Commission staff along with a \$600,108 supplement obtained in 2010. This grant award is being used to finance the acquisition and removal of residential structures located in the one percent annual probability (100-year) floodplain of the Fox River, to repair homes that were damaged by flooding in June 2008, and to finance the acquisition and processing of LiDAR elevation data that is being used in the preparation of digital orthophotographs for the County.

- A Wisconsin Department of Natural Resources-Municipal Flood Control Grant Program award totaling \$200,000 obtained by the Town of Wheatland in 2008 with the assistance of Commission staff, along with a \$346,985 supplement obtained in 2009. This grant award and supplement are being used to finance the acquisition and removal of residential structures that are located in the one percent annual probability (100-year) floodplain of the Fox River.
- A Federal Emergency Management Agency-Hazard Mitigation Grant Program (HMGP) award totaling \$1,243,287 obtained by Kenosha County in 2008 with the assistance of Commission staff. This grant award is being used to finance the acquisition and removal of residential structures that are located in the one percent annual probability (100-year) floodplain of the Fox River.
- A Federal Emergency Management Agency-Hazard Mitigation Grant Program (HMGP) award totaling \$2,201,985 obtained by Kenosha County in 2009 with the assistance of Commission staff. This grant award is being used to finance the acquisition and removal of residential structures that are located in the one percent annual probability (100-year) floodplain of the Fox River.

REVOLVING LOAN FUND ADMINISTRATION

The Commission, upon request, also assists in the administration of local revolving loan fund programs. These loan programs are established through repayments on Wisconsin Community Development Block Grant (CDBG) awards and through the appropriation of local funds. A number of activities are involved in the management of these programs, including ensuring

that the terms of each grant award or funding program are met. The Commission provided technical assistance in the utilization and administration of revolving loan fund programs during 2010 as follows:

- Provision of assistance to the Village of East Troy in providing information to businesses interested in obtaining financing from the Village's Community Development Block Grant (CDBG) revolving loan fund program and in completing the following activities: 1) provision of assistance in the servicing of one loan totaling \$61,000 that was provided with the assistance of the Commission, 2) provision of assistance in the packaging, closing, and servicing of one new loan totaling \$58,000 and 3) provision of assistance in the preparation of two semi-annual progress reports that were submitted to the Wisconsin Department of Commerce.
- Provision of assistance to the Village of Menomonee Falls in providing information to businesses interested in obtaining financing from the Village's Community Development Block Grant (CDBG) revolving loan fund program and the Village's economic development master fund (EDMF) program, and in completing the following activities: 1) provision of assistance in the servicing of 23 loans totaling \$2.73 million that were provided with the assistance of the Commission; 2) provision of assistance in the packaging, closing, and servicing of two new loans totaling \$82,500; and 3) provision of assistance in the preparation of two semi-annual progress reports that were submitted to the Wisconsin Department of Commerce.
- Provision of assistance to the Village of Shorewood in managing the Village's economic development master fund (EDMF) program and completing the following activities: 1) provision of assistance in the servicing of two loans totaling \$135,000 that were provided with the assistance of the Commission and 2) provision of assistance in the packaging, closing, and servicing of three new loans totaling \$236,500.
- Provision of assistance to the City of Muskego in providing information to businesses interested in obtaining financing from the City's

Community Development Block Grant (CDBG) revolving loan fund program and in providing assistance in the servicing of four loans totaling \$480,000 that were provided with the assistance of the Commission.

- Provision of assistance to the City of Cedarburg in providing information to businesses interested in obtaining financing from the City's Community Development Block Grant (CDBG) revolving loan fund program and in completing the following activities: 1) provision of assistance in the servicing of three loans totaling \$254,000 that were provided with the assistance of the Commission and 2) provision of assistance in the preparation of two semi-annual progress reports that were submitted to the Wisconsin Department of Commerce.
- Provision of assistance to the City of Port Washington in providing information to businesses interested in obtaining financing from the City's Community Development Block Grant (CDBG) revolving loan fund program and in completing the following activities: 1) provision of assistance in the servicing of five loans totaling \$588,400 that were provided with the assistance of the Commission, 2) provision of assistance in the packaging, closing, and servicing of three new loans totaling \$327,000, and 3) provision of assistance in the preparation of two semi-annual progress reports that were submitted to the Wisconsin Department of Commerce.
- Provision of assistance to Ozaukee County in providing information to businesses interested in

obtaining financing from the County's Community Development Block Grant (CDBG) revolving loan fund program and in completing the following activities: 1) provision of assistance in the servicing of five loans totaling \$790,400 that were provided with the assistance of the Commission; 2) provision of assistance in the packaging, closing, and servicing of four new loans totaling \$262,575; and 3) provision of assistance in the preparation of two semi-annual progress reports that were submitted to the Wisconsin Department of Commerce.

- Provision of assistance to Washington County in providing information to businesses interested in obtaining financing from the County's Community Development Block Grant (CDBG) revolving loan fund program.
- Provision of assistance to the Kenosha County Housing Authority in utilizing and administering the County's Community Development Block Grant (CDBG) revolving loan fund program for housing rehabilitation, and providing information to local residents on available public housing programs. A Commission staff member serves as Executive Director of the Housing Authority and staffs the Housing Authority office in western Kenosha County. CDBG administration included the following activities: 1) provision of information to local residents seeking available housing assistance; 2) provision of assistance in the packaging and closing of three new loans totaling \$25,425; and 3) the servicing of 139 loans totaling \$1.2 million.

COMMUNITY ASSISTANCE PLANNING DIVISION

DIVISION FUNCTIONS

The Community Assistance Planning Division initiated work on a Regional Housing Plan in 2008. Work on the plan continued during 2009 and 2010. The Division also has primary responsibility for assisting local units of government in the Region in the conduct of local planning efforts, and assisting County and local governments in the preparation of multijurisdictional comprehensive plans and implementing ordinances. The Division also assists counties in the preparation of farmland preservation plans. Such assistance promotes coordination between local and regional plans and plan implementation actions, resulting in good public administration as well as sound physical development within the Region. The Division also provides advisory and review services for County and local units of government.

REGIONAL HOUSING PLAN

The Commission staff initiated work on a regional housing plan in 2008. The planning effort is expected to be completed in 2012. Initial steps completed in 2008 included the preparation of a draft scope of work for the plan and establishment of a Regional Housing Plan Advisory Committee to oversee preparation of the plan. A series of 10 public informational meetings were held in 2009 to solicit public input regarding the scope of work and the proposed contents of the regional housing plan. Other work during 2009 included development of a future vision and objectives, principles, and standards to be used to guide development of the plan, which are documented in Chapter II of the draft plan report. The vision of the regional housing plan is: "Provide financially sustainable housing opportunities for persons of all income levels, age groups, and special needs throughout the entire Southeastern Wisconsin Region."

Sub-regional housing analysis areas were also identified in 2009 to facilitate the collection of data and the analyses necessary to develop plan recommendations. The delineation of the analysis areas was related to clusters of existing and anticipated future urban development. The intent was to permit sub-regional analyses of housing characteristics in the Region, such as the availability of affordable housing near major employment centers and the availability of transit linking affordable housing to major employment centers. The housing analysis areas are shown on Map 36.

Work during 2010 included gathering information on existing housing and on County and local comprehensive plans and zoning and subdivision ordinances that affect housing; an analysis of the cost of developing new housing; and analyses relating to housing discrimination and the need for accessible housing units. The following draft chapters or portions of chapters were completed and reviewed by the Regional Housing Plan Advisory Committee:

- Chapter III, *Plans and Programs Related to Housing in the Region*. This chapter includes a summary of regional, county, and local plans including consolidated plans prepared by Department of Housing and Urban Development (HUD) entitlement communities, comprehensive plans, and the regional land use and transportation system plans. Past housing planning efforts are also described, including the status of recommendations set forth in the regional housing plan adopted by the Commission in 1975. Federal, State, and local government sponsored housing programs are also summarized.
- Chapter IV, *Existing Housing*. This chapter includes several inventories and analyses related to existing housing in the Region. Part 1 presents information regarding population and household distribution in the Region. An inventory of housing stock by sub-regional housing analysis area is provided in Part 2. Part 3 includes a description of the negative impacts of foreclosures and abandoned homes on families and communities, causes of foreclosures, and the foreclosure process in Wisconsin. The chapter also includes an inventory of foreclosure activity in the Region



between 2000 and 2009. In addition, the chapter discusses recent Federal legislation and programs intended to address the nationwide foreclosure crisis.

- Chapter V, New Housing Development. This chapter provides information on the development of new, primarily market based, housing. Market based housing is provided by the private sector. It is typically developed without assistance from government programs that require the provision of subsidized housing units. Part 1 includes an analysis of permitted development densities and land use plans and regulations adopted by county and local governments that affect housing development. Part 2 includes an analysis of the costs associated with developing new market-based housing. Part 3, which will be completed in 2011, will present an analysis that describes the costs associated with providing public utilities and services to new housing and the contributions made by new residents to the local tax base and economy.
- Chapter VI, Housing Discrimination and Fair Housing Practices. This chapter includes information on reported evidence of housing discrimination and the furthering of fair housing practices in the Region. Information compiled for this chapter includes reported complaints of housing discrimination over the last decade, a description of Federal and State fair housing laws, the results of fair housing testing conducted in the Region, and home mortgage and lending patterns by race and ethnic group. A discussion of the relationship between land use controls and enforcement policies, such as community land use planning and zoning, and the legal requirements regarding the furthering of fair housing practices for communities receiving Federal funds is also included.
- Chapter IX, *Accessible Housing*. This chapter includes information on Federal and State legislation regarding the provision of accessible housing for persons with disabilities and construction practices that could increase the number of new accessible

housing units. Information is included regarding the demand for accessible housing units and the availability of such units in each sub-regional housing analysis area. Accessible housing for persons with disabilities other than, or in addition to, physical disabilities is also addressed.

Commission staff also gave a presentation on the scope and major findings of the regional housing plan at a Statewide conference sponsored by the Wisconsin Collaborative for Affordable Housing in July. Staff also assisted with the planning of the Urban Economic Development Association's annual summit in Milwaukee, focusing on housing foreclosures. Commission staff also set up a booth on regional planning, featuring the Regional Housing Plan, at the Milwaukee County Harvest Fair held at State Fair Park in September.

PROJECT PLANNING SERVICES

Project planning services generally involve the conduct for member units of government of detailed planning studies resulting in the preparation of County and local plans or plan implementation ordinances. Much of the Division's work during the period from 2004 through 2010 was focused on assisting local and county units of government in completing comprehensive plans to meet the requirements of the State comprehensive planning law enacted in 1999. During 2009, the Commission completed work on multijurisdictional comprehensive plans for Ozaukee, Racine, Walworth, and Washington Counties and participating cities, towns, and villages, and comprehensive plan reports for nine communities in Washington County. The multi-jurisdictional plan for Racine County was adopted by 16 of the 17 local governments in the County, and the multijurisdictional plan for Walworth County was adopted by 12 of the 16 towns in the County. Commission staff also provided data, attended meetings, and provided other support to assist county staff in the preparation of comprehensive plans for 13 of the 14 local governments in Ozaukee County; and provided data, review comments, and served on advisory committees for comprehensive planning in counties and communities that were not participating in one of the multi-jurisdictional planning efforts for which SEWRPC had the lead staff role.

Comprehensive Plans

Map 37 shows the status of comprehensive plans in the Region at the end of 2010. Commission work on comprehensive plans during 2010 included the following:

- Completion of a multi-jurisdictional comprehensive plan for Kenosha County, which was adopted by the County Board in April 2010. The plan was also adopted as the local comprehensive plan by the Villages of Bristol and Silver Lake and by the Towns of Brighton, Paris, and Somers.
- Completion and adoption of comprehensive plans for the Towns of Salem and Wheatland in Kenosha County, the City of Racine in Racine County, the Town of East Troy in Walworth County, and the Town of Farmington in Washington County.
- Provided information, including digital copies of all maps and chapters produced as part of the Kenosha County multi-jurisdictional plan, to the City of Kenosha and Village of Pleasant Prairie (which also participated in the multijurisdictional planning process) for incurporation into their local comprehensive plans.
- Developed model public participation plans for amending comprehensive plans, in response to requests from several local governments. A sample application form, public notice, resolution for plan commission approval, and ordinance for governing body adoption of a plan amendment were also prepared. Separate packets with a cover summary were developed for towns that have adopted independent comprehensive plans, towns that have adopted a multi-jurisdictional comprehensive plan as the town plan, and cities and villages. The packets were distributed and reviewed at a Washington County workshop on comprehensive plan implementation in June and at a meeting of the Racine/Kenosha Unit of the Wisconsin Towns Association in August.
- Initiated work on an amendment to the Washington County comprehensive plan to incorporate the land use plan maps adopted as

part of city, town, and village comprehensive plans, or amended by a local government, after the County plan was adopted in April 2008. All local land use plan maps were incorporated into an updated County land use plan map, and a digital copy of the map was provided to Washington County staff for review and use in preparing the County farmland preservation plan. Commission staff will develop text and tables for the amendment in 2011 for review by County staff and officials.

City, Town, and Village Park and Open Space Plans

The Division staff continued to assist local units of government in the preparation of city, town, and village park and open space plans. In addition to addressing outdoor recreation needs, such plans refine and detail the open space preservation recommendations of the regional land use plan and the regional park and open space plan, including recommendations pertaining to the preservation of environmental corridors and natural areas. Such plans incorporate the recommendations of the regional bicycle facilities plan, integrating those recommendations into recreation corridor systems as appropriate. Each plan is documented in a report published as a SEWRPC community assistance planning report. During 2010, the Commission staff initiated work on an update to the City of Racine park and open space plan. Work continued on an updated park and open space plan for the City of Brookfield. All plan chapters were completed and reviewed by the City Parks and Recreation Commission, and two open houses were held to obtain public comment on the draft plan. A final draft report will be prepared in early 2011 for review and consideration for adoption by the City.

County Farmland Preservation Plans

The Wisconsin Legislature enacted major changes to the Wisconsin Farmland Preservation Program (Chapter 91 of the *Wisconsin Statutes*) in 2009, as part of the State's Working Lands Initiative. The new program requires all counties in the Region, with the exception of Milwaukee County, to prepare and adopt a new County farmland preservation plan by December 31, 2011. Ozaukee and Racine Counties requested that SEWRPC take the lead role in preparing

Map 37

COMPREHENSIVE PLAN STATUS IN SOUTHEASTERN WISCONSIN: DECEMBER 31, 2010



NOTE: THIS MAP REFLECTS COMMUNITIES THAT HAVE ADOPTED COMPREHENSIVE PLANS UNDER SECTION 66.1001 OF THE WISCONSIN STATUTES, AND HAVE PROVIDED ACOPY OF AN ADOPTED PLAN TO SEWRPC.

a farmland preservation plan in each County. Kenosha, Walworth, Washington, and Waukesha Counties will take the lead in developing their County plan. Washington and Waukesha Counties requested that SEWRPC staff serve on the advisory committee formed to oversee development of the County plan. Commission work on farmland preservation planning during 2010 included the following:

- Commission staff worked with staff from the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP), which oversees the State Farmland Preservation Program, and held a meeting with SEWRPC, DATCP, and representatives from planning and land conservation departments from five counties in the Region to discuss the requirements of the new State farmland preservation program. SEWRPC generated a number of questions on the required content and format of farmland preservation plans, and compiled these questions with those from County staff and provided these questions to DATCP in advance of the meeting.
- Commission staff worked with Ozaukee County staff to complete a work plan and time schedule for the Ozaukee County farmland preservation plan. A State planning grant to assist with the planning effort was approved in February. Staff from SEWRPC, Ozaukee County, and UW-Extension held several meetings for the general public and local planners and officials to provide information on the new State requirements and the planning process and procedures for updating the County farmland preservation plan. Preparation of a public participation plan for the planning process was initiated. An advisory committee was established to help guide the development of the plan. Commission staff assisted in completing a questionnaire survey that was mailed in the fall to seek public opinion related to Ozaukee County farmland preservation, parks, and open space matters.
- Commission staff attended meetings and provided comments on draft chapters for the farmland preservation plans being prepared by Washington and Waukesha Counties, and commented on the criteria to be used to

identify farmland preservation areas in each County. Information compiled by SEWRPC as part of local comprehensive plans was provided to Washington County staff to assist in their analysis of potential farmland preservation areas.

• Commission staff prepared selected digital maps for Walworth County staff to use in the Walworth County farmland preservation plan update and consulted with Walworth County staff on plan update procedures.

Zoning and Land Division Ordinances and Maps

Commission staff continued efforts to assist local units of government in the preparation of land use regulations that serve to implement local comprehensive plans and the regional land use plan. Work during 2010 included the following:

- Completed a draft comprehensive update of the Village of Hartland zoning ordinance and zoning map to make the two more consistent with the adopted Village comprehensive plan. An informational meeting and public hearing on the draft ordinance and map were scheduled for early 2011.
- Completed work on updated shoreland and floodplain zoning maps for Ozaukee County. The updated maps reflect updated floodplain delineations developed as part of the FEMA Map Modernization program, the year 2005 Wisconsin Wetland Inventory, and updated stream and water body navigability determinations. The new maps were adopted by the Ozaukee County Board of Supervisors in November.
- Continued work on an update of the City of Cudahy zoning map, which was prepared by SEWRPC in 1991 as part of a comprehensive update of the City zoning ordinance at that time. SEWRPC staff prepared a zoning map update for review by the Common Council based on recommendations of a City advisory committee, and also prepared a map highlighting parcels proposed to be rezoned and legal descriptions for each parcel proposed to be rezoned. The City will hold a public hearing on the map update in early

2011. Commission staff also provided examples of zoning regulations for general parking, shared parking, and mixed use developments at the request of City staff.

- Updated and reprinted the Town of Wayne zoning ordinance to include all amendments approved by the Town Board since the ordinance was adopted in 2001.
- Continued to work with the Village of Kewaskum to update the Village zoning map, and also provided information and definitions for regulating billboards and other off-premise signs at the request of Village staff.
- Prepared an updated zoning map for the Town of Polk and initiated an update to the Town of Farmington zoning map.
- Provided information and sample zoning regulations to the Town of Cedarburg on various types of business zoning districts; to the City of Cedarburg and City of Port Washington on conservancy zoning districts; to the Town of Polk for the regulation of solar energy collectors; and to the Town of Jackson for amateur radio antennas.
- Provided zoning information to Waukesha County for protecting environmental corridors, and information on accurate floodplain, shoreland, and shoreland-wetland zoning district boundaries within annexed areas in the Village of Hartland as part of the County's shoreland and floodplain zoning map update.

REVIEW SERVICES

Review services are intended to encourage the incorporation of regional studies and plans into local planning programs, plans, and plan implementation devices, such as zoning and subdivision control ordinances. In addition, review services are intended to prevent unnecessary duplication of planning efforts and to coordinate and encourage regional plan implementation.

At the request of local units of government, the Commission reviews and comments on community comprehensive, land use, and neighborhood plans, cooperative boundary agreements, and park plans for conformity with the regional plan. No plan or ordinance review services were conducted during 2010.

The Commission staff routinely reviews proposed subdivision plats and certified survey maps (CSMs) for Kenosha, Racine, and Walworth Counties, as well as a number of cities and villages in the Region. During 2010, staff reviewed a total of 11 subdivision plats and provided related review comments to the concerned county or local government. Plats and CSMs submitted to the Commission are reviewed against all regional plan elements, including the highway right-of-way recommendations of the regional transportation system plan. Commission staff review of proposed land divisions thus represents another way in which the Commission helps county and local units of government implement the regional plan.

ADVISORY SERVICES

Advisory services consist of providing basic planning and engineering data available in the Commission's files to local units of government and private interests, and the provision of technical planning and engineering assistance to communities and government agencies on request. Representative advisory services performed during 2010 included the following:

- Provided information on amendments made to the comprehensive planning law in early 2010 to the Town of Hartford, and provided guidance to the Town regarding an update of the Town zoning ordinance and map to make the two more consistent with the Town comprehensive plan.
- Provided information to Kenosha County staff regarding the preparation and adoption of an updated Kenosha County Farmland Preservation Plan and County Park and Open Space Plan in relation to the Multi-Jurisdictional Comprehensive Plan for Kenosha County.
- Updated an analysis of fiscal capacity of local governments in the Region at the request of the City of Milwaukee.
- Provided conservation subdivision data in the Region to a graduate student.

- Provided samples of water trail text and maps used in the Region to a Midwest representative of the U.S. Department of Interior-National Park Service to assist in the preparation of a water trail map for Lake Michigan.
- Provided maps of existing and planned trails and bikeways prepared by the Commission for the Village of Caledonia to a consultant for use in updating the Village park and open space plan.
- Provided copies of the model official mapping and land division control ordinances prepared by SEWRPC to the City of Wisconsin Rapids.
- Provided information to a building inspector for communities in Waukesha and Wash-

ington Counties related to staking and regulating wetlands and environmental corridors, particularly upland areas, as well as SEWRPC's policy for managing such areas (i.e. pruning vegetation and removing invasive plants).

- Provided information to the Village of Hartland on "green cemeteries."
- Provided maps and tables of existing nonmetallic mining sites compiled as part of multi-jurisdictional comprehensive plans to a private engineering consultant.
- Gave a presentation on the work of the Commission at a Statewide conference sponsored by the Wisconsin Counties Association.

PUBLIC INVOLVEMENT AND OUTREACH DIVISION

BACKGROUND AND DIVISION FUNCTIONS

The year 2010 marked the first full year of activity for the Division of Public Involvement and Outreach, which was established by the Commission in mid-2009. The Division helps to further advance the Commission's ongoing progress in public involvement and outreach, connecting with potentially underserved populations as well as traditional audiences. Quality public involvement and outreach, which includes educating key audiences, is viewed to be a shared responsibility across the agency. The relatively new division thus works with other Commission staff, as well as maintaining and conducting significant community-level contacts, at times taking the lead or assuming a coordinating role as appropriate.

There are four elements of the work of public involvement and outreach:

- <u>Outreach</u>–To build awareness and inform constituents regarding the Commission's purpose, activities, and opportunities available, often using broad-reaching means such as the media, mass distributions, and large events.
- <u>Public Involvement</u>–Targeted at key individuals and organizations, to encourage participation in the Commission's planning efforts and recommendations in a well-understood and collaborative manner that may utilize committees, task forces, and other groups.
- <u>Education</u>–Often formalized and targeted events or materials reaching ages from youth through adults, which better equip audiences to process and act upon Commission recommendations based upon the facts audience members have learned.
- <u>Organizational Assistance and Support</u>-Spanning public outreach, involvement, and education—as well as internal and public external applications—to help streamline,

consolidate, ensure accuracy and understandability, and continuously update points of contact and resources available for or from the Commission.

FORMAL PRESENTATIONS, EDUCATION, AND COORDINATION EFFORTS

During 2010, the Division's work in formal settings or in established relationships involving presentations, other educational work and coordination, and briefings on Commission activities, included the following:

- Contributions occurred relative to formal Commission public informational meetings and open houses, including work on attendant announcements as appropriate, paid advertisements and/or summary materials, for the Walworth County Jurisdictional Highway Plan, the Interim Review and Update of the Year 2035 Regional Transportation System Plan, and the Socio-Economic Impact Analysis conducted by UW-Milwaukee's Center for Economic Development regarding the Regional Water Supply Plan.
- Commission staff worked with the Urban Economic Development Association of Wisconsin in planning the Association's 9th Annual Community Development Summit in Milwaukee. The theme for this event on housing foreclosures attended by some 160 community and regional leaders was, "Foreclosure: Impacts and Opportunities". In preparation for the Summit, assistance was provided to the Association on the Summit Planning Committee and the Sponsorship Subcommittee. During the event, a Commission display table was staffed to help explain the background and progress on the Regional Housing Plan under preparation. Cooperative work also continued relative to the Coalition for Advancing Transit, with which the Association plays a coordinating role.

- Assistance was provided to the UW-Milwaukee Center for Economic Development and its public outreach consultant regarding public meetings and contacts for central city, minority, and low-income groups and organizations. The emphasis of this effort was evaluating prior contacts and additional public outreach being conducted for the Socio-Economic Impact Analysis of the preliminary recommended Regional Water Supply Plan.
- A presentation on the Commission's background, regional planning principles, and the Regional Water Supply Study preliminary recommended plan was given to the Waukesha Sunshine Rotary Club to help inform members and allow possible comments.
- The Commission partnered with the Community Brainstorming Forum, a monthly community gathering coordinated by a volunteer-driven organization based in the City of Milwaukee, which has been addressing issues that impact particularly the African-American Community over the past 20 years. During 2010, a monthly meeting focused on the issue of "Jobs and Transportation–Today and the Future," for which the Commission provided program planning, event material printing and distribution, and panel presentation support to the Forum.
- Partnering occurred with the Granville Brown Deer Chamber and the Association for Northwest Milwaukee Advancement to jointly plan and present a Symposium on Economic Development – Focus on Jobs and Transit. This event examined the economic impact on the regional and local sectors of infrastructure and transit in supporting the revitalization effort within the Northwest Milwaukee-Brown Deer-Mequon-Menomonee Falls area.
- Commission staff appeared on a 30 minute Milwaukee cable television program, "What's Going On," to discuss the role of the Commission in short- and long-term planning functions and projects for the

seven-county Region. The program has been re-broadcast to the service area which covers the Milwaukee, Waukesha, and Ozaukee County areas.

- The Commission became a partner in the effort of the Social Development Commission's Bridges of Hope Initiative in Milwaukee County, a multi-year effort to address issues of poverty. Assistance included Regional Planning Commission staff chairing the effort's Job Opportunities Committee, which reviewed factors and solutions that impede individuals from finding jobs, including transportation and housing aspects.
- Work began on a multi-year, multidisciplinary effort addressing the environmental conditions impacting children and family health, being coordinated by the UW-Milwaukee Children's Environmental Health Resource Center. The 2010 effort focused on the 30th Street Industrial Corridor area to better connect entities involved around environmental health. The Commission provided information on water quality, housing, and transportation, as well as in-kind support toward sustainable development regarding this partnership.
- The Commission participated in the program planning and presentation aspects of the Water and People Public Service Conference. This conference was a collaborative effort that was coordinated by the Marquette University Law School and was attended by approximately 200 persons.
- Service was provided on a steering committee to plan an annual conference coordinated by the University of Wisconsin-Extension entitled, "Working Together: Understanding Hmong Culture," held for the first time in Milwaukee County. The Commission staff prepared a natural resources case study identified by Hmong leadership as a priority break-out topic for associated discussion of cultural influences in decision making.
- An update on the Regional Housing Study was given to Hispanic Roundtable repre-

sentatives in the City of Racine to help cultivate awareness and potential involvement.

- An exhibit featuring the Regional Housing Study was placed at the Milwaukee County Fair, held in conjunction with the Fall Harvest Festival at the Wisconsin State Fair grounds.
- A presentation with an extensive questionand-answer session was given to members of the Kenosha chapter of the National Association for the Advancement of Colored People, with discussion centering on the Kenosha County Transit Development Plan and the Regional Housing Study.
- A presentation on the Commission's environmental corridor concept and implementation success, and the emerging need and opportunities for riparian corridor management, was given to the 2010 Chicago Wilderness Congress. The Commission's respective educational materials were also distributed and used by the 85 session participants.
- Commission assistance was provided to the • Milwaukee Metropolitan Sewerage District and the Southeastern Wisconsin Watersheds Trust to help plan and conduct Clean Rivers, Clean Lakes VII, the seventh annual such watershed planning conference held in Milwaukee. This event drew some 240 water resource group representatives and citizens. Commission interested staff coordinated speakers and moderated a session on practical experiences from the Root River watershed.
- Assistance was provided to the Soil and Water Conservation Society and coordinating staff in the Ozaukee County Land Conservation Department in planning the SWCS Wisconsin Chapter's annual conference scheduled to address whether Wisconsin is meeting the nutrient management challenge in water quality protection. Service also continued on the Society's Wisconsin Chapter Board with Commission staff representing greater southeastern Wisconsin.

- In conjunction with the Environmental Planning Division, Commission Public Involvement and Outreach staff organized a stakeholder meeting to review and discuss riparian corridor management needs and opportunities. The meeting was held in workshop format to help educate and obtain comments from planning, resource management, and environmental stewardship organization representatives within the Region, as well as having webinar connections to regional planning staff from the Quad State Regional Planning Organizations representing the southern rim of Lake Michigan.
- The Commission continued work with the Delta Institute as part of the inter-regional Lake Michigan Watershed Academy funded by the U.S. Environmental Protection Agency. In 2010, Commission staff updated participating regional planning commissions on its efforts regarding sound riparian corridor management, culminating in publication of a widely distributed guidance booklet with the Environmental Planning Division titled, "Managing the Water's Edge—Making Natural Connections."
- In conjunction with the Environmental Planning Division, Commission Public Involvement and Outreach staff designed and taught a two-day watershed planning course in the University of Wisconsin-Milwaukee's School of Continuing Education. "Watershed Planning-Putting the was designed for Pieces Together," practitioners, applicable agency and organization staff, and college students wishing to further their course of academic study through examination of compreshensive watershed planning, including a field tour experience. The course is intended to continue in future years.
- At the request of the Department of Urban and Regional Planning at the University of Wisconsin-Madison, Commission staff taught a Water Resource Policy course session featuring regional planning principles as espoused by the Commission, the environmental corridor concept with applications, and the Regional Water Supply Plan.

- Working with the Washington County Land Conservation Department and Riveredge Nature Center, the Commission staff led a group of teachers, many from Milwaukee Public Schools, on a tour of the upper Milwaukee River watershed. The event included exposure to Commission plans and recommendations, and was part of a course available for UW-System credit under the Great Lakes Partnership Institute.
- Continued Commission participation occurred in the interagency consortium known as "Testing the Waters," which has trained scores of teachers and thousands of high school students over the years, most from within the watersheds tributary to the Milwaukee Harbor Estuary. In 2010, staff again worked with the Washington County Land Conservation Department to plan and conduct two watershed bus tours for students and their teachers to view land use changes, water quality problems, and solutions in the rural and developing landscape. Among the tour participants were attendees of Milwaukee public and private schools.
- Educational sessions were conducted for 10 groups of Pewaukee Middle School students attending camp on Lake Keesus in Waukesha County, to sample lake-bottom organisms and learn about the impact of land use, roadways, planning, and personal actions on the aquatic environment. This annual event has taught over 3,000 youth and their leaders over the years, some 200 during 2010.
- Public involvement assistance was provided to Walworth County in the conduct of a Working Lands Initiative informational meeting and public hearing. In addition to procedural and handout assistance, formal moderating of the event was conducted by Commission staff.
- Commission staff continued to serve as Coordinator for the Southeast Area Land and Water Conservation Association comprised of county Land Conservation Committee and department staff representatives.

In that capacity, a Southeast Area conservation poster contest was administered on behalf of three of the Association's counties–Ozaukee, Racine, and Washington–en route to winner competition at the State level. A conference session on invasive species was also moderated for the related Wisconsin Land and Water Conservation Association.

• Commission staff assistance continued on the Board of the Wisconsin Association of Floodplain, Stormwater, and Coastal Management via service as Awards Committee Chair, involving administration of the Association's awards recognition program for meritorious resource management.

ORGANIZATIONAL NETWORKING AND PARTNERSHIP BUILDING

The Commission has historically provided outreach to, and extended invitations to meet with, some 80 groups and organizations representing central city, minority, and low-income interests. Thereby, important information has been provided to sometimes under-represented constituents and important feedback has resulted to benefit plans under preparation. During 2010, this contact list grew to over 90 organizations as a formal distribution network, complementing more general types of outreach and work with "traditional" audiences. Examples of some of the larger public involvement and outreach efforts of many types were given above.

In addition, the Division continued focusing its outreach efforts as part of a broader strategy of organizational networking and partnership building. These efforts are built upon targeting key organizational entities within the seven-county Region and, more specifically, those entities that serve selected and targeted populations.

Selected populations encompass community-based organizations; central city businesses; local governmental entities; youth serving agencies; and citizen-based and neighborhood-focused groups and organizations.

Targeted populations include designated low income areas; areas predominantly serving communities of color and targeted ethnicities; organizations serving individuals with disabilities; and communities or neighborhoods where the issues of transportation, land use, and environmental emphasis may have unique and/or significant impact on long term planning.

As a result of all of these efforts, the Division representatives attended and participated in about 375 organizational events and activities that were conducted by or with over 225 organizations within the Region (i.e., community-based organizations, government agencies, educational institutions, business support networks, and citizen engagement entities, among others). Direct contacts by the Division for information distribution and public participation via public outreach, involvement, and education thus totaled over 6,000 contacts during 2010.

Primary organizations were identified for follow-up at a more frequent and/or more intensive level than the participation which will continue to be cultivated with other contacts. In combination, these primary contacts represent key populations, geographies, memberships, and interests. In addition, a number of these contacts may have shown past interest in the Commission's work when approached.

Many of the following primary organizational contacts were engaged multiple times during 2010, and are expected to exhibit such activity in looking ahead (e.g. somewhat regular status report on Commission projects; topic presentations; group and individual question and answer sessions; and/or informational meeting updates and comment sessions regarding Commission plans and studies). Some organizations may also be expected to partner with the Commission in conducting activities and events of mutual interest. A number of entries in the section above on formal presentations, education, and coordination efforts describe such growing partnerships.

Public Involvement and Outreach Division Primary Organizational Contacts

- African American Chamber of Commerce
- Aurora Family Service
- Clarke Square Layton Boulevard Neighborhoods Revitalization Initiative

- Community Brainstorming Forum
- Goodwill Industries of Southeastern Wisconsin
- Granville Brown Deer Chamber
- Groundwork Milwaukee
- Halifax Institute
- Hispanic Chamber of Commerce
- Hispanic Roundtable of Racine
- Hmong American Friendship Association
- IndependenceFirst
- La Casa de Esperanza
- League of United Latin American Citizens
- Lindsay Heights Area—City of Milwaukee
- Milwaukee Urban League
- National Association for the Advancement of Colored People
- Northeast Milwaukee communities area
- Racine/Kenosha Community Action Agency
- Repairers of the Breach
- Social Development Commission
- Southeastern Oneida Tribal Services
- The 30th Street Industrial Corridor revitalization area
- The Salvation Army of Greater Milwaukee
- United Migrant Opportunity Services
- United Way
- Urban Economic Development Association of Wisconsin
- Urban League of Racine and Kenosha

Organizations suggested as primary contacts are reviewed by the Environmental Justice Task Force, which is described in the next section. It is also possible that other organizations may be added and a few removed from this list over time.

ENVIRONMENTAL JUSTICE TASK FORCE

The Commission maintains among its advisory committees an Environmental Justice Task Force which is staffed largely by the Public Involvement and Outreach Division. This 13 member advisory body is intended to be broadly representative of minority, low-income, and special needs populations from across the Southeastern Wisconsin Region. In 2010, the Task Force met five times.

The primary role of the Environmental Justice Task Force is to enhance the consideration and integration of environmental justice throughout the regional planning process. The specific purposes of the Task Force are:

- To further facilitate the involvement of, and help ensure the full and fair participation of, low-income, minority and disabled individuals and communities at all stages in relevant areas of regional planning, as determined in consultation with them;
- To make recommendations on, and help monitor, issues and analyses potentially relevant to the needs and circumstances of low-income, minority and disabled communities in the Region;
- To help identify potential benefits and adverse effects of regional planning programs and activities with respect to minority, low-income and disabled populations;
- To advise and recommend methods to prevent the denial of, reduction in, or significant delay in the receipt of benefits, and/or to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority, low-income and disabled populations; and

• To enhance awareness, understanding, appreciation, support, and implementation of planning recommendations and benefits, with emphasis on the needs of minority, low-income, and disabled populations.

All meetings of the Task Force have been held in locations that are physically accessible to persons with disabilities and served by public transportation. Non-members are also able to attend meetings and comment, as all meetings are open to the public and provide reasonable comment opportunity. All meeting agendas, minutes, and materials presented and/or prepared in response to the Task Force's suggestions are regularly distributed to the members, as well as other interested parties, and posted to the Commission's website.

Environmental Justice Task Force discussion items during 2010 included the following subjects:

- Public involvement and outreach efforts, including work with minority and low-income organizations;
- Updates on SEWRPC planning efforts and schedules;
- Findings of the Regional Water Supply Study;
- Socio-Economic Impact Analysis of the Regional Water Supply Plan;
- Public transit planning, the Regional Transit Authority, and current funding crisis affect-ing public transit;
- Interim review and update of the Year 2035 Regional Transportation System Plan; and
- Regional Housing Plan status, including public involvement and outreach, and review of plan chapter materials.

CARTOGRAPHIC AND GRAPHIC ARTS DIVISION

DIVISION FUNCTIONS

The Commission's Cartographic and Graphic Arts Division provides basic services to other Commission divisions in a number of functional areas. The Division is responsible for creating and maintaining current a series of regional planning base maps that are used not only by the Commission, but are extensively used also by other units of government and by 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 decennial census years and related intercensal periods. The Division also provides in-house document 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 by private interests.

The Division also serves as a regional coordinating center for the conduct of large-scale topographic mapping efforts and the collation of horizontal and vertical survey control data. This function includes the preparation, upon request, of contracts and specifications for large-scale mapping and control survey efforts by county and local units of government. Another Division function, begun in 1984 and attendant to the Commission Executive Director's service as the Milwaukee County Surveyor, is the indexing and filing of records of all land surveys completed in Milwaukee County.

Finally, a major Division function involves final report production, including editing, type composition, proofreading, illustration preparation, offset printing, and binding.

BASE MAPPING

During 2010, work continued on the updating of the Commission's one-inch-equals-2,000-feet-scale county planning base maps, using Commission orthophotography and Wisconsin Department of Transportation state aid mileage summary maps. In 2010, this effort included updating of planimetric features and changing civil division corporate limit lines to reflect recent annexations and incorporations.

SURVEY CONTROL AND TOPOGRAPHIC AND CADASTRAL MAPPING

The Commission encourages county and local units of government in the Region to prepare one-inch-equals-100-feet-scale and one-inch-equals-200-feet-scale, twofoot-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 counties and local communities in the preparation of contracts and specifications for these programs. All the horizontal and vertical control survey data obtained as part of these mapping efforts are compiled by the Division. The Commission thus serves as a center for the collection, collation, and coordination of control survey data throughout the Region.

As shown on Map 38 and in Table 29, a total of 11,753 U.S. Public Land Survey corners in the Region as of the end of 2010 had been relocated, monumented, and coordinated, representing 100 percent of all such corners in the Region. Map 39 shows those areas of the Region for which, as of the end of 2010, large-scale topographic maps had been prepared to Commission-recommended standards. As shown in Table 29, the area thus completed totals about 2,385 square miles, or about 89 percent of the total area of the Region.

Samples of products obtained under the monumentation, control survey, and large-scale topographic mapping programs are shown in Figures 33 and 34 and on Map 41. Map 40 shows those areas of the Region for which, as of the end of 2010, large-scale cadastral (parcel) maps had been prepared to Commission-recommended standards, either by Commission staff or by private contractors working under programs administered by the Commission. These areas total approximately 2,041 square miles, or about 76 percent of the total area of the Region. A sample of a portion of a completed cadastral map is shown on Map 42.



Table 29

RELOCATION, MONUMENTATION, AND COORDINATION OF U.S. PUBLIC LAND SURVEY CORNERS AND COMPLETION OF LARGE-SCALE TOPOGRAPHIC MAPPING: 2010

County	Estimated Total Corners ^a	Wisconsin Department of Transportation	SEWRPC	County	Milwaukee Metropolitan Sewerage District	Local ^b	Multi- Agency	Total	Percent
Kenosha	1,203	58	168	914		63		1,203	100.00
Milwaukee	1,065	72	184	132	159	492	26	1,065	100.00
Ozaukee	1,064	143	179	629	3	110		1,064	100.00
Racine	1,478		172	1,306				1,478	100.00
Walworth	2,503	315		2,056		121	11	2,503	100.00
Washington	1,905	150	164	1,112		428	51	1,905	100.00
Waukesha	2,535	78	463	1,398		596		2,535	100.00
Region	11,753	816	1,330	7,547	162	1,810	88	11,753 ^C	100.00

NOTE: Includes only those areas of the Region for which U.S. Public Land Survey corners have been relocated, monumented, and coordinated utilizing SEWRPCrecommended procedures under original large-scale topographic mapping programs promulgated by the agencies listed in the above table.

^aThe estimated number of corners for each county was determined by assigning standard and closing corners to the respective county concerned and by alternately assigning common corners to the two or more counties concerned.

^bIncludes 22 cities, 21 villages, and four towns.

^CBecause of the need to set witness corners, these 11,753 U.S. Public Land Survey corners, including the centers of the sections, are marked by 11,985 monuments.

		Area (square miles) of Large-Scale Topographic Mapping Completed								
County	Total Area (square miles)	SEWRPC	County	Milwaukee Metropolitan Sewerage District	Local ^a	Multi- Agency	Total	Percent		
Kenosha	278	27.75	236.25		14.00		278.00	100.00		
Milwaukee	242	11.00	102.00	49.50	77.00	2.50	242.00	100.00		
Ozaukee	234	24.25	192.25		17.50		234.00	100.00		
Racine	340	25.50	314.50				340.00	100.00		
Walworth	578		550.50		27.50		578.00	100.00		
Washington	436	22.75	60.75		89.75	9.00	182.25	41.80		
Waukesha	581	78.75	307.00		145.25		531.00	91.39		
Region	2,689	190.00	1,763.25	49.50	371.00	11.50	2,385.25	88.70		

NOTE: Includes only those areas of the Region for which large-scale topographic maps have been prepared and throughout which U.S. Public Land Survey corners have been relocated, monumented, and coordinated utilizing SEWRPC-recommended procedures. Area shown indicates original large-scale topographic mapping programs.

^aIncludes 22 cities, 21 villages, and four towns.

DATUM TRANSFORMATION

The Commission-recommended horizontal control survey network within the Region is referenced to the North American Datum of 1927 (NAD 27), a datum based upon the Clarke Spheroid of 1866, a spheroid which fits the North American Continent and the Southeastern Wisconsin Region well. The Commission-recommended vertical control survey network within the Region is referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29), a datum formerly known as the Sea Level Datum of 1929. In 1973 the Federal Government undertook a readjustment of the national horizontal control survey network, and adopted a new horizontal datum known as the North American Datum of 1983 (NAD 83), utilizing a new reference spheroid known as the Geographic Reference System of 1980. In 1977, the Federal government undertook a readjustment of the





Figure 33

RECORD OF U.S. PUBLIC LAND SURVEY CONTROL STATION



national vertical control survey network and adopted a new vertical datum, known as the North American Vertical Datum of 1988 (NAVD 88). The use of these new datums within the Region does not provide any significant advantages over the continued use of the Commission-recommended datums. Since no benefits can be shown to occur from the use of the new datums and since a change in datums would incur very high costs, the Commission has determined to continue to recommend utilization of the older datums as a basis for surveying and mapping operations within the Region.

In order to facilitate the use of the new datums within the Region by such agencies as may determine to do so, the Commission, in July 1993 and October 1994, entered into agreements with Mr. Earl F. Burkholder, PS, PE, a consulting geodetic engineer for development of operational computation systems that would permit the ready and reliable bidirectional transformation of coordinates between the two horizontal and two vertical datums concerned. The computational systems were documented in SEWRPC Technical Report No. 34, A Mathematical Relationship between NAD27 and NAD83(91) State Plane Coordinates in Southeastern Wisconsin, December 1994; and SEWRPC Technical Report No. 35, Vertical Datum Differences in Southeastern Wisconsin, December 1995. Time has proven the computational systems documented in these reports to be sound and useful for their intended purposes.

Further changes in surveying technology since 1993 caused the Commission in 2008 to undertake a further review and evaluation of the Commissionrecommended control survey program and the Commission role in that program. These changes have included, among others, the adjustment of the once "new" Federal datums to create NAD 83 (2007) and NAVD 88 (2007); the use of global positioning system (GPS) technology for both horizontal and vertical positioning; and the provision of a continuously operating reference station (CORS) network within the Region by the Wisconsin Department of Transportation to facilitate the use of GPS

technology. These changes, and particularly the ability of GPS technology to accurately locate coordinate positions, led the Commission to create a Technical Advisory Committee of knowledgeable users of the recommended regional control survey system and asked that the Committee: 1) critically review and evaluate the continued utility of the Commission-recommended control survey system network; 2) recommend any needed changes in the network and the means for its perpetuation and use; and 3) recommend the Commission role, if any, in such perpetuation. Membership of that Committee is set forth in Appendix B of this report.

The findings and recommendations of the Technical Advisory Committee are set forth in SEWRPC
Figure 34



TYPICAL CONTROL SURVEY SUMMARY DIAGRAM

Technical Report No. 45, *Technical Review and Reevaluation of the Regional Control Survey Program in Southeastern Wisconsin*, March 2008. These findings and recommendations are as follows:

- 1. The Commission, its constituent counties and municipalities, and such special purpose governmental agencies as the Milwaukee Metropolitan Sewerage District should continue to utilize NAD 27 and NGVD 29 as a basis for horizontal and vertical survey operations within the Region, including land and public works related survey operations.
- 2. The Commission, in cooperation with its constituents counties, should continue to maintain the network of monuments that perpetuate the U.S. Public Land Survey System and the attendant horizontal and vertical control survey networks within the Region; and
- 3. The Commission should undertake the development of new equations for the bidirectional transformation of State Plane Coordinates between NAD 27 and NAD 83 (2007), and orthometric elevations between NGVD 29 and NAVD 88 (2007).

In accordance with these recommendations, the Commission in May 2008 entered into a contract with the consulting geodetic engineer for developing the desired new bidirectional transformation equations. The development of the equations was to be conducted in two phases as recommended in the SEWRPC Technical Report No. 45. Phase I was to consist of the development, test, and validation of a conceptual approach to the work, and was to include an application of the conceptual approach to a small sub-area of the Region. The Phase I work was also to identify any additional geodetic survey measurements that might be required in support of the development work. Phase I was completed in 2008. In addition to describing a proposed conceptual approach to the development of the desired bidirectional transformation equations, Phase I recommended the conduct of certain additional geodetic field surveys within the Region to accurately correlate the old and new datums; to provide validation of the accuracy of the transformed values: and to demonstrate the practicality of the use of GPS technology with both the old and new datums and the CORS network established within the Region by the Wisconsin Department of Transportation (WisDOT).

Phase II consisted of the actual development of the desired bidirectional transformation equations; the conduct of necessary additional geodetic survey work within the Region; and the demonstration of the practicality of utilizing GPS technology with the Continuously Operating Reference Stations (CORS) network newly established within the Region by the Wisconsin Department of Transportation. Phase II also included-for 100 selected monumented U.S. Public Land Survey corners-a comparison of coordinate and elevation values as determined by application of the bidirectional transformation equations and as determined by high-order field surveys. The transformed coordinate and elevation values were then assessed to determine the ability of the bidirectional transformation equations to meet National Map Accuracy Standards. To facilitate application of the equations, the Region was divided into 17 sub-areas with each area assigned a confidence level—A, B, or C—indicating the level of accuracy that could be expected in applications of the bidirectional transformation equations. Phase II was completed in 2010, and the findings and recommendations reported in Commission Technical Report, No. 49, Bidirectional Transformation of Legacy and Current Survey Control Data within Southeastern Wisconsin, May 2010.

COUNTY SURVEYING ACTIVITIES

In 1984, State legislation was enacted which in part requires that in a county having a population of 500,000 or more (Milwaukee County), where there is no county surveyor, a copy of each land survey plat prepared by a land surveyor be filed in the office of the regional planning commission, the executive director of which is to act in the capacity of county surveyor for the county. Under this act, the Commission is also made responsible for perpetuating corners of the U.S. Public Land Survey which may be subject to destruction, removal, or burial through construction or other activities and for maintaining a record of the surveys required for such perpetuation. This act became effective on May 28, 1984.

In 2010, under the requirements of this legislation, the Division received, indexed, and filed 710 records of land surveys completed within Milwaukee County, the only county within the Region which meets the statutory criteria concerned. In addition, the Commission began a project in 2006 to incorporate historic records of land surveys acquired from a now defunct land surveying firm. During 2009 the remaining portion of these records were indexed and filed, bringing the total number of records of land surveys completed within Milwaukee County which have been filed by the Division to 79,487.

During 2009 and 2010 the Commission assisted the Milwaukee County Automated Mapping Land Information System (MCAMLIS) staff with the initiation and completion of a program to produce digital scans of the hardcopies of the 79,487 plats of survey that have been filed with the Milwaukee County Surveyor since 1984. The purpose and intent of this project was to create a single database and to allow the digital images of the plats of survey to be accessed by the public through the MCAMLIS portion of the Milwaukee County website. The work involved coordination of plat of survey file management with a disadvantaged business enterprise located in Milwaukee County under contract to MCAMLIS.

Since 1961, the Commission has maintained records on U.S. Public Land Survey corners within the entire Region. Since 1984, the Commission, as noted above, has been responsible for the perpetuation of the U.S. Public Land Survey System in Milwaukee County. Since 1999, the Commission has been responsible for Map 41 TYPICAL TOPOGRAPHIC MAP



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Map 42

TYPICAL CADASTRAL MAP



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the remonumentation and perpetuation of the U.S. Public Land Survey System in Walworth County. Since 2000, the Commission has been responsible for the perpetuation of the U.S. Public Land Survey System in Waukesha County. Since 2006, the Commission has been responsible for the perpetuation of the U.S. Public Land Survey System in Kenosha County. In Kenosha, Walworth, and Waukesha Counties, the Commission performs the duties of County Surveyor under agreements with those Counties.

REGIONAL LAND INFORMATION WEBSITE

In 2003, the Commission completed the development of an internet site which provides access to land survey and control survey documents, aerial orthophotography, and planning related mapping for the Southeastern Wisconsin Region. The land survey and control survey documents—see samples shown in Figures 33 and 34 are updated on the internet site as new or revised data becomes available.

REPRODUCTION SERVICES

In addition to serving all other Commission divisions through in-house reproduction of reports, the Division provided reproduction services for local units of government and private interests. During 2010, a total of 181 prints of aerial photographs and 11 large-scale topographic maps of portions of the Region were reproduced.

FINAL REPORT PRODUCTION

The Commission produces most of its documents using in-house staff and equipment. During 2010, the Cartographic and Graphic Arts Division was responsible for the production of the following Commission publications:

PLANNING REPORTS

- No., 52, A Regional Water Supply Plan for Southeastern Wisconsin, December 2010, Volume 1, Chapters 1-12, 831 pages
- No., 52, A Regional Water Supply Plan for Southeastern Wisconsin, December 2010, Volume 2, Appendices, 329 pages

TECHNICAL REPORTS

- No. 46, Groundwater Budget Indices and their use in Assessing Water Supply Plans for Southeastern Wisconsin, February 2010, 60 pages
- No. 49, Bidirectional Transformation of Legacy and Current Survey Control Data within Southeastern Wisconsin, May 2010, 150 pages

COMMUNITY ASSISTANCE PLANNING REPORTS

- No. 266, 2nd Edition, *Racine County Hazard Mitigation Plan Update:2010-2015*, July 2010, 413 pages
- No. 278 2nd Edition, *Kenosha County Hazard Mitigation Plan Update: 2011-2015*, June 2010, 430 pages
- No. 279, *Milwaukee County Transit System Development Plan*, October 2010, 297 pages
- No. 292, A Comprehensive Plan for the Town of Farmington: 2035, Washington County, Wisconsin, January 2010, 283 pages
- No. 299, A Multi-Jurisdictional Comprehensive Plan for Kenosha County: 2035, April 2010, 1,030 pages
- No. 306, A Comprehensive Plan for the Town of Salem: 2035, Kenosha County, Wisconsin, March 2010, 348 pages
- No. 307, A Comprehensive Plan for the Town of Wheatland: 2035, Kenosha County, Wisconsin, May 2010, 229 pages
- No. 308, Sanitary Sewer Service Area for the Village of Big Bend and Environs, Waukesha County, Wisconsin, March 2010, 74 pages
- No. 309, *Mukwonago River Watershed Pro*tection Plan, June 2010, 383 pages
- No. 310, A Comprehensive Plan for the Town of East Troy: 2035, Walworth County, Wisconsin, December 2010, 130 pages

ANNUAL REPORTS

• 2009 Annual Report, October 2010, 256 pages

MEMORANDUM REPORTS

- No. 143, 2nd Edition, An Aquatic Plant Management Plan for the Lauderdale Lakes, Walworth County, Wisconsin, July 2010, 154 pages
- No. 172, A Watercourse System Plan for the Milwaukee Harbor Estuary, December 2010, 122 pages
- No. 177, An Aquatic Plant Management Plan for Whitewater and Rice Lakes, Walworth County, Wisconsin, March 2010, 102 pages
- No. 192, An Aquatic Plant Management Plan for Lake Shangrila and Benet Lake, Kenosha County, Wisconsin, March 2010, 114 pages
- No. 194, Stream Habitat Conditions and Biological Assessment of the Kinnickinnic and Menomonee River Watersheds: 2000-2009, January 2010, 152 pages
- No. 197, *Review, Update, and Reaffirmation of the Year 2035 Regional Transportation Plan,* June 2010, 165 pages

NEWSLETTERS

- Preliminary Recommended Jurisdictional Highway System Plan for Walworth County, March 2010, 8 pages
- Year 2035 Regional Housing Plan for Southeastern Wisconsin, October 2010, 8 pages

OTHER

- Amendment to Natural Areas and Critical Species Habitat Protection and Management Plan for the Southeastern Wisconsin Region, December 2010, 342 pages
- Amendment to the Regional Water Quality Management Plan, Village of Genoa City, March 2010, 5 pages
- Amendment to the Regional Water Quality Management Plan, City of New Berlin, December 2010, 4 pages
- Record of Public Comments, Kenosha-Racine-Milwaukee Commuter Link Project: Draft Environmental Impact Statement, June 2010, 108 pages
- Record of Public Comments, A Jurisdictional Highway System Plan for Walworth County: 2035, July 2010, 198 pages

GEOGRAPHIC INFORMATION SYSTEMS DIVISION

DIVISION FUNCTIONS

The Commission's Geographic Information Systems Division provides basic support and mapping services to the Commission's planning divisions, provides assistance to county and local governments in the development of automated land information systems, and distributes digital and hardcopy map products to requesting clients. In the mid-1970s, the Commission began collecting map information in digital format and has developed a computer mapping capability that incorporates large-scale base maps, planning data, and resource inventories into a regional geographic information system (GIS). A GIS is an assemblage of computer hardware, software, and geographic data for capturing, storing, updating, analyzing, and displaying geographically-referenced information, such as topographic mapping, land use, soils, floodplain boundaries, and associated attribute data. A geographic information system links information to location. In the Commission's GIS, the various planning and resource data sets are spatially-referenced to a framework provided by the U.S. Public Land Survey System (USPLSS) tied to the State Plane Coordinate System by accurate horizontal control surveys. This framework of survey control allows the wide variety of base maps and planning data sets in the Commission's geographic information system to be integrated together for regional planning activities.

A land information system (LIS) is similar to a GIS, but this information system has the added component of real-property boundary maps with ownership and parcel data. The maps and data sets in an LIS are therefore directly related, and geographically-referenced, to parcels and property information. With the inclusion of parcel information, land information systems have become an important administrative and decision-making tool for municipalities. At the local level, every county and many city, village, and town governments in the Southeastern Wisconsin Region have developed land information system capabilities as part of their planning activities. Many municipalities have expanded their LIS functionality to provide essential services, such as assistance with zoning decisions, public works inventories and maintenance, and access to public records. Since nearly all local land information systems use the common framework of survey control advocated by the Commission, regional planning data from the Commission's GIS have been distributed and integrated into a number of municipal land information systems. Similarly, the Commission has been able to acquire and incorporate large-scale parcel and topographic data sets from county and other land information systems to augment its GIS. Sharing data between GIS and LIS systems provides users with a wide range of planning-related information about the physical, cultural, and ownership characteristics of land—all important factors in the planning process.

COMPUTER MAPPING CAPABILITIES

The Commission has maintained a computer-assisted mapping capability since 1976. At that time, the Commission utilized computer-assisted drafting (CAD) software to create, maintain, and replicate maps for planning purposes. In 1987, the Commission acquired GIS software to support map digitization, map production, and map-related analytical functions. The GIS software provides the ability to integrate diverse spatial data sets and to generate new information from the analysis of multiple layers of geographically-referenced data. These operations are especially valuable to the Commission in conducting areawide planning activities.

The Commission's geographic information system currently includes ArcInfo and ArcView GIS software and MicroStation CAD software. The ArcInfo and ArcView software supports a wide variety of data collection, map analysis, and map production tasks. To supplement this GIS functionality, the MicroStation software is used in a variety of map review and map preparation operations, and facilitates the translation and comparison of digital map files between differing file formats.

GIS MAPPING SERVICES

The GIS Division facilitates the Commission's planning activities with map preparation and other mapping services. The Division prepares customized maps in both digital and hardcopy form to support project requirements of the planning staff. Additional mapping services include collection of digital map inventories and conducting spatial data analysis to assist completion of planning projects. In 2010, the GIS Division assisted with the following:

- Completed digital data collection for the 2005 Regional Vegetation Inventory and a substantial portion of the 2005 Regional Wildlife Habitat Inventory
- Completed the preliminary phase of the 2010 Regional Land Use Inventory for five counties
- Continued updates to the digital base map of the Region
- Completed thematic and reference maps for comprehensive plans covering several counties and local municipalities
- Completed thematic maps for a number of lake management plans
- Continued data collection and map revisions for floodplain mapping in Milwaukee and Waukesha Counties
- Reviewed imagery acquired for the 2010 Orthophotography Project, prepared compressed image files, and delivered orthophotography products for all areas of the Region except southern Kenosha County
- Prepared maps and graphics for the Mid-Kettle Moraine Outdoor Recreational Opportunities brochure to be published in 2011 by the Mid-Kettle Moraine Partners Group

DEVELOPMENT OF A REGIONAL GEOGRAPHIC INFORMATION SYSTEM

Since 1976, the Commission has developed a regional geographic information system with an emphasis on acquiring and utilizing data for regional planning purposes. The initial development of the system began with the conversion to digital format of land use and related inventories that previously were quantified, manipulated, and stored in hardcopy form. Over the years, the Commission has continued these map conversion efforts to build a large inventory of planning data sets covering the Southeastern Wisconsin Region. Currently, the regional GIS consists largely of resource inventories such as land use, soils, environmental corridors, vegetation, wildlife habitat, and related inventories. In addition to these data sets, the GIS also includes digital aerial orthophotography and digital base mapping for each county within the Region. A partial list of the planning inventories and other data sets contained in the Commission's regional geographic information system and, where applicable, the year of currency of each data set, includes the following:

- Aerial Orthophotography: 1995, 2000, 2005, 2007, 2010
- Land Use: 1963, 1970, 1980, 1985, 1990, 1995, 2000
- Soil Mapping Units
- Historical Urban Growth: 1995, 2000
- Vegetation: 1985, 2005
- Wildlife Habitat: 1985, 2005
- Inventory Environmental Corridors: 1990, 1995, 2000, 2005
- Planned Environmental Corridors
- Wetland Inventory: 2005
- Floodplain Boundaries
- Pre-Settlement Vegetation: 1836
- County Base Maps: 1985, 1990, 1995, 2000, 2005
- Natural Areas and Critical Species Habitats
- Civil Division Boundaries: 1985, 1990, 1995, 2000
- Regional Land Use Plans: 2010, 2020, 2035
- Watershed, Subwatershed, and Subbasin Boundaries
- Park and Open Space Sites
- Sewer Service Areas
- Depth to Bedrock
- Depth to Water Table
- Water Table Elevation
- Contaminant Attenuation Potential of Soils
- Groundwater Contamination Potential

REGIONAL ORTHOPHOTOGRAPHY PROGRAM

The Commission has a long-standing program of obtaining aerial photography of the Southeastern Wisconsin Region at regular intervals. Conventional aerial photography was first acquired in 1963 and thereafter collected in 1967, 1970, and at five-year intervals since. The early aerial photography was prepared as a black-and-white hardcopy product.

Beginning in 1995, the Commission upgraded the aerial photography to collect black-and-white orthophotography in both hardcopy and digital form. Orthophotography is aerial photography that is enhanced by the removal of horizontal displacement caused by ground relief, thereby creating image products that can be used as true maps. In 2005, the regional product was further enhanced with the collection of color orthophotography in digital format only. Hardcopy orthophoto products were not included in the 2005 orthophotography project, but can be prepared on demand from the digital orthophoto files.

The 2007 orthophotography project acquired color imagery for Milwaukee, Ozaukee, and Waukesha Counties and a portion of Washington County. The project was partially funded by a grant award from the U.S. Geological Survey as part of the Federal Homeland Security Program.

Planning for the most recent orthophotography project began about two years ago. The 2010 orthophotography project, partially funded by Federal planning funds and a grant from the U.S. Geological Survey, will result in the preparation of standard 12-inch pixel resolution imagery for Racine, Walworth, and most of Ozaukee Counties. Participants also had the opportunity to acquire higher resolution orthophotography. Milwaukee, Washington, and Waukesha Counties and the Cities of Mequon and Racine chose to provide additional funds to acquire 6-inch resolution imagery, and Kenosha County opted to acquire 3-inch resolution imagery. Counties and participating municipalities will also have the option to obtain accompanying digital elevation mapping.

The 2010 project includes a unique effort to evaluate an alternative orthophotography product in Milwaukee County. Both conventional and alternative orthophotos will be prepared for the County and evaluated for accuracy and relative cost of each product. The majority of the 2010 orthophotography project was completed by the end of the year, with the remaining imagery to be reviewed by Commission staff and delivered in early 2011.

Figure 35

REGIONAL LAND INFORMATION WEBSITE



REGIONAL LAND INFORMATION WEBSITE

In 2003, the Commission continued the development of a regional geographic information system with the creation of a land information website (see Figure 35). The Southeastern Wisconsin Regional Land Information website (<u>http://maps.sewrpc.org/regionallandinfo/</u>) is a cooperative effort between the Commission and the Land Information Officers and staffs of the seven counties. Partially funded by grants from the Wisconsin Land Information Program, the website provides access to land and control survey documents, aerial orthophotography, and regional planning maps. The website also offers access to parcel maps maintained and contributed by participating counties.

One important function of the website is online access to current land and control survey documents. Users can search for two types of survey documents: control station (dossier) sheets and Control Survey Summary Diagrams (CSSDs). A dossier sheet is a record of a USPLSS control station, generally a section corner, quarter-section corner, center of section, or witness corner. Each sheet contains an identification of the corner, a sketch of the location, witness monuments and ties, monument coordinates and elevations, and other surveyor's information. CSSDs summarize horizontal and vertical control survey information obtained from the high-order control surveys carried out within the Southeastern Wisconsin Region. Each Control Survey Summary Diagram covers six USPLSS sections and shows the location and type of corner monuments; coordinates and elevations of the located corners; and grid distances, bearings, and interior angles of all USPLSS section and quartersection lines.

The dossiers and CSSDs are maintained in digital format (Internet standard PDF format) on the regional land information website. To access the documents, users can search by location on an index map, or can enter the township, range, section, and corner information on a web page form. Either search method will present a list of one or more documents which can then be viewed and printed. As survey documents are updated, the revised dossiers and CSSDs are placed on the website to insure that the regional land information site is the best source for current survey documentation of the Southeastern Wisconsin Region.

The aerial photography portion of the regional land information website displays year 2010 orthophotography. Users can examine images of the Region and find out how the orthophotography is organized into digital files for distribution. An order form on the website can be used to request digital orthophoto files from the Commission for a nominal fee.

Another portion of the website, the Regional Map Server, is a mapping application providing access to planning and natural resource maps of the Region. This application allows users to select and view different types of planning data sets, including detailed and generalized land use maps, environmental corridor maps, soils maps obtained from the Natural Resources Conservation Service, and parcel mapping contributed by participating counties. Municipal boundaries and five years of orthophotography are also accessible on the mapping application. Metadata, providing detailed information about the origin, lineage, and content of the data sets, is available for the map layers displayed on the Regional Map Server.

The Southeastern Wisconsin Regional Land Information website has been developed to provide basic planning information to interested users. For surveyors, the site serves as the most current source of control survey documents in the Region. For land owners and developers, the website can answer property-related questions about surrounding land uses, proximity to environmental corridors, and soil types. The Commission, with the assistance of the counties, intends to continually enhance the regional land information website with the addition of new orthophotography, updated resource inventories, and additional planning-related mapping.

DEVELOPMENT OF COUNTY-BASED LAND INFORMATION SYSTEMS

Since its inception, the Commission has recommended that county and local units of government in the Region adopt a model for development of land information systems that includes preparation of base mapping and overlay mapping. This model consists of the following components:

- 1. The completion of the location and remonumentation of all U.S. Public Land Survey corners and quarter-section corners, including the centers of the sections and meander corners, to Commission standards.
- 2. The completion of high-order horizontal and vertical control surveys to establish the State Plane Coordinates and elevations of the U.S. Public Land Survey corners to Commission standards.
- 3. The completion of topographic base maps in digital and hardcopy form at one-inch-equals-100-feet or one-inch-equals-200-feet scales, with two-foot contour intervals. Recently, the acquisition of digital terrain model files (DTMs) has been included in this component.
- 4. The completion of cadastral overlay maps in digital and hardcopy form at similar one-inch-equals-100-feet or one-inch-equals-200-feet scales. These maps provide detailed information on the location and configuration of all real-property boundaries, including the boundaries of all streets and public ways and other public landholdings. These maps also assign a parcel identification number (tax key number) to each ownership parcel to enable the linking of geographic with nongeographic data files.
- 5. The creation of an initial series of planningoriented overlay maps in digital form, including parcel ownership, assessed valuation, soils, land use, wetland, floodplain, shoreland, and zoning data.

The first four components of this model establish the creation of large-scale topographic base maps and

cadastral overlay maps founded upon a Commissionrecommended monumented control survey network that accurately relates the U.S. Public Land Survey System to the State Plane Coordinate System. With this foundation in place, the final component of planning-oriented mapping can be added to create a modern system of land information access and management. Land information systems developed in this manner can be further enhanced with the addition of a wide variety of maps and related data files, providing information on demographic and administrative areas, public works, transportation, emergency services, public safety, land conservation, and numerous other applications. All counties and many local units of government in the Region are actively developing and enhancing land information systems according to this model of implementation.

The Commission provides assistance to the seven counties in the execution of their land information activities. In 2010, the Commission carried out the following work efforts in support of development of the county-based land information systems:

- In Kenosha County, the Commission initiated a project that will process LiDAR (light detection and ranging) elevation data previously acquired for the County. The project will result in the preparation of DTM (digital terrain model) files and one-foot contour interval mapping in digital format covering the entire County. This project is partially funded by a grant from the Wisconsin Department of Commerce.
- The Commission continued work on a floodland mapping project in Milwaukee County. Land information system planning in this county is facilitated by a public-private partnership known as the Milwaukee County Automated Mapping and Land Information System (MCAMLIS), which jointly manages the base mapping. This latest MCAMLIS project will

prepare a detailed floodplain and floodway boundary data set that can be used for local floodplain zoning and in updating Federal Emergency Management Agency flood insurance rate maps. Upon completion of this project, floodplain boundaries will be accurately delineated and added to the land information data sets—including county-wide digital cadastral and topographic mapping—which have been prepared under the MCAMLIS program.

- In Ozaukee County, the Commission worked with County staff to complete a shoreland and floodplain zoning mapping project. This project involved the preparation of digital and hardcopy shoreland zoning maps covering all Towns in the County. The mapping contained floodplain and floodway boundaries, navigable water features, shoreland boundaries, wetlands, and related features.
- In Racine County, the Commission began an elevation mapping project that is being partially funded by a grant from the Wisconsin Department of Commerce. This project collected LiDAR data for the entire County, and will result in the preparation of DTM and digital contour line files for 115 square miles (approximately 34 percent) of the County.
- The Commission assisted Walworth County with map maintenance services in 2010. Under an agreement with the County, the Commission staff performed regular updates to the County's digital zoning map.
- The City of Mequon and the Commission began a project that will acquire large scale elevation mapping. In addition to LiDAR data, the project will result in the preparation of DTM files and one-foot contour interval mapping for the entire City.

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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, and 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 management of the Commission's financial affairs. This includes maintaining a fund accounting system, preparing Commission payrolls, and processing accounts receivable and payable. Through the 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 its 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 2010 by maintaining a trust account with a minority-controlled bank within the Commission's service area. In addition, the Commission has established a business enterprise program, including the completion, maintenance, and expansion of a list of disadvantaged– and women-owned businesses which are contacted as potential Commission vendors.

The Division is also responsible for assisting the Executive Director in 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 2010, 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. Applicant flow is monitored in order to gauge progress in attracting minority applicants as required in the affirmative action program. Efforts were continued toward attracting qualified minority and women applicants during the year.

GRANT-IN-AID PROCUREMENT

Along with accounting for the Federal, State, and local funds received to operate the Commission, the Division is responsible for Federal and State grant application preparation. This includes completing the necessary application forms, including supporting narratives describing proposed work programs, preparing budgets to carry out the work programs, and assisting in obtaining final grant approval. These grants provide a substantial portion of the working capital required to carry out the Commission's overall work program.

The Division also processes any claims for reimbursement of expenses incurred under each grant contract, prepares detailed financial status reports as required by Federal and State funding agencies, and maintains detailed financial records for audit by grantor agencies.

The Commission's annual overall work program, a document, as noted above, required by Federal regulation, is also prepared with the assistance of the Division. This report is an important vehicle for securing Federal and State grants-in-aid, and serves as a guide to the financial management of the Commission.

PURCHASING AND CLERICAL SUPPORT

The Administrative Services Division provides the Commission with purchasing services and clerical staff support in the typing of reports, in addition to the typing of routine and specialized correspondence.

SALE AND DISTRIBUTION OF PUBLICATIONS

During 2010, the Division distributed a total of 6,805 copies of Commission publications. These included the

following: 45 planning reports, 24 amendments to planning reports, 187 technical reports, 1,865 community assistance planning reports, 328 memorandum reports, 469 annual reports, and 3,887 newsletters, In addition, the Division distributed 181 aerial photographs and 11 topographic maps. APPENDICES

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Appendix A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION COMMISSIONERS AND COMMITTEES: DECEMBER 2010

COMMISSIONERS

KEN	ISHA COUNTY	Term Expires
***	Robert W. Pitts	2012
**	Adelene Greene, Secretary	2016
*	Kimberly L. Breunig	2016

MILWAUKEE COUNTY

*	William R. Drew	2014
***	John Rogers	2014
**	John F. Weishan, Jr.	2010

OZAUKEE COUNTY

**	Thomas H. Buestrin	2014
***	William E. Johnson	2012
*	Gustav W. Wirth, Jr	2014

RACINE COUNTY

***	Susan S. Greenfield	2010
*	Gilbert B. Bakke	2014
**	Mary A. Kacmarcik	2012

WALWORTH COUNTY

***	Richard A. Hansen, Vice-Chairman	2012
**	Gregory L. Holden	2014
*	Nancy L. Russell, Treasurer	2012

WASHINGTON COUNTY

*	Daniel W. Stoffel	2014
**	Daniel S. Schmidt	2010
***	David L. Stroik, Chairman	2012

WAUKESHA COUNTY

*	James T. Dwyer	2012
***	Vacant	
**	Paul G. Vrakas	2010

- * Elected by County Board or appointed by County Executive and confirmed by County Board.
- ** Appointed by the Governor from a County-supplied list of candidates.
- *** Appointed by the Governor on his own motion without reference to any County-supplied list.

COMMITTEES

EXECUTIVE COMMITTEE

David L. Stroik, Chairman Richard A. Hansen, Vice-Chairman Gilbert B. Bakke Thomas H. Buestrin James T. Dwyer Adelene Greene Nancy L. Russell Daniel S. Schmidt John F. Weishan, Jr. Gustav W. Wirth, Jr.

ADMINISTRATIVE COMMITTEE

Adelene Greene, Chairman James T. Dwyer, Vice-Chairman Gilbert B. Bakke Thomas H. Buestrin Richard A. Hansen Nancy L. Russell Daniel S. Schmidt David L. Stroik John F. Weishan, Jr. Gustav W. Wirth, Jr.

INTERGOVERNMENTAL AND PUBLIC RELATIONS COMMITTEE

James T. Dwyer, Chairman John F. Weishan, Jr., Vice-Chairman Gilbert B. Bakke Kimberly L. Breunig Nancy L. Russell Daniel W. Stoffel David L. Stroik Gustav W. Wirth, Jr.

PLANNING AND RESEARCH COMMITTEE

Daniel S. Schmidt, Chairman Gregory L. Holden, Vice-Chairman Gilbert B. Bakke Kimberly L. Breunig William R. Drew Susan S. Greenfield William E. Johnson Mary A. Kacmarcik Robert W. Pitts John Rogers Nancy L. Russell Daniel W. Stoffel David L. Stroik Paul G. Vrakas John F. Weishan, Jr. (This page intentionally left blank)

Appendix B

COMMISSION ADVISORY COMMITTEES: 2010

KENOSHA COUNTY JURISDICTIONAL HIGHWAY PLANNING COMMITTEE

Ray Arbet Chairman	Director of Public Works, Kenosha County
Kenneth R. Yunker	Executive Director,
Secretary	Southeastern Wisconsin
	Regional Planning Commission
David E. Cox	Administrator, Village of Twin Lakes
David DeVito	Chairman, Town of Brighton
Colleen Fisch	Chairman, Town of Bristol
Virgil Gentz	Chairman, Town of Paris
William M. Glembocki	Chairman, Town of Wheatland
Barry S. Goad	President, Village of Genoa City
Marlene P. Goodson	President, Village of Paddock Lake
Richard Gossling	Chairman, Town of Bristol
Dewayne J. Johnson	Director, Southeast Region,
	Wisconsin Department of Transportation
Roger W. Johnson	President, Village of Silver Lake
Michael M. Lemens	Director of Engineering, City of Kenosha
Dwight E. McComb	Planning and Program
	Development Engineer,
	U.S. Department of Transportation,
	Federal Highway Administration
George E. Melcher Director, De	epartment of Planning and Development,
	Kenosha County
James M. Smith	Chairman, Town of Somers
Michael SpenceVill	age Engineer, Village of Pleasant Prairie
Robert Stoll	Chairman, Town of Randall
Linda S. Valentine	Chairperson, Town of Salem

MILWAUKEE COUNTY JURISDICTIONAL HIGHWAY PLANNING COMMITTEE

Jack H. Takerian Dire	ector, Department of Transportation and Public Works,
Chairman	Milwaukee County
Kenneth R. Yunker	Executive Director,
Secretary	Southeastern Wisconsin
	Regional Planning Commission
John M. Bennett	City Engineer, City of Franklin
Melinda K. Dejewski	City Engineer, City of St. Francis
David Eastman	Director of Public Works, City of Glendale
Kim Egan	Village Administrator, Village of West Milwaukee
Dewayne J. Johnson	Director, Southeast Region,
	Wisconsin Department of Transportation
William A. Kappel	Director of Public Works,
	City of Wauwatosa
Mary Jo LangeD	irector of Public Works, City Engineer, City of Cudahy
Michael G. Lewis	City Engineer, City of West Allis
Jeffery J. Mantes	Commissioner of Public Works,
	City of Milwaukee
Michael J. Martin	Director of Public Works, Village of Hales Corners
Daniel Naze	Director of Public Works, City Engineer,
	Village of Whitefish Bay
Michael Neitzke	Mayor,
	City of Greenfield
Andrew Pederson	Village Manager, Village of Bayside
George Poirier	Wisconsin Division Administrator,
	Federal Highway Administration,
	U.S. Department of Transportation
Susan E. Robertson	Village Manager, Village of Fox Point
Michael C. Simmons	Acting City Engineer, City of Oak Creek
Chris Swartz	Village Manager, Village of Shorewood
Carl J. Tisonik	Director of Public Works, Village of Greendale
Thomas W. Tollaksen	Village Manager, Village of River Hills
Russell Van Gompel	Village Manager, Village of Brown Deer
Kyle E. Vandercar	City Engineer, City of South Milwaukee

OZAUKEE COUNTY JURISDICTIONAL HIGHWAY PLANNING COMMITTEE

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Kenneth R. Yunker	Executive Director,
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	Regional Planning Commission
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Karl V. Hertz	President, Village of Thiensville
Barbara Jobs	Chairman, Town of Saukville
Dewayne J. Johnson	Director, Southeast Region,
	Wisconsin Department of Transportation
Francis J. Kleckner	Chairman, Town of Belgium
Kevin Kowalkowski	President, Village of Belgium
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OZAUKEE COUNTY JURISDICTIONAL HIGHWAY PLANNING COMMITTEE (continued)

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David Murphy Director of Public	c Works/
Village Engineer, Village of	Gratton
	Granton
Gregory P. Myers	edarburg
George Poirier Wisconsin Division Admi	nistrator,
Federal Highway Admin	istration,
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RACINE COUNTY JURISDICTIONAL HIGHWAY PLANNING COMMITTEE

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Distant M. Isaa	Wisconsin Department of Transportation
Richard M. Jones	Commissioner of Public Works,
Gan/ Kastonson	Chairman Town of Baymond
leffery Katz	Ianager of Planning and Engineering Services
	Public Works Department Racine County
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Robert E. Langmesser	Chair, Town of Waterford
Terrence J. McMahon	Supervisor, Town of Yorkville
Robert Miller	Mayor, City of Burlington
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	Federal Highway Administration,
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Ralph Rice	Chairman, Town of Burlington
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Chairman	Walworth County
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Secretary	Wisconsin Regional Planning Commission
Joseph Abell	Chairman, Town of Walworth
Thomas Brandemuehl	Superintendent of Public Works,
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	Wisconsin Department of Transportation
Dennis Jordan	Administrator, City of Lake Geneva
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William R. Loesch	President, Village of East Troy
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WALWORTH COUNTY JURISDICTIONAL HIGHWAY PLANNING COMMITTEE (continued)

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Jerry Mehring	
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Kenneth Monroe	Chairman, Town of Bloomfield
Wayne Redenius	Chairman, Town of Richmond
Nancy Russell	Chairperson, Walworth County
	Board of Supervisors and
	Public Works Committee
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Frank Taylor	Chairman, Town of LaGrange
Edward Vander Veen	Chairman, Town of Sharon
Todd V. Watters	President, Village of Walworth
Mark E. Wendorf	Director of Public Works, City of Delavan
James Wolfgram Su	perintendent, Highway Department, Town of Linn
Craig Workman	Director of Public Works,
	Village of Fontana-on-Geneva Lake

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Secretary	Wisconsin Regional Planning Commission
Richard L. Bertram	Chairman, Town of Barton
Robert A. Bingen	Chairman, Town of Addison
Russell Brandt	President, Village of Slinger
Kristine Deiss	Mayor, City of West Bend
Justin Drew	City Planner, City of Hartford
Dennis Gehring	Chairman, Town of Hartford
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Joseph C. Gonnering	Chairman, Town of Trenton
Dan Goetz	Supervisor, Washington County
	Board of Supervisors
Mike Heili	President, Village of Newburg
Scott M. Henke	Mayor, City of Hartford
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-	Wisconsin Department of Transportation
Ellis R. Kahn	Chairman, Town of Kewaskum
Dennis E. Kenealy	Chairman, Town of Erin
Carl Klemme	Chairman, Town of Wayne
Dwight E. McComb	
	U.S. Department of Transportation,
	Federal Highway Administration
Paul J. Metz	Chairman, Town of Germantown
Scott A. Mittelsteadt	President, Village of Jackson
Paul E. Mueller	Ādministrator,
	Planning and Parks Department,
	Washington County
Paul R. Rice	Chairman, Town of West Bend
Gene L. Reiter	Citizen, Town of Polk
Gary Schrieber	Chairman, Town of Farmington
Paul Servais	Chairman, Town of Jackson
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WAUKESHA COUNTY JURISDICTIONAL HIGHWAY PLANNING COMMITTEE

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Secretary	Wisconsin Regional Planning Commission
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Richard Arrowood	Chairman, Town of Ottawa
Tim Barbeau	
Allison M. Bussler	Director of Public Works, Waukesha County
Harlan E. Clinkenbeard	Planner, City of Pewaukee
James Delay	Mayor, City of Oconomowoc
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Richard A. Ensslin	President, Village of Butler
Jeffery A. Flaws	President, Village of Wales
Matthew Gehrke	Chairman, Town of Lisbon
Scott Gosse	Administrator, Village of Pewaukee
Keith Henderson	Chairman, Town of Brookfield
Joe Hoelkinger	President, Village of North Prairie
Scott Gosse Keith Henderson	Administrator, Village of Pewaukee
Joe Hoelkinger	President, Village of North Prairie

WAUKESHA COUNTY JURISDICTIONAL HIGHWAY PLANNING COMMITTEE (continued)

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	Village of Menomonee Falls
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Richard I Kneiser	President Village of Oconomowor Lake
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David C Lamerand	President Village of Hartland
Topy Lopoinski	Provident Village of Success
Piebord Lartz	President Village of Nachotak
Sharan L. Lagir	
Dea Martia	
	President, Village of Lannon
Ed McAlear	ing and Program Development Engineer
Dwight E. McComb Plan	Ing and Program Development Engineer,
	U.S. Department of Transportation
Frederick I Michalak	Federal Highway Administration
Prederick J. Michalek	
Richard Nawrocki	Supervisor, Town or Merton
Jack Nissen	President, Village of Dousman
Neil Palmer	President, Village of Elm Grove
Steven P. Ponto	
Sheri Schmit Systems Pla	nning Group Manager, Southeast Region,
	Wisconsin Department of Transportation
Philip Schuman	Mayor, City of Delafield
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ADVISORY COMMITTEE ON TRANSPORTATION SYSTEM PLANNING AND PROGRAMMING FOR THE RACINE URBANIZED AREA

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Chairman Kannath D. Yumluan	Racine County
Constant	Executive Director, Southeastern
Secretary	wisconsin Regional Planning Commission
Michael H. Andreasen	Administrator, village of Ivit. Pleasan
Sandra K. Beaupre	Director, Bureau of Planning, Division of
	I ransportation Investment Management,
	Wisconsin Department of Transportation
William D. Bensman	President, Village of Wind Point
Michael A. Hayek	Village Engineer, Village of Caledonia
Kristin Holmberg-Wright	President, Village of North Bay
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Dewayne J. Johnson	Director, Southeast Region
	Wisconsin Department of Transportation
Richard M. Jones	. Commissioner of Public Works and City Engineer,
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Peter T. McMullen	Air Management Specialist,
	Bureau of Air Management,
	Wisconsin Department of Natural Resources
Chervl L. Newton	Environmental Protection Specialist, Region V
· · · ·	U.S. Environmental Protection Agency
Michael Pievach	President, Wisconsin Coach Lines, Inc.
George Poirier	Wisconsin Division Administrator
eeerge i enter internet	Federal Highway Administration
	U.S. Department of Transportation
Marisol Simõn	Regional Administrator, Region V
	Federal Transit Administration
	U.S. Department of Transportation
Audrey Viau	President Village of Elmwood Park
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ADVISORY COMMITTEE ON TRANSPORTATION SYSTEM PLANNING AND PROGRAMMING FOR THE KENOSHA URBANIZED AREA

Kenneth R. Yunker	
Sandra K. Beaupre	Director. Bureau of Planning. Division of
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	Wisconsin Department of Transportation
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Ron Iwen	Director, Department of Transportation
	City of Kenosha
Dewayne J. Johnson	Director, Southeast Region
	Wisconsin Department of Transportation
Jeffrey B. Labahn	Director, Department of City Development,
	City of Kenosha
Michael M. Lemens	Director, Engineering Division,
F	Public Works Department, City of Kenosha

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL TRANSPORTATION SYSTEM PLANNING (continued)

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Scott Brandmeier	Dity of Franklin
	Village of Fox Point
Allison Bussler	Director of Public Works,
	Waukesha County
Shane Crawford	Director of Public Works,
	Walworth County
Robert R. Dreblow	Highway Commissioner, Ozaukee County
Jon Edgren	Highway Commissioner, Washington County
Thomas M. Grisa	Director of Public Works, City of Brookfield
Anita Gulotta-Connelly	
	Milwaukee County Transit System
Richard M. Jones	Commissioner of Public Works/City Engineer,
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William Kappel	Director of Public Works, City of Wauwatosa
Michael M. Lemens	Director of Engineering, City of Kenosha
Jeffrey J. Mantes	Commissioner, Department of Public Works,
	City of Milwaukee
Bharat Mathur	Acting Regional Administrator, Region 5,
	U.S. Environmental Protection Agency
	U.S. Department of Transportation
Dwight E. McComb	Planning and Program Development
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	Federal Highway Administration
Gloria L. McCutcheon	
	Department of Natural Resources
John H. Melby, Jr.	Director, Bureau of Air Management,
-	Wisconsin Department of Natural Resources
George E. Melcher	Director, Department of Planning and Development,
0	Kenosha County
Jeffrey S. Polenske	City Engineer, City of Milwaukee
David Prott	Director of Public Works,
	Racine County
Sheri Schmit	Systems Planning Group Manager
Sou	theast Region, Wisconsin Department of Transportation
Marisol Simõn	Regional Administrator, Region V,
	Federal Transit Administration,
	U.S. Department of Transportation
Jack Takerian	Director, Milwaukee County Department
	of Transportation and Public Works
Wallace Thiel	

DES PLAINES RIVER WATERSHED COMMITTEE

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Chairman	Development, Kenosha County
Kenneth R. Yunker	Executive Director, Southeastern
Secretary	Wisconsin Regional Planning Commission
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	Development, Racine County
Randall S. Blankenhorn	Executive Director, Chicago
	Metropolitan Agency for Planning
John F. Burke	Manager, Halter Wildlife Area
James D'Antuono	Basin Supervisor Illinois/Fox Team,
	Wisconsin Department of Natural Resources
Virgil Gentz	Chairman, Town of Paris
Marlene P. Goodson	President, Village of Paddock Lake
Richard J. Gossling	President, Village of Bristol
Ronald L. Johnson	Chairman, Kenosha County Land
	and Water Conservation Committee:
	Kenosha County Board Supervisor
Wavne E. Koessl	
Jeffrev B. Labahn	Director of City Development.
	City of Kenosha
Patricia A. Morton	Director. Mukwonago River Project
	The Nature Conservancy
Douglas J. Noble	Supervisor, Kenosha County Board of Supervisors
Michael R. Pollocoff	Administrator, Village of Pleasant Prairie
Edward St. Peter	General Manager. City of Kenosha Water Utility
James M. Smith	Chairman. Town of Somers
Michael D. Warner	
	Lake County Stormwater
	Management Commission

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON COASTAL MANAGEMENT IN SOUTHEASTERN WISCONSIN

Dr. Norman P. Lasca	Professor, Department of Geological Sciences,
Chairman	University of Wisconsin-Milwaukee
Susan Black	Director, Milwaukee County
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ADVISORY COMMITTEE ON TRANSPORTATION SYSTEM PLANNING AND PROGRAMMING FOR THE KENOSHA URBANIZED AREA (continued)

Peter T. McMullen	Air Management Specialist,
	Bureau of Air Management,
	Wisconsin Department of Natural Resources
Cheryl L. Newton	Environmental Protection Specialist,
2	Region V,
	U.S. Environmental Protection Agency
Michael J. Pjevach	President, Wisconsin Coach Lines, Inc.
George Poirier	Wisconsin Division Administrator,
Ū.	Federal Highway Administration,
	U.S. Department of Transportation
Michael R. Pollocoff	Administrator, Village of Pleasant Prairie
Marisol Simõn	Regional Administrator, Region V,
	Federal Transit Administration,
	U.S. Department of Transportation
Gary A. Sipsma	Director, Division of Highway, and
	Highway Commissioner, Department of
	Public Works, Kenosha County

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

Brian Dranzik Chair	Director of Administration, Department of Transportation and Public Works, Milwaukee County
John M. Bennett	City Engineer/Director of Public Works, City of Franklin
Rollin Bertran D	Director of Highway Operations, Milwaukee County
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	Village of Fox Point
Allison M. Bussler	Director of Public Works, Waukesha County
Robert R. Dreblow	Highway Commissioner, Ozaukee County
I homas M. Grisa	Director of Public Works, City of Brookfield
Anita Gulotta-Connelly	Managing Director, Milwaukee County
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	Department of Public Works,
	City of Milwaukee
Michael J. Martin	Director of Public Works,
	Village of Hales Corners
Jeffrey S. Polenske	City Engineer, City of Milwaukee
Jаск такепап	Milwoukee County Department
	of Transportation and Public Works
Paul Vornholt	Mayor's Office, City of Milwaukee
Scott K Walker	Milwaukee County Executive
000tt rt. Walkel	

Nonvoting Technical Staff Members

Kenneth R. Yunker Secretary	Executive Director, Southeastern Wisconsin Regional Planning Commission
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Dewayne J. Johnson	Director, Southeast Region,
	Wisconsin Department of Transportation
Peter T. McMullen	Air Management Specialist,
`	Transportation Section of Air Management,
	Wisconsin Department of Natural Resources
George Poirier	Wisconsin Division Administrator,
	Federal Highway Administration,
	U.S. Department of Transportation
Marisol Simõn	Regional Administrator, Region V,
	Federal Transit Administration,
	U.S. Department of Transportation

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL TRANSPORTATION SYSTEM PLANNING

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Fred Abadi	Director of Public Works,
	City of Waukesha
Sandra K. Beaupre	Director, Bureau of Planning,
	Division of Transportation Investment Management,
	Wisconsin Department of Transportation

ADVISORY COMMITTEE ON REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE FOR THE GREATER MILWAUKEE WATERSHEDS (continued)

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Charles Elickson	Development, City of Croopfield
Danial E Ertl	Development, City of Greenheid
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	City of Brookfield
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a	City Development, City of Milwaukee
Gregory I. Igl	District Conservationist,
	Elkhorn Service Center
	U.S. Natural Resources
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	Wisconsin Department of Natural Resources
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	City of West Allis
Andrew T. Struck	Director
	Ozaukee County Planning and Parks Department
Randy I Tetzlaff	Director of Planning and Development
1 CILICITI CILICITI	City of Port Washington
Nanay I Walah	Director of Community Development
INALLY L. WEIGH	Director of Community Development,
	City of Wauwatosa

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Nickolas C. George	Executive Director of Public Affairs,
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Roger B. Hammer	Assistant Professor,
-	Department of Rural Sociology,
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	City of Milwaukee
Tamara Mayzik	Administrative Coordinator, City of South Milwaukee
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Eric Reinelt	
Susan E. Robertson	Manager, Village of Fox Point
Chad Sampson	County Conservationist,
	Racine County
Kevin L. Shafer	Executive Director, Milwaukee
	Metropolitan Sewerage District

ADVISORY COMMITTEE ON REGIONAL WATER QUALITY MANAGEMENT PLAN UPDATE FOR THE GREATER MILWAUKEE WATERSHEDS

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	Director Bacine County Planning
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Mishael Bellung	and Development
Michael Ballweg	
	University of Wisconsin-Extension,
Like B. Baharan	Sheboygan County
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	Water and Wastewater Utility
Nathan Check	City Engineer, City of Mequon
Lisa Conley	Representative, Town and Country Resource
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Joyce Fiacco	Director, Dodge County Land
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	Washington Land Trust, Inc.
Andrew A. Holschbach	Director, Ozaukee County Planning,
	Resources, and Land Management Department
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	Milwaukee County Department of
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	Department, We Energies
James F. Lubner	Sea Grant Advisory Services Specialist
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leffrey I Mantes	Commissioner Department of Public Works
	City of Milwaukee
Lynn Mathias	County Land Conservationist
	Eond du Lac County
L Scott Mathie	actor of Covernment Affaire Metropolitan Builders
5. Scott Mathe Di	Acception of Croater Milwaukee
Jamas I. MaNally	Regional Water Loader Wisconsin
James L. Michelly	Department of Netural Department
Charles & Malahing	Associate Drefessor Civil and Environmental
charles 5. Meiching	Associate Professor, Civil and Environmental
	Engineering, Marquette University
Paul E. Mueller	Administrator, wasnington County
5	Planning and Parks Department
Patrick A. Murphy	State Resource Conservationist,
	Natural Resources Conservation Service
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	Village of Menomonee Falls
Judith A. Neu	City Engineer, City of West Bend
Charles A. Peters	Director, Wisconsin Water Science Center,
	U.S. Geological Survey
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	Metropolitan Sewerage District
Karen M. Shapiro	Executive Director,
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	Parks and Land Use Department

REGIONAL WATER SUPPLY PLANNING ADVISORY COMMITTEE (continued)

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Douglas S. Cherkauer	
Lisa Conley	
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	Land Use and Resource
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Charles P. Dunning	Hydrologist, U.S. Geological Survey
Franklyn A. Ericson	
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David Ewig	Water Superintendent
	City of Port Washington
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	City of Brookfield
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	Wisconsin Department of
Androw A. Holcobhach	Natural Resources, Madison
Andrew A. Holschbach	Resources and Land
	Management Department
James Kell	Water Utility Superintendent,
	City of West Bend
Eric J. Kiefer	Manager,
	North Shore
Thomas I Krueger	Water and Wastewater Utility Director
montao o. Na degor	Village of Grafton
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	City of Milwaukee
Mark Lurvey	Agricultural Business Operator,
L Cast Mathia	Lurvey Turf Nursery
J. Scott Mathie	Director of Government Ariairs, Metropolitan Builders
	Association of Greater Milwaukee
George E. Melcher	Director, Kenosha County Department of
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Paul E. Mueller	Administrator, Washington County
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Jettrey Musche	
Fdward St Peter	General Manager
	Water Utility, City of Kenosha
Dale R. Shaver	Director, Waukesha County
	Department of Parks and Land Use
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Lest D. Telester	MillerCoors, LLC
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	Department of Transportation and Public Works
Daniel S. Winkler	Director of Public Works and Utilities.
	City of Lake Geneva
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TECHNICAL ADVISORY COMMITTEE ON THE 2010 REGIONAL ORTHOPHOTOGRAPHY PRODUCT EVALUATION

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ADVISORY COMMITTEE ON REGIONAL POPULATION AND ECONOMIC FORECASTS (continued)

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REGIONAL WATER SUPPLY PLANNING ADVISORY COMMITTEE

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Brian Peters	Housing Policy Advocate.
	Independence First
Guadalupe "Wally" Rendon	Member Education/
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	Former Racine Police Officer
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Jackie Schellinger	Indian Community School
Theresa Schuerman	Walworth County Bilingual
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Willie Wade	Alderman, City of Milwaukee
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TECHNICAL ADVISORY COMMITTEE ON THE REVIEW AND REEVALUATION OF REGIONAL CONTROL SURVEY PROGRAM

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Robert W. Merry	Development, Kenosha County Chief Technical Officer,
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Thomas J. Tym	
William T. Wambach	Former District Director, District 1, Wisconsin Department of Transportation

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Marisol Simõn	Regional Administrator, Region V,
	Federal Transit Administration,
	U.S. Department of Transportation
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Kobert Stoll.	Unairman, Town of Randall
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Baria capponi	Waukesha Housing Authority
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loe Heck	Assistant Director Racine
	Department of City Development
Rob Henken	President Public Policy Forum Milwaukee
Michael Hoeft	City Planner City of Waukesha
Gary Konnelberger	City Administrator, City of Hartford
leff Labahn	Director of City Development
	City of Kenosha
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George E. Melcher	Director Kenosha County
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Falamak Nourzad	Principal Continuum Architecte
	& Planners Milwaukee
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	Becourse Conter Washington County
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Antonio IVI. Perez	Milwoulkee Heusing Authority
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weilord Sanders	Executive Director, M.L. King Economic
Man Kau Cablaitan	Development Corporation
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Kari Cabaaidan Daraaina	University of Wisconsin-Parkside
Kori Schneider-Peragine	
	Community and Economic
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Dala D. Ohanna	Milwaukee Fair Housing Council
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Mish and L. Onita	Department of Parks and Land Use
Michael J. Solka	Executive Director, YNCA
A day T Oracl	Orban Campus, Milwaukee
Andrew T. Struck	Director, Ozaukee County
Coott Thickle	Planning and Parks Department
Scott Inistle	President, Brookstone Home
	Builders, Waukesha
Rev. James C. Thomas	
	Development Corporation
Jonn ⊢. Weishan, Jr	Supervisor, Milwaukee County Board

Appendix C

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION STAFF: 2010

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Kenneth R. Yunker, PE Executive Director

Philip C. Evenson, AICP Special Projects Advisor Dr. Kurt W. Bauer, PE, RLS, AICP

Executive Director Emeritus

Debra D'Amico Executive Secretary

COMMUNITY ASSISTANCE PLANNING DIVISION

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Richard R. Kania, AICP, RLA Benjamin R. McKay Principal Planners

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Joyce A. Gramz Senior GIS Planning Specialist

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Paul J. Clavette Principal Systems Analyst

Michael G. Gosetti Geographic Information Systems Supervisor

Bradley T. Subotnik Senior GIS Applications Specialist

Patricia L. Bouchard Michael B. Scott GIS Application Specialists

Timothy R. Gorsegner Geographic Information Systems Technician

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Kathryn E. Sobottke Senior Specialist

James P. Siegler Planner

Frank G. Fierek, Jr. Land Use Mapping Specialist

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John R. Meland Chief Economic Development Planner

CARTOGRAPHIC AND GRAPHIC ARTS DIVISION

Donald P. Simon, RLS Chief Planning Illustrator

Jean C. Johnson Nancee A. Nejedlo Principal Planning Draftsmen

LuAnn Sakale Senior Planning Draftsman

John T. Washburn, RLS Senior Specialist– Land Surveyor

Andrew J. Traeger Land Survey Assistant

Richard J. Wazny Print Shop Supervisor PLANNING DIVISION Christopher T. Hiebert, PE

TRANSPORTATION

Chief Transportation Engineer

Robert E. Beglinger Donald R. Martinson Special Projects Engineers

Albert A. Beck Principal Planner

Ryan W. Hoel, PE

Principal Engineer

Sonia Dubielzig Senior Planner

Eric D. Lynde Senior Engineer

Ajibola M. Ayanwale Jason F. Biernat Engineers

Victor T. Helin Travel Demand Modeler

Reginald L. Mason Xylia N. Rueda Research Analysts

ADMINISTRATIVE SERVICES DIVISION

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Marcia L. Hayd Linette G. Heis Secretaries

Kathleen A. Lisota Bookkeeper

Sylvia Carlson Receptionist

Robert J. Klatkiewicz Office Clerk

ENVIRONMENTAL PLANNING DIVISION

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Dr. Donald M. Reed Chief Specialist-Biologist

Robert P. Biebel, PE, PH Special Projects Engineer

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Joshua A. Murray, PE Senior Engineer

Dr. Thomas M. Slawski Dr. Jeffrey A. Thornton, CLM, PH Principal Planners

Dr. Joseph E. Boxhorn Senior Planner

Dr. Lawrence A. Leitner Principal Biologist

Dr. Dhruva N. Vangipuram, PE Engineer

Christopher J. Jors Kristin A. Sherfinski Specialists

Jennifer L. Dietl Aaron W. Owens Sara W. Teske Research Analysts

Edward J. Schmidt GIS Planning Specialist

Patricia M. Kokan Secretary (This page intentionally left blank)

Appendix D

PUBLICATIONS OF THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION: 1962-2010

(Titles of reports in red are those that can be accessed on the website at www.sewrpc.org.)

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, May 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 Lake Michigan Estuary and Direct Drainage Area Subwatersheds Planning Program Prospectus, September 1978* Milwaukee Area Primary Transit System Alternatives Analysis Prospectus, October 1978 Milwaukee Northwest Side/Ozaukee County Transportation Improvement Study Prospectus, November 1978 Milwaukee Area Work Time Rescheduling Study Prospectus, December 1978 Pike River Watershed Planning Program Prospectus, April 1979 Milwaukee Area Freeway Traffic Management System Study Prospectus, June 1979 Oak Creek Watershed Planning Program Prospectus, December 1979 Prospectus for an Energy Emergency Contingency Plan for Southeastern Wisconsin, December 1983 Milwaukee River Priority Watersheds Program Prospectus, March 1985 Stormwater Drainage and Flood Control Planning Program Prospectus for the Milwaukee Metropolitan Sewerage District, March 1985 Infrastructure Study for the Southeastern Wisconsin Region, June 1986 Milwaukee High Lake Level Impact Study Prospectus, December 1987 Prospectus for the Preparation of Coordinated Sanitary Sewer and Water Supply System Plans for the Kenosha Area, June 1988 Prospectus for the Preparation of Coordinated Sanitary Sewer and Water Supply System Plans for the Racine Area, May 1989* Natural Area Protection and Management Planning Program Prospectus, August 1989* Prospectus for the Preparation of a Comprehensive Plan for the Kenosha Urban Planning District, December 1990 Des Plaines River Watershed Planning Program Prospectus, September 1991

PROSPECTUSES—continued

Prospectus for a Study of Emergency Medical Services in Waukesha County, March 1992 Prospectus for the Preparation of a Sanitary Sewerage System Plan for the Northwestern

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Overall Work Program and Prospectus of the Southeastern Wisconsin Regional Planning Commission: 1976-1980, December 1975

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Study Design for the Continuing Regional Land Use-Transportation Study: 1970-1974* Study Design for the Continuing Land Use-Transportation Study: 1972-1976*

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- No. 2 Regional Base Mapping Program, July 1963*
- No. 3 The Economy of Southeastern Wisconsin, June 1963*
- No. 4 The Population of Southeastern Wisconsin, June 1963*
- No. 5 The Natural Resources of Southeastern Wisconsin, June 1963*
- No. 6 The Public Utilities of Southeastern Wisconsin, July 1963*
- No. 7 The Regional Land Use-Transportation Study Volume 1 - Inventory Findings: 1963, May 1965* Volume 2 - Forecasts and Alternative Plans: 1990, June 1966 Volume 3 - Recommended Regional Land Use and Transportation Plans: 1990, November 1966*
- No. 8 Soils of Southeastern Wisconsin, June 1966*
- No. 9 A Comprehensive Plan for the Root River Watershed, July 1966*
- No. 10 A Comprehensive Plan for the Kenosha Planning District
 Volume 1 Inventory Findings, Forecasts, and Recommended Plans, February 1967*
 Volume 2 Implementation Devices, February 1967*
- No. 11 A Jurisdictional Highway System Plan for Milwaukee County, March 1969*
- No. 12 A Comprehensive Plan for the Fox River Watershed
 Volume 1 Inventory Findings and Forecasts, April 1969*
 Volume 2 Alternative Plans and Recommended Plan, February 1970
- No. 13 A Comprehensive Plan for the Milwaukee River Watershed
 Volume 1 Inventory Findings and Forecasts, December 1970*
 Volume 2 Alternative Plans and Recommended Plan, October 1971*
- No. 14 A Comprehensive Plan for the Racine Urban Planning District Volume 1 - Inventory Findings and Forecasts, December 1970 Volume 2 - The Recommended Comprehensive Plan, October 1972 Volume 3 - Model Plan Implementation Ordinances, September 1972
- No. 15 A Jurisdictional Highway System Plan for Walworth County, October 1972*
- No. 16 A Regional Sanitary Sewerage System Plan for Southeastern Wisconsin, February 1974
- No. 17 A Jurisdictional Highway System Plan for Ozaukee County, December 1973
- No. 18 A Jurisdictional Highway System Plan for Waukesha County, January 1974
- No. 19 A Library Facilities and Services Plan for Southeastern Wisconsin, July 1974
- No. 20 A Regional Housing Plan for Southeastern Wisconsin, February 1975*
- No. 21 A Regional Airport System Plan for Southeastern Wisconsin, December 1975
- No. 22 A Jurisdictional Highway System Plan for Racine County, February 1975
- No. 23 A Jurisdictional Highway System Plan for Washington County, October 1974*
- No. 23 2nd Edition, A Jurisdictional Highway System Plan for Washington County, July 2008
- No. 24 A Jurisdictional Highway System Plan for Kenosha County, April 1975
- No. 25 A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000
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- No. 26 A Comprehensive Plan for the Menomonee River Watershed
 Volume 1 Inventory Findings and Forecasts, October 1976*
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- No. 27 A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000, November 1977*
- No. 28 A Regional Air Quality Attainment and Maintenance Plan for Southeastern Wisconsin: 2000, June 1980
- No. 29 A Regional Wastewater Sludge Management Plan for Southeastern Wisconsin, July 1978*
- No. 30 A Regional Water Quality Management Plan for Southeastern Wisconsin: 2000 Volume 1 - Inventory Findings, September 1978* Volume 2 - Alternative Plans, February 1979* Volume 3 - Recommended Plan, June 1979*
- No. 31 A Regional Transportation Plan for the Transportation Handicapped in Southeastern Wisconsin: 1978-1982, April 1978
- No. 32 A Comprehensive Plan for the Kinnickinnic River Watershed, December 1978*
- No. 33 A Primary Transit System Plan for the Milwaukee Area, June 1982
- No. 34 A Transportation System Plan for the Milwaukee Northwest Side/Ozaukee County Study Area, August 1983
- No. 35 A Comprehensive Plan for the Pike River Watershed, June 1983*
- No. 36 A Comprehensive Plan for the Oak Creek Watershed, August 1986
- No. 37 A Water Resources Management Plan for the Milwaukee Harbor Estuary Volume 1 - Inventory Findings, March 1987*
 Volume 2 - Alternative and Recommended Plans, December 1987*
- No. 38 A Regional Airport System Plan for Southeastern Wisconsin: 2010, May 1987
- No. 38 2nd Edition, A Regional Airport System Plan for Southeastern Wisconsin: 2010, November 1996*
- No. 39 A Freeway Traffic Management System Plan for the Milwaukee Area, November 1988*
- No. 40 A Regional Land Use Plan for Southeastern Wisconsin-2010, January 1992*
- No. 41 A Regional Transportation System Plan for Southeastern Wisconsin: 2010, December 1994*
- No. 42 A Regional Natural Areas and Critical Species Habitat Protection and Management Plan for Southeastern Wisconsin, September 1997
- No. 43 A Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2010, December 1994
- No. 44 A Comprehensive Plan for the Des Plaines River Watershed, June 2003
- No. 45 A Regional Land Use Plan for Southeastern Wisconsin: 2020, December 1997
- No. 46 A Regional Transportation System Plan for Southeastern Wisconsin: 2020, December 1997
- No. 47 A Regional Freeway System Reconstruction Plan for Southeastern Wisconsin, May 2003*
- No. 48 A Regional Land Use Plan for Southeastern Wisconsin: 2035, June 2006
- No. 49 A Regional Transportation System Plan for Southeastern Wisconsin: 2035, June 2006
- No. 50 A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds, December 2007
- No. 51 A Wireless Antenna Siting and Related Infrastructure Plan for Southeastern Wisconsin, September 2006
- No. 52 A Regional Water Supply Plan for Southeastern Wisconsin Volume 1 - Chapters 1 – 2, December 2010 Volume 2 – Appendices, December 2010
- No. 53 A Regional Broadband Telecommunications Plan for Southeastern Wisconsin, October 2007

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- No. 1 Land Development Guide, November 1963*
- No. 1 Second Edition, Land Division Control Guide, July 2001
- No. 2 Official Mapping Guide, February 1964

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- No. 2 2nd Edition, Official Mapping Guide, June 1996
- No. 3 Zoning Guide, April 1964*
- No. 4 Organization of Planning Agencies, June 1964*
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- No. 1 Potential Parks and Related Open Spaces, September 1965*
- No. 2 Water Law in Southeastern Wisconsin, January 1966*
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- No. 3 A Mathematical Approach to Urban Design, January 1966*
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- No. 6 Planning Law in Southeastern Wisconsin, October 1966*
- No. 6 2nd Edition, Planning Law in Southeastern Wisconsin, April 1977
- No. 7 Horizontal and Vertical Survey Control in Southeastern Wisconsin, July 1968*
- No. 7 2nd Edition, Horizontal and Vertical Survey Control in Southeastern Wisconsin, August 1990
- No. 7 3rd Edition, Horizontal and Vertical Survey Control in Southeastern Wisconsin, August 1996*
- No. 8 A Land Use Design Model
 Volume 1 Model Development, January 1968
 Volume 2 Model Test, October 1969
 Volume 3 Final Report, April 1973
- No. 9 Residential Land Subdivision in Southeastern Wisconsin, September 1971
- No. 10 The Economy of Southeastern Wisconsin, December 1972*
- No. 10 2nd Edition, The Economy of Southeastern Wisconsin, May 1984
- No. 10 3rd Edition, The Economy of Southeastern Wisconsin, October 1995
- No. 10 4th Edition, The Economy of Southeastern Wisconsin, July 2004
- No. 11 The Population of Southeastern Wisconsin, December 1972*
- No. 11 2nd Edition, The Population of Southeastern Wisconsin, June 1984
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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 Water Pollution Control in Southeastern Wisconsin
 - Volume 1 Point Sources, July 1977
 - Volume 2 Sludge Management, August 1977
 - Volume 3 Urban Storm Water Runoff, July 1977
 - Volume 4 Rural Storm Water Runoff, December 1976
- No. 19 A Regional Population Projection Model, October 1980
- No. 20 Carpooling in the Metropolitan Milwaukee Area, March 1977
- No. 21 Sources of Water Pollution in Southeastern Wisconsin: 1975, September 1978*
- No. 22 Recent Population Growth and Change in Southeastern Wisconsin: 1970-1977, September 1979

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- No. 23 Transit-Related Socioeconomic, Land Use, and Transportation Conditions and Trends in the Milwaukee Area, December 1980*
- No. 24 State-of-the-Art of Primary Transit System Technology, February 1981
- No. 25 Alternative Futures for Southeastern Wisconsin, December 1980
- No. 26 Milwaukee Area Alternative Primary Transit System Plan Preparation, Test, and Evaluation, March 1982
- No. 27 Milwaukee Area Work Time Rescheduling Study, August 1981
- No. 28 Evaluation of the Milwaukee Area Rideshare Program: 1972-1982, May 1983
- No. 29 Industrial Land Use in Southeastern Wisconsin, November 1984*
- No. 30 The Development of an Automated Mapping and Land Information System: A Demonstration Project for the Town of Randall, Kenosha County, Wisconsin, December 1985
- No. 31 Costs of Urban Nonpoint Source Water Pollution Control Measures, June 1991*
- No. 32 General Mitchell International Airport Enplaning Passenger Survey Findings: 1989, August 1990
- No. 33 Integration of the Computer-Assisted Management and Planning System with a Parcel-Based Land Information System: A Demonstration Project in Kenosha County, September 1992
- No. 34 A Mathematical Relationship between NAD27 and NAD83(91) State Plane Coordinates in Southeastern Wisconsin, December 1994
- No. 35 Vertical Datum Differences in Southeastern Wisconsin, December 1995
- No. 36 Lake Michigan Shoreline Recession and Bluff Stability in Southeastern Wisconsin: 1995, December 1997
- No. 37 Groundwater Resources of Southeastern Wisconsin, June 2002*
- No. 39 Water Quality Conditions and Sources of Pollution in the Greater Milwaukee Watersheds, November 2007
- No. 40 Rainfall Frequency in the Southeastern Wisconsin Region, April 2000
- No. 41 A Regional Aquifier Simulation Model for Southeastern Wisconsin, June 2005
- No. 42 Municipal Fiscal Capacity Analysis for Southeastern Wisconsin, July 2005
- No. 43 State-of-the-Art of Water Supply Practices, July 2007
- No. 44 Water Supply Law, April 2007
- No. 45 Technical Review and Revaluation of the Regional Control Survey Program in Southeastern Wisconsin, March 2008
- No. 46 Groundwater Budget Indices and Their Use in Assessing Water Supply Plans for Southeastern Wisconsin, February 2010
- No. 47 Groundwater Recharge in Southeastern Wisconsin Estimated by a GIS Based Water Balanced Model, July 2008
- No. 48 Shallow Groundwater Quantity Sustainability Analysis Demonstration for the Southeastern Wisconsin Region, November 2009
- No. 49 Bidirectional Transformation of Legacy and Current Survey Control Data Within Southeastern Wisconsin, May 2010

COMMUNITY ASSISTANCE PLANNING REPORTS

- No. 1 Residential, Commercial, and Industrial Neighborhoods, City of Burlington and Environs, February 1973
- No. 2 Alternative Land Use and Sanitary Sewerage System Plans for the Town of Raymond: 1990, January 1974
- No. 3 Racine Area Transit Development Program: 1975-1979, June 1974
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- No. 180 Public Transit Human Services Transportation Coordination Plan for Ozaukee County: 2008, December 2008
- No. 181 Public Transit Human Services Transportation Coordination Plan for Racine County: 2008, December 2008
- No. 182 -Public Transit Human Services Transportation Coordination Plan for Walworth County: 2008, December 2008
- No. 183 -Public Transit Human Services Transportation Coordination Plan for Washington County: 2008, December 2008
- No. 184 -Public Transit Human Services Transportation Coordination Plan for Waukesha County: 2008, December 2008
- No. 185 Community Based Wireless Plan Implementation: Town of Wayne, Washington County, Wisconsin, January 2009
- No. 186 Assessment of Conformity of the Year 2035 Regional Transportation System Plan and the Year 2009-2012 Transportation Improvement Program with Respect to the State of Wisconsin Air Quality Implementation Plan—Six County Southeastern Wisconsin Ozone Non-attainment Area, March 2009
- No. 187 Regional Wireless Plan Implementation Broadband Public Safety Communications Demonstration Project, Kenosha County, Wisconsin, May 2009
- No. 188 Troy Bedrock Valley Aquifer Model, Waukesha and Walworth Counties, Wisconsin, November 2009
- No. 189 Proposed North Lake Boat Launch Site Wetland Delineation, Waukesha County, Wisconsin, July 2009
- No. 192 An Aquatic Plant Management Plan for Lake Shangrila and Benet Lake, Kenosha County, Wisconsin, March 2010
- No. 194 Stream Habitat Conditions and Biological Assessment of the Kinnickinnic and Menomonee River Watersheds: 2000-2009, January 2010
- No. 197 Review, Update, and Reaffirmation of the Year 2035 Regional Transportation Plan, December 2010

ECONOMIC DEVELOPMENT PROFILES

Economic Development Profiles have been prepared for the Southeastern Wisconsin Region, for each of the seven counties in the Region, for the Milwaukee Metropolitan Statistical Area, and for the following communities within each of the seven counties:

Kenosha County	Ozaukee County	Walworth County	Waukesha County
City of Kenosha	City of Cedarburg	City of Delavan	City of Brookfield
Village of Pleasant Prairie	City of Mequon	City of Elkhorn	City of Delafield
Town of Bristol	City of Port Washington	City of Lake Geneva	City of Muskego
	Village of Belgium	City of Whitewater	City of New Berlin
Milwaukee County	Village of Fredonia	Village of Darien	City of Oconomowoc
City of Cudahy	Village of Grafton	Village of East Troy	City of Pewaukee
City of Franklin	Village of Saukville	Village of Walworth	City of Waukesha
City of Glendale	Village of Thiensville		Village of Butler
City of Greenfield			Village of Dousman
City of Milwaukee	Racine County	Washington County	Village of Eagle
City of Oak Creek	City of Burlington	City of Hartford	Village of Elm Grove
City of St. Francis	City of Racine	City of West Bend	Village of Hartland
City of South Milwaukee	Village of Rochester	Village of	Village of Menomonee Falls
City of Wauwatosa	Village of Sturtevant	Germantown	Village of Mukwonago
City of West Allis	Village of Union Grove	Village of Jackson	Village of Pewaukee
Village of Brown Deer	Village of Waterford	Village of Kewaskum	Village of Sussex
Village of Hales Corners	Town of Caledonia	Village of Slinger	
Village of West	Town of Mt. Pleasant		
Milwaukee	Town of Yorkville		

LAKE USE REPORTS-FOX RIVER WATERSHED

Kenosha County No. FX-40, Benedict Lake No. FX-12, Camp Lake No. FX-27, Center Lake No. FX-35, Cross Lake No. FX-45, Dyer Lake* No. FX-7, Elizabeth Lake Racine County No. FX-7, Bohner Lake No. FX-25, Bohner Lake No. FX-15, Browns Lake No. FX-9, Eagle Lake No. FX-9, Eagle Lake* No. FX-42, Echo Lake* No. FX-32, Kee Nong Go-Mong Lake

No. FX-34, Lilly Lake* No. FX-17, Marie Lake* No. FX-13, Powers Lake* No. FX-11, Silver Lake* No. FX-45, Voltz Lake

No. FX-29, Long Lake* No. FX-6, Waterford-Tichigan Lakes* No. FX-26, Waubeesee Lake No. FX-5, Wind Lake*

LAKE USE REPORTS-FOX RIVER WATERSHED—continued

Walworth County No. FX-41, Army Lake No. FX-40, Benedict Lake No. FX-7, Beulah Lake No. FX-31, Booth Lake No. FX-4, Como Lake* No. FX-4, Como Lake* No. FX-1, Lake Geneva No. FX-Lauderdale Lakes* (17, Green Lake, 20, Middle Lake, 18, Mill Lake)

Waukesha County No. FX-3, Big Muskego Lake* No. FX-23, Denoon Lake No. FX-19, Eagle Spring Lake* No. FX-10, Little Muskego Lake*

- No. FX-39, Lulu Lake No. FX-21, North Lake No. FX-37, Pell Lake No. FX-43, Peters Lake* No. FX-25, Pleasant Lake No. FX-24, Potters Lake* No. FX-38, Silver Lake No. FX-30, Wandawega Lake
- No. FX-14, Lower Phantom Lake No. FX-2, Pewaukee Lake* No. FX-34, Spring Lake No. FX-33, Upper Phantom Lake

LAKE USE REPORTS-MILWAUKEE RIVER WATERSHED

Fond du Lac County No. ML-2, Long Lake* No. ML-9, Auburn Lake No. ML-21, Forest Lake No. ML-12, Mauthe Lake* No. ML-18, Mud Lake* No. ML-5, Kettle Moraine Lake*

Ozaukee County No. ML-4, Mud Lake No. ML-17, Spring Lake

Sheboygan County No. ML-6, Random Lake* No. ML-10, Crooked Lake* No. ML-7, Lake Ellen*

TECHNICAL RECORDS

Volume 1-No. 1, October-November 1963*

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

Washington County No. ML-3, Little Cedar Lake* No. ML-14, Green Lake* No. ML-19, Lake Twelve* No. ML-13, Lucas Lake No. ML-11, Smith Lake* No. ML-20, Wallace Lake* No. ML-20, Wallace Lake* No. ML-15, Barton Pond No. ML-1, Big Cedar Lake* No. ML-1, Big Cedar Lake* No. ML-16, West Bend Pond

Volume 1-No. 2, December 1963-January 1964 Arterial Network and Traffic Analysis Zones by Richard B. Sheridan, Chief Transportation Planner Conducting the Household Postal Questionnaire Survey by Wade G. Fox, Cartography and Design Supervisor Conducting the Home Interview Survey by Sheldon W. Sullivan, Administrative Officer Aerial Photographs and Their Use in the Land Use Inventory by Harlan E. Clinkenbeard, Land Use Planning Chief A Backward Glance: The U. S. Public Land Survey in Southeastern Wisconsin by Richard E. Rehberg, Editor Volume 1-No. 3, February-March 1964 Conducting the Truck and Taxi Survey by Sheldon W. Sullivan, Administrative Officer Conducting the Truck and Taxi Postal Questionnaire Survey by Wade G. Fox, Cartography and Design Supervisor Conducting the External Survey by William E. Creger, P.E., Traffic Operations Engineer Rail and Transit Inventory and Design of the Transit Network by David A. Kuemmel, P.E., Transportation Planning Engineer A Backward Glance: The Man-Made Ice Age by Richard E. Rehberg, Editor Volume 1-No. 4, April-May 1964* The Application of Soil Studies to Regional Planning by Kurt W. Bauer, Executive Director Coding by Wade G. Fox, Cartography and Design Supervisor, and Robert L. Fisher, Coding Supervisor Inventory of Existing Outdoor Recreation Facilities and Historic Sites in Southeastern Wisconsin by Theodore F. Lauf, Research Analyst Inventory of Potential Park and Related Open Space Sites by Karl W. Holzwarth, Landscape Architect A Backward Glance: The Electric Interurban Railway by Richard E. Rehberg, Editor Volume 1-No. 5, June-July 1964 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 Inventory of the Arterial Street Network by William T. Wambach, Jr., P.E. A Backward Glance: The Milwaukee and Rock River Canal by James E. Seybold, Editor

Volume 1-No. 6, August-September 1964	
 Checking the Network Description for Arterial Highway and Transit Networks 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 Expanding the Origin-Destination Sample by Richard B. Sheridan, Chief Transportation Planner, and Wade G. Fox, Cartography and Design Supervisor A Backward Glance: Greendale-Garden City in Wisconsin by Kurt W. Bauer, Executive Director 	
Volume 2-No. 1, October-November 1964*	
Simulation Models in Urban and Regional Planning by Kenneth J. Schlager, Chief Systems Engineer	
Volume 2-No. 2, December 1964-January 1965	
 Capacity of Arterial Network Links by Richard B. Sheridan, Chief Transportation Planner The ABC Method of Current Population Estimating by Donald L. Gehrke, Economics and Population Analyst, and Orlando E. Delogu, Financial Resources and Legal Analyst O & D Surveys Accuracy Checks by Eugene G. 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 Company 	rporation
Volume 2-No. 4, April-May 1965*	
Determination of Runoff for Urban Storm Water Drainage System Design by Kurt W. Bauer, Executive Director	
Volume 2-No. 5, June-July 1965	
 Screen Line Adjustment of Trip Data 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 	

Volume 2-No. 6, August-September 1965
A Modal Split Model for Southeastern Wisconsin by Edward Weiner, Highway Engineer
Volume 3-No. 1, 1968
 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
Volume 3-No. 2, 1969
 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 by Gerald P. Caffrey, Milwaukee Municipal Reference Librarian
Volume 3-No. 3, September 1971*
Hydrogeologic Considerations in Liquid Waste Disposal, with a Case Study in Southeastern Wisconsin by Martha J. Ketelle, Department of Geology and Geophysics, University of Wisconsin-Madison
Volume 3-No. 4, September 1971
 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 A Backward Glance: The Development of General Mitchell Field by Sheldon W. Sullivan, Chief of Data Collection
Volume 3-No. 5, March 1973*
 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

Volume 3-No. 6, April 1976*
 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 by Sheldon W. Sullivan, SEWRPC Chief of Data Collection, and 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
Volume 4-No. 1, March 1978*
 A Backward Glance: Milwaukee's Water Story by Milwaukee Water Works Is There a Groundwater Shortage in Southeastern Wisconsin? by Douglas S. Cherkauer and Vinton W. Bacon, University of Wisconsin-Milwaukee An Overview of the Sources of Water Pollution in Southeastern Wisconsin by Kurt W. Bauer, Executive Director, SEWRPC The Effect of Sample Rate on Socioeconomic and Travel Data Obtained through Standard Home Interview by Jean Lusk, SEWRPC Planner
Volume 4-No. 2, March 1981*
 Refining the Delineation of the Environmental Corridors in Southeastern Wisconsin by Bruce P. Rubin, Chief Land Use Planner, SEWRPC, and Gerald H. Emmerich, Jr., Senior Planner, SEWRPC Water Quality and Quantity Simulation Modeling for the Areawide Water Quality Management Planning Program for Southeastern Wisconsin by Thomas R. Sear, P.E., Senior Water Resources Engineer, SEWRPC Evaluation of a Water Quality Standard for Total Phosphorus in Flowing Streams in Southeastern Wisconsin by David B. Kendziorski, Senior Planner, SEWRPC Bibliography of Lake Michigan Shore Erosion and Nearshore Process Studies by Norman P. Lasca, Professor, Department of Geological Sciences and Center for Great Lakes Studies, University of Wisconsin-Milwaukee, and David Baier, Warren Baumann, Patrick Curth, and Jan H. Smith, Geologists, Department of Geological Sciences and Center for Great Lakes Studies, University of Wisconsin-Milwaukee, and David Baier, Warren Baumann, Patrick Curth, and Jan H. Smith, Geologists, Department of Geological Sciences and Center for Great Lakes Studies, University of Wisconsin-Milwaukee A Backward Glance: Historic Evolution of the Local Governmental Structure in Southeastern Wisconsin by Eileen Hammer
Volume 4-No. 3, February 1982
Preservation of Scientifically and Historically Important Geologic Sites in Milwaukee County, Wisconsin by Donald G. Mikulic, Staff Geologist, Illinois State Geological Survey, and Joanne Kluessendorf, Geologic Research Assistant, Illinois State Geological Survey, Champaign, Illinois

Inventory of Solid Waste Management Facilities in Southeastern Wisconsin: 1980

by Robert P. Biebel, Principal Engineer, SEWRPC, and Joseph E. Stuber, Senior Engineer, SEWRPC Inventory Findings of Cannonball Passenger Surveys: 1980 and 1971

by Jean M. Lusk, SEWRPC Planner

A Backward Glance: Historic Evolution of the Local Governmental Structure in Southeastern Wisconsin by Eileen Hammer

Volume 4-No. 4, February 1984

- Characteristics of Travel in Six Major Attractors in the Southeastern Wisconsin Region by Jean M. Lusk, SEWRPC Planner, and John L. Zastrow, SEWRPC Senior Specialist
- Shopping Centers: Characteristics of Travel–1963-1972
- by Jean M. Lusk, SEWRPC Planner, and John L. Zastrow, SEWRPC Senior Specialist
- A Backward Glance: Historic Evolution of the Local Governmental Structure in Southeastern Wisconsin by Eileen Hammer

Volume 4-No. 5, December 1989

- Review and Analysis of Lake Michigan Water Levels at Milwaukee, Wisconsin by David P. Kendziorski, SEWRPC Principal Planner
- Lake Levels and Datum Differences
 - by Kurt W. Bauer, SEWRPC Executive Director
- A Backward Glance—A History of Storm Damage and Protective Measures in Milwaukee Harbor by Bruce W. Jordan, M.A.

Volume 4-No. 6, December 1993*

Interpreting Soils of Southeastern Wisconsin for Onsite Disposal of Household Sewage by Marvin T. Beatty, Ph.D., Professor Emeritus of Soil Science, University of Wisconsin-Madison
Shifts in Centers of Population within the Region: 1963-1990 by Donald G. Dittmar, SEWRPC Senior Specialist
Methodology for Review of Challenges to Wetland Field Delineations Conducted by the Southeastern Wisconsin Regional Planning Commission by Donald M. Reed, SEWRPC Chief Biologist
A Backward Glance—Unincorporated Settlements in Southeastern Wisconsin by Arno M. Klausmeier, SEWRPC Librarian, with Assistance from Scott K. Enk, SEWRPC Senior Editor

ANNUAL REPORTS

1961,* 1962,* 1963, 1964, 1965, 1966, 1967, 1968, 1969,* 1970, 1971, 1972,* 1973, 1974, 1975, 1976, 1977, 1978,* 1979,* 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, and 2009

CONFERENCE PROCEEDINGS

1st Regional Planning Conference, December 6, 1961*
2nd Regional Planning Conference, November 4, 1962*
3rd Regional Planning Conference, November 20, 1963*
4th Regional Planning Conference, May 12, 1965*
5th Regional Planning Conference, October 26, 1966*
6th 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

CONFERENCE PROCEEDINGS—continued

- 10th Regional Planning Conference, March 15, 1978
- 11th Regional Planning Conference, April 19, 1979
- 12th Regional Planning Conference, January 31, 1980*
- 13th Regional Planning Conference, November 9, 1983
- 14th Regional Planning Conference, May 13, 1985
- 15th Regional Planning Conference, November 14, 1988
- 16th Regional Planning Conference, May 5, 1992
- 17th Regional Planning Conference, June 27, 1994

NEWSLETTERS

SEWRPC Newsletter, Volume 2 through Volume 42, Number 4 SEWRPC Freeway System Study Newsletter, Nos. 1 through 5 SEWRPC Review and Update of Regional Land Use and Transportation System plans for Southeastern Wisconsin Nos. 1 through 4 Milwaukee County Transit System Development Plan: 2007-2011 Year 2035 Regional Land Use and Transportation System Plans for Southeastern Wisconsin, Number 5 Summary of Proposed Comprehensive Broadband Telecommunications Plan for Southeastern Wisconsin Regional Water Supply Plan for Southeastern Wisconsin—Issues 1 and 2 Summary of A Regional Water Quality Management Plan Update for the Greater Milwaukee Watersheds Regional Water Supply Plan for Southeastern Wisconsin Assessment of Lake Michigan Shoreline Erosion Control Structures in Racine County Milwaukee County Transit System Development Plan: 2009-2013, Transit Service Improvement Natural Areas and Critical Species Habitat Plan Update for Southeastern Wisconsin Year 2035 Regional Housing Plan for Southeastern Wisconsin-Issues 1 and 2 Racine County Transit Plan: 2011-2015 Preliminary Recommended Jurisdictional Highway System Plan for Walworth County

TRANSPORTATION IMPROVEMENT PROGRAMS

- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1978-1982, December 1977*
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1979-1983, December 1978*
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1980-1984, December 1979*
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1981-1985, December 1980*
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1982-1986, December 1981*
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1983-1987, December 1982*
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1984-1988, December 1983*
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1985-1989, December 1984*
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine

TRANSPORTATION IMPROVEMENT PROGRAMS—continued

Urbanized Areas in Southeastern Wisconsin: 1986-1990, December 1985*

- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1987-1991, December 1986*
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine
- Urbanized Areas in Southeastern Wisconsin: 1988-1992, December 1987*
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1989-1993, December 1988
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1990-1994, December 1989
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine Urbanized Areas in Southeastern Wisconsin: 1991-1995, December 1990
- A Transportation Improvement Program for the Kenosha, Milwaukee, and Racine
- Urbanized Areas in Southeastern Wisconsin: 1992-1996, October 1991
- A Transportation Improvement Program for Southeastern Wisconsin: 1993-1998, December 1992
- A Transportation Improvement Program for Southeastern Wisconsin: 1995-1997, November 1994
- A Transportation Improvement Program for Southeastern Wisconsin: 1997-1999, September 1996
- A Transportation Improvement Program for Southeastern Wisconsin: 1998-2000, November 1997
- A Transportation Improvement Program for Southeastern Wisconsin: 2000-2002, February 2000
- A Transportation Improvement Program for Southeastern Wisconsin: 2002-2004, February 2002
- A Transportation Improvement Program for Southeastern Wisconsin: 2004-2006, December 2003
- A Transportation Improvement Program for Southeastern Wisconsin: 2005-2007, January 2005
- A Transportation Improvement Program for Southeastern Wisconsin: 2007-2010, December 2006
- A Transportation Improvement Program for Southeastern Wisconsin: 2009-2012, March 2009
- A Transportation Improvement Program for Southeastern Wisconsin: 2011-2014, February 2010

OTHER

Twenty-Five Years of Regional Planning, December 1985

- Economic Development Planning Staff Memorandum No. 94-01, Southeastern Wisconsin Region Industrial/Business Park Directory: July 1994, August 1994
- Scope of Work for a Detailed Planning Study of Commuter Rail and Bus Alternatives in the Kenosha-Racine-Milwaukee Corridor, July 1998
- Job Access and Reverse Commute Regional Transportation Plan, December 1998
- Scope of Work, A Regional Freeway System Reconstruction Study for Southeastern Wisconsin, December 2000

*Out of print.

SCRIMA, KABITZKE & CO., S.C.

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TELEPHONE (262) 542-8401 FAX 542-8713

INDEPENDENT AUDITOR'S REPORT

MEMBER WISCONSIN INSTITUTE OF CPA'S

To the Commissioners of Southeastern Wisconsin Regional Planning Commission Waukesha, Wisconsin

We have audited the accompanying financial statements of Southeastern Wisconsin Regional Planning Commission, as of and for the year ended December 31, 2010, as listed in the table of contents. These financial statements are the responsibility of Southeastern Wisconsin Regional Planning Commission's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States and the standards applicable to financial audits contained in <u>Government Auditing Standards</u>, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the general purpose financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and the disclosures in the general purpose financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall general purpose financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Southeastern Wisconsin Regional Planning Commission, as of December 31, 2010, and the results of its operations for the year then ended in conformity with generally accepted accounting principles.

In accordance with <u>Government Auditing Standards</u>, we have also issued our report dated May 17, 2011, on our consideration of Southeastern Wisconsin Regional Planning Commission's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts and grants.

Our audit was performed for the purpose of forming an opinion on the financial statements taken as a whole. The accompanying schedule of expenditures of federal and state of Wisconsin awards is presented for purposes of additional analysis as required by U.S. Office of Management and Budget Circular A-133, <u>Audits of States, Local Governments, and Non-Profit Organizations</u>, and is not a required part of the basic financial statements of Southeastern Wisconsin Regional Planning Commission. Such information has been subjected to the auditing procedures applied in the audit of the general purpose financial statements and, in our opinion, is fairly stated, in all material respects, in relation to the general purpose financial statements taken as a whole.

The Commission has not presented a Management's Discussion and Analysis, which accounting principles generally accepted in the United States of America has determined is necessary to supplement, although not required to be part of the financial statements.

Scrime, Kakuthe + CO. S.C.

Scrima, Kabitzke & Co., S.C. Waukesha, Wisconsin May 17, 2011

Southeastern Wisconsin Regional Planning Commission Balance Sheet - All Fund Types December 31, 2010

		Special	Debt		
	General	Revenue	Service	2010 Total	2009 Total
Assets					
Pooled cash and cash equivalents	\$ 2,655,206	\$	\$	\$ 2,655,206	\$ 2,246,928
Grants receivable	249,914	1,408,145		1,658,059	1,621,853
Interest receivable	29			29	8,753
Prepaid expense	120,189			120,189	160,835
Property and equipment	3,387,726			3,387,726	3,552,347
Deferred bond expenses			62,098	62,098	68,442
Due from other funds	1,396,613			1,396,613	1,571,205
Restricted assets:					
Cash with bond trustee			2,031,932	2,031,932	2,038,129
Total Assets	\$ 7,809,677	\$ 1,408,145	\$ 2,094,030	\$ 11,311,852	\$ 11,268,492
Liabilities					
State sales tax	\$ 165	\$	\$	\$ 165	\$ 48
Accounts payable	114,951	38,586		153,537	137,305
Vacation accrual	233,522			233,522	222,342
Deferred revenue	463,470			463,470	443,533
Sick pay accrual	356,616			356,616	357,254
Due to other funds		1,369,559	27,054	1,396,613	1,571,205
Accrued payroll and taxes	165,127			165,127	157,882
Deposits and advance rents	161,963		2,031,932	2,193,895	2,041,462
General long-term debt	2,100,000			2,100,000	2,235,000
Accrued interest payable			35,044	35,044	37,047
Total Liabilities	3,595,814	1,408,145	2,094,030	7,097,989	7,203,078
Fund Equity					
Investments in fixed assets - net of debt	1,287,726			1,287,726	1,317,347
Fund Balances - designated	1,798,067			1,798,067	1,302,878
- undesignated	1,128,070			1,128,070	1,445,189
Total Fund Equity	4,213,863			4,213,863	4,065,414
Total Liabilities and Fund Equity	\$ 7.809.677	\$ 1.408.145	\$ 2.094.030	\$ 11.311.852	\$ 11 268 492

The accompanying accountant's audit report and notes to financial statements are an integral part of these statements

Southeastern Wisconsin Regional Planning Commission Statement of Revenues, Expenditures and Changes

in Fund Balance - All Governmental Fund Types

For the Year Ended December 31, 2010

	Governmental Fund Types					
	Special					
Revenues	General	Revenue	2010	2009		
Contributions from counties	\$ 2,370,245	\$	\$ 2,370,245	\$ 2,370,245		
Grant revenues		3,067,276	3,067,276	3,651,069		
Service grants	389,191	481,237	870,428	1,176,450		
Pass-through grants	809,416	747,028	1,556,444	351,736		
Interest on invested funds	11,027		11,027	23,698		
Other income	11,375		11,375	19,127		
Rental income	71,161		71,161	70,089		
Total Revenues	3,662,415	4,295,541	7,957,956	7,662,414		
Expenditures						
Salaries and fringe benefits	2,955,277	2,056,894	5,012,171	5,170,819		
Office and other expenses:						
Technical consultants	48,120	162,372	210,492	238,040		
Technical consultants - pass-through	869,803	717,669	1,587,472	863,780		
Office supplies	34,452	13,695	48,147	59,478		
Insurance, audit, legal fees	67,523		67,523	80,833		
Library acquisition and dues	29,119	5,482	34,601	36,072		
Printing and graphics supplies	51,492		51,492	35,056		
Postage expense	20,474		20,474	27,128		
Travel expense	18,123	9,304	27,427	44,165		
Telephone expense	31,222		31,222	32,919		
Building usage	162,749	2,812	165,561	213,490		
Building maintenance	136,223		136,223	156,641		
Other operating expenses	18,363	4,027	22,390	46,870		
Unemployment expense	32,286		32,286			
Software and equipment maintenance	166,807	8,248	175,055	191,725		
Capital outlay	28,846	20,368	49,214	30,823		
Interest expense	108,136		108,136	98,460		
Total Expenditures	4,779,015	3,000,871	7,779,886	7,326,299		
Excess (Deficit) Revenues Over Expenditures	(1,116,600)	1,294,670	178,070	336,115		
Indirect Expense Allocation	1,294,670	(1,294,670)				
Fund Balance - beginning of year	2,748,067	-0-	2,748,067	2,411,952		
Fund Balance - end of year	\$ 2,926,137	\$ -0-	\$ 2,926,137	\$ 2,748,067		

The accompanying accountant's audit report and notes to financial statements are an integral part of these statements.

Southeastern Wisconsin Regional Planning Commission Statement of Revenues, Expenditures and Changes in Fund Balance - Budget and Actual - All Governmental Fund Types For the Year Ended December 31, 2010

			Variance
			Favorable
Revenues	Budget	Actual	(Unfavorable)
Contributions from counties	\$ 2,370,245	\$ 2,370,245	\$
Grant revenues	4,512,180	3,937,704	(574,476)
Pass-through grants		1,556,444	1,556,444
Interest on invested funds		11,027	11,027
Other income		11,375	11,375
Rental income	71,160	71,161	1
Total Revenues	6,953,585	7,957,956	1,004,371
Expenditures			
Salaries and fringe benefits	5,111,049	5,012,171	98,878
Office and other expenses:			
Technical consultants	656,000	210,492	445,508
Technical consultants - pass-through		1,587,472	(1,587,472)
Office supplies	75,000	48,147	26,853
Insurance, audit, legal fees	73,500	67,523	5,977
Library acquisition and dues	40,000	34,601	5,399
Printing and graphics supplies	120,000	51,492	68,508
Postage expense	30,000	20,474	9,526
Travel expense	60,000	27,427	32,573
Telephone expense	34,900	31,222	3,678
Building usage	161,500	165,561	(4,061)
Building maintenance	155,000	136,223	18,777
Other operating expenses	25,000	22,390	2,610
Unemployment compensation expense	5,000	32,286	(27,286)
Software and equipment maintenance	170,000	175,055	(5,055)
Capital outlay	128,500	49,214	79,286
Interest expense	108,136	108,136	-
Total Expenditures	6,953,585	7,779,886	(826,301)
Excess Revenues Over Expenditures	\$ -0-	178,070	\$ 178,070
Fund Balance - beginning of year		2,748,067	
Fund Balance - end of year		\$ 2,926,137	

The accompanying accountant's audit report and notes to financial statements are an integral part of these statements.

Southeastern Wisconsin Regional Planning Commission

Combined Notes to the Financial Statements

For the Year Ended December 31, 2010

The accompanying summary of Southeastern Wisconsin Regional Planning Commission's more significant accounting policies is presented to assist the reader in interpreting the financial statements and other data in this report. These policies, as presented, should be reviewed as an integral part of the accompanying financial statements. The accounting policies of Southeastern Wisconsin Regional Planning Commission conform to generally accepted accounting principles as applicable to governmental units.

Note 1 - Summary of Significant Accounting Policies

Reporting Entity

The Commission uses the criteria set forth by the Governmental Accounting Standards Board to determine the scope of the Commission's reporting entity. The accompanying financial statements reflect all significant operations of the Commission, which are under control of the Commissioners of Southeastern Wisconsin Regional Planning Commission.

Basis of Presentation

Southeastern Wisconsin Regional Planning Commission is a public agency serving the local communities within the counties of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha.

The accounts of the Commission are organized on the basis of funds, each of which is considered a separate accounting entity. The operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, liabilities, fund equity, revenues, and expenditures. Government resources are allocated to and accounted for in individual funds based upon the purposes for which they are to be spent and the means by which spending activities are controlled. The following funds are used by the Commission:

Governmental Funds

General Fund - The General Fund is the general operating fund of the Commission. It is used to account for all financial resources except those required to be accounted for in another fund.

Special Revenue Fund - Special Revenue Funds are used to account for the specific revenue sources (other than major capital projects) that are legally restricted to expenditures for specified purposes.

Total (Memorandum Only) - The column captioned Total (Memorandum Only) in the combined financial statements is a total of the columnar statements by fund type. The total column is not comparable to a consolidation and does not present financial position and results of operations in conformity with generally accepted accounting principles because the same basis of accounting is not used by all funds and interfund transactions and balancing accounts have not been eliminated.

Southeastern Wisconsin Regional Planning Commission

Combined Notes to the Financial Statements

For the Year Ended December 31, 2010

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

Budget

The Commissions annual budget is prepared principally on the cash basis and represents departmental appropriations as authorized and any authorized revisions during the year to reflect changes in programs and activities. The budget cash basis differs from generally accepted accounting principles (GAAP). Actual amounts in the accompanying budgetary comparison statement are presented on the modified accrual basis.

Cash and Cash Equivalents

In addition to bank accounts and petty cash, this classification includes all short-term investments.

Basis of Accounting

The modified accrual basis of accounting is followed by the governmental funds. Under the modified accrual basis those items of revenue for which a valid receivable can be determined in advance of their due date should be recognized on the accrual basis. All other items are recognized on the cash basis because the time of collection generally coincides with the determination of the amount. Expenditures are recognized when a liability to be met from fund assets is incurred.

Fixed Assets

Governmental general fixed assets acquired during the year ended December 31, 2009 are recorded as expenditures in the governmental funds. Generally accepted accounting principles require that these fixed assets be capitalized at cost.

Accrued Sick Leave

The Commission accrues up to 130 days for sick leave when an employee retires. The employee may use these funds to purchase health insurance after they retire.

Deferred Debt Expense and Bond Discount

Bond issuance costs and bond discount costs are capitalized and amortized over the terms of the bonds. Accrued Vacation

.....

The Commission accrues unused vacation time since the unused vacation time is cumulative from year to year. The maximum accrual per individual is 30 days.

Southeastern Wisconsin Regional Planning Commission

Combined Notes to the Financial Statements

For the Year Ended December 31, 2010

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

Fund Balances

The Commission classifies its fund equity as follows:

Designated Fund Balances - indicates that portion of fund equity, which has been segregated for specific purposes.

Undesignated Fund Balances - indicates that portion of fund equity, which is available for budgeting or other uses in future periods.

Note 2 - General Fixed Asset Group

The following is a cost breakdown of fixed assets as of December 31 of the year indicated. Generally accepted accounting principles require that these fixed assets be capitalized at the original cost. Fair market value at liquidation would be different from these values.

	2010	2009
Land	\$ 335,300	\$ 335,300
Land improvements	213,655	213,655
Building and improvements	3,287,879	3,287,879
Office furniture	251,407	250,931
Computers and related equipment	331,569	298,788
Office equipment	343,305	352,768
Automobiles	159,933	174,845
Field equipment	66,899	43,293
	4,989,947	4,957,459
Less: Depreciation	(1,602,221)	(1,405,112)
Net Book Value	\$ 3,387,726	\$ 3,552,347

Southeastern Wisconsin Regional Planning Commission

Combined Notes to the Financial Statements

For the Year Ended December 31, 2010

Note 3 - Employee Retirement Plan

All eligible Southeastern Wisconsin Regional Planning Commission employees participate in the Wisconsin Retirement System, a cost-sharing multiple-employer public employee retirement system (PERS). The payroll for employees covered by the system for the year ended December 31, 2010 was \$3,272,881, the employer's total payroll was \$3,285,350.

All permanent employees expected to work over 600 hours a year are eligible to participate in the System. Covered employees in the general category are required by statute to contribute 6.2% of their salary (3.2% for Executives and Elected Officials, 5.5% for Protective Occupations with Social Security, and 3.9% for Protective Occupations without Social Security), to the plan. Employers may make these contributions to the plan on behalf of employees. Employers are required to contribute the remaining amounts necessary to pay the projected cost of future benefits. Total contributions for the years ending December 31, 2010 and 2009 were \$360,017 and \$358,920, respectively, equal to the required contributions for each year.

Employees, who retire at or after age 65, are entitled to receive a retirement benefit. Employees may retire at age 55, (50 for protective occupation employees), and receive actuarially reduced benefits. The factors influencing the benefit are: (1) final average earnings, (2) years of creditable service, and (3) a formula factor. Final average earnings is the average of the employees' three highest years earnings. Employees terminating covered employment before becoming eligible for a requirement benefit. For employees beginning participation after 1/L/90, creditable service in each of five years is required for eligibility for a retirement annuity. Participants employed prior to 1990 and on or after April 24, 1998 are immediately vested.

The System also provides death and disability benefits for employees. Eligibility for and the amount of all benefits is determined under Chapter 40 of the State Statutes.

The "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date and disregarding the Wisconsin Retirement System funding objective of maintaining stable contribution rates over the long-term future. The measure, which is the actuarial present value of credited projected benefits, is intended to help users assess the System's funding status on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among PERS and employers. The System does not make separate measurements of assets and pension benefit obligation of individual employers.

Southeastern Wisconsin Regional Planning Commission

Combined Notes to the Financial Statements

For the Year Ended December 31, 2010

Note 4 - Cash and Temporary Investments

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

Cash on hand and on deposit CDs Temporary cash investments



The temporary cash investments are invested in the Wisconsin Investment Pool. The pool was paying 0.19% as of December 31, 2010.

Note 5 - Cognizant Agency

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

Note 6 - Designated Funds

The Commission has designated the following funds for future purposes:

Equipment replacement	\$	175,000
Errors and Omissions Insurance		300,000
Building Improvement & Maintenance		693,06
Program Development Fund	_	630,00
	\$	1,798,06

Note 7 - Long-Term Debt

The City of Pewaukee issued \$3,000,000 of Industrial Revenue bonds on March 1, 2001. These bonds are to be repaid within 20 years from the date of issue. The interest rate varies from 3.85% to 5.25%. The following is a schedule of principal and interest payments over the next five years:

	Principal	Interest		
2011	\$ 140,000	\$	101,948	
2012 and thereafter	1,960,000		545,938	
Total	\$ 2,100,000	\$	647,886	

The commission has an option to prepay the balance of the bonds, at par, commencing March 1, 2011. With this option the Commission has deposited irrevocably with the bond trustee \$1,930,000 to be invested in U.S. Treasury notes. On March 1, 2011 this deposit and accrued interest will be used to pay the remaining bonds outstanding.

Southeastern Wisconsin Regional Planning Commission

Combined Notes to the Financial Statements

For the Year Ended December 31, 2010

Note 8 - Cash Risks

As of the balance sheet date, balances of cash at a financial banking institution exceeded the federally insured limit. These balances fluctuate greatly during the year and can exceed this limit. Management monitors, regularly, the financial condition of the banking institution, and tries to keep this potential risk to a minimum.

FIFTY YEARS OF REGIONAL PLANNING 1960-2010



2010

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COMMISSION COMPLETES FIFTY YEARS OF SERVICE TO THE REGION

PROLOGUE

Fifty years ago Gaylord Nelson, then Governor of Wisconsin, wrote a paper entitled "A Regional Planning Agency for Southeastern Wisconsin," which was published in the July 1960 issue of Traffic Quarterly, a scholarly publication of the Eno Foundation. In that paper, Governor Nelson discussed the need for areawide planning in southeastern Wisconsin, the creation of a regional planning agency for southeastern Wisconsin, and his hopes for what such an agency would do to help resolve the growing environmental and developmental problems of that region. Shortly after writing that paper, Governor Nelson issued the Executive Order creating the Southeastern Wisconsin Regional Planning Commission. In so doing, Governor Nelson acted in the spirit of a long tradition of planning in southeastern Wisconsin, a tradition extending over many years and transcending partisan political viewpoints. In his paper, Governor Nelson outlined certain tasks to be done by an areawide planning agency in southeastern Wisconsin. These included coordinating the application of state programs and policies within the Region; articulating regional development goals and objectives; coordinating the separate and sometimes conflicting activities of the individual counties, municipalities, and special purpose districts operating within the Region; conducting basic planning and engineering inventories; and providing planning assistance to the individual counties and municipalities.

In the 50 years since its creation, the Commission has pursued these tasks with diligence and some success. It has equipped itself, as Governor Nelson asked, with "penetrating studies and well-thought-out plans" so that it can speak with intelligence about "state highway locations, wetland preservation, park development, and pollution and watershed control" within the Region. It has effectively coordinated municipal public works development in such areas as sanitary sewerage, stormwater management and flood control, water supply, highway and transit system development, park and open space preservation, and airport development. Although much remains to be done, the Commission has made significant progress to "preserve the natural beauty, protect the water resources, stave off pollution, and provide for efficient movement of traffic" within the Region. It has even made modest progress toward directing urban decentralization into a more orderly regional settlement pattern.

INTRODUCTION

This Annual Report is the 50th Annual Report prepared by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). It was on August 8, 1960, that then Governor Gaylord A. Nelson, acting on petitions submitted by the Boards of Supervisors of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha Counties, issued the executive order that created the Commission. On the occasion of the Commission's Golden Anniversary, it seems appropriate to pause and reflect on the Commission's creation, on its past planning efforts, and on its accomplishments. Such reflection is deemed to be important because, while there are still some public officials in the Region who were involved in, and remember the creation of the Commission, there are now many public officials at the state, county, and local levels who have come to office in the years since that creation and who do not have knowledge of the reasons for the creation of the Commission, nor understanding of its purpose in being. This special section of the Commission's 50th Annual Report was prepared to document the activities and accomplishments of the Commission in its first half-century, and thereby provide a means by which public officials at all levels of government operating within the Region, and interested and concerned citizens, can gain a better understanding of the Commission's purpose and work.

HISTORIC BACKGROUND

The recognition of the need for, and the beginnings of, regional planning in southeastern Wisconsin can be traced at least as far back as 1909 when Milwaukee County began to develop a plan for a countywide system of parks and parkways. Milwaukee County's areawide planning efforts were later centered in a County Department of Regional Planning, which, in addition to developing a plan for a system of parks and parkways, developed a plan for a countywide arterial street and highway system, and a plan to help guide land use development within Milwaukee County. This approach to areawide planning worked well as long as urban development remained confined to Milwaukee County. As World War II drew to a close, however, the character of urban development within the greater Milwaukee area began to change.

Urban development began to spread out in a highly diffused pattern beyond established public utility and community facility service areas and across county boundaries into once remote rural-agricultural areas. At the same time, urban population densities began to decline significantly, the automobile increasingly became the dominant mode of personal travel, and once isolated and independent communities began to grow together. In recognition of these changing conditions, certain civic leaders and public officials in the Milwaukee area saw a need to develop a means by which the problems created by the diffusion of urban development across municipal and county boundary lines could be addressed in a technically sound, cooperative manner.

These leaders included, among others, men like Leo Tiefenthaler, the Civic Secretary of the City Club of Milwaukee, which had a long and distinguished record of contributions toward civic betterment in the area; Elmer Krieger, City Planner for the City of Milwaukee; Jacob H. Beuscher, Professor of Law at the University of Wisconsin-Madison; and Richard W. Cutler, a Milwaukee attorney specializing in municipal law. Together, these leaders and their colleagues worked for about eight years to obtain enactment of State legislation enabling the creation of regional planning commissions. The legislation was signed into law by then Governor Walter J. Kohler, Jr., in July 1955. This original state enabling legislation, much of which remains in place, embodied all of the basic concepts which have guided the work of the Commission to this day.

Having obtained the necessary state enabling legislation, the same group of civic leaders and public officials set about the task of obtaining the county petitions required for the Governor to act to create a regional planning commission for southeastern Wisconsin. The Waukesha County Board of Supervisors was the first board to file such a petition, doing so in November 1957. The Milwaukee and Ozaukee County Boards of Supervisors fol-



From 1961 to 2002 the SEWRPC offices were located in the old courthouse in downtown Waukesha. The Main part of the complex was constructed in 1893, and provided the Commission with elegant offices while making good use of a complex vacated when Waukesha County constructed a new courthouse on the outskirts of the City of Waukesha in 1958.

lowed with petitions in July and November 1958, respectively; and the Kenosha, Racine, Walworth, and Washington County Boards of Supervisors followed with petitions in June 1960, July 1960, April 1960, and August 1960, respectively. Having received the petitions necessary to create a regional planning commission for a logical geographic planning area, then Governor Gaylord Nelson, as already noted, issued the Executive Order creating the Southeastern Wisconsin Regional Planning Commission.

In a very real sense, the work and accomplishments of the Commission over the past 50 years represent not just the efforts of the Commissioners, of the Commission staff, and of the many public officials and citizens who served on Commission advisory committees, but also the efforts of the elected officials that comprise the constituent county boards and the governing bodies of the local municipalities within the Region, without whose staunch support neither the creation, nor the continued existence, of the Commission would have been possible. Over the past 50 years the Commission has built upon that foundation of support, refining and carrying out the collective ideas of a great many elected officials and citizen leaders in southeastern Wisconsin.

The first meeting of the Southeastern Wisconsin Regional Planning Commission was held on September 21, 1960, in the County Board Room of the Waukesha County Courthouse. The Commission developed an organizational structure to conduct its work, including the establishment of an Executive Committee which is empowered to act for the full Commission on all matters except adoption of plan elements and of an annual work program and budget; a Planning and Research Committee to oversee the technical work of the Commission: an Intergovernmental and Public Relations Committee to address relationships with other units and agencies of government; and an Administrative Committee to perform housekeeping functions. This working committee structure has served the Commission well for 50 years. The accompanying inset identifies the individuals who have served as regional planning commissioners over the past 50 years.

The State enabling legislation assigns three basic functions to the Commission: 1) inventory-that is, planning data base development and maintenance; 2) plan preparation and adoption; and 3) promotion of intergovernmental cooperation and coordination in addressing the developmental and environmental problems of southeastern Wisconsin. Since its creation in 1960, the Commission has diligently pursued these three functions, although the relative emphasis placed on each has changed over time. Initially, major emphasis was on the inventory function, with increasing attention being directed over the years to the plan preparation and intergovernmental coordination functions. A review of the work and accomplishments of the Commission in its first half century is probably best presented in the context of these three basic functions.

BUILDING AND MAINTAINING A DECISION-MAKING DATA BASE— THE INVENTORY FUNCTION

The framers of the regional planning legislation in Wisconsin recognized that there was a need for an organization in the greater Milwaukee area to collect

and analyze the basic planning and engineering data needed by the various units and agencies of government, and by private investors operating within the Region, to make good decisions concerning development and redevelopment. They recognized that, to a great extent, areawide development could be guided and shaped in the public interest simply through the task of collecting, analyzing, and disseminating planning and engineering data on a continuing, uniform, areawide basis. Experience has shown that if the areawide inventory function is properly carried out, the resulting information will indeed be used and acted upon by Federal, State, and local units and agencies of government and by private investors. If the information is properly used to prepare regional plans, it will then also be used to arrive at public and private development decisions on a day-to-day basis, and will contribute in a major way toward the shaping of development in accordance with those plans.

At the time of the creation of the Commission, there was an almost total lack of definitive data within the Region on such important matters as, among others, streamflows and attendant stages; the location and extent of floodways and floodplains; surface- and ground-water quality; the location, extent, and quality of woodlands, wetlands, and wildlife habitat areas; the location of sites having scenic, scientific, cultural, and recreational value; existing land use; soils; travel habits and patterns; and transportation system capacity and utilization. The Region had not even been mapped to modern standards. Areawide inventory, then, was a most important function for the Commission to perform and has been, in every respect, the most popular of its functions. That function must, moreover, be ongoing because it requires continuing effort to maintain in a current and useful form the information that constitutes a planning information system.

All of the Commission inventory efforts have been carried out in accordance with a predesigned structure for such a planning information system formulated in 1961. This planning structure explicitly addresses information needs for land use and public infrastructure planning and development. The inventory efforts conducted by the Commission in accordance with this structure have ranged from aerial photography and base mapping to demographic, economic, land use, and transportation and utility system capacities and use; and have involved detailed operational soil surveys, stream gaging, and

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSIONERS: 1960-2010

				COMMISSIO	NOFFICERS				
	Chairman Henry J. Schmandt 196 George C. Berteau 196 Alfred G. Raetz 1981-11 Anthony F. Balestrieri 11 Frank F. Uttech 1989-1 David B.Falstad 1995-1 Thomas H. Buestrin 199 David L. Stroik 2009-	60-1961 51-1980 984 1985-1988 994 1996 1996 197-2008	Vice-Ch George C. Bertez Joseph A. Schmi James F. Egan 1 Eugene A. Hollist Arthur E. Weiner Ray F. Blank 196 Lawrence W. Hill Francis J. Pitts 1 Evelyn L. Petshe Anthony F. Bales Harout O. Sanas Allen L. Morrison Thomas H. Bues William R. Drew Richard A. Hanse	airman au 1960-1961 tz 1961-1965 966: 1971-1973 ter 1967 1968 9-1970 man 1974 975-1977 k 1978-1979 trieri 1980 arian 1981-1988 1989-1995 trin 1996 1997-2006 an 2007-2010	Charles B. Coe Richard W. Cutle 1969-1977: 19 Garth R. Seehav Anthony F. Bales Harout O. Sanas Irene M. Brown Jean M. Jacobsc Richard A. Hans Gustav W. Wirth Adelene Greene	relary 1960-1962 er 1963-1967; 81-1984 ver 1968 tifrei 1978-1979 ;arian 1980 1985-1988 on 1989-2002 en 2003-2004 , Jr. 2005-2008 2009-	Treas Fortney Larson 1 Lyle L. Link 1965 Mervin L. Brandt Joseph A. Schmi William D. Rogar Sheila M. Siegler Thomas H. Bues Allen L. Morrison Peter D. Ziegler 7 Duane H. Bluem Richard A. Hanse William R. Drew 1 Nancy Russell 20	urer 960-1964 -1966; 1979-1980 1967-1968 tz 1969-1978 1993 tin 1994-1992 1996-2002 2003 ke 2003-2004 an 2005-2006 2007-2009 209-	
	KENOSHA COUNTY COMM	AISSIONERS					RACINE COUNTY	COMMISSIONERS	
			Shared Co	ounty/					Shared County/
County Appointee George L. Schiltz 1960-1965 Charles A. Hollencamp 1965-1966 Jacob Kammerzelt 1966-1970 Donald L. Knapp 1970-1972 Francis J. Pitts 1972-1993 Thomas J. Gorlinski 1994-2004 Leonard R. Johnson 2004-2006 Anita M. Faraone 2006-2010 Kimberly L. Breunig 2010-	Gubernatorial Appoi Erwin W. Lange 1960-19 Dario F. Madrigrano 196- Marlin M. Schnurr 1969- Donald L. Klapper 1970- Leon T. Dreger 1980-196 Mary A. Plunket 1983-11 Leon T. Dreger 1988-200 Robert W. Pitts 2007-	intee 964 14-1969 1970 1978 82 988 06	Gubernatorial . George C. Berteau Donald E. Mayew Sheila M. Siegler ' Adelene Greene 2	Appointee _1960-1971 1972-1983 1983-2004 004-	County / Wilfred Patrick Garth R. Seeha John Margis, Jr Raymond J. M John R. Hanse Jean M. Jacobs Michael J. Miki Gilbert B. Bakk	Appointee 1960-1966 iwer 1966-1972 . 1972-1977 oyer 1977-1984 n 1984-1987 son 1988-2004 asevich 2004-2009 e 2010-	Gubernato Milton F. LaPou George C. Bertk Michael W. Wel James F. Roone David B. Falsta Richard A. Hans Susan S. Green	rial Appointee r 1960-1971 agu 1972-1980 Is 1981-1985 ay 1986-1987 d 1988-1998 sen 1999-2006 hield 2007-	Gubernatorial Appointee Lynn E. Stahlbaum 1960-1961 Lester O. Hoganson 1961-1964 Sam Rizzo 1964-1968 Leonard C. Rauen 1968-1976 Earl G. Skagen 1977-1990 Martin J. Itzin 1990-2000 James E. Moyer 2000-2006 Mary A. Kacmarcik 2007-
M	ILWAUKEE COUNTY COM	IMISSIONERS	S Chanad O	aunted a		V	ALWORTH COUN	TY COMMISSIONER	Sharad County/
County Appointee	Gubernatorial Appo	pintee	Gubernatorial	ounty/ Appointee	County	Appointee	Gubernato	orial Appointee	Gubernatorial Appointee
John P. Murphy 1960-1968 Richard C. Nowakowski 1968-1972 Emil M. Stanislawski 1972-1976 Harout O. Sanasarian 1976-1988 John R. Bolden 1989-1991 Patrick Marchese 1992-1995 Tyrone P. Dumas 1996-1998 William Heinemann 1999 David A. Novak 2000-2002 Linda A. Seemeyer 2002-2007 George A. Torres 2008-2009 Brian Dranzik 2009-2010 William R. Drew 2010-	Richard W. Cutler 1960- Jean B. Tyler 1984-1991 William R. Drew 1991-20 John Rogers 2009-	1984 1 009	Henry J. Schmand Norman C. Storck Evelyn L. Petshek Irene M. Brown 19 Thomas W. Meauu Daniel J. Diliberti 1 Lee Holloway 200 John F. Weishan,	it 1960-1968 1969-1975 1975-1979 181-1988 x 1990-1993 1993-2004 4-2009 Jr. 2009-	Eugene A. Holli Harold H. Kolb Allen L. Morrisc Nancy Russell :	ster 1960-1974 1974-1982 nn 1982-2008 2008-	Charles B. Coe Ray Schmidt 19 Henry S. Lauter Anthony F. Bale Richard A. Hans	1960-1964 164-1970 toach 1970-1971 estrieri 1972-2006 sen 2007-	John D. Voss 1960-1972 John B. Christians 1972-1975 Eugene A. Hollister 1975-1976 John D. Ames 1976-1996 Robert J. Voss 1996-2002 Gregory L. Holden 2002-
	DZAUKEE COUNTY COMM	ISSIONERS				W	ASHINGTON COUN	NTY COMMISSIONE	RS
County Appointee	Gubernatorial Appo	nintee	Shared Co Gubernatorial	ounty/ Appointee	County	Annointee	Gubernato	rial Appointee	Shared County/ Gubernatorial Appointee
Ray F, Blank 1960-1970 Ralph J. Huiras 1970-1972 John P. Dries 1972-1980 Allen F. Bruederle 1980-1990 Leroy A. Bley 1990-2002 Robert A. Brooks 2002-2006 Gustav W. Wirth, Jr. 2007-	E. Stephan Fischer 1960 Nicholas R. Didier 1963- Frank D. Meyer 1964-19 Albian O. Behrens 1965 Thomas H. Buestrin 197 Sara L. Johann 1983-19 Etroy Schreiner 1988-19 Gustav W. Wirth, Jr. 199 William Earl Johnson 20	0-1963 -1964 965 5-1970 71-1982 987 998 99-2006 007-	James F. Egan 19 Alfred G. Raetz 19 Thomas H. Buestr	60-1976 976-1990 in 1990-	Joseph A. Schr Harold F. Ryan Patricia A. Stra Kenneth F. Mill Charlene S. Br John M. Jung 2 Daniel Stoffel 2	1978-1986 1978-1986 chota 1986-2002 er 2002-2006 ady 2006-2008 008-2010 010-	James D. Reigh Arthur E. Weine Lawrence W. Hi Frank F. Uttech Lawrence W. Hi Peter D. Ziegler David L. Stroik	e 1960-1961 er 1962-1970 illman 1971-1976 1977-1994 illman 1995-1999 · 2000-2003 2004-	Carlton M. Herman 1960-1968 Arnold R. Finch 1968-1969 Paul F. Quick 1970-1979 Thomas J. Sackett 1980-1985 Daniel S. Schmidt 1986-
			W	AUKESHA COUNT	Y COMMISSIONER	RS			
	Fort Mer Rob Ken Jam	County Ap they Larson 1 rvin L. Brandt odore F. Matt oert F. Hamilto neth C. Herro nes T. Dwyer 2	pppointee 960-1964 1964-1969 1969-1976 on 1976-1999 o 2000-2006 2007-	Gubernator Lyle L. Link 1960 Paul G. Vrakas 1 Richard A. Cong Duane H. Bluem Anselmo Villarre	ial Appointee -1980 980-1986 don 1986-1992 ke 1992-2004 al 2004-2010	Shared C Gubernatoria Maynard W. Mey Charles J. Davis William D. Rogar Paul G. Vrakas 1	2ounly/ Appointee er 1960-1968 1969-1979 1980-1992 992-		

EARLY COMMISSION WORK ACTIVITIES

USE OF EMERGING TECHNOLOGY



The Commission was the first special purpose agency of government within Wisconsin to apply machine computer technology to its work. Initially the technology—as applied in the Commission's first generation land use—transportation planning program, a program which involved the conduct of massive travel and traffic inventories—was IBM "punch card" technology. The data had to be entered into the computer system by "key punch," and a number of Commission employees were engaged in this task one of whom is shown here entering travel survey data. Somewhat later, the Commission acquired what was then the largest digital central processing unit in Wisconsin, and shared the unit not only with some county and local governments within the Region, but also with such private sector firms as Allis-Chalmers and A.O. Smith.

STREAMFLOW DATA COLLECTION



When the Commission was created in 1960, there were only two continuous-recording streamflow-gages in operation within the Region. Recognizing that streamflow data were essential to the sound management of the water resources of the Region, the Commission was instrumental in establishing, in cooperation with Federal, State and local units and agencies of government, a streamflow monitoring program which by 2010, consisted of 37 continuous recording streamflow gages in operation at strategic locations on the stream network of the Region. The long term data collected by those gages are absolutely essential for sound flood control and water quality management within the Region.

DETAILED SOIL SURVEY



A pioneering, detailed soil survey for the entire seven-county region was conducted by the then U.S. Soil Conservation Service under contract to the Commission. Unprecedented in the extent of the area surveyed, the type of photo maps utilized, and in the soil data and interpretative information provided, the survey was completed in 1966. The soil maps and data were important considerations in the design of various regional plan elements and has been widely used by county and local municipalities, special purpose agencies, and private sector organizations.

DETAILED LAND USE INVENTORY



In 1963, the Commission conducted the first detailed land use inventory of the Region for comprehensive planning purposes. This initial inventory was conducted by photointerpretation utilizing Commission large-scale, ratioed and rectified, aerial photographs and was checked by field survey. The work involved the manual delineation and measurement—as shown here—of the areas devoted to 62 different categories of land use. Maintained current at five year intervals, the resulting land use data provide one of the important bases for transportation, sanitary sewerage, water supply, flood control, and land use planning within the Region. water quality monitoring efforts. Outputs of this information system have ranged from a geographic base file of socioeconomic, land use, and travel origin and destination and traffic flow data, to largescale flood hazard maps, and to high order control survey data.

Pioneering Inventory Efforts

The Commission's inventory efforts not only have been truly massive but also, in a number of cases, have involved new techniques that have substantially advanced the state-of-the-art concerned. Two examples of such pioneering inventory efforts deserve mention. The first of these efforts involved the completion in 1966 of detailed soil surveys for the entire seven-county planning region by the U.S. Soil Conservation Service (SCS) under contract to the Commission. The regional soil survey was unprecedented in several respects: first, in the geographic extent of the area surveyed; second, in the type of photo-maps utilized, and third and most importantly, in the soils data and interpretive information provided. At the request of the Commission, the SCS modified its mapping procedures to utilize ratioed and rectified aerial photographs provided by the Commission as base maps for the survey, instead of the photos produced from aerial mosaics typically used. These photographs were controlled to both the U.S. Public Land Survey and State Plane Coordinate Systems. This important departure from past practice permitted the mapped soils data to be accurately quantified and correlated with both real property boundary line and topographic information in the Commission data files. It additionally facilitated the eventual conversion of the mapped soil data to digital computer-readable form, and facilitated their use in graphic and numeric form in areawide and local land use planning, zoning, and land subdivision control, in tax assessment and development financing, and in the location and design of public works. The survey mapped the geographic locations of the various kinds of soils; identified their physical, chemical, and biological properties; and provided interpretations of those properties for agricultural applications as had been typical practice up to that time. Even more importantly, the regional soil survey, for the first time in the United States, provided interpretations of the soil properties for land use and public works planning purposes, including specific interpretations of the suitability of the soils for various types of urban land use development. The findings of the soil survey were reported in SEWRPC Planning Report No. 8, *Soils of Southeastern Wisconsin*, 1966, a hallmark report subsequently used as a model nationally, and from which seven individual county soil survey reports were prepared. The regional soil survey has been among the most useful of the Commission's inventory efforts and has materially influenced development decisions within the Region.

No planning and engineering function is more basic or important than mapping, aerial photography, and the conduct of related control surveys. Accurate maps, based upon a sound system of survey control, depicting the elevation and configuration of the land surface and the location of its physical features, both natural and man-made, are essential basic planning and engineering tools. Maps are necessary to the intelligent use and management of natural resources, and to every phase of urban development. Their value extends not only to every level and agency of government, but also to private individuals and groups who are concerned in some way with the development and use of land. Accordingly, a second far-sighted, pioneering, inventory effort by the Commission involved the preparation of large-scale topographic and matching cadastral maps, based upon a unique system of horizontal and vertical survey control developed by the Commission. This system combines the U.S. Public Land Survey and State Plane Coordinate systems, permitting for the first time within the Region the accurate and precise correlation of real property boundary line and earth science data. Such correlation, while always important for good planning and engineering, has over the years become essential to the equitable application of shoreland, floodland, and wetland zoning, which requires the accurate and precise correlation of certain natural resource base features with real property boundary lines. Importantly, the survey control and mapping devised by the Commission has provided the foundation for the development by the counties and municipalities within the Region of automated, parcel-based land information and public works management systems. At the Commission's urging, and through its own efforts, the control survey network has been extended over the entire Region, and the large-scale topographic and complementary cadastral mapping has, as of 2010, been extended over 2,385 square miles, or about 89 percent of the total area of the Region. A total of 11,753 U.S. Public Land Survey corners, or all such
corners in the Region, have been relocated and monumented, and placed upon the State Plane Coordinate System as a basis for the mapping.

Other inventory efforts of the Commission have addressed the collection, mapping, and analyses of:

- Areawide land use data;
- Natural resource base data, including the accurate mapping of wetlands, woodlands, and wildlife habitat areas;
- Stream flow and stage data and flood hazard mapping;
- Surface and groundwater quality data;
- Areawide travel behavior and pattern data;
- Regional transportation system capacity and utilization data.
- Sanitary sewerage and public water supply system configuration, capacity, and use.

The Commission has periodically updated its key inventories, usually at 10 year intervals. This provides an invaluable time series of consistent, comparable data over a now 50 year period of record. The data so maintained in each functional area are, moreover, sufficiently comprehensive and sufficiently detailed to permit simulation of the performance of the systems involved–arterial streets and highways, transit, sanitary sewerage, water supply, stream network flows and stages, and water quality conditions, and aquifer performance–to be simulated under existing and alternative future land use conditions.

PREPARING REGIONAL DEVELOPMENT RECOMMENDATIONS—THE PLAN-MAKING FUNCTION

Planning Concepts Pioneered by the Commission

The Commission's planning efforts have served to advance some very basic and important concepts which, while new at the time of their advancement and often greeted with skepticism and at times hostility, have now become widely accepted not only within the Region, but within the State and nation. Some of these concepts deserve a brief description here.

Integrated Land Use and Public Works Facilities Planning

Beginning with the regional land use and transportation study in the early 1960's, the Commission has taken an integrated approach to the planning of land use and of such public works as highway and transit, sewerage, water supply, and drainage and flood control systems. The sound planning of public works facilities cannot be separated from land use planning. The land use pattern determines the amount and spatial distribution of travel within an urban area, and thereby the loadings on the transportation system. At the same time, whatever transportation system is planned and built becomes a determinant of the future land use pattern. Similarly, the land use pattern is an important determinant of sewerage facility needs. Sewage flows from residential, commercial, industrial, and institutional land uses must be quantified in order to plan a system of trunk sewers and sewage treatment works. The sewerage facilities, in turn, become even more important than transportation facilities in determining the future land use pattern. The land use pattern is also an important consideration in planning for drainage and flood control works, since the type, location, extent, and intensity of land use affects the quantity of storm water runoff and downstream flood flows and stages. Flood flows and stages and attendant flood hazard areas, in turn, are an important determinant of the future land use pattern.

The Commission's approach to integrating land use and public works facilities planning has not been one of simply projecting land use development through analyses of historic trends. Rather, the Commission's approach has been a normative one in the sense that the Commission first prepares a regional land use plan designed to help shape future land use into a safer, more healthful, and more attractive and efficient pattern while preserving and protecting the underlying and sustaining natural resource base. That normative land use plan, then, becomes the basis for the design of supporting public works systems, and facilitates the preparation of sound system plans for transportation, sewerage, water supply, and flood control, and to coordinate the development of the individual systems of public works with each other, and reinforce the influence of those systems on shaping land use development in the public interest. This normative approach has served the Region well over the years.



Environmental Corridors

Beginning with the first regional land use plan in the early 1960's, the Commission has advanced the concept of the environmental corridor. This concept was not originated by the Commission; indeed, it has its roots in southeastern Wisconsin as far back as the earliest parkway system planning in Milwaukee County at the turn of the 20th century by Charles B. Whitnall. At about the time of the creation of the Commission this concept was articulated and advanced in an academic sense by Professor Phillip H. Lewis, Jr., of the Department of Landscape Architecture of the University of Wisconsin-Madison. The Commission, in its land use planning efforts, accomplished the first practical application of the concept on a regional scale. Environmental corridors are defined as linear areas in the landscape which encompass the most important elements of the natural resource base, including the best remaining woodlands, wetlands, and wildlife habitat areas; surface waters and associated shorelands and floodlands; areas covered by organic soils; areas containing rough topography and significant geological formations; sites having scenic, historic, and scientific value; and areas of groundwater recharge and discharge.

Through its land use planning efforts, the Commission has not only collected the information necessary to delineate these corridors, but has accurately delineated and mapped the corridors and promoted their protection and preservation in essentially natural open uses. The Commission has found the corridors to be essential to the protection and wise use of the natural resource base, to the preservation of the cultural heritage and natural beauty of the Region, and to the enrichment of the physical, intellectual, and spiritual development of the resident population of the Region. The preservation of the corridors will not only do much to ensure the maintenance of the overall environmental quality of the Region, but will also help prevent the creation of serious and costly environmental and developmental problems. These problems include surface and groundwater pollution; poor drainage and flooding; failing onsite sewage disposal systems; excessive infiltration of clear water into sanitary sewerage systems; wet basements and excessive operation of sump pumps; and settlement and structural failure of roadways, parking areas, utilities, and buildings.

Prime Agricultural Land Preservation

A second concept advanced by the Commission in its initial land use planning efforts was the preservation in agricultural use of the most productive agricultural lands remaining in the Region. These lands were defined on the basis of soils, the size and productivity of the individual farms, and the size of blocks of farms so as to constitute viable agricultural areas. In the first regional land use plan, these lands were defined and mapped as prime agricultural lands, and recommendations made for their preservation, including later recommendations for the use of tax credits. This concept and the recommendations were at first received with great



SEWRPC plan recommendations to preserve and protect prime agricultural lands through appropriate public use regulation and tax relief have had mixed acceptance in the region since they were first made in 1966. The recommendations attained widespread support through-out Walworth County and in portions of northern Ozaukee, west central Washington, and north central Kenosha Counties. Of the 1,047 square miles of prime agricultural lands in the region identified in the SEWRPC plans, and in followup county and local planning efforts, for protection and preservation in farming uses, about 486 square miles, or 46 percent, had been subjected to appropriate use restrictions by 2010.

skepticism, and some hostility, by farmers, local elected officials, and even State and Federal agricultural officials. The Commission, however, persisted in working with local units of government toward preserving and protecting that important resource from urban encroachment. It was believed that by avoiding the intrusion of urban land uses into the prime agricultural areas, conflicts between farming activities and, in particular, residential land uses, would be avoided; farming communities maintained intact; the demand for urban services with attendant increases in the cost of local government avoided; and farmers given more confidence in investing in improvements to provide greater productivity and reduce soil erosion. The latter would, in turn, have water quality benefits. The first exclusive agricultural zoning ordinance in Wisconsin designed to protect prime farmlands was prepared by the Commission for the Town of Belgium in Ozaukee County. That ordinance was adopted by the Town Board in 1966. One of the first approaches to exclusive agricultural zoning at the county level in the State or nation was taken by Walworth County in 1974. Since that time, the concept of the preservation of prime agricultural areas, aided by zoning and tax relief, has spread throughout southeastern Wisconsin, and indeed the State and nation.

Containment of Urban Sprawl

A third concept advanced by the Commission in its initial planning efforts which has become widely accepted since, was the concentration of new urban development in areas covered by soils well suited to urban use; in areas not subject to special hazards, such as flooding and erosion; and in areas which could be readily and economically provided with essential urban services, including centralized sanitary sewerage, public water supply, and mass transit. New urban development would then occur as infill and redevelopment, as well as contiguous to, and outward from, the existing urban centers in the Region. It was believed that by so doing, a more orderly and economic development pattern would be achieved, the intensification of existing and development of new environmental and developmental problems would be avoided, and a safer, more healthful, and more efficient land use pattern would evolve.

The containment of urban development as proposed in the regional land use plan thus complemented the regional land use objectives of preserving and protecting the environmental corridors and prime agricultural lands. The urban containment component of the regional land use plan has been institutionalized at the State level through the imposition of water quality-related planning requirements that call for the delineation of urban sanitary sewer service areas. The delineation of these areas has become an important plan implementation commitment, along with the determination by the State not to approve sanitary sewer extensions to lands either lying beyond the boundaries of such areas, or designated as primary environmental corridors within such areas.



Protection of Floodlands

Beginning with the preparation of the first of a series of watershed plans in the early 1960's-the plan for the Root River watershed in Milwaukee, Racine, and Waukesha Counties-the Commission has advocated the exclusion of new flood-damage-prone development into floodlands, and the preservation of the floodlands in essentially natural, open uses. It was believed that by protecting the existing floodwater storage capacity of these floodlands, the construction of costly structural flood control works could be avoided which, by their very nature, tend to destroy the natural environment along a stream course. Under the Commission's floodland protection concept, both floodways and flood fringe are recommended for protection and areas preservation in natural, open uses, (the floodways being the areas along a stream which convey floodwaters during a major flood; the flood fringe areas being important to storing floodwaters and reducing downstream peak flood flows and stages). The only exceptions are those floodlands already

developed for permanent urban land uses, such development taking place before the knowledge of the extent of the natural floodplains became available. The Commission has promoted this concept in its planning and has worked extensively with local units of government throughout the Region-and did so far in advance of the statemandated floodland protection program now in place-to implement the zoning and land subdivision regulations necessary to achieve these objectives. The first floodland zoning ordinance based upon definitive, recurrence interval flood hazard data prepared by the Commission was adopted by the City of Racine in 1970. The data developed by the Commission provided the sound basis required for the implementation of State legislation adopted in 1967 mandating floodland zoning throughout the State.

Balanced Approach to Transportation System Planning

Two years after the creation of the Commission, the U.S. Congress, in the 1962 Federal Highway Act, mandated transportation system planning in all of the metropolitan areas of the United States. The major metropolitan area transportation planning efforts in the United States, undertaken pursuant to that act, focused exclusively on planning for highway development. The Commission from the inception of its work chose to approach transportation system planning in a more balanced way, looking in particular to find ways to provide for the more efficient and environmentally sound movement of people by public transit. Thus, the Commission's original regional transportation plan, adopted in 1966, contained not only an arterial street and highway element but an equally important public transit element. The planning for these two elements recognized that, to the extent it was possible to accommodate travel on public transit facilities, the need to provide highway facilities may be reduced. This integrated approach to highway and public transit planning was unprecedented in the United States, and took place at a time when transit services were still being profitably provided in the private sector. The Commission has also conducted studies of potential system configurations of light rail, commuter rail, and express bus systems within the Region, and has recommended development of a network of express bus lines within the Region.

Jurisdictional Highway System Planning

All of the highway system planning for metropolitan areas in the United States prior to the Commission's work was functional in nature; that is, such planning was intended to identify the types and locations of highway facilities necessary to accommodate metropolitan area travel patterns. The Commission's approach to transportation planning was not only functional but also jurisdictional. After completing the first functional arterial street and highway system plan for the Region in 1966, the Commission undertook, on a county-by-county basis, the preparation of a coordinated set of jurisdictional highway system plans. These plans identify which of the arterial highway facilities included in the functional plan should be constructed, operated, and maintained by state government, which by county government, and which by local government. This reassignment of jurisdictional responsibility was based upon a rational set of criteria relating to trip volumes, trip lengths, and land uses served, as well as to the operational characteristics of the facilities, and provided a way in which to more equitably address the highway system needs in a dynamic metropolitan area.

Systems Approach to Plan Design

Systems engineering basically must focus on design. It seeks to achieve good design by, first of all, setting good objectives. Good design is further achieved by determining, through quantitative analysis, the ability of alternative plans to meet these objectives, and by cultivating interdisciplinary team activity considering all of the relationships involved both within the systems being designed and between the system and its environment. The Commission's emphasis on systems engineering has served to revitalize the concept of the comprehensive plan, and has proven most valuable in establishing good working relationships with plan implementation agencies.

This emphasis on systems engineering led the Commission to incorporate the use of mathematical simulation models in the quantitative test and evaluation of alternative plans. The Commission thus pioneered the application of demographic and economic growth models within the Region. These models include a dynamic input-output matrix; a full

battery of travel and traffic simulation models, including trip generation, trip distribution, modal split, and traffic assignment models; a full battery of water resource management simulation models, including streamflow and stage, lake volume and level, and stream and lake water quality models; and a full battery of aquifer simulation models. The Commission also developed an ambient air quality simulation model, and did pioneering work under contract to the U.S. Department of Housing and Urban Development on the development of a land use design model. The Commission simulation modeling capabilities permitted technically sound system plans to be prepared for the development of arterial streets and highways, transit systems, and sewerage and drainage and flood control systems, for air and water quality management, and for public water supply systems. Through the use of these modeling capabilities, the Commission could take a true interdisciplinary approach to plan design, test, and evaluation. Some of the analytical methods developed by the Commission, such as the rank based expected value method of alternative plan evaluation and the alternative future scenarios approach to forecasting, were drawn from military and aerospace technology and applied to public planning for the first time.

The emphasis on systems engineering also disciplined the Commission's data collection efforts and permitted regional plan elements to be prepared in sufficient depth and detail to provide a sound basis for plan implementation. This means that in the regional plans, the location and alignment of major facilities and the boundaries of, for example, proposed flood hazard and shoreline erosion areas could be determined with sufficient accuracy to provide a basis for the advanced reservation of rightof-way, and for the application of public land use regulations at the county and local level. Only through such detailed planning can transportation facilities such as arterial streets and highways, freeways and transitways, and water control facilities such as reservoirs and drainage channels, be properly related to the developing land use pattern and to each other. And only through such planning can the advanced reservation of land needed for public facilities be achieved through the cooperative efforts of Federal, State, and local units and agencies of government.

ADVISORY COMMITTEES



The Commission's use of advisory committees to assist it in its planning efforts is an important characteristic of its approach to plan preparation. In the early 1980's SEWRPC completed a rapid transit planning study. The advisory committee for the study was chaired by former Milwaukee mayor Frank P Ziedler, shown here at left during a committee meeting. At the right is then assemblyman John O. Norquist, who became the mayor of Milwaukee in 1988. Seated between Messrs. Ziedler and Norquist are Kurt W. Bauer, then SEWRPC executive director, Kenneth R. Yunker, then a SEWRPC assistant director who became executive director in 2009; and long-time SEWRPC executive secretary Margaret M. Shanley. The study reviewed the available rapid transit technologies, including in-depth analyses of a potential light rail transit system to serve the Milwaukee northwest corridor where proposed freeways had by that time been abandoned. Ultimately, Milwaukee County rejected light rail and proceeded to implement express bus service in the corridor.

Participatory Planning Process

The Commission, since its inception and long before the concept became popular in the early 1970's, has been strongly committed to a participatory planning process. The structure of the Commission itself, of course, provides for citizen participation directly in the planning process in the most meaningful manner possible by including citizen members on the Commission itself. That participation has been broadened, however, by the creation of an advisory committee for every Commission work effort culminating in the preparation of a plan, to ensure the active participation of all concerned interests in the planning process.

Such participation is essential to any planning effort intended to promote consensus and cooperation

between public and private, urban and rural, and local, State, and Federal interests. All of the Commission's work contributing to the evolving regional plan is reviewed by an advisory committee, beginning with the study design to assure that all pertinent issues are being addressed and ending with final plan recommendations. The advisory committees are purposefully structured to ensure that, whatever the given planning task at hand, all of the relevant interests from local, State, and Federal agencies and units of government and from various private sector interests are represented. In its work, the Commission endeavors to respond to the comments and concerns of advisory committee members in a meaningful way, a commitment that leads to the adoption of recommendations that are not always the most efficient or cost-effective technical solutions to the identified problems, but which are perceived to best meet community goals and objectives. The Commission believes that without a full commitment to a participatory planning process through the advisory committee mechanism, regional plans would not be well received.

Cyclical Approach to Planning

One of the planning process concepts advanced by the Commission involves the cyclical nature of that process. In the Commission's view, the planning process should alternate between areawide system planning and local project planning. For example, in transportation planning, 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 more detailed local project planning. If for whatever reasons a particular facility construction or management proposal advanced at the areawide level cannot be implemented at the local level, that determination is taken into account in the next phase of systems planning. As the planning process proceeds, therefore, resultant system level plans incorporate the feedback from the project level plans. This planning concept ensures that the regional planning process in southeastern Wisconsin remains relevant to the concerns and needs of the citizens and communities in the Region.

The Importance of a Master Plan

The Commission is charged by law with the duty and function of making and adopting a master plan for the physical development of the Region. The Commission has placed great importance on this function, and the literal interpretation it has given to the statutory language relating to plan formulation and adoption is probably unprecedented in metropolitan planning within the United States. The Commission believes that the importance of formulating areawide development plans, and of securing agreement on such plans through their formal adoption, not only by the Commission, but by the constituent county and local units of government, and by implementing State and Federal agencies, cannot be overemphasized.

The Commission has placed great emphasis on the development 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 each of the others; if serious and costly environmental and developmental problems are to be avoided: and if a more attractive 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 efforts are related to the comprehensive plan. It is recognized, in this respect, that the validity of the concept of the comprehensive plan has been questioned, 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 intelligently coping with the problems generated by areawide urbanization. The comprehensive plan not only provides the necessary framework for coordinating and guiding growth and development within a multijurisdictional urbanizing region, but also provides the best conceptual basis available for the application of systems engineering technology to the growing problems of such regions.

Regional Plans Prepared and Adopted

The performance of a planning agency can be measured in a number of ways. One measure is the extent to which plans have been prepared. Another measure is the extent to which those plans have been formally adopted by the planning body. A third measure is the extent to which those plans have been carried out by the agencies designated in the plan to have implementation responsibilities. And yet a final measure—and the ultimate test—is the degree to which the implementation of plan recommendations solves the problems and meets the objectives intended.

During its 50-year existence, the Commission has placed a great deal of emphasis on plan preparation adoption. The comprehensive regional and development plan mandated by State Statute has evolved over time to include a land use plan element; a transportation system plan element, including highway, transit, and airport subelements; a park and open space plan element; a natural areas plan element; a housing plan element; a sanitary sewerage system plan element, a water quality management plan element; a water supply element; an air quality management plan element; and comprehensive water quality management, stormwater management and flood control plan elements for the Des Plaines, Fox, Kinnickinnic, Menomonee, Milwaukee, Pike, and Root River watersheds and the Oak Creek watershed. The Commission has also prepared detailed "city" plans for the Kenosha and Racine urbanized areas. These district plans, prepared at the request of the two cities, carry the regional plan elements into greater detail, integrating local and regional development objectives. The Commission also assisted six of the seven counties-and many of their constituent municipalitiesin preparing "smart growth" plans as required by State legislation, similarly integrating regional, county, and local development objectives. A listing of the major plan elements adopted by the Commission over the past 50 years is contained elsewhere in this Annual Report.

Plan adoption is considered by the Commission to be very important, along with subsequent certification to the Federal, State, and local units and agencies of government concerned. The Commission holds that formal adoption of a plan by the Commission and by the other governmental agencies concerned is an important means of assuring a common understanding of, and agreement on, needed courses of action. This common understanding and agreement enables the staffs of the many units and agencies of government concerned with land use, public works development and redevelopment, and environmental protection to program the necessary plan implementation work in a cooperative manner.

Perhaps to a greater degree than most other intergovernmental planning agencies in the nation, the Commission has been successful in securing plan endorsement or adoption. For example, the initial regional highway and transit system plan was adopted or endorsed by the county boards of supervisors of all seven of the constituent counties in the Region, by the State and Federal transportation agencies, and by numerous local governing bodies. Similarly, the initial regional land use plan was adopted by six of the seven county boards, by many of the local units of government, and by key State and Federal agencies concerned with land use and supporting public infrastructure development. The park and open space plan was adopted by six of the seven county boards. Each of watershed plans was adopted by the county boards concerned. The regional water quality management plan was adopted by the Wisconsin Department of Natural Resources and endorsed by the U.S. Environmental Protection Agency.

REGIONAL DEVELOPMENT ACTIONS INFLUENCED BY COMMISSION PLANS—THE INTERGOVERNMENTAL COORDINATION FUNCTION

No review of activities under the Commission's plan implementation function would be complete without some recognition of the major regional plan implementation actions that have been taken by the many units and agencies of government and private sector interests concerned with the development of the Southeastern Wisconsin Region. Certainly, some of the actions that have occurred since 1960 would have occurred even if the Commission's planning programs had not been carried out. Other actions, however, can fairly be said to have been influenced by Commission plan recommendations, while yet others probably would not have occurred in the absence of the Commission's planning efforts. The following text summarizes these actions.

The plans prepared and adopted by the Commission, taken together, represent the Commission recommendations concerning needed actions to address the developmental and environmental problems of the

Region and promote the evolution of a more attractive and healthy, as well as a safer and more efficient, regional settlement pattern. The Commission's plans are by law entirely advisory, and the recommendations in those plans are addressed primarily to those units and agencies of government operating within the Region which have responsibilities relating to the physical development and redevelopment of the Region. It is those agencies-Federal, State, county, and municipal-which determine whether or not Commission recommendations are to be carried out, thereby influencing the development pattern of the Region; abating existing developmental and environmental problems within the Region; and avoiding the creation of new problems of this sort. Thus, the Commission, as a planning rather than a plan implementation agency, can take no credit for any of the actions taken by public bodies in a manner consistent with the plan recommendations. To the extent that the Commission plans have been, or are being, implemented, and development in the Region thereby influenced, the Commission can take credit only for providing a forum for cooperative, intergovernmental consideration and decision-making through an ongoing planning process.

Recognizing the role of the implementing agencies, then, the following summary is provided for some of the major regional plan implementation actions that have occurred within the Region over the past 50 years:

• Environmental Corridors

One of the most important recommendations made in the Commission plans is the preservation and protection of the primary environmental corridors of the Region. These corridors comprise about 462 square miles of land and surface water, or about 17 percent of the total area of the Region, but contain almost all of the best remaining elements of the natural resource base of the Region. The preservation of these corridors is recommended not only for resource conservation and protection purposes, but to lend form and structure to urban development in the Region, and thereby avoid the inappropriate placement of urban development in areas poorly suited for such development. The mere act of mapping the corridors, thereby enabling concerned individuals and organizations to visualize their outlines, is an important factor in their protection. However, when the Commission made its initial recommendations in 1966 to preserve and protect these corridors, it was recognized that a number of additional coordinated measures would be required to achieve the corridor protection objective, including public acquisition of certain corridor lands, public regulation of other privately owned corridor lands, and reformulation of public utility extension policies to avoid utility service extensions that would support inappropriate urban development in the corridors.

Over the years, many important actions have been taken by implementing agencies toward achieving the corridor objectives. Over 168 square miles of primary environmental corridor land-including about 71 square miles of inland lake surface water representing about 36 percent of the total corridors area-are now publicly owned and permanently protected. Another 22 square miles, or 5 percent, of the total corridor area is held by conservancy organizations or is otherwise in compatible private ownership. Through extensive joint State-local floodplain and shoreland-wetland zoning and Federal wetland regulation, another 146 square miles, or 31 percent, may be considered to be permanently protected from inappropriate development. Another 66 square miles, or 14 percent, are protected by local land use regulations. And yet another 30 square miles, or about 7 percent, are upland areas lying within urban service areas and are protected from incompatible urban development by State administrative rules which prohibit sanitary sewer extensions for the purpose of effecting development of such lands. Thus only 30 square miles or 7 percent, remain unprotected—a remarkable achievement.

What began in 1966 as a plan concept, then, has been institutionalized and integrated into Federal, State, and local legislation and administrative rules, and into the day-to-day practice of planning at the State, county, and local levels and to a limited extent through



First introduced in the SEWRPC 1990 regional land use plan released in 1966, the environmental corridor concept has been institutionalized throughout Southeastern Wisconsin, becoming well established in contemporary planning practice and municipal law, including in a Wisconsin Supreme Court decision. Many actions have been taken throughout the region to preserve and protect the natural resource features found in the primary environmental corridors, including public land acquisition, public land regulation, private land acquisition through organizations such as land trusts, and public utility extension policies. The corridors not only encompass the best remaining elements of the natural resource base-woodlands, wetlands, wildlife habitat areas, shorelands, floodlands, and areas of groundwater recharge-but also consist of lands that are generally poorly suited for urban development. Of the 462 square miles of land in the region that comprise the primary environmental corridors, by 2010 about 432 square miles, or 93 percent, were protected from inappropriate development.

the actions of the U.S. Army Corps of Engineers at the Federal level. This institutionalization of the environmental corridor concept should ensure that a great majority of the environmental corridor lands within the Region will be preserved and protected as development and redevelopment proceeds within the Region.

MAJOR PARK SITES





Two of the major outdoor recreation sites originally recommended by the Commission for preservation in its park and open space planning efforts are identified in theses photographs. On the left is Harrington Beach State Park in the Town of Belgium, Ozaukee County. This park, acquired and developed by the Wisconsin Department of Natural Resources in response to Commission plan recommendations, was created on the site of the virtually last remaining major stretch of Lake Michigan beach in the Region. That beach, together with an inland lake formed in a former local quarry, provide the setting for high-quality outdoor recreation opportunities. On the right is Ottawa Lake State Recreation Area. The Ottawa lake Recreation Area is in the Town of Ottawa, Waukesha County, in the heart of the Southern Unit of the Kettle Moraine State Forest. With its swimming beach, camping facilities, and access to miles of hiking and cross country skiing trails, the Ottawa Lake site also is popular for summer and winter activities.

• Major Park Sites

Under one of its first planning efforts, the Commission in 1966 recommended the acquisition and ultimate development of 13 new major parks within the Region. Each of these recommended large park sites encompassed an outstanding combination of natural resource features, and these 13 sites comprised the best remaining potential large park sites in the Region. One of these sites contained the last remaining undeveloped major stretch of Lake Michigan beach in the Region. The Commission recommended that these 13 sites—all then in private ownership-be protected and acquired and developed for park purposes. State and county park agencies have since acted to acquire and substantially develop 12 of these 13 park sites: Brightondale Park in Kenosha County; Oakwood Park in Milwaukee County; Hawthorn Hills and Harrington Beach Parks in Ozaukee County; Cliffside and Ela Parks in Racine County; Whitewater Lake Park in Walworth County; Pike Lake Park in Washington County; Minooka, Ottawa Lake, and Monches Parks in

Waukesha County; and a major part of the Sugar Creek Park site in Walworth County. Only the Paradise Valley Park site in Washington County has not been publicly acquired to date, but has been largely protected through ownership by private sector conservancy organizations.

Regional Freeway System

One of the major Commission efforts over the years has .been directed at meeting the transportation needs of the area through the preparation and implementation of areawide transportation system plans. As already noted, the Commission transportation plans have from inception-and long before it became popular to do so-attempted to provide a balanced approach to transportation system development, including emphasis on both arterial highways and mass transit. In addition, the Commission transportation system plans have always attempted to make maximum use of the transportation system capacity already in place through better management of that system.

Many actions have been taken to develop the planned regional freeway system. Major new freeway segments contained in the original regional transportation plan and constructed include the IH 43 Freeway through Ozaukee County; the STH 15now IH 43—Freeway through Milwaukee, Waukesha, and Walworth Counties: the USH 16-now STH 16-Freeway through Waukesha County; the USH 45 Freeway through Milwaukee, Waukesha, and Washington Counties; and the Airport Spur Freeway in Milwaukee County. Important capacity additions to the freeway system have been implemented in accordance with the plan recommendations, including the addition of a third lane to IH 94 through Kenosha and Racine Counties: the addition of a third lane to the IH 94 Freeway in central Waukesha County; and the provision of a third lane to the IH 43 Freeway in central Milwaukee County. The Lake Parkway, once planned as a freeway, has been constructed as an expressway from the south end of the Hoan Bridge to E. Lavton and S. Pennsylvania Avenues in Milwaukee County affording the south shore communities ready access to downtown Milwaukee and the regional freeway system.

When the Commission undertook its first regional transportation study in 1963, there were about 68 miles of freeways in existence within the Region. The original regional transportation plan, as adopted in 1966, called for the addition of about 373 miles of freeways, which would have resulted in a total regional freeway system of about 441 miles. In the years immediately following the adoption of the 1966 first generation plan, every mile of proposed freeway was advanced by the Wisconsin Department of Transportation to the detailed facilities planning stage where precise centerline and right-of-way requirements were preliminarily determined. As public hearings were held on each of the proposed new freeways, changing public attitudes caused a number of the originally planned freeways to be removed from the plan, including the Milwaukee Metropolitan Belt Freeway; the extension of the Stadium Freeway-North through Milwaukee and Ozaukee Counties; the extension of the



The regional transportation plan adopted by SEWRPC in 1966 envisioned a 441-mile regional freeway system. The fate and status of that system in 2010 is shown on this map. Nearly 270 miles were built as freeways and remain in service. About 13 miles have been built as expressways with limited arterial street grade crossings. Less than one mile—the Park East in downtown Milwaukee—was built and has since been removed. About 12 miles remain to be built consisting of the USH 12 freeway in Walworth County. The remaining 145 were never built and have been removed from the regional plan.

Stadium Freeway-South in Milwaukee County; the Park Freeway-West in Milwaukee County; the Bay Freeway in Milwaukee and Waukesha Counties; the Lake Freeway-South in Milwaukee, Racine, and Kenosha Counties; and the Racine Loop Freeway. As a result, only about 205 miles, or 55 percent, of the originally planned system were built. Another 13 milescomprised of the Lake Parkway in Milwaukee County-which replaced in part the Lake Freeway South; the Oconomowoc Bypass-STH 16 in Waukesha County and the Whitewater Bypass-USH 12 in Walworth County-were built as expressways. About one mile of freeway was built but

subsequently razed—the Park Freeway East. The existing freeway system within the Region as of 2010 totaled 272 miles, or about 8 percent of the total arterial street and highway system, but in 2010 carried about 38 percent of the total daily vehicle miles of travel within the Region

• Surface Arterial Street and Highway System

> Many additions and improvements have been made to the surface arterial street and highway system in accordance with regional plan recommendations. Entirely new highways have been constructed, and existing facilities improved to facilitate traffic movement within the Region all as recommended in the transportation plan. Examples of new and improved surface arterial facilities constructed in accordance with plan recommendations include:

- Kenosha County: STH 50; STH 31— Green Bay Road; and the extension easterly of CTH E—12th Street including a new crossing of the Pike River in Kenosha County. Of particular significance was the construction of CTH Q—now STH 165—from IH 94 easterly, a distance of about six miles, to serve what is now the Lakeview Corporate Park in the Village of Pleasant Prairie, one of six new major industrial centers recommended to be developed in the first generation regional land use plan;
- Milwaukee County: STH 241—S. 43rd Street; CTH P—Good Hope Road—including its extension easterly across the Milwaukee River; CTH BB—Rawson Avenue; STH 100—Ryan Road and Lovers Lane; the extension of Puetz Road westerly from Hunting Park Drive to S. 76th Street; and the extension of N. 124th Street from STH 145 to STH 100; in Milwaukee County;
- Ozaukee County: STH 167—Mequon Road; STH 57; STH 181—Wauwatosa Road; and the extension easterly of Falls Road—including a new crossing of the Milwaukee River in Ozaukee County;



The provision of needed additional capacity on existing arterial streets and highways represents another aspect of the Commission's functional highway system plans. This photograph shows one such major arterial street improvements completed in accordance with Commission plan recommendations. The photograph shows the major improvement along W. Good Hope Road in the City of Milwaukee, including an interchange with the USH 41-45 Freeway. This road provides direct access to the developing Park Place area on the northwest side of the City of Milwaukee.

- Racine County: STH 31—Green Bay Road; STH 36—Loomis Road and Milwaukee Avenue; STH 20—Washington Avenue; the extension of Bridge Street including a grade separation of the Canadian National Railway; the State Street extension westerly over the Fox River; and the Burlington bypass in Racine County;
- Walworth County: STH 50; the USH 12 Whitewater bypass; and the STH 120 Lake Geneva bypass in Walworth County;
- Washington County: STH 60; STH 167—Mequon Road; Lannon Road; and Pilgrim Road; and the northerly extension of CTH G across the Milwaukee River in Washington County; and

- Waukesha County: CTH O—Moorland Road; the Waukesha bypass; STH 164; STH 59—Greenfield Avenue; CTH LL—Janesville Road, CTH Y—Racine Avenue; STH 36— Loomis Road; Holz Parkway; the realignment of Pilgrim Parkway; and the realignment of Silvernail Road to accommodate the expansion of the Waukesha County Airport, in Waukesha County.
- Jurisdictional Highway System Transfers Steps have been taken to implement the changes in jurisdiction recommended in a series of jurisdictional highway system plans prepared for each of the seven constituent counties by the Commission. Such changes are designed primarily to attain equity in the costs of construction and maintenance of the arterial highway system. Progress in this respect has been most significant in Waukesha County, where a number of important jurisdictional changes have been made, including the assumption of jurisdiction by Waukesha County of Moorland Road; the former STH 15, North Avenue in the City of Brookfield, Springdale Road in a number of municipalities; the assumption of jurisdiction by the State of Wisconsin of former Waukesha CTH F, and of CTH A, converting the Waukesha bypass to a state trunk highway; and the assumption of jurisdiction by a number of municipalities in Waukesha County of former county trunk highways. Progress in this respect has also been made in Milwaukee County, where the County has assumed jurisdiction over College Avenue in the Village of Greendale and City of Franklin; Mill Road in the City of Milwaukee; and STH 15 in the City of West Allis. In Ozaukee County the State assumed jurisdiction over CTH N-the Wauwatosa Road; while local municipalities assumed jurisdiction over STH 57. In Walworth County the State assumed jurisdiction over CTH G which became STH 120. In Racine County the State assumed jurisdiction of CTH F which became STH 164. In Kenosha County the State assumed jurisdiction over CTH Q-now STH 165. Negotiations concerning additional jurisdictional changes are ongoing, as the county jurisdictional plans are updated.

FALLS ROAD BRIDGE



The Commission transportation planning efforts are also focused on providing more convenient and safe circulation patterns within communities. At times this involves the provision of additional bridge crossings. This photograph shows the then recently completed Falls Road bridge crossing—originally proposed by the Commission in 1966—provides a second major crossing of the Milwaukee River in the Village, thus providing a redundant crossing for emergency vehicles and eliminating circuitous travel patterns by residents from one side of the river to the other.

• Regional Transit Systems

Commission plan recommendations to reestablish the abandoned-or pending abandonment of-once privately operated, mass transit systems in the Kenosha, Racine, and Waukesha areas have been fully carried out. In each case, the Commission worked with the local community to evaluate the potential for reestablishing a mass transit system and to prepare detailed operational and capital facilities plans for such systems. The bus systems that are in place in these three communities today largely reflect those plan recommendations, and provide important public services to those residents of the Region-including the poor, the elderly, and the young who have limited or no access to private automobiles and whose mobility is therefore restricted.

In the Milwaukee urbanized area, the Commission's transit planning has been instrumental in the establishment of the modified rapid transit components of the Milwaukee transit system, consisting of the construction of outlying park-ride lots and the provision of bus rapid transit (freeway flyer) routes operating over the freeway system. This particular plan recommendation has been implemented to the degree where today there are in the greater Milwaukee area 44 outlying park-ride lots, of which 42 are publicly owned, and which are served by 34 flyer bus routes. The bus routes are used on a daily basis by about 6,000 passengers. The park-ride lots are used on a daily basis by about 3,000 vehicles, substantially reducing not only the traffic loading on the arterial streets of the Region, but also the parking demand in the central business district of Milwaukee.

The Commission worked with Ozaukee and Washington Counties to establish bus transit services connecting those Counties with the Milwaukee County system. This work also established shared-ride taxi service throughout these two counties.

Flood Control

Most of the Commission recommendations in the area of flood control are nonstructural in nature, consisting of proposals to keep remaining undeveloped floodlands free from damage-prone land uses. This recommendation has been widely accepted and carried out throughout the Region. Thus, today nearly all of the identified floodplains in the Region are adequately protected from incompatible land uses. The permanent reservation in open space uses of major floodwater storage areas helps attenuate downstream flood flows and stages. For example, action taken to preserve the Menomonee Falls swamp and the Brookfield marsh ensures that flooding problems on the Fox River in downstream Waukesha are not aggravated. In accordance with plan recommendations, existing flood damage prone urban development has been removed from flood hazard areas along the Menomonee River in the Hart Park area of Wauwatosa; along the Root River between W. Layton Avenue and S. Forest Home Avenue in the City of Greenfield; and along the Fox River in Kenosha County.

• Sewage Treatment Plant Construction and Renewal

The Commission water quality planning efforts over the past 50 years have been focused in large part on providing recommendations for improved systems of wastewater treatment facilities, seeking in



plan recommendations facilitate improved express transit service in the greater Milwaukee area over the regional freeway system, and reduce parking demand in downtown Milwaukee. This photograph identifies the Watertown Plank Road park and ride lot in the City of Wauwatosa. This lot includes direct access for buses to the freeway ramp. The regional plans also recommended the development of a network of park and carpool lots within the seven county Region.

> part to provide improved water quality through the consolidation of sewage treatment plants and the abandonment of small, inefficient, and poorly operated sewage treatment facilities. These construction and abandonment recommendations have been coupled with many recommendations to provide for higher levels of sewage treatment, and for trunk sewer construction leading to the abatement of separate sewer overflows.

> A great deal of progress has been made in implementing these recommendations. Major new areawide sewage treatment facilities have been constructed, including the Walworth County Metropolitan Sewerage District plant, which was built as an outgrowth of a Commission plan recommendation and which has permitted the abandonment of obsolete sewage treatment plants in the Cities of Delavan, and Elkhorn, the Walworth County Institutions, and the Villages of Williams Bay and Darien; the



Dela-Hart Water Pollution Control Commission plant, which has permitted the abandonment of an obsolete sewage treatment plant in the Village of Hartland and the extension of sewer service to previously unsewered areas in the City of Delafield, the Village of Nashotah and the Town of Summit; the plants in the Upper Fox River watershed area, where the City of Brookfield and partner communities have constructed a major new areawide sewage treatment facility and where a series of



One of the major Commission planning efforts over the years has been related to abating water pollution from overloaded municipal sewage treatment plants with attendant bypassing of raw or partially treated sanitary sewage at the plants, and the overflows of raw sanitary and combined sewage at numerous locations in the tributary sewage systems. This involved elimination of small inefficient treatment plants, the construction of major new treatment facilities, the rebuilding and upgrading of certain existing treatment facilities, and construction of trunk and relief sewers. As shown on this map, over the years a total of 35 small, obsolete municipal treatment plants have been abandoned, 11 new treatment facilities have been constructed in accordance with Commission plan recommendations, and 34 additional municipal sewage treatment plants have been rebuilt and upgraded. These efforts have involved not only treatment plant construction and reconstruction, but major sewerage system rehabilitation efforts as well.

intercommunity trunk sewers have been built to enable the abandonment, for example, of the obsolete Pewaukee sewage treatment plant and the extension of sewer service to the Pewaukee Lake area, thus helping to improve lake water quality; the Racine area, where an upgraded sewage treatment facility and trunk sewer system

AREAWIDE SEWAGE TREATMENT PLANT



When SEWRPC began work on a regional water quality management plan, three public sewage treatment plants, the Port Washington, South Milwaukee, and Milwaukee Metropolitan Sewerage District's South Shore plant, provided only a primary level of treatment, 20 public sewage treatment plants were operating over capacity and often passed partially treated sewage to surface waters. The original plan recommended the abandonment of a number of then existing plants: the construction of 10-in later plan amendments increased to 11-new plants largely to serve multiple communities; improvements to the inadequately performing existing plants; and the abandonment of 35 of the once 59 private plants within the Region. All of these recommendations have been carried out. Shown here is one of the new plants constructed in accordance with the regional plan-the Walworth County Metropolitan Sewerage District plant-which serves the Elkhorn Delavan, Delavan Lake, Darien, Como Lake, and Williams Bay communities.

> has enabled the abandonment of obsolete sewage treatment facilities at Sturtevant and North Park: the Kenosha area, where a new sewage treatment facility and trunk sewer system has enabled the abandonment of four obsolete sewage treatment facilities serving the Village of Pleasant Prairie and the Town of Somers; and the Milwaukee metropolitan area, where new sewage treatment facilities and trunk sewer systems have enabled the abandonment of obsolete sewage treatment plants in Muskego, New Berlin, Menomonee Falls, Hales Corners, Greendale, Franklin, Germantown, Thiensville, and the Caddy Vista area of the now Village of Caledonia. All of these projects and many



When SEWRPC was organized there were 536 Milwaukee area flow-relief devices discharging raw sanitary sewage from combined sewers and from overloaded sanitary sewers directly to surface waters. The Commission's plans included recommendations to construct a deep tunnel storage system to significantly abate both combined and separate sanitary sewer overflows. Work on the tunnels began in 1985, the system was brought into service in 1994, and it was completed in 2010. The tunnels—such as the one shown here while under construction—reduced the number of combined sewage overflow events from an average of about 52 times a year to less than two times a year, and reduced the volume of all sewer overflows from about nine billion gallons a year to about 773 million, a 92 percent reduction.

more have significantly contributed to lessening the impact of major point sources of water pollution on the quality of the receiving water system, and have led to the elimination of many thousands of failing onsite sewage disposal systems throughout the Region.

Combined Sewer Overflow Pollution Abatement

One of the major causes of water pollution in the older central cities of Milwaukee, Racine, and Kenosha has been combined sewer overflows during wet weather periods. In the Racine and Kenosha areas, Commission plans have recommended that the original combined sewer systems designed to convey mixed sanitary water and stormwater be totally separated through the construction of parallel systems. These recommendations have been fully implemented. In these two metropolitan areas, then, water pollution from combined sewer overflows has been eliminated. In the Milwaukee area, the Commission recommended in 1971 that the combined sewer system not be separated, but that instead a system of deep tunnel storage and conveyance facilities be constructed to capture, convey, and store large volumes of sewer overflows. Once captured, these overflows would be stored until treatment plant capacity became available during subsequent dry weather periods. This longstanding Commission plan recommendation was reexamined in great depth and detail by the Milwaukee Metropolitan Sewerage District. In 1981, the MMSD and the Wisconsin Department of Natural Resources made a final decision to implement the original Commission recommendations. Construction of the entire system of deep tunnel storage and conveyance facilities was completed by the Milwaukee Metropolitan Sewerage District in the spring of 2010. The system has performed admirably as planned and designed, reducing the number of combined sewer overflow events from an average of 52 per year to less than two, reducing the average annual overflows of combined storm water and sanitary sewage and separate sanitary sewage to the rivers and streams of Milwaukee County and to Lake Michigan by over 90 percent.

Nonpoint Source Pollution Abatement Activities

Beginning with its series of watershed plans first developed in the mid-1960's and extending through the regional water quality management plan adopted in 1979, the Commission has recognized the need to achieve clean water through the abatement of pollution from nonpoint sources, primarily runoff from urban and rural land. Toward this end, the Commission has identified specific pollutant runoff reduction goals for the various watersheds in the Region. The Commission has recommended that detailed, site-specific planning and plan implementation programs be mounted to determine how best to achieve these goals.

Implementation efforts attendant to this difficult pollution abatement effort have, to date, not received the same level of achievement as have the plans relating to point sources of pollution.

Planning Assistance

The Commission has since its inception carried on a community assistance program. Through this program the Commission has attempted to build sound working relationships with the local units and agencies of government in the Region, and through those relationships, foster regional plan implementation. Under this program, the Commission provides functional guidance and advice to county and local governments on a wide variety of matters. The services have included the review of proposed land subdivisions and zoning changes; guidance in the location and alignment of public streets and highways, utilities, and buildings; and to assistance in the operation of dams and other water control facilities. The Commission has provided extensive assistance to local governments in preparing comprehensive zoning ordinances and zoning district maps, special floodplain and shoreland zoning ordinances, and land subdivision control ordinances, and in the preparation of official maps. The Commission has prepared a series of local planning guides dealing with such issues as land subdivision design and regulation, comprehensive and special purpose zoning, official mapping, and the organization of local planning agencies. The Commission has also assisted county and local governments in preparing local comprehensive plans and elements of such plans as land use, transportation, park and open space, lake management, and economic development plans.

The Commission has provided resident planning staff services to local governments on a contract basis, including the historic provision of such services to the Cities of Burlington, Cedarburg, Delavan, Franklin, Hartford, and West Bend; the Villages of Germantown, Menomonee Falls, and Sussex, and the Towns of Somers and Summit. At one time the Commission provided data processing services to municipalities and special purpose districts within the Region, including such services relating to property tax assessment and billing, payroll processing, processing of voter registration and poll lists, utility billing, crime reporting systems, jury selection, and library circulation and inventory systems. Such services were provided at a time when data processing technology was first being introduced to county and local governments, and when the application of the technology required the use of large central processors. Since the Commission possessed a large central processor for its transportation and water management planning efforts, the provision of data processing services was a cost effective means of applying computer data processing at the county and local government levels. Such services, which terminated in 1990 as the use of smaller yet powerful computers proliferated, were provided to more than 75 agencies and communities, including the communities of Kenosha, Racine, Washington, and Waukesha; 13 cities, 26 villages, 35 towns, 20 school districts, one sanitary district, and even the Federal District Court in eastern Wisconsin.

The Commission has also assisted the counties and municipalities within the Region in the selection of consultants to perform planning and engineering services, and in the preparation of technical specifications and in the administration of contracts governing the preparation of control surveys, topographic maps and cadastral maps within the Region, the contracts totaling tens of millions of dollars. The Commission has also provided administrative assistance to communities in preparing job descriptions for positions such as planner, city engineer, and director of public works, and has assisted the communities in interviewing and selecting for retention, applicants for such positions. In a unique assistance effort the Commission in 1980 obtained funding for, and oversaw, the rehabilitation of the East Troy Wisconsin Railroad, a 7.5 mile railway then owned and operated by the Village of East Trov.

The Commission has also extended the planning and engineering data developed under the Regional planning programs, not only to county and municipal units and agencies of government, but also to Federal and State agencies, and to private firms and individuals as well. This extension has included such widely diverse activities as: the preparation of population forecasts for use by local governments, school districts, and private sector market research firms; the preparation, utilizing the Commission traffic simulation model, of estimates of existing and probable future traffic flows for use in the design of proposed State, county, and local arterial street and highway system improvements, large land development projects, and in transit route location and scheduling; the provision of interpretative soils and other natural resource base data to land developers, builders, and prospective building site and home buyers; the provision of detailed flood hazard data to developers and investors; the determination, utilizing the Commission flood flow simulation model, of the effects on flood flows and stages of proposed changes in stream channels and bridges and culvert capacities, and in the location and elements of floodway and floodplain areas for use by Federal, State, County and local regulatory agencies and private developers; and the provision of horizontal and vertical control survey data to public and private engineers and land surveyors working in the Region. This extension of Commission data to public and private decision makers helps to assure that day-to-day development decisions take into account the same information upon which the regional plans are based; and accordingly, helps to assure that such decisions are made in a manner consistent with plan recommendations.

The Commission work attracted considerable national and even international attention among practicing engineers and planners. Delegations from Australia, France, Great Britain, and China visited the Commission offices to discuss its work with Commission staff. The Commission work also received favorable attention in peer reviewed professional journals and in text books; and the Commission received several awards for its work from national professional associations.

CONCLUDING COMMENTS

Careful review of the regional planning program over its first 50 years of existence indicates that regional planning has indeed been an effective force in creating a more attractive, healthful, safer, and efficient regional settlement pattern. Under the Commission work program, an extremely useful planning and engineering data bank has been established and maintained which is being well used by both the public and private sectors. A framework of areawide development plans designed to address the most pressing areawide problems in the Region has been created and widely adopted by key Federal,



urban point and nonpoint sources of water pollution. Other foreign delegations were particularly interested in the Commission's land use and environmental corridor planning, transportation planning, watershed planning, topographic and cadastral mapping programs as foundations for the creation of automated land information systems. Commission staff often participated in national and international professional conferences on the use of soil data, land use and transportation planning, and environmental corridor delineation and preservation, and the Commission work was frequently cited in professional journals and in textbooks.

State, and local implementing agencies. The problems addressed have been as controversial as they have been complex, including freeway, rapid transit, and airport system development; sewage treatment plant location and capacity; sludge and solid waste management; combined sewer overflow abatement; flood control; and containment of urban sprawl. The planning efforts have often involved development projects regionally needed or desired, but objectionable locally. A center for coordinating planning and plan implementation activities within the Region has been established, and through that center substantial progress made in implementing some of the most important of the recommendations contained in the adopted regional plans. Modest success has been achieved in influencing three major elements of regional development: the location and capacity of major transportation routes and facilities; the location and extent of major park and open space reservations, including the preservation of the environmental corridors of the Region in essentially natural open uses and the preservation of the prime agricultural lands in agricultural use; and the location, service areas, and capacities of sanitary sewerage and drainage and flood control facilities, which strongly influence the type and location of urban land uses in the Region. Urban development has been encouraged to occur in areas of the Region that are covered by soils suitable for urban use; that are not subject to special hazards, such as flooding and lakeshore erosion; and that can be economically provided with essential public services, including centralized sanitary sewerage, public water supply, and mass transit. Importantly, major progress has been made in abating surface water pollution-primarily, to date, from point sources-and in restoring the environmental integrity of the lakes and streams of the Region. The best remaining woodlands, wetlands, and wildlife habitat areas of the Region have been protected from deterioration and destruction and a beginning made in the protection of the important groundwater recharge areas of the Region.

The Commission has taken an intergovernmental approach to regional planning which seeks to strengthen the traditional forms of local government within the Region, enhancing the ability of those governments to deal with the serious and costly problems created by areawide urbanization. This intergovernmental approach has certain inherent strengths. Being intergovernmental and, therefore, basically voluntary and cooperative in nature, the Commission has placed great emphasis in its work upon the promotion and attainment of a consensus among the various Federal, state, and local units and agencies of government and the private interests concerned with areawide problems and their resolution. This approach depends primarily upon the introduction of relevant information into the complex processes whereby community development decisions are reached in an area which consists of many communities holding diverse, and at times conflicting, goals and objectives. This voluntary, cooperative approach has required the Commission to stress the active participation of all of the public and private interests concerned in the planning effort, a participation which has helped not only to promote a higher level of technical quality in the adopted plans themselves, but also to promote plan implementation.

This intergovernmental approach has also led the Commission to attach great importance to the validity, accuracy, and relevance of the data collected; to the depth and detail of the plans prepared; and to the full exploration and careful evaluation of alternatives to the recommended plans. It has also led the Commission to attach great importance to the use of the legally adopted comprehensive plan as the primary focal point for the areawide coordination of land use development; for the coordination of such development with supporting transportation and utility systems; for the coordination of the development of each of these systems with the others; and for the abatement of serious environmental problems. The use of the comprehensive plan has, moreover, provided an excellent focal point for meaningful citizen participation in the planning process.

The Commission views its work as a continuing planning process, providing public and private agencies throughout the Region with the data and materials necessary to make sound development decisions. The Commission hopes that the seven constituent counties and the 146 constituent municipalities, as well as the concerned state and Federal agencies, will in the years ahead continue to provide the support needed for the Commission to continue its work and to bring its planning efforts to full fruition in the service of the present and future residents of the Region. The real test of regional planning ultimately lies not in the extent to which plan recommendations are made, or even to the extent to which such recommendations are implemented, but in the extent to which the implemented measures actually resolve the areawide problems requiring resolution. The measurements for this real test have been made over the last 50 years as reflected in real conditions attendant to such factors as traffic movement and congestion, ambient air and water quality, and the use of park and outdoor recreation facilities. The Commission is confident that its constituent counties and municipalities and the concerned state and Federal agencies will continue to assist in making those measurements, in adapting to change as may be necessary, and in meeting whatever new developmental and environmental challenges may lie ahead.



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