Thirteenth annual report. September, 1974

W-Regional-S.E.

1973 ANNUAL REPORT

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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

SERVING THE COUNTIES OF
KENOSHA • MILWAUKEE • OZAUKEE • RACINE • WALWORTH • WASHINGTON • WAUKESHA

COMMISSION MEMBERS

KENOSHA COUNTY
Donald L. Klapper
Donald E. Mayew
Francis J. Pitts

MILWAUKEE COUNTY
Richard W. Cutler,
Secretary
Emil M. Stanislawski
Norman C. Storck, P.E.

OZAUKEE COUNTY
Thomas H. Buestrin
John P. Dries
James F. Egan

RACINE COUNTY
George C. Berteau,
Chairman
John Margis, Jr.
Leonard C. Rauen

WALWORTH COUNTY
Anthony F. Balestrieri
John B. Christians
Harold H. Kolb

WASHINGTON COUNTY
Lawrence W. Hillman,
Vice-Chairman
Paul F. Quick
Joseph A. Schmitz,
Treasurer

WAUKESHA COUNTY
Charles J. Davis
Lyle L. Link
Theodore F. Matt

COMMISSION STAFF

Kurt W. Bauer, P.E. . . . . Executive Director

Harlan E. Clinkenbeard . . . . . Assistant Director

Keith W. Graham, P.E. . . . . Assistant Director

John A. Boylan . . . . . Administrative Officer

John W. Ernst . . . . . Data Processing Manager

Philip C. Evenson . . . . . Chief Community Assistance Planner

Mark P. Green, P.E. . . . . Chief Transportation Planner

Michael J. Keidel . . . . . Chief of Planning Research

Leland H. Kreblin . . . . . Chief Planning Illustrator

William D. McElwee, P.E. . . . . Chief Environmental Planner

Bruce P. Rubin . . . . . Chief Land Use Planner

Sheldon W. Sullivan . . . . . Chief of Data Collection

THIRTEENTH ANNUAL REPORT

Southeastern Wisconsin Regional Planning Commission

P.O. Box 769
Old Courthouse
916 N. East Avenue
Waukesha, Wisconsin 53186

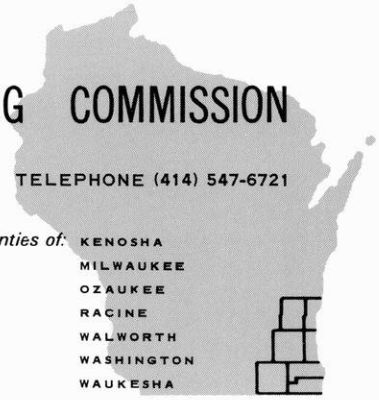
The preparation of this publication was financed in part through a joint planning grant from the Wisconsin Department of Transportation; the Wisconsin Department of Local Affairs and Development; the U. S. Department of Transportation, Federal Highway Administration and Urban Mass Transportation Administration; and the U. S. Department of Housing and Urban Development.

September 1974

Inside Region $1.00
Outside Region $2.00

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

916 NO. EAST AVENUE • WAUKESHA, WISCONSIN 53186 • TELEPHONE (414) 547-6721



Serving the Counties of:
KENOSHA
MILWAUKEE
OZAUKEE
RACINE
WALWORTH
WASHINGTON
WAUKESHA

July 29, 1974

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

In accordance with the requirements of Section 66.945(8)(b) of the Wisconsin Statutes, the Commission each calendar year prepares, publishes, and certifies an Annual Report to the State Legislature of Wisconsin and to the legislative bodies of the constituent county and local units of government within the Region. This, the 13th Annual Report of the Commission, summarizes the accomplishments of the Commission for the calendar year 1973 and contains a statement of the financial position of the Commission as certified by an independent auditor.

The Commission Annual Report is intended to serve a number of functions in addition to meeting the specific legislative requirement noted above. As a publication documenting activities conducted during the year under the continuing regional land use-transportation study, a study carried out pursuant to the areawide planning requirements of the 1962 Federal Aid Highway Act and the 1964 Federal Urban Mass Transportation Act, it serves as an annual report to the Federal and State Departments of Transportation. In addition, the Annual Report is intended to meet certain requirements of the U. S. Department of Housing and Urban Development, including an annual report on progress in planning for resolution of the housing problems of the Region and the preparation of an overall work program design, together with a specific work program for the succeeding calendar year. Most importantly, however, the Commission annual report is intended to provide county and local public officials and interested citizens with a comprehensive overview of current and proposed Commission activities and to thereby provide a focal point for the promotion of regional plan preparation and implementation. Consequently, the Commission Annual Report is lengthy in comparison to annual reports of other planning agencies in the state and nation, being intended to serve as a permanent working reference concerning the activities of the Commission, rather than as a document to be perused and discarded.

The reader's attention is particularly directed to the summary section of this Annual Report entitled "Regional Planning Overview—1973" included in the beginning of the report. This summary includes all of the major actions taken by the Commission and by implementing agencies during 1973 with respect to each of the major functional areas of planning to which the Commission has addressed itself, namely land use and transportation planning, housing planning, community facility planning, environmental planning, and community assistance planning. One new regional plan element—the jurisdictional highway system plan for Walworth County—was adopted in 1973. Plan elements completed by the end of 1973 and pending adoption included the important regional sanitary sewerage system plan, the regional library facilities and services plan, jurisdictional highway system plans for Ozaukee and Waukesha Counties, and the comprehensive plan for the Racine Urban Planning District. The Commission is indeed pleased to note that one additional new major regional park site was publicly acquired during 1973, the important Monches site in the Town of Merton, Waukesha County. This site was acquired by the Waukesha County Park and Planning Commission. This acquisition leaves only two of 12 recommended regional park sites yet to be publicly acquired and committed for all time to public outdoor recreation and open space uses.

The Commission believes that remarkable progress has been made in gathering and maintaining in a current form the planning and engineering data required to make sound areawide development decisions within the Region, in cooperatively preparing and adopting key elements of the comprehensive plan for the development of the Region, and in working toward the implementation of those plan elements to create a better environment for working and living within the Region. The progress achieved to date reflects the strong commitment in southeastern Wisconsin toward a voluntary system of cooperative, areawide, intergovernmental planning.

Respectfully submitted,

George C. Berteau
Chairman

TABLE OF CONTENTS

	Page
REGIONAL PLANNING OVERVIEW—1973	1
Land Use and Transportation Planning	1
Housing Planning	1
Community Facility Planning	2
Environmental Planning	2
Community Assistance Planning	3
Prospective Work Program	3
INTRODUCTION	5
About the Commission	5
SEWRPC Receives NSPE Award	6
LAND USE AND TRANSPORTATION PLANNING	7
Continuing Regional Land Use-Transportation Study	7
Regional Airport System Planning Program	62
HOUSING PLANNING	65
Regional Housing Study	65
Continuing Housing Outreach Program	77
COMMUNITY FACILITY PLANNING	81
Regional Library Planning Program	81
Regional Park, Outdoor Recreation, and Related Open Space Planning Program	81
ENVIRONMENTAL PLANNING	83
Regional Sanitary Sewerage System Planning Program	83
Root River Watershed Planning Program	96
Fox River Watershed Planning Program	99
Milwaukee River Watershed Planning Program	101
Menomonee River Watershed Planning Program	103
Water Quality Monitoring Program	104
Stream Gaging Program	106
Floodlands in the Region	107
Sandstone Aquifer Simulation Model	112
COMMUNITY ASSISTANCE PLANNING	113
Educational, Advisory, and Review Services	113
Project and Resident Planning Services	114
Data Processing Services	114
School Census Services	115
District Planning	115
OTHER ACTIVITIES	117
Clearinghouse Review Activities	117
Public Information Activities	134
Commission and Advisory Committee Meetings	138
Staff Technical Meetings	138
Staff Organization	138
Financing	140
PROSPECTIVE COMMISSION WORK PROGRAMS—A FORWARD GLANCE	143
Commission Policy on Additional Regional Plan Elements	143
Progress During 1973 in Establishing Additional Regional Planning Programs	145
Commission Work Programs: 1974-1978	146
Annual Work Program: 1974	150

LIST OF APPENDICES

Appendix		Page
A	Southeastern Wisconsin Regional Planning Commission Commissioners and Committees—1973	157
B	Commission Advisory Committees	158
C	Southeastern Wisconsin Regional Planning Commission Staff—1973	167
D	Southeastern Wisconsin Regional Planning Commission Report of Audit Examination for the Year Ended December 31, 1973	169

LIST OF TABLES

Table		Page
1	Plan Elements Comprising the Adopted Regional Plan for Southeastern Wisconsin: December 31, 1973	10
2	Status of Large-Scale Topographic Mapping and Relocation, Monumentation, and Coordination of U. S. Public Land Survey Corners in the Region by County: December 31, 1973	12
3	Population of the Region by County: April 1970 and February 1973	14
4	Comparison of 1973 Estimated and Forecast Population Levels for the Region by County	15
5	Average Labor Force, Work Force, Employment, and Unemployment in the Region: 1960-1973	20
6	Distribution of Employment in the Region by County: 1960-1973	21
7	Levels of Employment in the Region by Selected Major Industry Group: 1970 and 1973	21
8	Comparison of 1973 Estimated and Forecast Employment Levels for the Region by County	22
9	Public and Nonpublic School Enrollment in the Region by County: 1970 to 1973	23
10	Residential Subdivision Platting Activity in the Region: 1973	24
11	Selected Characteristics of Modified Rapid Transit (Freeway Flyer) Routes in the Region: 1973	31
12	Automobile Availability and Persons Per Auto for the Region by County: 1963, 1972, and 1973	35
13	Truck Availability for the Region by County: 1963, 1972, and 1973	35
14	Comparison Between Automobile and Truck Availability Estimates and Forecasts for the Region by County: 1973	36
15	Implementation Status of Major Public Outdoor Recreation Areas Recommended in the Adopted Regional Land Use Plan: 1973	40
16	Implementation Status of Major Retail and Service Centers Recommended in the Adopted Regional Land Use Plan: 1973	42
17	Implementation Status of Major Industrial Centers Recommended in the Adopted Regional Land Use Plan: 1973	43
18	Status of Planned Freeway Facilities in the Region: December 31, 1973	45
19	Status of All Existing, Programmed, and Planned Freeways in the Region: December 31, 1973	46
20	Status of Recommended State Trunk and County Trunk Arterial Highway System Improvements in Milwaukee County: 1969-1980	51
21	Priority Improvement Program for Freeways in the Region: 1974-1990	59
22	Short-Range Priority Improvement Program for Nonfreeway State Trunk Highways and County Trunk Highways: 1974-1980	60
23	Regional Housing Objectives, Principles, and Standards	65
24	Housing Need Status by Tenure for Households in the Region: 1970	75
25	Housing Need for Elderly and Black Households in the Region: 1970	77
26	Subsidized Low and Moderate Income Housing Units in the Region by Short-Range Housing Planning Areas	80
27	Estimated Sanitary Sewerage Expenditures in the Region by Public Sanitary Sewerage System: 1970	86
28	Wisconsin Department of Natural Resources Water Use Objectives and Supporting Water Quality Standards for Surface Waters: 1973	90
29	Comparison of Sewage Flow and Strength Values Found in the Region with Design Criteria Selected for Use in the Regional Sanitary Sewerage System Planning Program	92
30	Parkway Land Acquisition Progress in the Root River Watershed in Acres: 1973	98
31	Park and Open Space Federal Grant Applications Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	118
32	ORAP Pollution Prevention and Abatement and Local Park Facility State Grant Applications Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	119
33	Applications for Federal and State Grants-in-Aid for the Acquisition and Development of Park and Open Space Land in the Region: 1964-1973	120
34	Sewerage and Water Supply Facility Federal Grant/Loan Applications Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	121
35	Historic Trend in Applications for Federal and State Grants-in-Aid for Sewerage and Water Supply Facilities in the Region: 1964-1973	122
36	Solid Waste Planning Federal Grant Application Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	122
37	Transportation Facility Federal Grant Applications Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	123
38	Applications for Federal and State Grants-in-Aid for Transportation Facilities in the Region: 1967-1973	125
39	Community Facility Federal Grant Applications Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	126

Table		Page
40	Health, Social Services, and Comprehensive Planning Federal Grant Applications Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	126
41	Land Development and Housing Program Grant/Loan/Mortgage Insurance Applications Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	129
42	Conservation Program Federal Grant Applications Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	130
43	Law Enforcement Assistance Program Federal Grant Applications Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	130
44	Environmental Impact Statements Reviewed During 1973 by the Southeastern Wisconsin Regional Planning Commission	134
45	Publications and Related Materials of the Southeastern Wisconsin Regional Planning Commission: 1962-1973	135
46	Proposed Regional Planning Work Program for Southeastern Wisconsin: 1974-1978	147
47	Anticipated Funding Allocations for Proposed Major Regional Planning Programs in the Region by Governmental Level and Agency: 1974-1978	151
48	Actual and Anticipated Annual Revenue Allocations for Regional Planning Programs in the Region by Governmental Level and Agency: 1961-1978	152

LIST OF FIGURES

Figure		Page
1	Population Forecast and Current Population Estimate for the Region: 1970-2000	15
2	Population Forecast and Current Population Estimate for Kenosha County: 1970-2000	16
3	Population Forecast and Current Population Estimate for Milwaukee County: 1970-2000	16
4	Population Forecast and Current Population Estimate for Ozaukee County: 1970-2000	16
5	Population Forecast and Current Population Estimate for Racine County: 1970-2000	16
6	Population Forecast and Current Population Estimate for Walworth County: 1970-2000	17
7	Population Forecast and Current Population Estimate for Washington County: 1970-2000	17
8	Population Forecast and Current Population Estimate for Waukesha County: 1970-2000	17
9	Employment Forecast and Current Employment Estimate for the Region: 1970-2000	22
10	Revenue Passengers Carried on Urban Mass Transit and on Modified Rapid Transit in the Region: 1950-1973	27
11	Historical Trend and Alternative Forecasts of Urban Mass Transit Use in the Region: 1950-1990	32
12	Revenue Passengers Carried on Modified Rapid Transit in the Region by Route: 1964-1973	33
13	Automobile Availability Forecast and Current Estimate for the Region: 1960-1990	35
14	Forecast and Current Estimate of Persons Per Automobile Available for the Region: 1950-1990	36
15	Forecast and Current Estimate of Truck Availability for the Region: 1960-1990	36
16	Relationship Between Percent of Arterial Vehicle Miles of Travel and Cumulative Arterial Mileage—Recommended Ozaukee County Jurisdictional Highway System: 1990	57
17	Housing Need Status by Selected Household Size in the Region: 1970	76
18	Housing Need Status by Selected Household Income Range in the Region: 1970	76
19	Relationship Between Sanitary Sewerage Operation and Maintenance Expenditures and Sewerage System Size in the Region: 1970	88
20	Floodland Components Under Natural and Regulatory Conditions	109
21	Southeastern Wisconsin Regional Planning Commission Existing Staff and Committee Structure	139
22	Southeastern Wisconsin Regional Planning Commission 1973 Receipts and Expenditures	141
23	Timing of Major Work Program Elements—Southeastern Wisconsin Regional Planning Commission: 1961-1978	148
24	Actual and Anticipated Annual Revenue Allocations for Major Commission Planning Programs by Governmental Level: 1961-1978	154

LIST OF MAPS

Map		Page
1	Communities in the Region Affected by the Federal Aid Highway Act of 1962	9
2	Large-Scale Topographic Mapping and Control Survey Coverage in the Region: December 1973	13
3	Street Address Coding Guide Completion Status: 1973	18
4	Residential Platting Activity in the Region: 1973	25
5	Urban and Suburban Mass Transit Routes in the Milwaukee Urbanized Area: 1973	29
6	Urban and Suburban Mass Transit Routes in the Kenosha and Racine Urbanized Areas: 1973	30
7	Rail and Intercity Bus Passenger Service in the Region: 1973	34
8	Adopted Land Use Plan for the Region: 1990	38
9	Major Public Outdoor Recreation, Retail and Service, and Industrial Centers in the Region: 1990	39
10	Regional Freeway Plan Implementation Progress: 1973	44
11	Milwaukee Area Transit Plan: 1990	47
12	Adopted Jurisdictional Highway System Plan for Milwaukee County: 1990	48
13	Changes in the Jurisdictional Highway Systems in Milwaukee County: 1967-1973	50
14	Adopted Jurisdictional Highway System Plan for Walworth County: 1990	53
15	Proposed Jurisdictional Classification of the Arterial Street and Highway System in Ozaukee County: 1990	54
16	Recommended Scenic Drive System in Ozaukee County: 1990	55
17	Status of the Short-Range Action Housing Program Recommendations in the Region: December 1973	78
18	Existing Sanitary Sewer Service Areas and Sewage Treatment Facilities in the Region: 1970	84
19	Recommended Water Use Objectives for the Region: 1990	89
20	Subregional Areas Designated for Sanitary Sewerage System Planning Purposes in the Region	93
21	Recommended Regional Sanitary Sewerage System Plan: 1990	95
22	Location of Southeastern Wisconsin Regional Planning Commission Stream and Lake Sampling Stations in the Region: 1973	105
23	Location of U. S. Geological Survey Stream Gaging Stations in the Region: 1973	108
24	Floodlands in the Region	111

REGIONAL PLANNING OVERVIEW 1973

The Commission's 1973 work program was again extremely varied, including major work efforts under each of the three principal regional planning functions of inventory, plan design, and the promotion of plan implementation activities by the various units and agencies of government and private interests concerned. The following is a summary of the major actions taken by the Commission and by implementing agencies during the year with respect to each of the major functional areas to which the Commission has addressed itself, namely land use and transportation planning, housing planning, community facility planning, environmental planning, and community assistance planning.

LAND USE AND TRANSPORTATION PLANNING

(See pages 7 to 63)

- Surveillance activities conducted under the continuing regional land use-transportation study indicate that population growth in the Region is continuing to slow to the point where fertility has already reached replacement levels. School enrollment figures for the Region confirm this trend. Indicators of development and facility needs such as automobile and truck availability and vehicle miles of travel, however, continue to meet or exceed forecast levels which were prepared under the initial land use-transportation study for a 1990 population level substantially greater than that now anticipated.

- Transit use in the Region continued to decline. The decline, about 6 percent overall, however, was the smallest in recent years. All of the decline was incurred by the Region's largest system, the Milwaukee and Suburban Transport Corporation. Transit ridership increased modestly in Kenosha, Racine, and Waukesha.

- Two new public transit park-and-ride stations were established, one at the Goerke's Corner interchange of the East-West Freeway and one at the Silver Spring interchange on the North-South Freeway. These two stations represent the first public investment of its kind in the Region, and represent the forerunner of 34 such stations proposed for the Milwaukee urbanized area in the adopted Milwaukee Area Transit Plan.

- The Milwaukee and Ozaukee County Boards of Supervisors formally adopted the Milwaukee Area Transit Plan. The Milwaukee County Board, however, disappointingly deleted the important transitway construction schedule from the plan, calling instead for further study of alternatives to the transitway proposal in the Milwaukee East-West travel corridor.

- The Commission adopted the Walworth County jurisdictional highway system plan. Like the previously adopted Milwaukee County jurisdictional highway system plan, the Walworth County plan refines the previously adopted transportation plan and contains specific recommendations for the improvement of state, county, and local arterial highways. Jurisdictional highway system plans were also completed for Ozaukee and Waukesha Counties. The plan previously completed for Ozaukee County was formally adopted by the County Board in December.

- Alternative airport system plans were developed for the Region under the regional airport system planning program. Twenty-one alternative plans were considered and analyzed, with five specific alternatives selected for detailed evaluation and presentation at a public hearing.

- The Waukesha County Park and Planning Commission acted to acquire portions of the important Monches regional park site, one of the eight best remaining park sites in the Region identified by the Commission in a 1964 inventory. Acquisition of this important site means that 10 of the 12 recommended regional park sites are now wholly or partially in public ownership and under various stages of development.

- A special land use study was completed identifying offstreet parking lands within the Region, such lands being defined as those with 10 or more parking spaces. This study revealed that about 6,460 acres were in offstreet parking use in 1970, representing about 0.4 percent of the total area and nearly 2 percent of the developed area of the Region.

- Land subdivision data collected and analyzed by the Commission revealed that 99 new residential subdivision plats were recorded in the Region during 1973. These plats encompassed 2,670 acres of land, averaging about 27 acres each. Nearly one-half of all this platting occurred in Waukesha County. A total of 37 of the 99 plats, representing 1,010 new residential building sites, were designed to be served by septic tank sewage disposal systems, contrary to regional land use plan recommendations.

HOUSING PLANNING

(See pages 65 to 80)

- The Commission established a series of specific housing development objectives and supporting principles and standards. These objectives, prin-

ciples, and standards form the basis for the establishment of true housing need, and will contribute toward the formulation of regional housing strategies directed at the public and private sectors of the economy.

- The regional housing study progressed to the point where estimates of true housing need were established. About 18 percent of the total households in the Region, or about 96,000 households, were found to be in housing need. Of this total, about 70,000 were in economic need only, that is, were spending more than 30 percent of their adjusted gross household income for shelter. The remaining 26,000 households found to be in housing need were households living in housing units that did not meet standards for decent, safe, and sanitary housing.

- More than 5,000 new federally subsidized housing units were built in the Region during the 1972 and 1973 construction seasons, far exceeding the 2,000 units allocated to the Region for this period by the short-range action housing program. Construction of such units surpassed the Commission's allocation in 12 of the 25 regional planning areas, with the remaining planning areas having either no subsidized housing construction or having less construction than allocated.

COMMUNITY FACILITY PLANNING
(See pages 81-82)

- The Commission completed a recommended regional library facilities and services plan, which recommends the formulation of intergovernmental, areawide library systems through a federation procedure provided for under recent Wisconsin legislation. The plan also recommends that full policy control of each library in the Region be retained by local library boards, with areawide library service being provided through the cooperative, voluntary establishment of a seven-county regional library federation.

- A major new regional planning program was begun which will result in the preparation of a regional park, outdoor recreation, and related open space plan. Data collection activities begun during the year centered primarily on field work necessary to inventory the existing outdoor recreation facilities in the Region.

ENVIRONMENTAL PLANNING
(See pages 83 to 112)

- The Commission completed a regional sanitary sewerage system plan. The plan includes definitive recommendations for the establishment of sanitary sewer service areas, the location of sewage treatment plants, the configuration and sizing of major trunk sewers, treatment levels and performance standards at sewage treatment plants, and the abatement of separate and combined sewer overflows. The plan also includes a series of suggested implementation schedules. Full implementation of the plan recommendations would assure that the established federal and state water use objectives and supporting water quality standards would be met. A series of public informational meetings and a formal public hearing on the plan were held late in the year.

- At the request of the City of Greenfield Common Council, the Commission undertook a reevaluation of the adopted Root River watershed plan as it relates to flood problems along the North Branch of the Root River in Greenfield. The reevaluation confirmed the initial Root River watershed plan recommendation that removal of 18 structures and floodproofing of 19 other structures was sound, and that an additional alternative, the construction of earthen dikes, would also be technically feasible and economical. Following a public hearing and a survey of residents in the area, the city reaffirmed the original plan recommendations for structure removal and floodproofing and requested the Milwaukee County Park Commission to take steps to implement the plan recommendation. In this respect, it should be noted that despite recommendations to the contrary contained in the Commission's comprehensive plan for the Root River watershed adopted in 1966, three additional homes were permitted to be constructed in the floodplain of the Root River in Greenfield. This action served to aggravate the flood problem and the extent of structure removal required.

- Agreement was reached in the Upper Fox River watershed among the local, state, and federal agencies of government concerned to provide for two major areawide sewage treatment plants, one each at Brookfield and Waukesha. This agreement led to Commission amendment of the Fox River watershed plan, which had initially included the recommendation for a single sewage treatment facility to serve the Upper Fox River watershed area.

- A major step toward implementation of key recommendations of the Milwaukee River watershed plan to abate surface water pollution from combined sewer overflows in the Milwaukee area was taken. This step involved completion of a prospectus for the preliminary engineering study necessary to detail, refine, and implement the watershed plan recommendations in this respect.

- Four new continuous stream flow gages were established in the Region with the financial assistance of several county boards. The gages were established on the Mukwonago River in Waukesha County, on the White River in Racine County, on the Milwaukee River in Washington County, and on Cedar Creek in Ozaukee County.

- Major inventories were undertaken under the Menomonee River watershed study relating to water quality and to stream channel capacity, including the collection of data on channel and floodland cross sections and on the location and dimensions of all hydraulic control structures including dams, bridges, and culverts in the watershed.

- The Commission agreed to undertake a comprehensive study of the Kinnickinnic River watershed at the request of the Common Council of the City of Milwaukee, and toward that end to establish a Kinnickinnic River watershed committee.

COMMUNITY ASSISTANCE PLANNING
(See pages 113-115)

- Floodland zoning regulations and floodland zoning maps were prepared for the City of Cedarburg and the Village of Saukville in Ozaukee County, the City of West Bend and Village of Jackson, Washington County; the Village of Brown Deer, Milwaukee County; the Villages of Waterford and Rochester, Racine County; the Village of Silver Lake, Kenosha County; and the Village of East Troy, Walworth County.

- A new Walworth County zoning ordinance was prepared and designed specifically to implement the Commission's regional land use and Fox River watershed plans. Particular emphasis was placed upon the creation of zoning districts to provide for the preservation of primary environmental corridors and prime agricultural lands.

- Detailed neighborhood unit development plans were completed for the Decorah Hills neighborhood in the City of West Bend and the Whitnall Park Southeast neighborhood in the City of Franklin.

- A series of public informational meetings and public hearings were held on comprehensive planning for the Racine Urban Planning District.

PROSPECTIVE WORK PROGRAM
(See pages 143-154)

- The Commission received a formal request from the City of Milwaukee to undertake a comprehensive study of the Kinnickinnic River watershed. In accordance with established Commission policy, the Commission authorized the establishment of a Kinnickinnic River Watershed Committee to assist in the preparation of a prospectus for the requested study.

- A formal request from the City of Milwaukee to conduct a comprehensive study of the Milwaukee Harbor estuary and the outer harbor area was favorably received by the Commission. The Commission directed, however, that creation of the necessary advisory committee and preparation of the required prospectus be postponed at least until the proposed Kinnickinnic River watershed study is funded and mounted.

- The Commission received formal requests from the Kenosha, Ozaukee, and Racine County Boards to undertake a comprehensive study of the Lake Michigan shoreline erosion problems. In response, the Commission convened an interagency meeting among appropriate federal, state, and local public officials to assist in determining an appropriate course of action. It was the consensus of those attending this meeting that a long-term solution to the erosion problems could best be achieved through a federal study conducted by the U. S. Army Corps of Engineers. The Commission determined to work with the counties concerned and the Wisconsin Congressional delegation toward that end.

- During the five-year period 1974-1978, the Commission proposes to conduct nine major work programs designed to prepare additional regional plan elements. Six of the nine programs—regional library planning program; regional airport system planning program; regional sanitary sewerage system planning program; regional park, outdoor recreation, and open space planning program; regional housing study; and Menomonee River watershed study—were either nearing completion or substantially underway in 1973. The remaining three programs—regional air quality maintenance planning program, Kinnickinnic River watershed study, and regional water supply system planning program—are to be mounted and completed by 1978. In addition, the Commission proposes to conduct the following three major continuing work programs designed to maintain and reappraise existing plan elements: continuing regional land use-transportation study, continuing housing study, and continuing environmental engineering planning program. Finally, the Commission also proposes to conduct or participate in the following five major work programs which are not designed to prepare or reappraise plan elements, but which will materially contribute to sound community development and environmental protection in southeastern Wisconsin: preparation of additional local planning guides relating to storm water management, costs and revenues associated with residential development, environmental corridor preservation, and agricultural land preservation; sandstone aquifer simulation modeling program; International Joint Commission water pollution research study; and Washington County sediment and erosion control programs.

INTRODUCTION

ABOUT THE COMMISSION

The Southeastern Wisconsin Regional Planning Commission was established in 1960 under provisions of Section 66.945 of the Wisconsin Statutes and upon the unanimous petition of the seven county boards concerned. The Commission serves as a forum for the discussion of intergovernmental problems, and represents an attempt to provide the basic information and planning services necessary to solve areawide problems on a voluntary, cooperative basis. It attempts to identify the general pattern of future development in the Region, and to plan the systems needed to serve that development.

Area Served

The Region includes the seven southeastern Wisconsin counties of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha, which comprise the urban and industrial heart of Wisconsin. These seven counties have an area of 2,689 square miles, or about 5 percent of the total area of the state; and contain nearly 1.8 million persons—or about 40 percent of the state population—organized into 154 general-purpose local units of government and 106 public school districts. A new unit of government was added to the Region in 1973 with the incorporation of the Village of Newburg, located in Washington and Ozaukee Counties. All but two of the general-purpose local units of government—the Village of West Milwaukee and the Town of Vernon—are participating in the work of the Commission. The participating units represent 98.7 percent of the area of the Region and 99.6 percent of the population.

The seven counties have an estimated employment of 770,000, or about 40 percent of the state's total employment, and about $18 billion of equalized valuation, or about 40 percent of the state's tangible wealth as measured by such valuation.

There are 12 watersheds in the Region, which is traversed by the subcontinental divide separating the Great Lakes—St. Lawrence River drainage system from the Mississippi River drainage system.

Organization

The authority of the Commission rests with its 21 members—three from each county—who serve without pay. One Commissioner from each county is appointed by the county board, and two from each county are appointed by the Governor, with one such appointee being from a list certified by the county board to the Governor. The full Commission meets four times a year, and is responsible for establishing overall policy. The Executive, Administrative, and Planning and Research Committees meet once a month to conduct the day to day work of the agency, and the Intergovernmental and Public Relations Committee meets on call to consider important policy matters.

The Commission is assisted in its work by a full-time staff and by 22 technical, citizen, and intergovernmental coordinating committees. The advisory committees include both public officials and interested private citizens with knowledge in Commission work areas, who provide major input to both the formulation and execution of the Commission's work programs. The advisory committee membership is set forth in Appendix B.

Funding for the Commission programs is provided by county contributions apportioned among the member counties on the basis of equalized assessed valuation, heavily supplemented by local, state, and federal funds for specific work projects.

Functions

As conceived by the Commission, regional planning has three principal functions:

1. Inventory—the collection, analysis, and dissemination of basic planning and engineering data on a uniform, areawide basis so that, in light of such data, the various levels and agencies of government and private investors operating within the Region can better make decisions concerning areawide and local community development.

2. Plan Design—the preparation of a framework of long-range areawide plans for the physical development of the Region. To this end the Commission is charged by law with the function and duty of "making and adopting a master plan for the physical development of the Region." The permissible scope and content of this plan, as outlined in the legislation, extend to all phases of regional development, emphasizing, however, the preparation of alternative spatial designs for land use and supporting transportation and utility facilities.

3. Plan Implementation—the promotion of regional plan implementation through provision of a center for the coordination of the day-to-day planning and plan implementation activities by the various levels and agencies of government in the Region.

Policies

The Commission has adopted certain formal policy statements in order to provide a framework within which its functions can be properly carried out. Among these are a work program initiation procedure whereby no major work programs requiring local funding are begun until

a detailed prospectus is prepared and county board approval is obtained; a community assistance policy whereby technical assistance on local planning problems is provided to local units and agencies of government upon request; and a federal grant and loan application review policy whereby all such applications are reviewed on the basis of their relationship to adopted regional plan elements. In addition, the Commission has consistently followed a policy of attempting to actively involve local units of government in the regional planning process, largely through an extensive advisory committee structure, interagency staff assignments, public informational meetings and public hearings, and its community assistance program. The Commission has also as a matter of policy operated within the legislative framework in which it was created and has not sought any changes in that framework. Finally, the Commission has never as a matter of policy requested funds from the constituent counties in excess of 0.003 percent of the equalized assessed valuation, although State Statutes permit—upon the approval of the member counties—local tax levies for regional planning purposes in excess of this amount.

Concepts Underlying Regional Planning

In recent years regional planning has become increasingly accepted as a necessary governmental function in most of the nation's large urban areas. This has come about through a growing awareness that certain pressing problems of physical and economic development and of environmental deterioration transcend the geographic limits, as well as the fiscal capabilities, of local units of government, and require for sound resolution the cooperative action of all units and agencies of government concerned.

The term region as it is used in this context applies to an area larger than a county but smaller than a state, united by economic interests, geography, and common problems brought about by rapid urbanization and changing regional settlement patterns. A regional basis is unquestionably necessary to provide a meaningful technical approach to the sound development of such areawide systems of public works as highway and transit, sewerage and water supply, and park and related outdoor recreation facilities. A regional basis is also necessary to a sound approach to the resolution of such areawide problems as flooding, air and water pollution, deterioration or destruction of the natural resource base, and rapidly changing land use.

State, community, and private interests are all vitally affected by such areawide problems and by proposed solutions to these problems. It appears neither desirable nor possible for any one level or agency of government to impose the decisions required to solve these areawide problems. Such decisions can better come from a consensus among the various levels and agencies of government and private interests concerned, based on a common interest in the welfare of the entire Region. Regional planning is absolutely essential to promote such a consensus and the necessary cooperation between urban and rural, local and state, and private and public interests.

The Commission does not regard regional planning as a substitute for federal, state, and local public planning or for private planning, but rather as a vital supplement to such planning. Because the work of the Commission is strictly advisory, the regional planning program has emphasized the promotion of close cooperation between the various governmental agencies concerned with land use development and with the design, construction, operation, and maintenance of supporting public works facilities. The Commission believes that the highest form of areawide planning is that in which the quality of the technical work performed, the validity and accuracy of the data collected, and the cooperative, active participation in the planning effort by all public and private agencies concerned together form the basis for development decisions which will not only lead to more efficient physical development but which will ensure a more desirable regional environment in which to live and work.

SEWRPC RECEIVES NSPE AWARD

In 1973 the Commission's comprehensive planning program was cited by the National Society of Professional Engineers (NSPE) as one of the nation's top ten engineering achievements of 1972. It was the first time that a planning effort, in contrast to an engineering project resulting in actual constructed works, received such a national award. The planning program was nominated for the award by the Wisconsin Society of Professional Engineers, and is also the first engineering project in Wisconsin to be cited by NSPE as one of the top ten engineering achievements.

The Society stated that the "Southeastern Wisconsin Plan was cited as an outstanding engineering achievement because of its use of fundamental systems engineering skills and sound engineering judgment to create a design which is complex and thorough in format, yet understandable and workable by lay persons responsible for the plan's implementation."

LAND USE AND TRANSPORTATION PLANNING

Planning for land use development and for supporting transportation facility development is fundamental to the entire structure of regional planning for southeastern Wisconsin. Hence, the first major work program of the Commission actually directed toward the preparation of a framework of advisory plans for the physical development of the Region was the regional land use-transportation study initiated in January 1963. This study resulted in the preparation of two important components of the comprehensive plan for the development of the Region: a regional land use plan and a regional transportation (highway and mass transit) plan. These two important plan elements together provide the basic framework for sound and more fully coordinated state and local planning and development efforts within the Region, as well as for the preparation of additional regional plan elements such as utility and public facility plans, and of subregional plan elements such as comprehensive watershed and comprehensive urban planning district plans.

The recommended regional land use and transportation plans were adopted by the Commission on December 1, 1966, after intensive public review and evaluation of three alternative such plans. The adopted plans were subsequently certified to all local units of government in the Region and to those local, state, and federal governmental agencies concerned with land use and transportation system development. Since that time the plans have been widely adopted by the key plan implementation agencies operating within the Region.

The completion, adoption, and certification of the regional land use and transportation plans by the Commission, together with the widespread acceptance of the plans by local, state, and federal units and agencies of government, represented a unique achievement in planning for the development of large urban regions in the nation. The adopted plans provide for the first time in southeastern Wisconsin a medium through which land use and transportation system development can be guided and shaped in the public interest on an areawide basis through the cooperative actions of the local, state, and federal units and agencies of government concerned. The adopted plans provide the basis for the formulation of action programs which can serve to abate the most pressing land use and transportation problems of the Region. The plans also provide a valuable framework for the extension of planning assistance by the Commission to local, state, and federal units and agencies of government and to private enterprise within the Region. The plans serve as an essential basis for Commission review of applications by state and local units of government for federal grants in partial support of the construction of transportation facilities, of the acquisition and improvement of major park and outdoor recreation areas, and of the construction of basic sewerage and water supply facilities as they relate to areawide land use development. In addition, the plans serve as a basis for Commission review of major federally aided housing development projects submitted to the U. S. Department of Housing and Urban Development by public agencies and private developers. Indeed, intelligent review of such applications and projects would be impossible at the regional level without the adopted plans and the data and knowledge of the Region assembled during the plan preparation process.

Since completion of the initial regional land use-transportation study in 1966, the Commission has carried on a continuing regional land use-transportation study as an integral part of the overall regional program in southeastern Wisconsin. In addition, the Commission mounted in 1971 a regional airport system planning program designed to prepare a regional air transportation plan element to complement the transportation plan element prepared earlier. Discussion of the activities during 1973 under the continuing regional land use-transportation study and the regional airport system planning program follows.

CONTINUING REGIONAL LAND USE-TRANSPORTATION STUDY

Even before the initial regional land use-transportation study was completed, the Commission, its constituent local units of government, and affected state and federal agencies considered the need for establishing a continuing regional land use-transportation study. A prospectus for such a study was subsequently approved and published, and necessary funding was obtained. The continuing study, which became operational in 1967, is being conducted in accordance with a series of study designs, the latest of which constitutes a five-year work program for the period January 1, 1972 through December 31, 1976. This study design provides for a major reappraisal of the initial regional land use and transportation plans upon completion of major surveillance activities, including reinventories of land use development and travel habits and patterns in the Region. The data collection and processing phases of these two major reinventories were completed in 1973. Major plan reappraisal efforts will take place during 1974 and continue through mid-1975.

The continuing regional land use-transportation study, which is a basic part of the overall regional planning program for southeastern Wisconsin, has five specific objectives:

1. To meet the planning requirements of the Federal Aid Highway Act and the Federal Urban Mass Transportation Act in order to qualify constituent state and local units and agencies of government

for federal aid for the development of highway and transit facilities in the Region, and to assist the Commission in meeting the areawide planning and grant review requirements of U. S. Office of Management and Budget Circular A-95. Upon completion of the regional airport system plan, the continuing land use-transportation study will also be designed to meet the continuing planning requirements of the Airport and Airway Development Act of 1970. As shown on Map 1, the 1962 Federal Aid Highway Act directly affects 58 of the cities, villages, and towns which comprise the Kenosha, Milwaukee, and Racine urbanized areas as delineated by the U. S. Bureau of the Census; six of the seven counties in the Region; and the Wisconsin Department of Transportation. All but 10 of the cities, villages, towns, and counties directly affected by the Federal Aid Highway Act have formally agreed to cooperate in conducting the continuing transportation planning process with the Wisconsin Department of Transportation and the SEWRPC, utilizing the continuing regional land use-transportation study as the vehicle for such continuing transportation planning. Of these, nine—Washington County; the Villages of Germantown, North Bay, Sturtevant, and Big Bend; and the Towns of Grafton, Germantown, Pewaukee, and Vernon—become directly affected by the Act through the redelineation of the Milwaukee and Racine urbanized areas after the 1970 census. The remaining community not formally cooperating in the transportation planning process in the Village of West Milwaukee in Milwaukee County. Under the terms of the Act, the State Highway Commission of Wisconsin is responsible for securing maximum possible participation in the continuing transportation planning process through the execution of formal interagency agreements.

2. To update and revise the basic planning and engineering data collected in, and the forecasts prepared under, the initial regional land use-transportation study so that the full value of these data and forecasts can be realized and development decisions within the Region can be made intelligently, based upon current factual information.

3. To periodically update and revise the plans prepared under the initial study effort in light of changing public values and conditions within the Region.

4. To provide for the continued integration of land use and transportation planning efforts within the Region with other elements of the comprehensive regional planning effort, including the preparation of air transportation, watershed development, sewerage and water supply, park and open space, housing, and air quality management plan elements.

5. To continue to convert the plans prepared under the initial study and maintained current under the continuing study into action programs for plan implementation.

Through the continuing regional land use-transportation study and other major planning efforts carried out by the Commission, the regional land use and transportation plan recommendations initially adopted in 1966 have been refined, reevaluated, and amended through adoption of other major planning reports by the Commission. These additional subregional plan elements have subsequently been certified to the appropriate units of government and state and federal agencies for adoption and implementation.

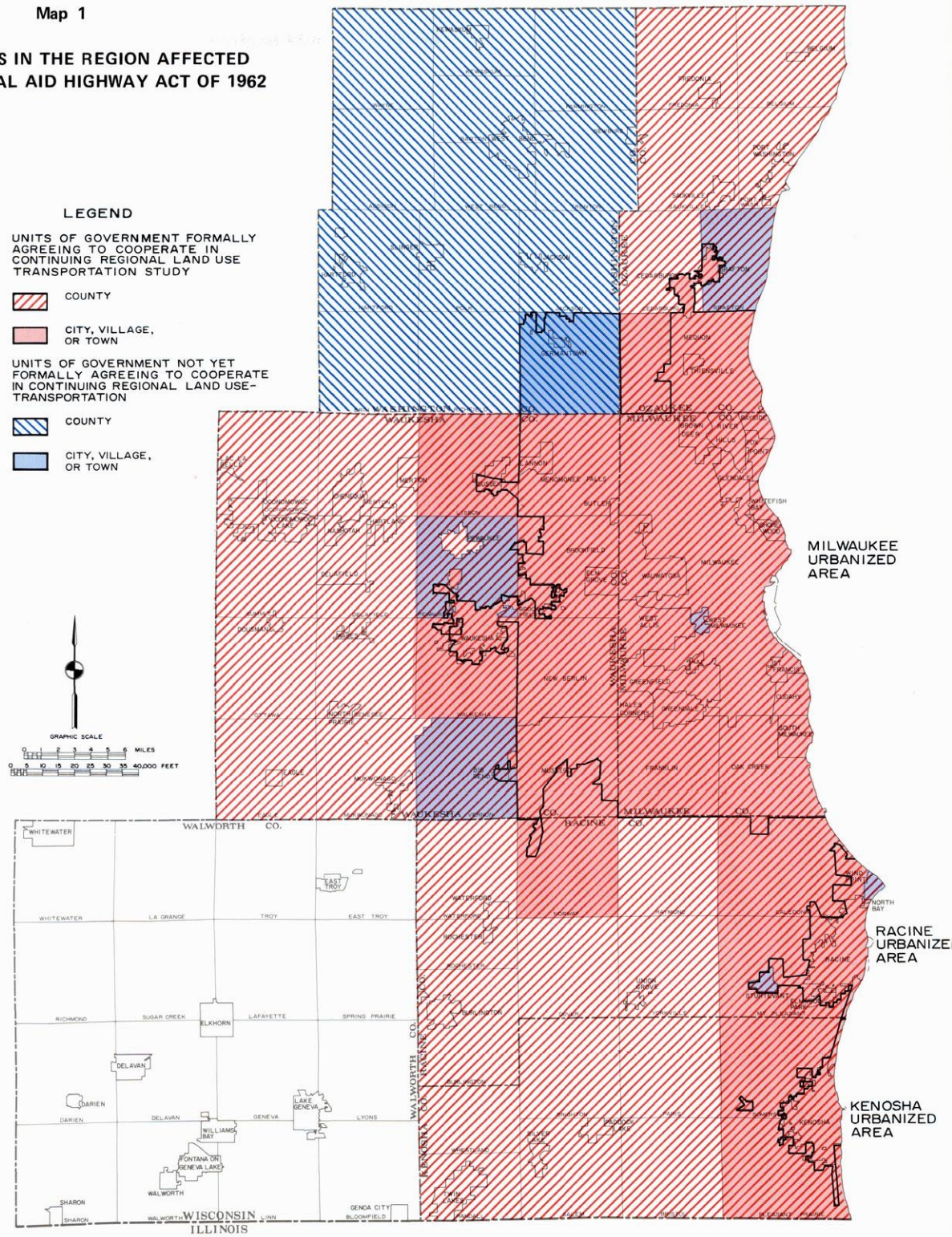
The plan elements comprising the adopted regional plan for southeastern Wisconsin as of December 31, 1973, are summarized in Table 1. In addition to the initial regional transportation plan and the regional land use plan, both adopted by the Commission in 1966, the adopted regional plan for southeastern Wisconsin consists of plan elements set forth in the Root River watershed plan adopted on September 22, 1966; the Milwaukee County jurisdictional highway system plan and the Fox River watershed plan, both adopted on June 4, 1970; the Milwaukee River watershed plan and the Milwaukee area transit plan, both adopted on March 2, 1972; the Kenosha Planning District comprehensive plan adopted on June 1, 1972; and the Walworth County jurisdictional highway system plan adopted on March 1, 1973. At year's end, several additional plan elements were in various stages of preparation which would further refine, detail, and amend the regional plan, including the Racine Urban Planning District comprehensive plan; the Menomonee River watershed comprehensive plan; and jurisdictional highway system plans for Kenosha, Ozaukee, Racine, Washington, and Waukesha Counties.

The continuing regional land use-transportation study also seeks to maintain the close working relationships established under the initial study between the Commission and those agencies of government and private organizations responsible for land use and transportation system development in the Region. Moreover, the data collected, the plans prepared, and the plan implementation policies recommended in the initial and continuing planning efforts must be extended as a basis for the making of development decisions on a day-to-day basis. Because the regional plans are solely advisory, it is particularly important that they be fully understood at each level of implementation. Toward this end, one of the most important aspects of the continuing regional land use-transportation planning effort involves the interpretation of the adopted plan to the federal, state, and local implementing units and agencies of government.

To meet the foregoing objectives, the continuing regional land use-transportation study must perform five basic functions: surveillance, reappraisal, service and plan implementation, procedural development, and documentation. Work progress on the continuing study during 1973 is reported herein for each of these five functions, with the surveillance and reappraisal work efforts reported together as appropriate.

Map 1

COMMUNITIES IN THE REGION AFFECTED BY THE FEDERAL AID HIGHWAY ACT OF 1962



Continuing, comprehensive, areawide transportation planning must be carried on in all urbanized areas of the United States in order to maintain the eligibility of state and local units of government for federal aid in support of new highway and transit facility construction. The 1962 Federal Aid Highway Act and the 1964 Federal Urban Mass Transportation Act require that this continuing planning process be carried on cooperatively by all units and agencies of government concerned. A total of 58 municipalities in the three urbanized areas of the Region—Kenosha, Milwaukee, and Racine—are directly affected by this requirement. To date, all but 10 of the cities, villages, towns, and counties directly affected by the Acts have formally agreed to cooperate in conducting the continuing transportation planning process, utilizing the continuing regional land use transportation study as the vehicle for such continuing transportation planning.

Source: SEWRPC.

Table 1

PLAN ELEMENTS COMPRISING THE ADOPTED REGIONAL PLAN FOR SOUTHEASTERN WISCONSIN DECEMBER 31, 1973

Adopted Plan Element	Planning Document	Plan Element Function Related to Transportation Planning	Dates of Adoption or Endorsement		
			SEWRPC	State Highway Commission of Wisconsin	U. S. Department of Transportation, Federal Highway Administration
Root River Watershed Plan	SEWRPC Planning Report No. 9, A Comprehensive Plan for the Root River Watershed	To recommend bridge design standards related to flood control; to provide for a system of scenic parkway drives.	September 22, 1966	--	--
Regional Land Use Plan and Regional Transportation Plan	SEWRPC Planning Report No. 7, The Regional Land Use-Transportation Study, Volume One, Inventory Findings—1963; Volume Two, Forecasts and Alternative Plans—1990; Volume Three, Recommended Regional Land Use-Transportation Plans—1990	To provide an initial regional highway and mass transit plan; to provide a regional land use plan.	December 1, 1966	October 23, 1967	April 26, 1967
Milwaukee County Jurisdictional Highway System Plan	SEWRPC Planning Report No. 11, A Jurisdictional Highway System Plan for Milwaukee County	To refine the initial regional highway plan as it pertains to Milwaukee County and to recommend jurisdiction for each highway segment.	June 4, 1970	April 2, 1970	April 13, 1970
Fox River Watershed Plan	SEWRPC Planning Report No. 12, A Comprehensive Plan for the Fox River Watershed, Volume One, Inventory Findings and Forecasts; Volume Two, Alternative Plans and Recommended Plan	To recommend bridge design standards related to flood control, and to provide for a system of scenic parkway drives.	June 4, 1970	December 5, 1970	February 1, 1974
Milwaukee River Watershed Plan	SEWRPC 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	To amend initial regional highway and Milwaukee County jurisdictional highway plans by removing proposed Milwaukee River Parkway arterial and replacing it with a parkway pleasure drive; to recommend bridge design standards related to flood control; and to provide for a system of scenic drives.	March 2, 1972	July 14, 1972	April 3, 1973
Milwaukee Area Transit Plan	Milwaukee Area Transit Plan	To refine initial regional mass transit plan as it pertains to the Milwaukee urbanized area.	March 2, 1972	Pending	Pending
Kenosha Planning District Comprehensive Plan	SEWRPC Planning Report No. 10, A Comprehensive Plan for the Kenosha Planning District. Volumes One and Two	To refine initial regional highway plan as it pertains to the Kenosha Planning District.	June 1, 1972	Pending	Pending
Walworth County Jurisdictional Highway System Plan	SEWRPC Planning Report No. 15, A Jurisdictional Highway System Plan for Walworth County	To refine the initial regional highway plan as it pertains to Walworth County and to recommend jurisdiction for each highway segment.	March 1, 1973	July 5, 1973	August 1, 1973

Source: SEWRPC.

Surveillance and Reappraisal

Under the surveillance function, regional development is carefully monitored in relation to the adopted regional land use and transportation plans and amendments thereto. Definitive data are collected on the amount and spatial location of changes in population and economic activity, land use development, automobile and trunk availability, trip generation, mode of transportation utilized, local land use and transportation plan development, and plan implementation actions within the Region. These changes, once identified and quantified, must be analyzed to determine whether the forecasts and assumptions underlying the recommended plans are holding over time and whether the plans remain valid or must be changed.

Not all aspects of regional development are monitored under the continuing study in any given calendar year, Some aspects, such as changes in land use, in the natural resource base, and in community plans and zoning ordinances are intended to be fully updated at five-year intervals. Other aspects, such as current population and employment estimates and automobile and truck availability, are updated on an annual basis. Other surveillance activities are coordinated with the biennial national transportation studies, including definitive descriptions of existing transportation facilities and measures of the use of these facilities as determined by traffic counts and computation of vehicle miles of travel.

Under the reappraisal function, the adopted regional land use and transportation plans and the forecasts and assumptions on which these plans are based are to be reappraised in light of changes in regional development as revealed by the surveillance function. A comprehensive, in-depth analysis of the trends in regional development is scheduled to be conducted during the continuing regional land use-transportation study based on the results of the 1970 census and the detailed land use and travel inventories begun in 1972 and completed in 1973. The major plan reappraisal will include a careful analysis of the inventory findings and the implications of such an analysis with respect to the continued validity of the adopted plans, the regional development objectives upon which the plans are based, and the policies and programs for plan implementation. Revisions in both the adopted regional land use and transportation plans will be effected contingent upon such findings and analyses and the documentation thereof.

The following discussion reports the surveillance and reappraisal activities conducted under the continuing regional land use-transportation study during 1973. In large part, 1973 consisted of completion of surveillance activities in preparation for major plan reappraisal efforts during 1974.

Base Mapping and Aerial Photography (3.1)[1]

During 1973 the Commission continued to update its established base map series. All county and regional planning base maps in the 1" = 2000', 1" = 4000', and 1" = 8000' series were updated utilizing Wisconsin Department of Transportation state aid mileage summary maps to make changes in minor civil division corporate limit lines. This updating also included revision of the 1" = 2 mile scale generalized regional base map. Upon completion of this latter map, polyester film positive reductions were made to provide updated versions of the 1" = 4 mile and 1" = 8 mile scale regional base map series.

Town base maps at a scale of 1" = 1000' which are useful to town boards, plan commissions, and zoning committees in local planning, zoning, and related development decision making have been prepared for 46 of the 64 civil towns in the Region. These maps are prepared on an "at cost" basis under the Commission's community assistance program and are updated annually to reflect changes in minor civil division corporate limit lines. During 1973, the Commission prepared special 1" = 1000' scale base maps for the City of Hartford and environs, the Village of Sussex and environs, and for the Town of Erin. The Commission also prepared a 1" = 1000' scale zoning district overlay map for the Town of Norway.

As an aid in carrying out certain regional land use and transportation plan implementation recommendations, the Commission and constituent local units of government prepare from time-to-time 1" = 100' and 1" = 200' scale, 2' and 4' 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. All of the horizontal and vertical control survey data collected under the large-scale mapping efforts of the Commission under the initial and continuing regional land use-transportation studies and under its watershed studies, as well as such data collected by the Wisconsin Department of Transportation and by county and local units of government under compatible large-scale mapping efforts, have been collated and published in SEWRPC Technical Report No. 7, Horizontal and Vertical Survey Control in Southeastern Wisconsin.

---

[1] *The numbers contained in parentheses in this subsection of the 1973 Annual Report refer to subelements of the continuing regional land use-transportation study as set forth in detail in the SEWRPC Study Design for the Continuing Land Use-Transportation Study, 1972-1976, December 1971, and are provided to expedite required federal and state agency review of this report.*

While no new large-scale mapping and related control survey work was completed during 1973 under the continuing study, horizontal and vertical control survey data collected by the Commission under related mapping efforts in other work programs and by county and local units of government were collated and prepared for publication by the Commission. New control survey summary diagrams presenting data on the location, state plane coordinates, and mean sea level elevation of U. S. Public Land Survey corners; on the grid lengths and bearings of quarter section lines; and on the area of quarter sections were prepared for the Sturtevant, Honey Creek, and Wind Lake Drainage Canal areas in Racine County. The utility of the control survey data is indicated by the fact that the Commission received approximately 150 inquiries regarding such data in 1973. All survey data will eventually be collated and published by the Commission in subsequent editions of Technical Report No. 7.

During the year, large-scale topographic maps were prepared for a total of 27.50 square miles, with a total of 250 U. S. Public Land Survey sections corners relocated, monumented, and coordinated. These maps were prepared under mapping programs conducted by Racine County, the Cities of Delavan and West Allis, and the Villages of East Troy and Kewaskum. The status of the large-scale topographic mapping and horizontal and vertical survey control program for the Region is summarized in Table 2 and on Map 2.

Population Activity (3.2.5, 4.2.1, and 4.3.1)

Information on the changing size, composition, and distribution of the population in southeastern Wisconsin is essential not only to the continuing regional land use-transportation study but also to all other Commission work programs. Work continued on the compilation and analyses of various data required to monitor the

Table 2

STATUS OF LARGE-SCALE TOPOGRAPHIC MAPPING AND RELOCATION, MONUMENTATION, AND COORDINATION OF U. S. PUBLIC LAND SURVEY CORNERS IN THE REGION BY COUNTY: DECEMBER 31, 1973

County	Total Area (Square Miles)	Large-Scale Topographic Mapping[a]					
		Area Completed		Area Under Preparation		Total	
		Square Miles	Percent	Square Miles	Percent	Square Miles	Percent
Kenosha	278	33.75	12.14	--	--	33.75	12.14
Milwaukee	242	69.25	28.62	--	--	69.25	28.62
Ozaukee	234	46.50	19.87	--	--	46.50	19.87
Racine	340	160.00	47.06	11.00	3.24	171.00	50.29
Walworth	578	40.75	7.75	--		40.75	2.03
Washington	436	69.75	16.00	5.75	1.32	75.50	7.75
Waukesha[b]	581	110.75	19.06	16.50	2.84	127.25	21.90
Region	2,689	530.75	19.74	33.25	1.24	564.00	20.97

County	Relocation, Monumentation, and Coordination[a]													
	U. S. Public Land Survey Corners							Area (Square Miles)						
	Estimated Total Corners	Completed		Under Preparation		Total		Total Area	Completed		Under Preparation		Total	
		Number	Percent	Number	Percent	Number	Percent		Area	Percent	Area	Percent	Area	Percent
Kenosha	1,183	198	16.74	--	--	198	16.74	278	34.00	12.23	--	--	34.00	12.23
Milwaukee	1,084	404	37.27	--	--	404	37.27	242	81.00	33.47	--	--	81.00	33.47
Ozaukee	1,070	248	23.18	80	7.48	328	30.65	234	37.25	15.92	12.75	5.45	50.00	21.37
Racine	1,534	1,020	66.49	134	8.74	1,154	75.23	340	175.75	51.69	46.75	13.75	222.50	65.44
Walworth	2,521	189	7.50	--	--	189	7.50	578	22.50	3.89	--	--	22.50	3.89
Washington	1,811	490	27.06	35	1.93	525	28.99	436	81.75	18.75	7.00	1.61	88.75	20.36
Waukesha[b]	2,577	717	27.82	138	5.36	855	33.18	581	121.50	20.91	26.00	4.48	147.50	25.39
Region	11,780	3,266	27.72	387	3.29	3,653	31.01	2,689	553.75	20.59	92.50	3.44	646.25	24.03

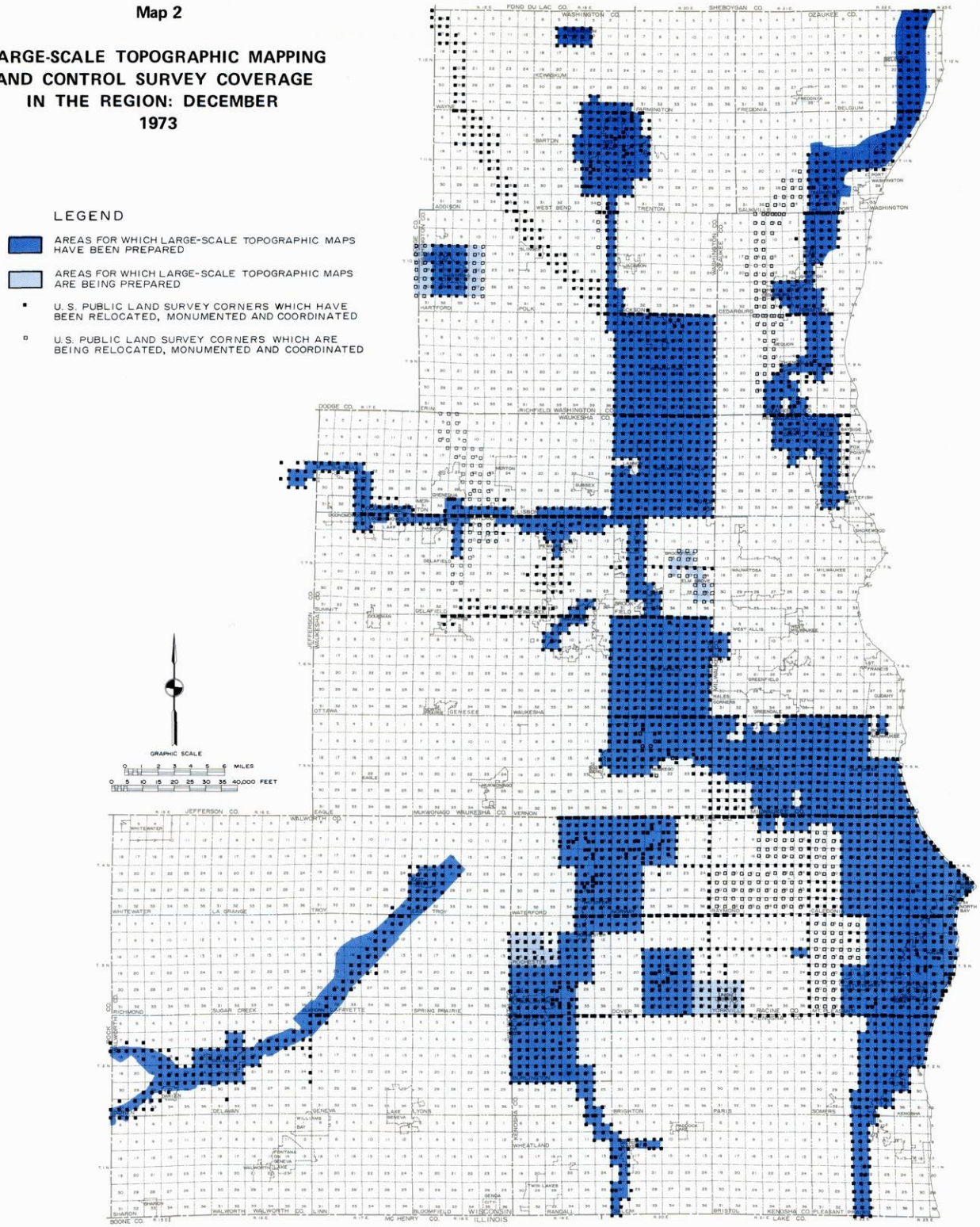
[a] *Includes only those areas of the Region for which large-scale topographic maps have been or are being prepared and throughout which U. S. Public Land Survey corners have been or are being relocated, monumented, and coordinated utilizing SEWRPC recommended procedures.*

[b] *Includes Oconomowoc bypass mapping in Jefferson County. This constitutes an area of 12 U. S. Public Land Survey one quarter sections within which 13 of a total of 20 U. S. Public Land Survey corners have been relocated, monumented, and coordinated; and of which 1.5 square miles have been mapped.*

Source: SEWRPC.

Map 2

LARGE-SCALE TOPOGRAPHIC MAPPING AND CONTROL SURVEY COVERAGE IN THE REGION: DECEMBER 1973



A total of 3,266 U.S. Public Land Survey Corners have been relocated, monumented, and coordinated within an area of 554 square miles under surveying and mapping programs carried out by various local units of government, the State Highway Commission of Wisconsin, and the Regional Planning Commission as of December 31, 1973. In addition, work was underway during 1973 to extend the survey control system into an additional 92 square miles, with an additional 387 corners in the process of being relocated, monumented, and coordinated.

Source: SEWRPC.

changes in size, composition, and distribution of the resident population and related changes in urban development patterns within the Region. As part of the surveillance and reappraisal activities related to population factors, the Commission maintained during 1973 a current population estimate prepared in conjunction with the Wisconsin Department of Administration; compared that estimate against the new Commission 1990 and 2000 population forecasts as reported in the 1972 Annual Report; updated and further expanded the regional street address coding guide; and prepared corrections to the Commission's Dual Independent Map Encoding (DIME) files for the Milwaukee, Racine, and Kenosha urbanized areas as part of the U. S. Census Bureau's Correction, Updating, and Extension (CUE) program.

Current Population Estimate

Preparation of current population estimates is one of the most difficult tasks facing demographers and planners. The Commission has been cooperating with the Wisconsin Department of Administration in the preparation of yearly current population estimates for civil divisions, the major purpose of which is state use for establishing an official state tax sharing base. The population of the Region as of February 1973 was estimated at approximately 1,783,600 persons (see Table 3). This estimate is based upon symptomatic indicators of population change that are available on a statewide basis, namely, the number of automobiles registered, the number of persons filing income tax returns, and the dollar value of the exemptions for dependents on those income tax returns. These three indicators have been found to be the best currently available measures of absolute population size and change. A fourth indicator—the U. S. Bureau of Census county population estimates based primarily on rates of natural increase and migration which relate school enrollment to population movement—was averaged into the county population estimates determined by the three primary indicators. The distribution of population by civil division within counties, however, was based solely on the three primary indicators.

The 1973 regional population estimate represents an increase of about 27,500 persons, or nearly 2 percent, above the 1970 census level. This represents an average annual increase of about 9,200 persons since 1970, or less than 1 percent per year. As shown in Table 3, the largest absolute increase from 1970 to 1973, about 16,300, occurred in Waukesha County, while the greatest relative increase, about 11 percent, occurred in Ozaukee County. Based on the estimates, Milwaukee County's population declined by nearly 12,000 persons, or about 1 percent, during this same period.

Population Forecasts

Under the reappraisal function, the population forecasts and attendant assumptions upon which the adopted regional plan are based are reappraised in light of changes in population size, composition, and distribution as revealed by the surveillance function. Although the preparation of population forecasts is not planning, the preparation of all plans must begin with forecasts. In any planning program, forecasts are required of all future events and conditions which lie outside the scope of the plan but which will affect plan design and implementation. Control of changes in population levels lies largely outside the scope of governmental activity at the regional and local levels and outside the scope of the physical planning process. Future population levels, therefore, must be forecast. These levels, in turn, determine the aggregate demand for land and supporting transportation and utility systems.

Table 3

POPULATION OF THE REGION BY COUNTY: APRIL 1970 AND FEBRUARY 1973

County	Population		Population Change April 1970 to February 1973	
	April 1970[a]	February 1973[b]	Number	Percent
Kenosha	117,917	122,254	4,337	3.8
Milwaukee	1,054,249	1,042,434	- 11,815	- 1.1
Ozaukee	54,461	60,484	6,023	11.0
Racine	170,838	174,857	4,019	2.4
Walworth	63,444	65,374	1,930	3.0
Washington	63,839	70,587	6,748	10.6
Waukesha	231,338	247,599	16,261	7.0
Region	1,756,086	1,783,589	27,503	1.6

[a] *1970 U. S. Census of Population and Housing.*

[b] *Wisconsin Department of Administration estimates.*

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

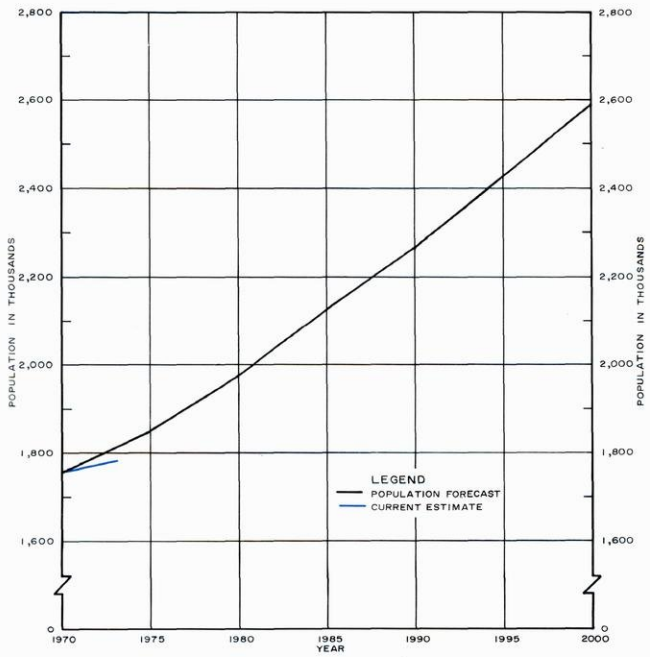
As reported in the 1972 Annual Report, the Commission during 1972 published a new technical report which analyzed the changing size, composition, and spatial distribution of the population of the Region as indicated primarily by the 1970 census, and which set forth a new year 2000 population forecast for the Region. This forecast was selected from a series of 12 prepared by the Commission staff and was recommended to the Commission by the Socioeconomic Subcommittee of the Technical Coordinating and Advisory Committee on Regional Land Use-Transportation Planning. The year 2000 regional forecast population, which was set at about 2.59 million persons, assumed that the birth rate would drop to replacement fertility levels by 1985, that the death rate would remain at the current level, and that the migration rate would also remain at the current level, which resulted in a small net outmigration during the 1960s. This new forecast is somewhat lower than the Commission's initial 1990 population forecast of about 2.68 million persons prepared nearly a decade ago, reflecting substantial changes in the factors affecting population size.

According to the new 2000 forecast, the 1973 population level of the Region should approximate 1,817,400 persons. As noted above, the estimated 1973 level was 1,783,589 persons. Thus, the new population forecast was about 34,000 persons, or nearly 2 percent, above the 1973 estimate (see Table 4 and Figure 1). Figures 2 through 8 show current population estimates and population forecasts for each of the seven counties in the Region. The greatest absolute variance, about 18,500 persons, occurs in Milwaukee County. The greatest relative variance occurs in Waukesha County, where the population forecast is over 4 percent above the population estimate. Together, Milwaukee and Waukesha Counties account for over 87 percent of the variance between the forecast and estimated 1973 population levels.

These differences may be attributed primarily to a more rapid reduction in fertility than anticipated when the population forecasts were prepared in 1972. Current national fertility trends indicate that the total fertility rate has already declined to a level below replacement fertility, causing a reduction in the number of births

Figure 1

POPULATION FORECAST AND CURRENT POPULATION ESTIMATE FOR THE REGION: 1970-2000



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

Table 4

COMPARISON OF 1973 ESTIMATED AND FORECAST POPULATION LEVELS FOR THE REGION BY COUNTY

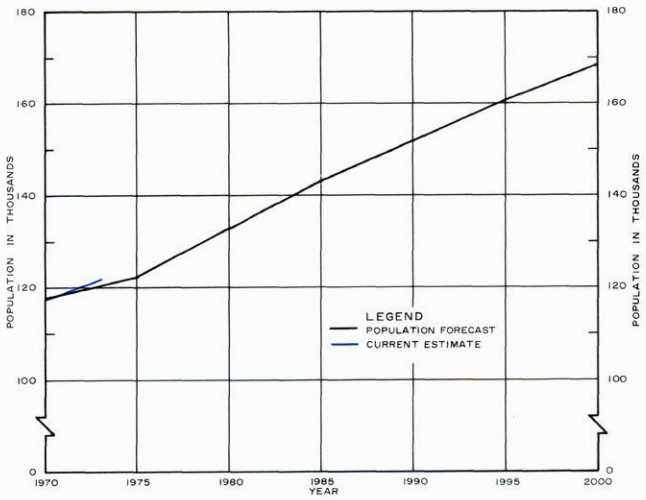
County	Population Levels		Difference Forecast Versus Estimate	
	Estimate[a] February 1973	SEWRPC Forecast February 1973	Number	Percent
Kenosha	122,254	122,100	- 154	- 0.1
Milwaukee	1,042,434	1,060,900	18,466	1.8
Ozaukee	60,484	60,100	- 384	- 0.6
Racine	174,857	178,800	3,943	2.2
Walworth	65,374	67,000	1,626	2.5
Washington	70,587	69,800	- 787	- 1.1
Waukesha	247,599	258,700	11,101	4.5
Region	1,783,589	1,817,400	33,811	1.9

[a] *Estimate established by the Wisconsin Department of Administration as the "official" base for state shared tax distribution.*

Source: Wisconsin Department of Administration and SEWRPC.

Figure 2

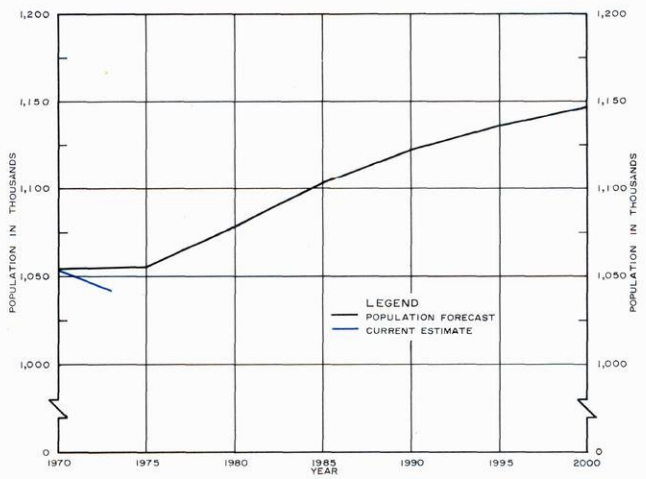
POPULATION FORECAST AND CURRENT POPULATION ESTIMATE FOR KENOSHA COUNTY: 1970-2000



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

Figure 3

POPULATION FORECAST AND CURRENT POPULATION ESTIMATE FOR MILWAUKEE COUNTY: 1970-2000



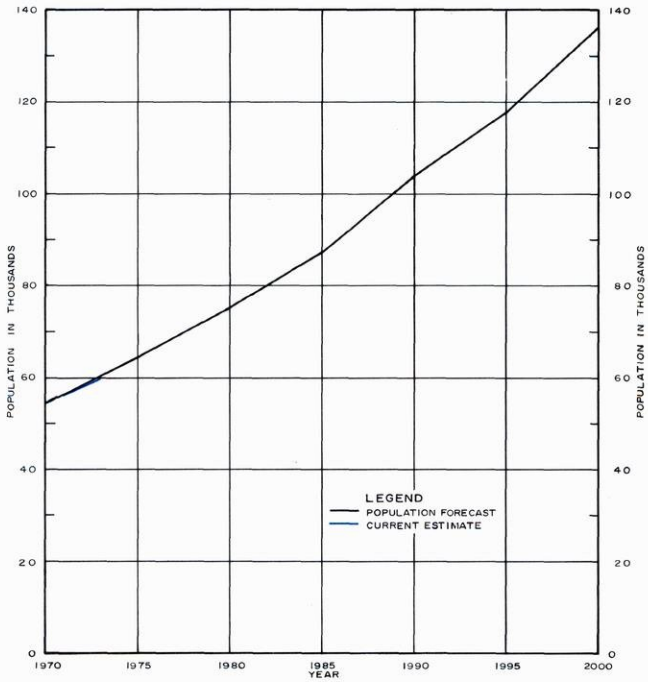
Source: U. S. Bureau of the Census, Wisconsin Department of Administration, and SEWRPC.

and resulting in a significant decrease in the rate of population growth in the nation. Based upon the most recent information available, the fertility rate in Wisconsin has also fallen below the replacement rate, consistent with the national trend, resulting in a reduction in the actual number of births in the state and Region.

Thus, assumptions made by the Commission in 1972 that fertility rates would not reach replacement levels until the mid-1980s, although based upon the best data available, appears to be in error, since the 1973 fertility rate

Figure 4

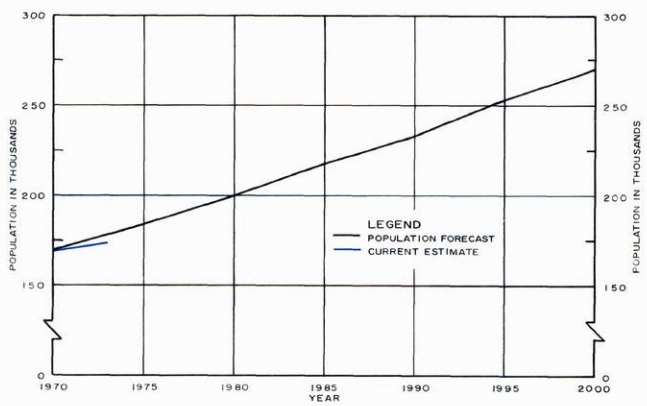
POPULATION FORECAST AND CURRENT POPULATION ESTIMATE FOR OZAUKEE COUNTY: 1970-2000



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

Figure 5

POPULATION FORECAST AND CURRENT POPULATION ESTIMATE FOR RACINE COUNTY: 1970-2000

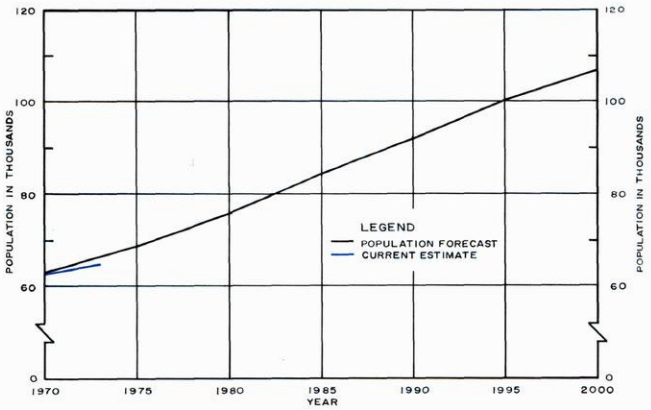


Source: U. S. Bureau of the Census, Wisconsin Department of Administration, and SEWRPC.

actually fell below replacement level. This most recent decline in the fertility rate could result in a more significant decline in the rate of population growth for the Region over the next several years, and require revision of the regional and county population forecasts published by the Commission in 1972. Accordingly, the Commission staff during 1974 will reexamine the validity of

Figure 6

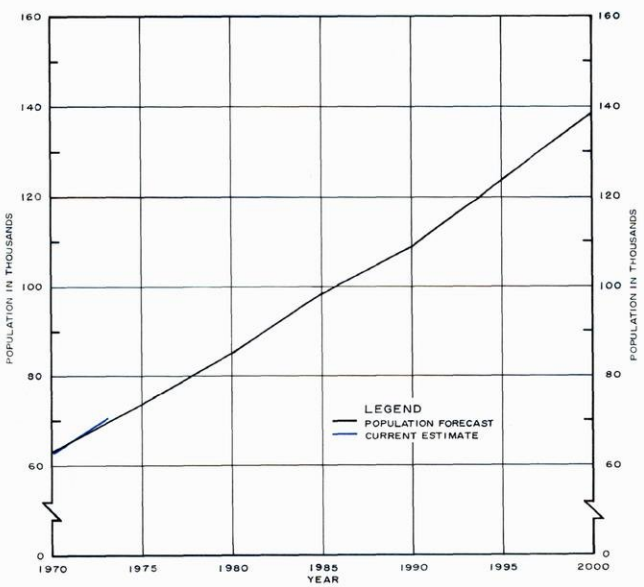
POPULATION FORECAST AND CURRENT POPULATION ESTIMATE FOR WALWORTH COUNTY: 1970-2000



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

Figure 7

POPULATION FORECAST AND CURRENT POPULATION ESTIMATE FOR WASHINGTON COUNTY: 1970-2000



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

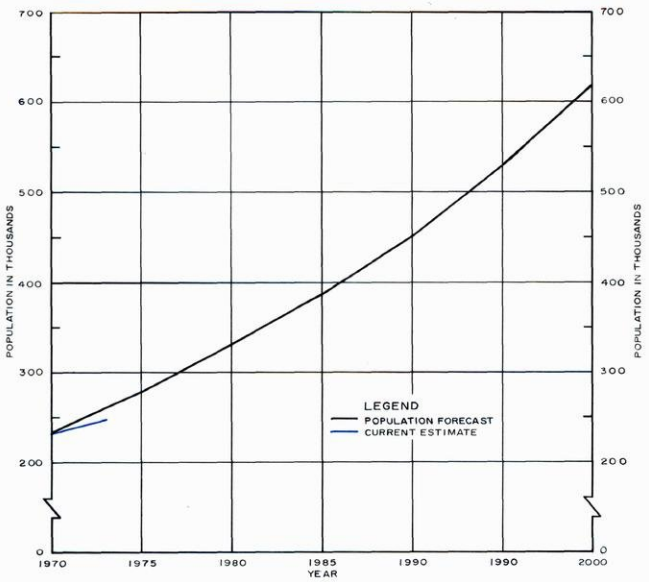
the assumptions underlying the year 2000 regional and county population forecasts as part of the major land use and transportation plan reevaluation to determine if the most recent changes in fertility rates and other recent changes in population factors, such as migration, warrant further downward revision of the population forecasts.

Street Address Coding Guide

In a work program related to its demographic studies, the Commission during 1973 continued the development and

Figure 8

POPULATION FORECAST AND CURRENT POPULATION ESTIMATE FOR WAUKESHA COUNTY: 1970-2000



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

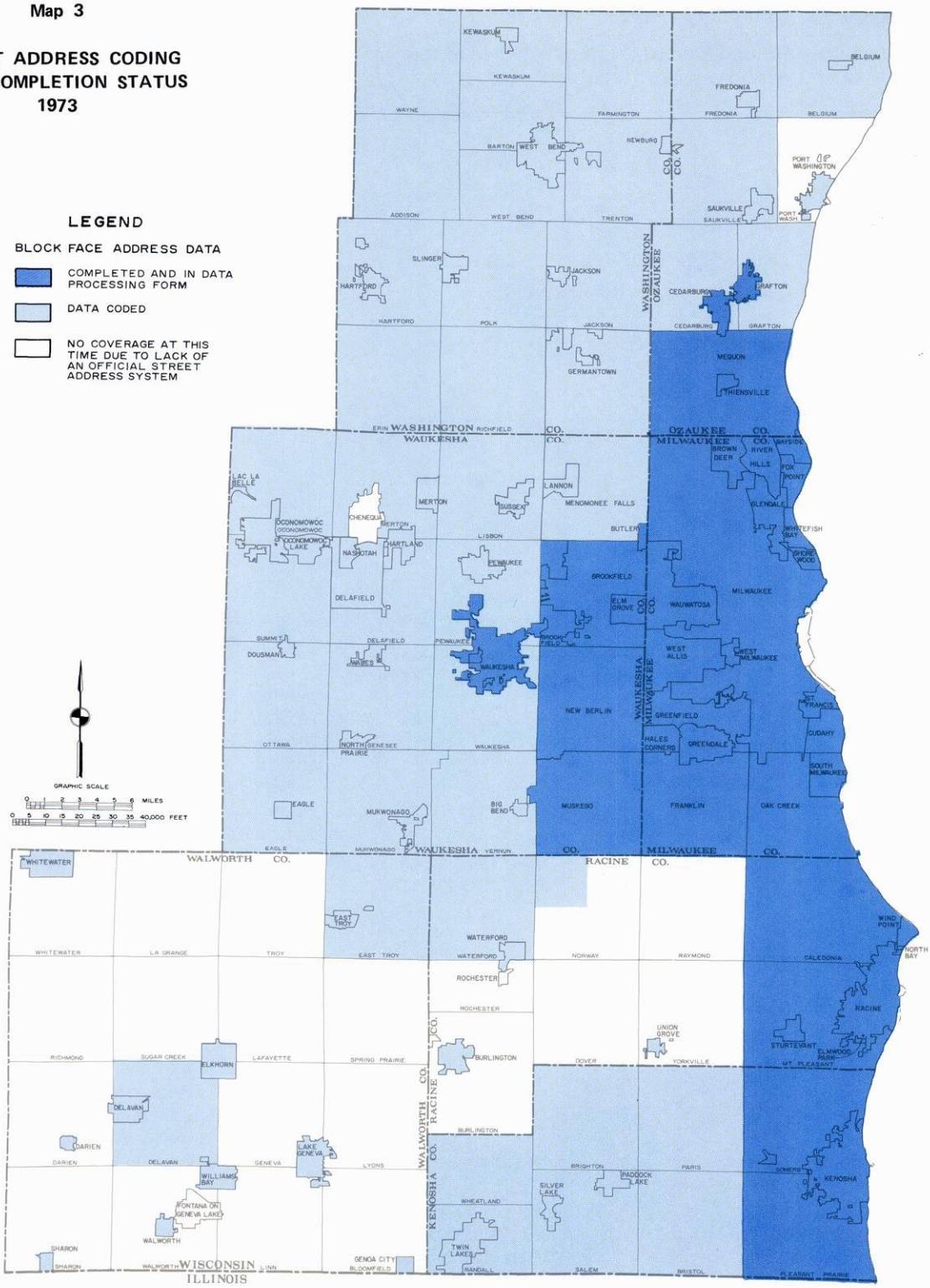
maintenance of a regional street address coding guide (ACG). The guide enables machine identification of the geographic location, such as civil division, census tract and block traffic analysis zone, and U. S. Public Land Survey quarter section, of specific street addresses. The guide was developed under the initial regional land use-transportation study to enable the collation of transportion planning data by quarter section within the three urbanized areas of the Region. In preparation for the 1970 Census of Population and Housing, the guide was refined and detailed to facilitate the collation of census data by block face under a cooperative program with the U. S. Bureau of the Census undertaken in 1968. The coding guide was updated for the urbanized areas in 1970 with the addition of segments of the urban street network developed since 1968. By the end of 1973, the coding guide had been updated to January 1973 for the Milwaukee, Racine, and Kenosha urbanized areas, and was expanded to include block face address range data for nearly three-fourths of the area of the Region (see Map 3). Further updating and expansion of the guide to encompass the entire Region are envisioned as formal street address systems are established in the remaining areas of the Region.

Geographic Base (DIME) File

In a work program related to the street address coding guide, the Commission in cooperation with the U. S. Bureau of the Census has developed a geographic base file which is a description, in computer readable form, of the geographic coordinates of the street intersections and address ranges of an area. This file provides additional ability to relate the vast store of urban data

Map 3

STREET ADDRESS CODING GUIDE COMPLETION STATUS 1973



A street address coding guide, through machine data processing, enables rapid identification of the geographic location, such as civil division, census tract and block, traffic analysis zone, or U.S. Public Land Survey quarter section, of a specific street address. The guide was initially developed for transportation planning purposes, and was extremely useful in enabling the collation of transportation planning data by U.S. Public Land Survey quarter section and traffic analysis zone. In addition, the guide has been useful in collating 1970 census data by block face level. The Commission intends to extend the street address coding guide to include the entire Region. At the present time, portions of the Region primarily in Racine and Walworth Counties are not covered by the street address coding guide, since official street address systems have not yet been established in these areas.

Source: SEWRPC.

collected by the Census Bureau and the Commission to the geographical area from which it was collected by machine data processing equipment. The first phase of this program, begun in 1967, included the development of the dual independent map encoding (DIME) files for the Milwaukee, Racine, and Kenosha urbanized areas. These DIME files were designed to relate various physical features such as street intersections, rail crossings, and stream crossings to X-Y geographic coordinates based on the Wisconsin State Plane Coordinate Grid and the longitude-latitude reference system. This first phase was completed in 1969 prior to the conduct of the 1970 census, and was used in the conduct of that census.

The second phase of the coding guide improvement program, begun in 1973, is aimed at the correction, update, and extension of the existing DIME files for expanded use in conducting future censuses and to enable the Commission to more readily perform data analyses at various levels of geographic detail through the use of a computer. The DIME files are also useful for computerized car pooling programs. The use of the files allows home addresses of employees in major employment concentrations to be readily related by machine to geographic residence areas such as a census tract, block, or block face.

During 1973 the Commission entered into a cooperative program with the U. S. Bureau of the Census to correct, update, and extend the existing geographic base files for the Region. This program, termed Correction, Update, and Extension (CUE) program, is designed to provide the clerical procedures, processing methodology, and computer programs necessary to correct and update the existing DIME files and extend DIME coverage to include the entire Southeastern Wisconsin Region. By the end of 1973, the Commission had coded corrections to ensure street name consistency, the matching of left and right street segments, and the correctness of DIME area boundary definitions under the CUE program. These corrections are scheduled to be keypunched and sent to the Census Bureau for processing and insertion into the existing DIME files during 1974. During 1974 the Commission will devote major effort to further correct and update the existing DIME files and extend these files to include the entire Region.

Economic Activity (3.2.5, 4.2.2, and 4.3.2)

Economic data, like population data, are essential to sound regional planning. Growth and change in the economy greatly influence the size, composition, and spatial distribution of the population; the demand for land and other resources; and the demand for supporting transportation and utility facilities. The kind and level of economic activity also influence the availability of public financial resources required to provide the services and facilities needed to serve the resident population and to abate existing environmental problems.

Collection and dissemination of information on the changing size, composition, and spatial distribution of the Region's work force[2] continued in 1973. Through the cooperative efforts of the Wisconsin Department of Industry, Labor, and Human Relations and various employment data user-oriented organizations in the state, including SEWRPC, an improved data series has been established enumerating employment by place of work on a monthly basis through an industry reporting system. Table 5 presents historical and current data on the average annual labor force, work force, number of employed workers, and number of unemployed workers in the Region.

Current Employment Estimate

In 1973 the work force averaged 800,900 persons, an increase of nearly 2 percent from 1972. The number of employed persons in the Region, as distinguished from the work force, which includes unemployed as well as employed persons, averaged 770,000 persons in 1973, a 3 percent increase over the 1972 level. The number of unemployed persons in the Region averaged about 30,900, or nearly 4 percent of the work force, in 1973, compared to about 36,600, or nearly 5 percent of the work force, in 1972. This represents a decrease of nearly 16 percent in the number of unemployed since 1972, indicating that the effects of the recent national economic recession diminished over the last two years.

The segment of the population which can be most closely related to the economy is the labor force. Current and historical changes in the size of an area's labor force are an indicator of changes in an area's economy, of demographic growth or decline, and of the geographic and social mobility of the population. The labor force in the Region in 1973 was estimated at about 761,000 persons, compared with 746,300 in 1972, an increase of 2 percent. It should be noted that observed differences between labor force and work force levels in the Region are due to the fact that the work force tabulations will "double count" persons holding two or more jobs, will include those persons who live outside of but work within the Region, and will exclude those persons who live inside but work outside of the Region.

A more detailed analysis concerning the spatial distribution of jobs in the Region in 1973 indicates that the largest concentrations of jobs are in Milwaukee, Waukesha, and Racine Counties (see Table 6). About 86 percent of the regional jobs in 1973 were located in these three counties. Within the Region the job distribution since 1960 has been toward a decreasing concentration of jobs in Milwaukee County and an increasing concentration in

---

[2]*The work force is an enumeration of workers at their place of work. This measure differs from the labor force, which is an enumeration of workers at their place of residence. The federal decennial census of population enumerates the labor force, while the work force is enumerated as part of current employment estimates prepared by the Wisconsin Department of Industry, Labor, and Human Relations.*

Table 5

AVERAGE LABOR FORCE, WORK FORCE, EMPLOYMENT, AND UNEMPLOYMENT IN THE REGION: 1960-1973

Year	Labor Force[a]	Work Force[b]	Employed[c]	Unemployed[d]	
				Number	Percent of Work Force
1960	638,700	673,200	647,900	25,300	3.8
1961	633,600	669,800	632,600	37,200	5.6
1962	627,700	663,500	638,600	24,900	3.8
1963	634,100	670,300	646,100	24,200	3.6
1964	644,700	681,500	658,300	23,200	3.4
1965	668,100	706,200	685,900	20,300	2.9
1966	682,900	721,900	702,000	19,900	2.8
1967	693,800	733,400	709,100	24,300	3.3
1968	704,200	744,400	722,400	22,000	3.0
1969	721,100	762,300	740,200	22,100	2.9
1970	744,500	776,200	741,600	34,600	4.5
1971	737,900	764,700	725,000	39,700	5.2
1972	746,300	785,400	748,800	36,600	4.7
1973	761,000	800,900	770,000	30,900	3.8

[a] *The term "labor force" is defined as the number of workers within the Region enumerated by place of residence. It includes all persons 14 years of age or older who were at work, that is, those who worked for pay or profit; with a job but not at work, that is, those persons who were temporarily absent from their job; and not at work but known to be actively seeking work. The 1960 and 1970 levels are taken from the 1960 and 1970 census, and the levels from 1961 through 1969 and 1971 through 1973 are estimates based on observed relationships between the labor force and work force estimates prepared by the Wisconsin Department of Industry, Labor, and Human Relations.*

[b] *The term "work force" is defined as the number of workers within the Region enumerated by place of work. It includes all persons 14 years of age and older who were at work, that is, those who worked for pay or profit; workers absent from a job or business and not seeking work because of vacation, illness, bad weather, temporary layoff, or labor dispute; and not at work but actively seeking work. These data are provided by the Wisconsin Department of Industry, Labor, and Human Relations on a monthly basis through an industry reporting system. It should be noted that work force tabulations will double count persons holding two jobs, will include those persons who live outside the Region but work within the Region, and exclude those persons living within, but working outside, the Region.*

[c] *The term "employed" refers to the members of the work force actually at work. The number of persons employed is derived by subtracting the number of unemployed workers from the number of persons in the work force.*

[d] *The term "unemployed" refers to those members of the work force who report weekly that they were available and looking for work during all of the previous week but did not work during that week.*

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

the remaining counties. The Milwaukee County proportion of total regional jobs decreased from 68 percent to 67.5 percent from 1972 to 1973, continuing a downward trend from 75 percent in 1960, while Kenosha and Walworth Counties experienced the largest increases, from 5.4 to 5.7 percent and from 3.2 to 3.4 percent, respectively.

Employment levels in the Region's major industry groups increased from 484,600 employed persons in 1970 to 514,100 in 1973, an increase of 6 percent (see Table 7). The transportation equipment industry had the greatest relative increase in employment (nearly 22 percent), while government and educational services had the largest absolute increase (14,400 employees). Three other industries—construction, fabricated metals, and retail trade—experienced appreciable increases in employment of 11, 6, and 5 percent, respectively.

Employment Forecast

The year 2000 regional employment projections prepared by the Commission in 1972 indicate a 1973 forecast employment of approximately 772,200. The actual 1973 employment level in the Region estimated by the Wisconsin Department of Industry, Labor, and Human Relations was 770,000. Thus, the Commission forecast was 0.3 percent higher than the estimate (see Table 8 and Figure 9).

The largest absolute and relative variance of the forecast from the current estimated level occurred in Kenosha County, where the forecast level was 4,600 persons, or nearly 12 percent, lower than the estimated level. The smallest relative variance—0.4 percent—occurred in Milwaukee and Racine Counties.

Table 6

DISTRIBUTION OF EMPLOYMENT IN THE REGION BY COUNTY: 1960-1973

County	Distribution of Employment (In Thousands)													
	1960		1961		1962		1963		1964		1965		1966	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Kenosha	40.1	6.2	36.2	5.7	38.8	6.1	41.9	6.5	40.5	6.2	42.1	6.1	37.3	5.3
Milwaukee	486.2	75.0	473.5	74.9	469.5	73.6	469.1	72.6	472.7	71.8	487.4	71.0	498.9	71.1
Ozaukee	9.5	1.5	9.5	1.5	10.6	1.6	11.2	1.7	12.1	1.8	13.6	2.0	14.6	2.1
Racine	48.5	7.5	49.0	7.8	51.2	8.0	52.9	8.2	55.4	8.4	58.9	8.6	60.1	8.5
Walworth	18.3	2.8	19.1	3.0	19.8	3.1	20.0	3.1	21.3	3.2	22.0	3.2	22.6	3.2
Washington	14.5	2.2	14.1	2.2	14.9	2.3	15.5	2.4	17.0	2.6	18.3	2.7	18.9	2.7
Waukesha	30.8	4.8	31.2	4.9	33.8	5.3	35.5	5.5	39.3	6.0	43.6	6.4	49.6	7.1
Region	647.9	100.0	632.6	100.0	638.6	100.0	646.1	100.0	658.3	100.0	685.9	100.0	702.0	100.0

County	Distribution of Employment (In Thousands)													
	1967		1968		1969		1970		1971		1972		1973	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Kenosha	35.4	5.0	36.7	5.1	36.9	5.0	39.2	5.3	38.7	5.3	40.6	5.4	44.4	5.7
Milwaukee	501.1	70.7	506.3	70.1	515.5	69.6	510.9	68.9	498.1	68.7	509.0	68.0	519.6	67.5
Ozaukee	15.9	2.2	16.2	2.2	17.3	2.3	17.9	2.4	18.1	2.5	19.2	2.6	19.6	2.5
Racine	60.5	8.5	60.5	8.4	62.5	8.5	61.9	8.3	59.4	8.2	63.5	8.5	66.2	8.6
Walworth	22.8	3.2	23.7	3.3	24.3	3.3	24.2	3.3	23.9	3.3	24.0	3.2	25.8	3.4
Washington	19.1	2.7	20.1	2.8	20.2	2.7	20.3	2.7	19.9	2.8	21.1	2.8	21.5	2.8
Waukesha	54.3	7.7	58.9	8.1	63.5	8.6	67.2	9.1	66.9	9.2	71.4	9.5	72.9	9.5
Region	709.1	100.0	722.4	100.0	740.2	100.0	741.6	100.0	725.0	100.0	748.8	100.0	770.0	100.0

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

Table 7

LEVELS OF EMPLOYMENT IN THE REGION BY SELECTED MAJOR INDUSTRY GROUP: 1970 AND 1973

Industry Group	Levels of Employment (In Thousands)					
	1970		1973		Change 1970-1973	
	Number	Percent of Regional Employment	Number	Percent of Regional Employment	Absolute	Percent
Nonelectrical Machinery	68.1	9.2	70.0	9.1	1.9	2.8
Electrical Machinery and Equipment	36.5	4.9	34.6	4.5	- 1.9	- 5.2
Retail Trade	111.2	15.0	116.7	15.2	5.5	4.9
Wholesale Trade	32.0	4.3	32.1	4.2	0.1	0.3
Finance, Insurance, and Real Estate Services	31.2	4.2	32.5	4.2	1.3	4.2
Fabricated Metals	24.6	3.3	26.2	3.4	1.6	6.5
Primary Metals	22.5	3.0	22.4	2.9	- 0.1	- 0.4
Transportation Equipment	22.0	3.0	26.8	3.5	4.8	21.8
Food and Related Products	18.9	2.5	18.3	2.4	- 0.6	- 3.2
Government and Educational Services	78.7	10.6	93.1	12.0	14.4	18.3
Construction	24.0	3.2	26.7	3.5	2.7	11.2
Printing, Publishing, and Allied Products	14.9	2.0	14.7	1.9	- 0.2	- 1.3
Subtotal	484.6	65.2	514.1	66.8	29.5	6.1
Other Employment	257.0	34.8	255.9	33.2	- 1.1	- 0.4
Total Regional Employment	741.6	100.0	770.0	100.0	28.4	3.8

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

Table 8

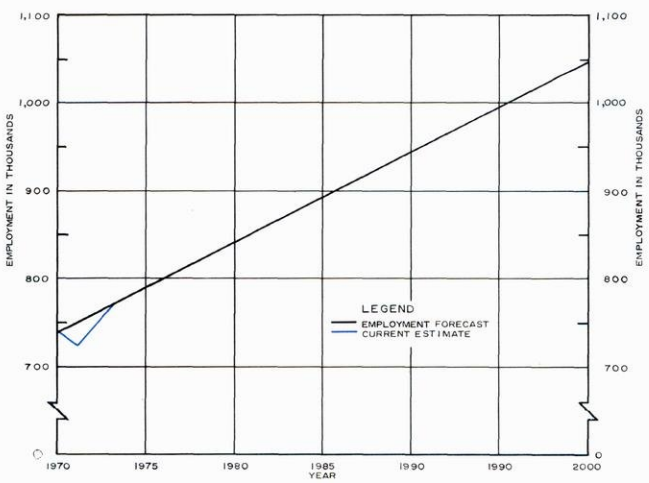
COMPARISON OF 1973 ESTIMATED AND FORECAST EMPLOYMENT LEVELS FOR THE REGION BY COUNTY

County	Employment Levels			
	Estimate July 1, 1973	SEWRPC Forecast July 1, 1973	Difference	
			Number	Percent
Kenosha	44,400	39,800	- 4,600	- 11.6
Milwaukee	519,600	521,900	2,300	0.4
Ozaukee	19,600	19,900	300	1.5
Racine	66,200	65,900	- 300	- 0.4
Walworth	25,800	26,500	700	2.7
Washington	21,500	22,100	600	2.8
Waukesha	72,900	76,100	3,200	4.4
Region	770,000	772,200	2,200	0.3

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

Figure 9

EMPLOYMENT FORECAST AND CURRENT EMPLOYMENT ESTIMATE FOR THE REGION: 1970-2000



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

Existing Land Use (3.2.3 and 4.3.4)

Work continued during 1973 on the analysis of data collected under the regional land use inventory conducted in 1970. The spatial distribution of new urban development as indicated in the 1967 and 1970 land use inventories was compared to determine the extent to which such development conflicted with recommendations in the 1990 regional land use plan. This analysis will be concluded in 1974 as a necessary step toward reevaluation of the regional land use plan and preparation of a new year 2000 regional land use plan.

A special study was also completed concerning offstreet parking lands within the Region, such lands being defined as those with 10 or more parking spaces. Each offstreet parking site identified in the 1970 regional land use inventory was coded to its associated urban land use, namely residential, commercial, industrial, transportation and utility, government and institution, or recreation. This study revealed that about 6,460 acres, or 0.38 percent of the total area and nearly 2 percent of the developed area of the Region, were in offstreet parking use. Over 2,900 acres, or about 45 percent, were in use for offstreet parking associated with commercial land uses; about 1,300 acres, or 21 percent, were associated with manufacturing land uses; and about 1,260 acres, or 20 percent, were associated with institutional land uses.

Inventory of Special-Purpose Districts (3.2.5.2)

During 1973, work continued on the collection of data concerning public and nonpublic elementary and secondary schools and public school districts in the Region. Such data are important to transportation planning in the location and design of transportation facilities such as freeways, standard arterial streets and highways, and transit lines. In addition, school locations and enrollment levels have important implications for changes in the composition and spatial distribution of the population within the Region.

Enrollment estimates for public and nonpublic schools indicate a drop in enrollment of about 1 percent in the public schools and more than 4 percent in the nonpublic schools from 1972 to 1973. As shown in Table 9, public school enrollment in 1973 was estimated at about 381,800, compared to about 385,800 in 1972. Nonpublic school enrollment declined from about 82,200 in 1972 to about 78,800 in 1973. This trend follows the documented decline in the birthrate in the Region which began during the 1960s and greatly accelerated in the early 1970s.

Table 9

PUBLIC AND NONPUBLIC SCHOOL ENROLLMENT IN THE REGION BY COUNTY: 1970 to 1973

County	School Enrollment							
	Public				Nonpublic			
	1970	1971	1972	1973	1970	1971	1972	1973
Kenosha	27,056	27,566	27,768	27,708	5,276	4,928	4,714	4,505
Milwaukee	206,877	208,509	207,436	202,351	61,052	55,325	52,355	49,320
Ozaukee	13,244	13,858	14,325	14,649	2,632	2,360	2,480	2,470
Racine	40,170	40,433	40,936	40,537	8,427	7,875	7,817	7,781
Walworth	14,202	14,306	14,250	14,535	1,368	1,288	1,195	1,168
Washington	15,723	16,281	16,783	17,595	3,446	3,247	3,488	3,392
Waukesha	61,676	63,328	64,315	64,444	11,401	10,429	10,198	10,213
Region	378,948	384,281	385,813	381,819	93,602	85,452	82,247	78,849

County	Change in Public School Enrollment						Change in Nonpublic School Enrollment					
	1970-1971		1971-1972		1972-1973		1970-1971		1971-1972		1972-1973	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Kenosha	510	1.9	202	0.7	- 60	- 0.2	- 348	- 6.6	- 214	- 4.3	- 209	- 4.4
Milwaukee	1,632	0.8	- 1,073	- 0.5	- 5,085	- 2.4	- 5,727	- 9.4	- 2,970	- 5.4	- 3,035	- 5.8
Ozaukee	614	4.6	467	3.4	324	2.3	- 272	- 10.3	120	5.1	- 10	- 0.4
Racine	263	0.7	503	1.2	- 399	- 1.0	- 552	- 6.6	- 58	- 0.7	- 36	- 0.5
Walworth	104	0.7	- 56	- 0.4	285	2.0	- 80	- 5.8	- 93	- 7.2	- 27	- 2.2
Washington	558	3.5	502	3.1	812	4.8	- 199	- 5.8	241	7.4	- 96	- 2.8
Waukesha	1,652	2.7	987	1.6	129	0.2	- 972	- 8.5	- 231	- 2.2	15	0.1
Region	5,333	1.4	1,532	0.4	- 3,994	- 1.0	- 8,150	- 8.7	- 3,205	- 3.8	- 3,398	- 4.1

Source: Wisconsin Department of Public Instruction and SEWRPC.

The total number of public schools in the Region declined by about 2 percent, from 657 in the 1971-1972 school year to 647 in the 1972-1973 school year. The number of nonpublic schools remained constant at 300.

The operation and maintenance of the public schools was provided by 103 public school districts, of which 48 are districts in which only kindergarten through eighth grade (K-8) are operated; 10 are union high school districts in which only grades 8-12 are operated; and 45 are districts in which kindergarten through twelfth grade (K-12) are operated.

Inventory of Land Subdivision Activity (3.2.3)

Data on land subdivision activity are an important input to the surveillance function of the continuing regional land use-transportation study, as well as an important part of the general planning data base for the Region. An initial study conducted during 1969 included an analyses of the quantity, character, rate, and geographic location of land subdivision activity from 1920 through 1969. The study culminated in the publication of SEWRPC Technical Report No. 9, Residential Land Subdivision in Southeastern Wisconsin. The data presented in that report are maintained current annually with the cooperation of the Wisconsin Department of Local Affairs and Development.

The inventory revealed that 99 residential subdivision plats were recorded in the Region between January 1 and December 31 of 1973. These plats encompassed 2,670 acres of land and averaged more than 27 acres each. As shown in Table 10, nearly half of the total platted residential acreage occurred in Waukesha County, reflecting a continuing trend in that county of large-lot, unsewered subdivisions. As shown on Map 4, the highly dispersed pattern of residential land development observed from 1950 through 1972 continued through 1973. A total of 37 of the 99 plats, encompassing 1,418 of the 2,670 acres platted during the year and located primarily in Waukesha County, were served by private onsite septic tank sewage disposal systems and thus were not in conformance with the adopted regional development standard pertaining to the provision of centralized public sanitary sewer service to all new urban residential development. These 37 subdivisions created a total of 1,010 new residential building sites with a corresponding need for 1,010 new septic tank installations when fully developed.

Table 10

RESIDENTIAL SUBDIVISION PLATTING ACTIVITY IN THE REGION: 1973

County	Subdivisions Platted					
			Served by Public Sanitary Sewer		Not Served by Public Sanitary Sewer	
	Number	Percent of Total	Number	Percent of Total Subdivisions	Number	Percent of Total Subdivisions
Kenosha	8	8.1	6	6.1	2	2.0
Milwaukee	18	18.2	18	18.2	0	0.0
Ozaukee	10	10.1	9	9.1	1	1.0
Racine	6	6.0	6	6.0	0	0.0
Walworth	9	9.1	4	4.1	5	5.0
Washington	18	18.2	4	4.1	14	14.1
Waukesha	30	30.3	15	15.1	15	15.2
Region	99	100.0	62	62.7	37	37.3

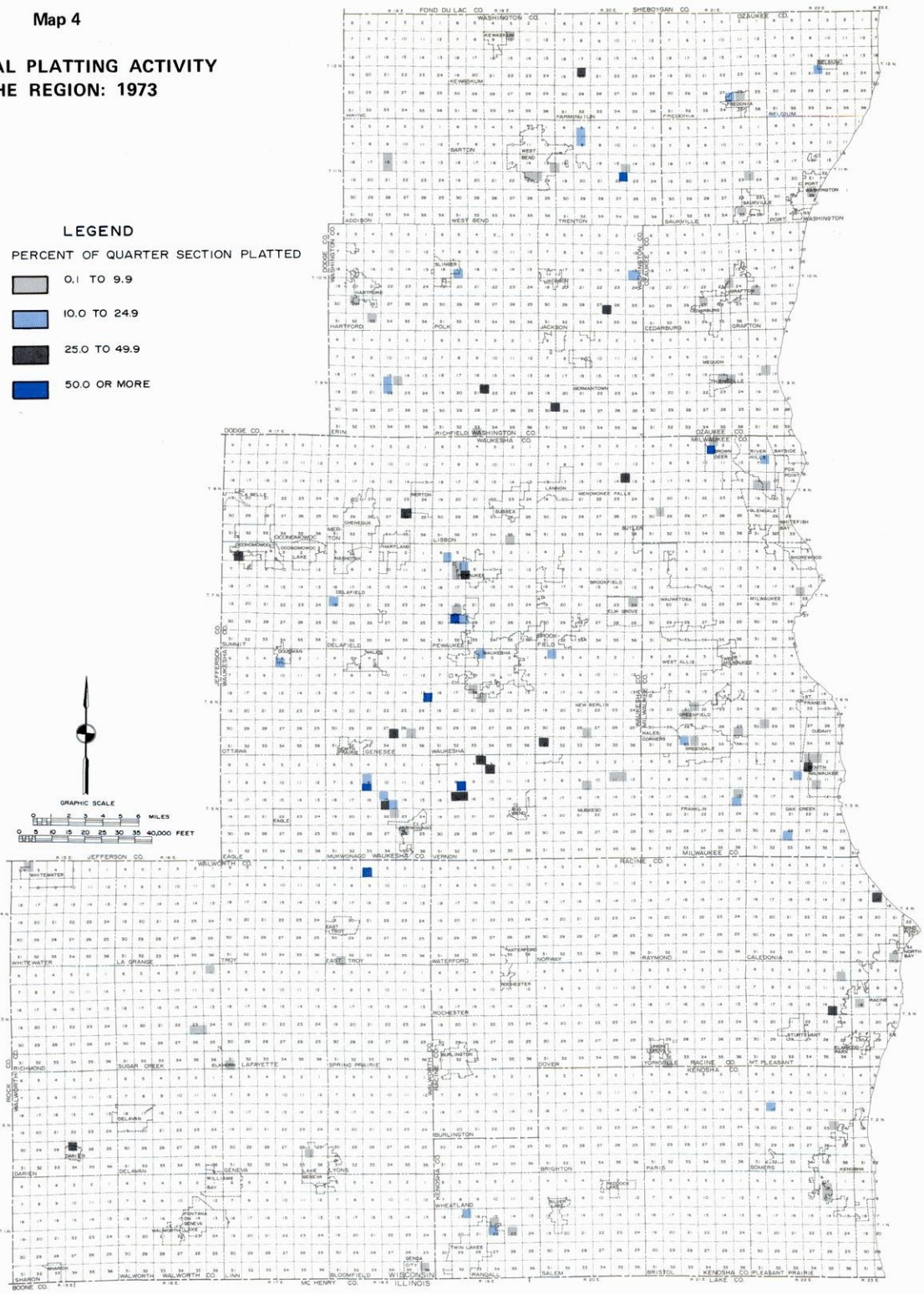
County	Acres Platted					
			Served by Public Sanitary Sewer		Not Served by Public Sanitary Sewer	
	Number	Percent of Total	Acres	Percent of Total Area	Acres	Percent of Total Area
Kenosha	98	3.7	69	2.6	29	1.1
Milwaukee	374	14.0	374	14.0	0	0.0
Ozaukee	88	3.2	76	2.8	12	0.4
Racine	175	6.6	175	6.6	0	0.0
Walworth	106	4.0	51	1.9	55	2.1
Washington	535	20.0	30	1.1	505	18.9
Waukesha	1,294	48.5	477	17.9	817	30.6
Region	2,670	100.0	1,252	46.9	1,418	53.1

County	Lots Platted					
			Served by Public Sanitary Sewer		Not Served by Public Sanitary Sewer	
	Number	Percent of Total	Number	Percent of Total Lots	Number	Percent of Total Lots
Kenosha	176	5.5	138	4.3	38	1.2
Milwaukee	453	14.2	453	14.2	0	0.0
Ozaukee	210	6.6	203	6.4	7	0.2
Racine	448	14.1	448	14.1	0	0.0
Walworth	121	3.8	85	2.7	36	1.1
Washington	425	13.4	57	1.8	368	11.6
Waukesha	1,348	42.4	787	24.7	561	17.7
Region	3,181	100.0	2,171	68.3	1,010	31.8

Source: Wisconsin Department of Local Affairs and Development and SEWRPC.

Map 4

RESIDENTIAL PLATTING ACTIVITY IN THE REGION: 1973



A total of 99 residential subdivision plats were recorded in the Region during 1973. These subdivision plats encompassed about 2,670 acres of land, averaging more than 27 acres per plat. About half of the total platted residential acreage in the Region during the year occurred in Waukesha County. Of the 99 plats recorded during the year, 37 plats encompassing about 1,400 acres of land were designed to be served by private onsite septic tank sewage disposal systems, and thus represent development not in conformance with the adopted regional development standard pertaining to the provision of centralized public sanitary sewer service to all new urban residential development.

Source: Wisconsin Department of Local Affairs and SEWRPC.

Transportation Facilities (3.2.1 and 4.3)

Transportation facilities are among the most critical elements influencing travel characteristics and shaping the spatial distribution of rural and urban development within an area. The availability or lack of a transportation facility will influence both the path and the mode, as well as the frequency, of personal travel. In addition, the accessibility a transportation facility provides will influence the intensity and type of land use development which takes place. The continuing regional land use-transportation study must, therefore, include an evaluation of both the supply of and the demand for transportation facilities. Evaluation of the supply of transportation facilities is achieved by taking inventory of the location and capacity of the existing transportation system, while evaluation of demand is achieved by analyzing inventories of travel habits and patterns.

Highway Facilities and Service Levels (3.2.1.1)

The Commission conducted a complete inventory of the location and capacity of the existing arterial street and highway system in the Region as part of the initial land use-transportation study. To permit a reappraisal of the current system, as well as to maintain current the extensive planning and engineering data on transportation system capacity collected during the initial study, this inventory was updated in 1967, 1970, and 1972. The results were reported in the Commission's annual reports for each of these three years.

Because of the 1972 reinventory, it was not considered necessary to conduct a similar reinventory during 1973. The Commission, however, maintained current the inventory of physical characteristics of the arterial street and highway system by utilizing secondary data sources, which include the capital improvement project completion reports from the public works departments of the Cities of Kenosha, Milwaukee, Racine, West Allis, Wauwatosa, and Waukesha, and the state trunk highway log. These sources provide accurate, current data on the physical characteristics of all reconstructed or newly constructed arterial street and highway facilities in the major urban areas of the Region as well as the entire rural area. The Commission also continued to collate traffic count data as collected by various agencies and units of government in the Region in order to provide a basis for continuing surveillance of existing arterial street and highway system use.

Transit Facilities and Service Levels (3.2.1.2 and 4.3.6)

Comprehensive regional transportation planning must consider all modes of travel, with particular emphasis on how such modes may interact to affect the overall use of each mode. If a balanced regional transportation system is to be developed in which each mode of transportation is assigned that portion of the total travel demand which it is best able to carry, then careful attention must be given to the interaction between public and private modes of transportation for the movement of persons.

The principal emphasis in such attention at the regional level must be on a determination of the major mass transit facilities which may be needed and which must be designed as integral parts of the total regional transportation system. Such major facilities consist of the rapid and modified rapid transit facilities which combine high-speed service with high capacity. Existing mass transit facilities of all types, however, must also be inventoried in a regional land use-transportation planning program, since they form the basic feeder system to major rapid and modified rapid transit facilities, carry a substantial portion of the person trips within certain subareas of the Region, and affect any evaluation of modal split.

For the purposes of the initial regional land use-transportation study, mass transit was defined as the transportation of persons by bus, rail, or other conveyance providing relatively frequent service to the general public on regular schedules over prescribed routes. In its most common form in the Region, mass transit is provided by buses operating on urban streets. Rapid transit was defined as mass transit operating over exclusive grade-separated rights-of-way to provide highspeed service. There is presently no true rapid transit service in the Region. It should be noted that the term mass transit includes rapid transit, and that the latter is distinguished primarily by the high level of service offered. It should also be noted that a "modified" form of rapid transit service can be provided by buses operating on freeways as long as the freeways used for such service continue to operate at or under design capacities and at design speeds.

A complete inventory of the supply of public transportation services was completed as part of the initial land use-transportation study. During 1973 the Commission reinventoried elements of the public transportation system to provide current data related to the Commission's travel inventories.

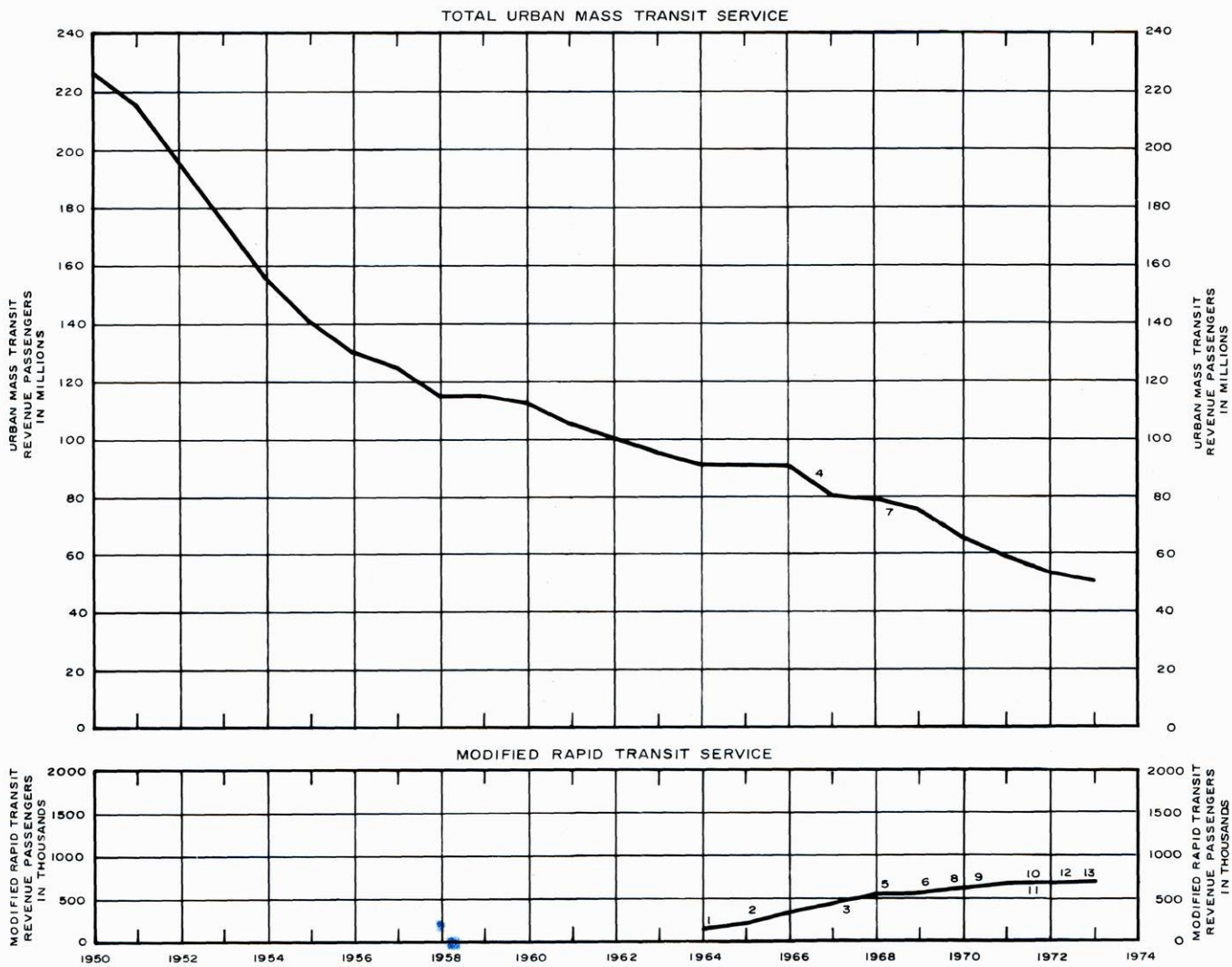
Urban and Suburban Mass Transit

During 1973, urban and suburban mass transit service was available in the Milwaukee, Kenosha, Racine, and Waukesha urban areas. Although total overall ridership in these areas was down—the result of a decline in revenue passengers in the Milwaukee area—the rate of decline in the Milwaukee area was less than in recent years and overall ridership in each of the other areas actually increased.

Total ridership for the four areas declined by nearly 3 million revenue passengers, from about 54 million in 1972 to about 51 million in 1973, as shown in Figure 10. This was the result of a decline of about 2.8 million revenue passengers in Milwaukee County, which is served by the Milwaukee and Suburban Transport Corporation. In this area, ridership dropped from 52.1 million in 1972 to about 49.3 million in 1973, or about 6 percent. This is the smallest rate of decline in the area served by the Transport Corporation since 1969, however, and may be attributed to the motor fuel shortage which became evident late in 1973.

Figure 10

REVENUE PASSENGERS CARRIED ON URBAN MASS TRANSIT AND ON MODIFIED RAPID TRANSIT IN THE REGION: 1950-1973



1. INAUGURATION OF MODIFIED RAPID TRANSIT SERVICE AT MAYFAIR SHOPPING CENTER–MARCH 1964.
2. INAUGURATION OF MODIFIED RAPID TRANSIT SERVICE AT BAY SHORE SHOPPING CENTER–NOVEMBER 1965.
3. INAUGURATION OF MODIFIED RAPID TRANSIT SERVICE AT TREASURE ISLAND (CITY OF WEST ALLIS)–NOVEMBER 1967.
4. INCLUDES PERIODS OF TRANSIT STRIKES AND LOCAL CIVIL DISORDERS.
5. INAUGURATION OF MODIFIED RAPID TRANSIT SERVICE AT TREASURE ISLAND (CAPITOL DRIVE)–APRIL 1968.
6. INAUGURATION OF MODIFIED RAPID TRANSIT SERVICE AT COUNTRY FAIR SHOPPING CENTER (VILLAGE OF HALES CORNERS)–APRIL 1969.
7. DOES NOT INCLUDE REVENUE PASSENGERS CARRIED BY LAKESHORE TRANSIT–KENOSHA, INC., DURING JANUARY AND FEBRUARY 1969. SERVICE WAS DISCONTINUED AT THE END OF FEBRUARY 1969; DATA ON RIDERSHIP FOR JANUARY AND FEBRUARY ARE NOT AVAILABLE.
8. INAUGURATION OF MODIFIED RAPID TRANSIT SERVICE AT SPRING MALL SHOPPING CENTER (CITY OF GREENFIELD)–JULY 6, 1970.
9. INAUGURATION OF MODIFIED RAPID TRANSIT SERVICE AT TARGET SHOPPING CENTER (CITY OF MILWAUKEE)–MAY 17, 1971.
10. DISCONTINUANCE OF MODIFIED RAPID TRANSIT SERVICE AT BAY SHORE SHOPPING CENTER DUE TO LACK OF PARKING FACILITIES–AUGUST 11, 1972.
11. INAUGURATION OF MODIFIED RAPID TRANSIT SERVICE AT NORTHLAND SHOPPING CENTER (CITY OF MILWAUKEE)–AUGUST 14, 1972.
12. INAUGURATION OF MODIFIED RAPID TRANSIT SERVICE AT NORTHSHORE "PARK N' RIDE" LOT (CITY OF GLENDALE)–JANUARY 1973.
13. INAUGURATION OF MODIFIED RAPID TRANSIT SERVICE AT GOERKES CORNERS PUBLIC TRANSIT STATION (TOWN OF BROOKFIELD)–OCTOBER 29, 1973.

Source: Milwaukee and Suburban Transport Corporation; Flash City Transit; Wisconsin Coach Lines, Inc.; City of Kenosha Parking and Transit Commission; Wisconsin Public Service Commission; and SEWRPC.

Within Milwaukee County the Transport Corporation operated 53 local and express routes during the year (see Map 5). The adult basic cash fare remained at 50 cents on the local system and 60 cents on the freeway flyer system. The cost of a weekly pass remained at $5, and the five-cent-per-zone fare for rides to outlying areas remained the same.

In the City of Racine, where transit service is provided by Flash City Transit Company on 10 routes, ridership increased 1 percent, from about 526,000 revenue passengers in 1972 to about 530,000 in 1973 (see Map 6). The increase, the first since 1959, may be largely attributed to the restoration of Saturday service in mid-1973. The basic adult cash fare of 40 cents and the 10-cent charge for a transfer remained the same. The city continued to subsidize bus company operations during the year. In addition to the foregoing service, transit service is provided between the City of Racine and the University of Wisconsin-Parkside campus by the Parkside Vet's Club, utilizing a chartered bus. This service costs 75 cents one way or $45 for a semester pass.

Service in the City of Kenosha is provided by the City of Kenosha Transit-Parking Commission, the only publicly operated system in the Region, which operates six city routes and six special routes primarily servicing schools (see Map 6). Ridership in the Kenosha area increased 14 percent, from about 503,000 revenue passengers in 1972 to about 574,000 in 1973. This increase continues a trend toward increasing ridership begun when the Kenosha transit system was reestablished as a publicly owned and operated system in September 1971. The basic fare for all service is 25 cents, the lowest of any system in the Region. The University of Wisconsin-Parkside provides urban mass transit service on two routes in the Kenosha area. These two routes are designed primarily to serve students, faculty, staff, and visitors to its main campus. One route consists of free shuttle bus service operated on the main campus, while the second consists of free shuttle bus service between the main campus and a branch campus in the City of Kenosha (see Map 6).

Service in the City of Waukesha is provided by Wisconsin Coach Lines, Inc., which operates three city routes and 17 routes primarily servicing schools (see Map 5). Ridership on the three city routes declined 7 percent, from about 39,000 revenue passengers in 1972 to about 36,000 in 1973. This loss, however, was offset by a 5 percent increase in the number of school riders on the 17 routes, from about 238,000 revenue passengers in 1972 to about 250,000 in 1973, reflecting increasing school enrollment. This resulted in an increase in the number of revenue passengers for the Waukesha system as a whole of about 9,000 persons, or 3 percent. The adult cash fare on the city routes remained at 40 cents.

On suburban commuter routes operated by Wisconsin Coach Lines, Inc., ridership totaled about 427,000 revenue passengers in 1973, down 9 percent from approximately 467,000 in 1972. Declines were experienced on all routes except the Milwaukee-Watertown route, which increased 6 percent over 1972, perhaps due to the establishment during 1973 of the Goerkes Corners public transit station, which provides a convenient park-and-ride facility, and to the abandonment in late 1972 of the Milwaukee Road's "Cannonball" commuter rail service in the same travel corridor. Ridership on the Milwaukee-Waukesha and Milwaukee-Kenosha routes declined about 8 percent, and on the Milwaukee-Port Washington route, about 9 percent.

In contrast to the overall decline in mass transit use in the Milwaukee urbanized area is the continued increase in the use of freeway flyer service provided by the Milwaukee and Suburban Transport Corporation and Wisconsin Coach Lines, Inc. This service is a prototype of the rapid transit and modified rapid transit service recommended in the transportation plan to be provided in the Milwaukee area. Freeway flyer service began in 1964 with the establishment of an initial route between the Mayfair Shopping Center in the City of Wauwatosa and the Milwaukee central business district (CBD). By the end of 1973, nine freeway flyer routes were in operation.

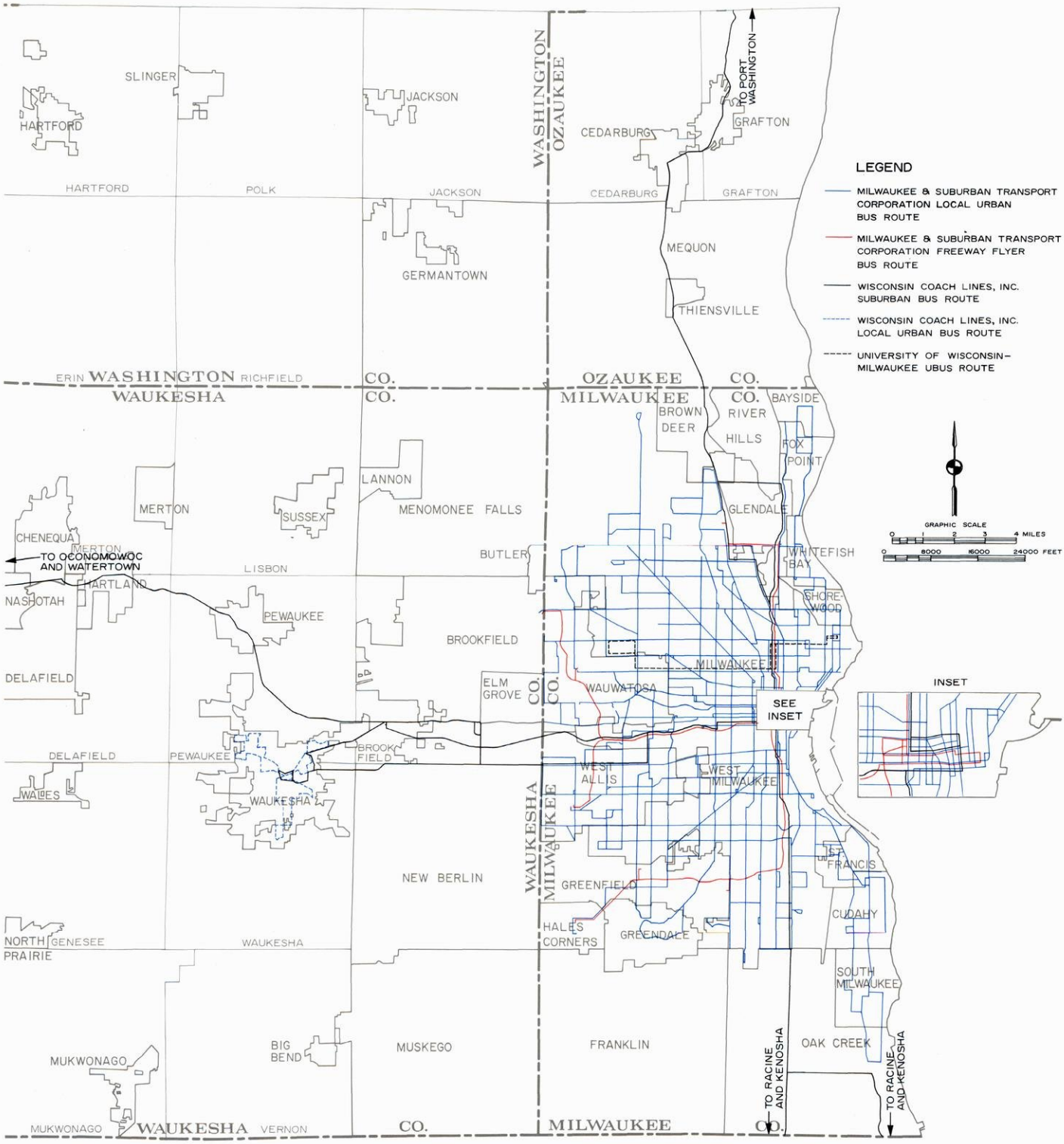
During 1973, freeway flyer service was inaugurated between a new surface parking lot, located on excess North-South Freeway right-of-way in the Silver Spring interchange near the Bay Shore Shopping Center, and the Milwaukee CBD. The lot was constructed with funds provided by Milwaukee County, the Wisconsin Department of Transportation, and the U. S. Department of Transportation, Federal Highway Administration. The project constituted the first use of public funds for the construction of parking facilities related to mass transit in the Milwaukee area. In July 1973 this route, called the Northshore route, became the first to offer service during off-peak hours on a Monday through Friday basis. In October 1973, Wisconsin Coach Lines, Inc. inaugurated freeway flyer service between a new public transit station located at the Goerkes Corners interchange on IH-94 in the Town of Brookfield and the Milwaukee CBD. This new facility was constructed with funds provided by the U. S. Department of Transportation, Federal Highway Administration; and the Wisconsin Department of Transportation, Division of Highways.

Selected characteristics pertaining to each freeway flyer route in the Region are shown in Table 11. As shown in Figure 10, total annual ridership on the freeway flyer service has increased steadily from about 81,000 revenue passengers in 1964 to about 721,000 in 1973. The 1973 ridership increase totaled more than 15,000 revenue passengers, an increase of about 2 percent.

The historical trend in mass transit ridership, as well as the Commission's alternative forecasts of total transit ridership to 1990, are shown in Figure 11. Each of the forecasts is based upon a separate set of assumptions concerning the action or lack of action during the forecast period to promote and encourage transit use. These forecasts range from a high of about 150 million revenue passengers per year to a low of about 27 million per year. The forecast high could occur if public action is taken to fully implement the recentralization recommendations in

Map 5

URBAN AND SUBURBAN MASS TRANSIT ROUTES IN THE MILWAUKEE URBANIZED AREA: 1973

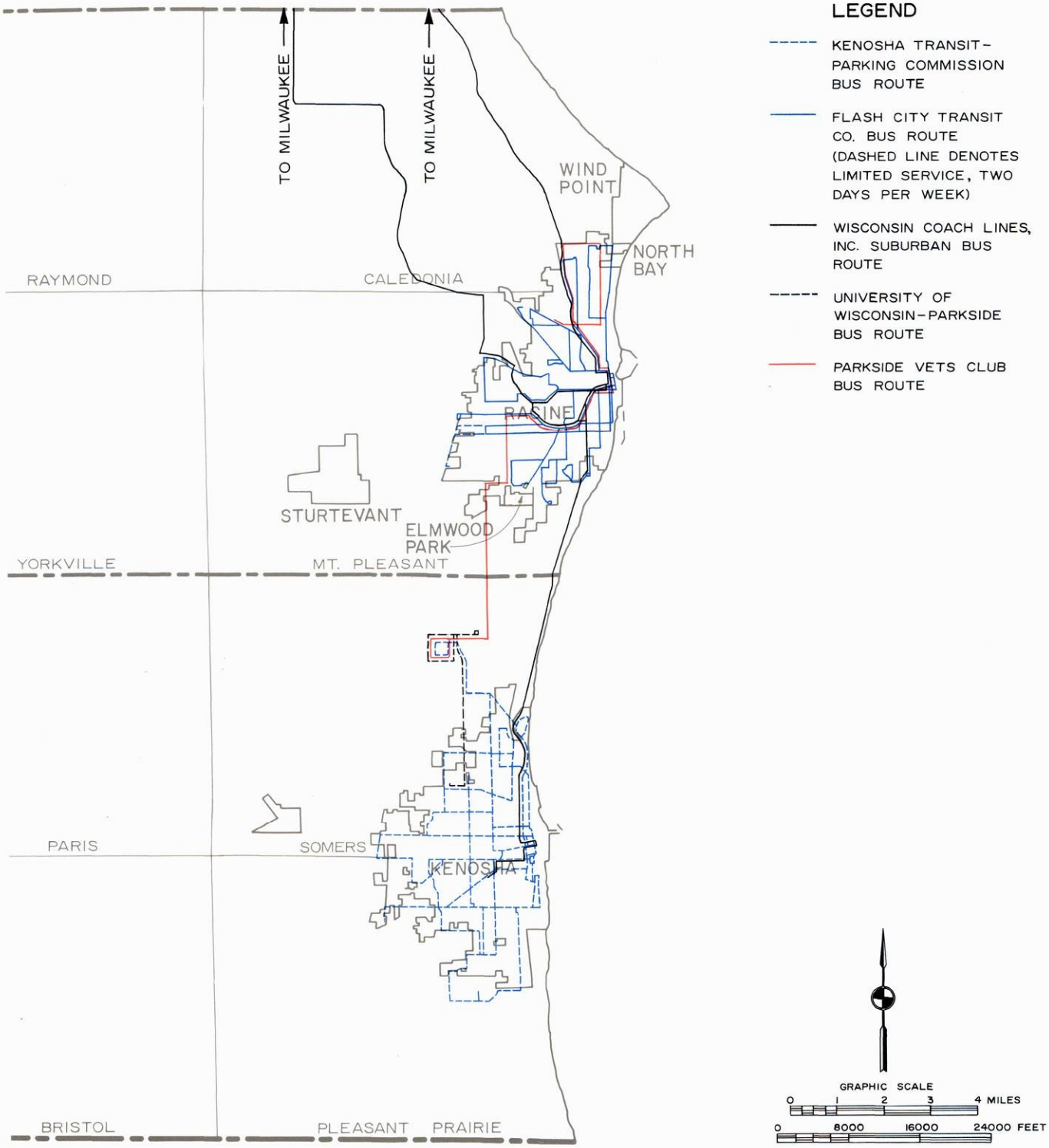


Mass transit service in the Milwaukee urbanized area during 1973 was provided by two transit operators. The Milwaukee and Suburban Transport Corporation provided three types of urban mass transit service, including local urban bus service, freeway flyer express bus service, and special contract service for the students, faculty, and staff of the University of Wisconsin-Milwaukee. Wisconsin Coach Lines, Inc. provided local bus service in the City of Waukesha and suburban bus service to other portions of the Milwaukee urbanized area. Total ridership on Milwaukee and Suburban Transport Corporation route lines declined from about 52.1 million revenue passengers in 1972 to about 49.3 million revenue passengers in 1973, a drop of about 6 percent. This decline, however, represents the smallest rate of decline in Transport Corporation ridership since 1969, and may be attributed to the motor fuel shortage which became evident late in 1973. Total ridership on the local bus service by Wisconsin Coach Lines, Inc. in Waukesha increased about 3 percent during 1973, representing about 9,000 additional riding passengers. Ridership on the suburban bus lines operated by Wisconsin Coach Lines, Inc. declined during 1973, down 9 percent from the 1972 revenue passenger level of about 467,000.

Source: SEWRPC.

Map 6

URBAN AND SUBURBAN MASS TRANSIT ROUTES IN THE KENOSHA AND RACINE URBANIZED AREAS :1973



Mass transit service in the Kenosha and Racine urbanized areas during 1973 was provided by the Kenosha Transit-Parking Commission, Flash City Transit Company, Wisconsin Coach Lines, Inc., the University of Wisconsin-Parkside, and the University of Wisconsin-Parkside Vet's Club, the latter two operations directly aimed at serving Wisconsin-Parkside faculty, staff, and students. The system operated by the Kenosha Transit-Parking Commission is the only publicly owned and operated mass transit system in the Region. Ridership on this system increased by about 14 percent during 1973, from about 503,000 revenue passengers in 1972 to about 574,000 revenue passengers in 1973. Ridership on the Flash City Transit Company routes in the City of Racine increased slightly, from about 526,000 revenue passengers in 1972 to about 530,000 revenue passengers in 1973. The suburban bus lines operated by the Wisconsin Coach Lines, Inc. in the Kenosha and Racine urbanized areas represent extensions of routes originating in the Milwaukee urbanized area.

Source: SEWRPC.

Table 11

SELECTED CHARACTERISTICS OF MODIFIED RAPID TRANSIT (FREEWAY FLYER) ROUTES IN THE REGION: 1973

Name of Route	Date Route Established	Route Description		Length of Route (One-Way Miles)	Average Weekday Passenger Volume		
		From	To		Initial Year of Operation	Peak Year	1973
Mayfair	03/30/64	STH 100 and W. North Avenue, City of Wauwatosa	Milwaukee CBD	10.2	416	955	710
Bay Shore[a]	11/29/65	N. Port Washington Road and Silver Spring Drive, City of Glendale	Milwaukee CBD	7.1	351	645	--
Treasure Island–West Allis	11/06/67	STH 100 and Cleveland Avenue, City of West Allis	Milwaukee CBD	9.8	204	445	402
Treasure Island–Brookfield	04/22/68	STH 190 and N. 124th Street, City of Brookfield	Milwaukee CBD	12.5	142	216	216
Country Fair	04/14/69	STH 100 and W. Grange Avenue, Village of Hales Corners	Milwaukee CBD	14.6	200	312	312
Spring Mall	07/06/70	S. 76th Street and W. Cold Spring Road, City of Greenfield	Milwaukee CBD	12.0	178	373	373
Target	05/17/71	USH 41 and W. Layton Avenue, City of Greenfield	Milwaukee CBD	8.7	141	226	226
Northland-Teutonia	08/14/72	6200 block of N. Teutonia Avenue, City of Milwaukee	Milwaukee CBD	9.0	418	418	249
Northshore	01/02/73	N. Port Washington Road and Silver Spring Drive, City of Glendale	Milwaukee CBD	6.7	358	358	358
Goerkes Corners	10/29/73	IH 94, USH 18, and N. Barker Road, Town of Brookfield	Milwaukee CBD	13.6	60	60	60

[a] *Discontinued after August 11, 1972. For the remainder of 1972, the Bay Shore route was partially replaced by the Northland-Teutonia route, and in 1973 was permanently replaced by the Northshore route.*

Source: SEWRPC.

the adopted general land use plan and the transit service improvement recommendations in the adopted regional transportation plan, as well as expansion of and refinements to those recommendations formulated under the Milwaukee County Mass Transit Technical Planning Study, all of which are intended to reverse the downward trend in ridership. The forecast low could occur under a policy of no positive public action toward implementation of those recommendations.

As shown in Figure 11, forecast 1973 transit use, based on implementation of the adopted regional land use and transportation plans, was 103 million revenue passengers. The actual total of about 51 million, however, was less than half the forecast level. The difference may be largely attributed to the fact that major improvements in transit service recommended under the adopted transportation plan have not occurred. At the end of 1973, limited modified rapid transit service in the form of freeway flyer service was being provided to seven of the 39 loading and unloading points recommended in the adopted regional surface transportation plan, while full modified rapid transit service was being provided to one additional point—the Northshore park-and-ride lot on the North-South Freeway.

The historical trends in freeway flyer use on individual routes are shown in Figure 12. Ridership on the Mayfair and Treasure Island-West Allis routes, which show similar development patterns, appears to have leveled off, while growth is still strong on the Spring Mall and Northshore routes. A pattern of seasonal variation in freeway flyer use is also apparent, with daily ridership on most of the routes peaking during the winter months and dropping to a low point during the summer months.

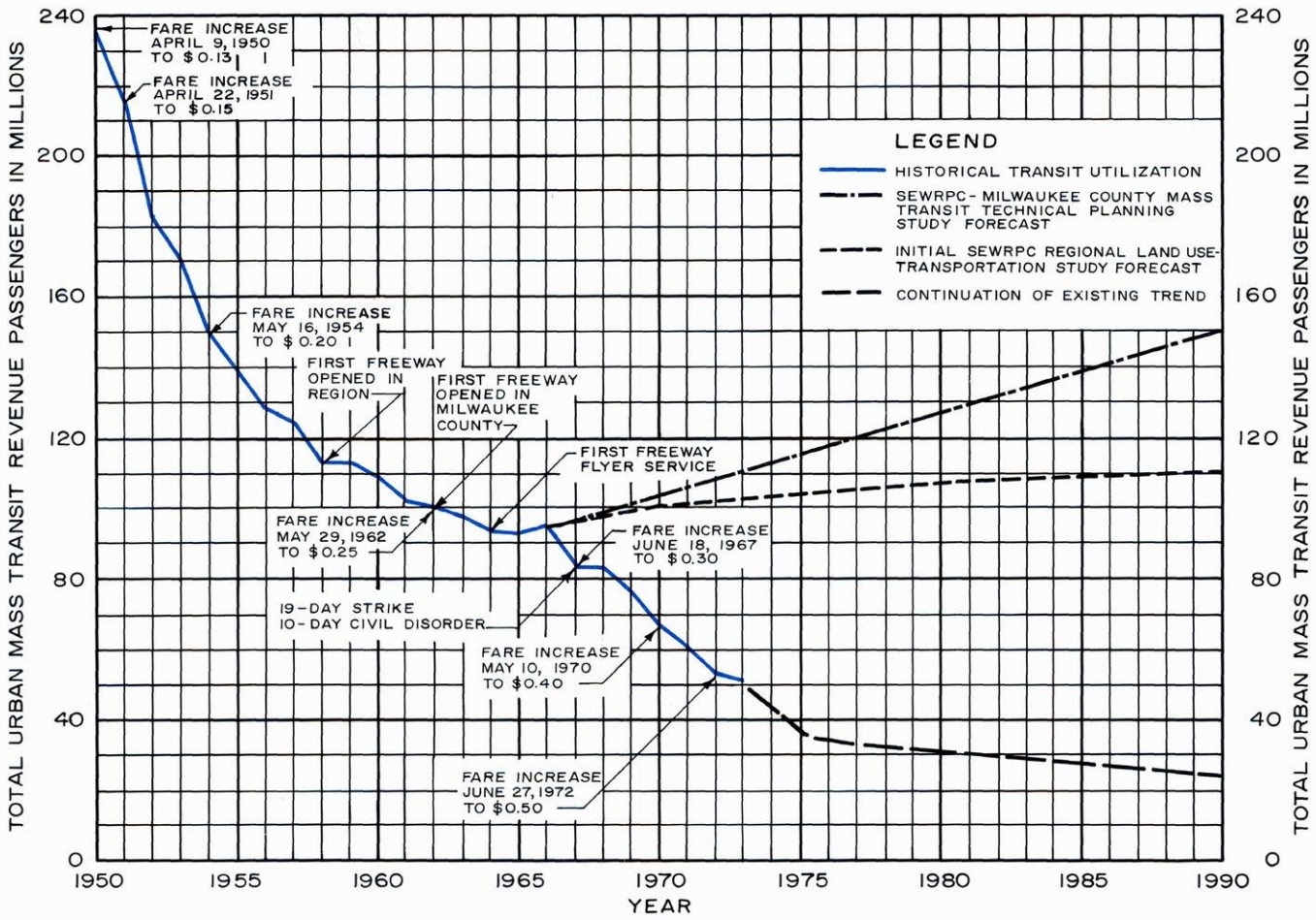
Rail and Intercity Bus Service

Railroad passenger service in the Region at the end of 1973 was provided over about 97 miles of rail line by two privately owned railroads—the Chicago and Northwestern Transportation Company (C & NW) and the Chicago, Milwaukee, St. Paul and Pacific Railroad Company (Milwaukee Road)—and by the quasi-public National Railroad Passenger Corporation (Amtrak), as shown on Map 7. Weekday passenger service provided by the C & NW included two trains in each direction between the Cities of Lake Geneva and Chicago, and nine trains in each direction between the Cities of Kenosha and Chicago. The Milwaukee Road provided one train in each direction Monday through Friday between the Village of Walworth and the City of Chicago. In 1973, the Milwaukee Road was allowed to discontinue service on this route on weekends and holidays.

Amtrak service included one train daily in each direction between the Cities of Chicago and Seattle with a stop in the City of Milwaukee; one train daily in each direction

Figure 11

HISTORICAL TREND AND ALTERNATIVE FORECASTS OF URBAN MASS TRANSIT USE IN THE REGION: 1950-1990



NOTE: FARE INCREASES SHOWN IN THIS FIGURE REFER ONLY TO THE MILWAUKEE AND SUBURBAN TRANSPORT CORP. OPERATION AND TO THE SINGLE RIDE ADULT CASH FARE. ADULT TICKET BOOK FARE INCREASES OCCURRED ON APRIL 22, 1951; DECEMBER 2, 1951; DECEMBER 26, 1954; JUNE 29, 1958; JANUARY 11, 1959; MAY 29, 1962; JUNE 18, 1967; AUGUST 17, 1969; JANUARY 23, 1970; AND MAY 10, 1970. WEEKLY PASS FARE INCREASES OCCURRED ON APRIL 9, 1950; APRIL 22, 1951; DECEMBER 2, 1951; NOVEMBER 1, 1953; MAY 16, 1954; JUNE 29, 1958; DECEMBER 17, 1961; JUNE 18, 1967; MAY 25, 1969; AUGUST 17, 1969; MAY 10, 1970; AND JUNE 27, 1972.

Source: SEWRPC.

between the Cities of Chicago and Minneapolis (with an extension to Seattle three days a week) with a stop in Milwaukee; and five trains daily in each direction between the Cities of Milwaukee and Chicago, four of which stop in the Village of Sturtevant. Amtrak discontinued through train service between the Cities of Milwaukee and St. Louis in October 1973.

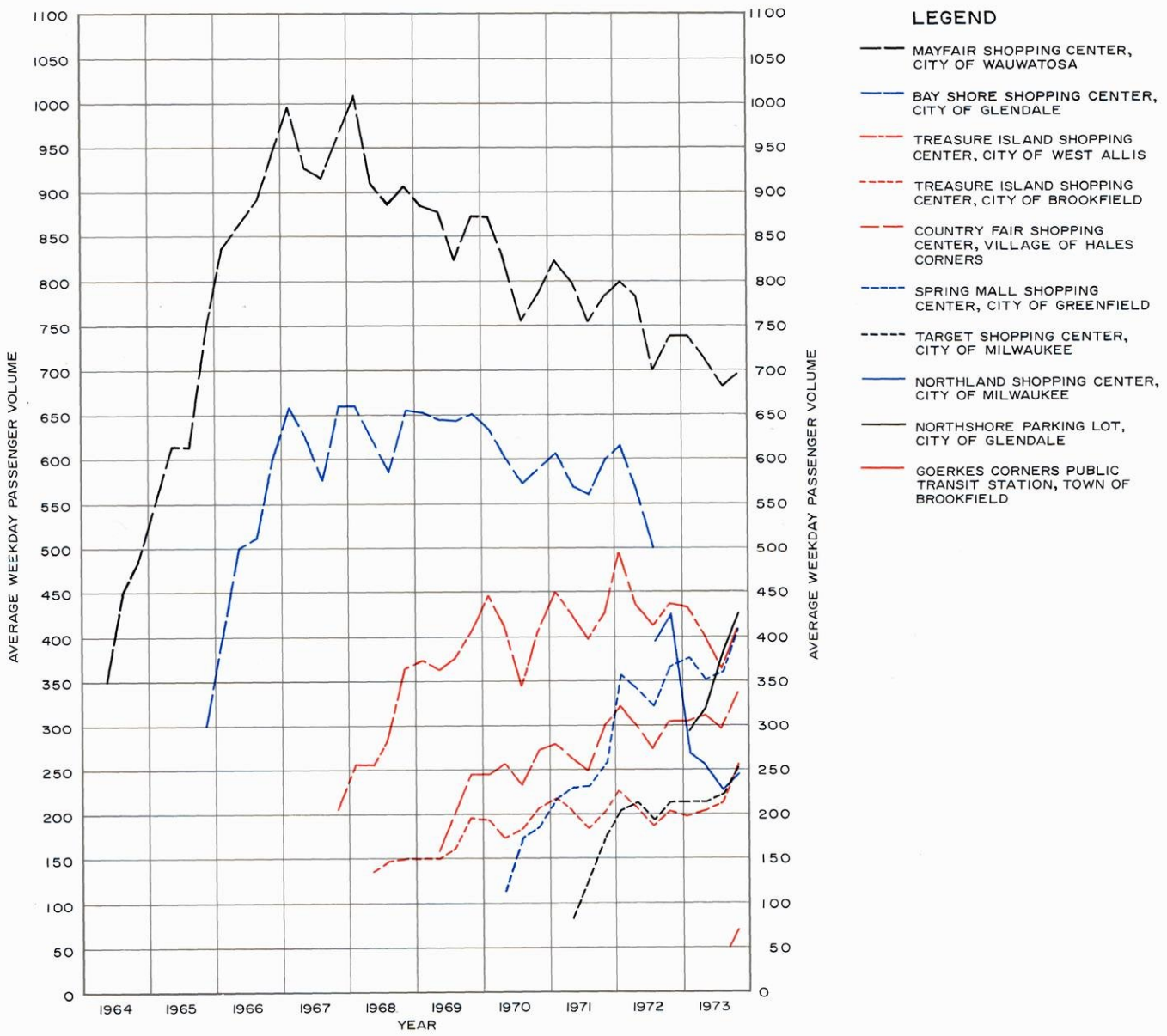
Intercity bus service was provided by eight private companies operating in the Region: Badger Coaches, Inc.; Central-West Motor Stages, Inc.; Greyhound Lines-West; Peoria-Rockford Bus Company; Scholastic Transit Company and its subsidiary, North American Coach Company; Tri-State Coach Lines, Inc.; Wisconsin Coach Lines, Inc.; and Wisconsin-Michigan Coaches, Inc. During 1973, they operated intercity bus lines over a network of about 500 miles of streets and highways (see Map 7).

Automobile and Truck Availability
(3.2.1.4, 4.2.5, and 4.3.5)

The inventory of automobile and truck availability is maintained current annually by county and civil division. Motor vehicle registration data of the Wisconsin Department of Transportation indicate that the number of automobiles and trucks available to residents in the Region increased again in fiscal 1973. There were 727,620 automobiles available, an increase of nearly

Figure 12

REVENUE PASSENGERS CARRIED ON MODIFIED RAPID TRANSIT IN THE REGION BY ROUTE: 1964-1973



Source: Milwaukee and Suburban Transport Corporation.

5 percent from 1972 (see Table 12). The number of trucks available increased to 85,262, about 7 percent above the 1972 level (see Table 13).

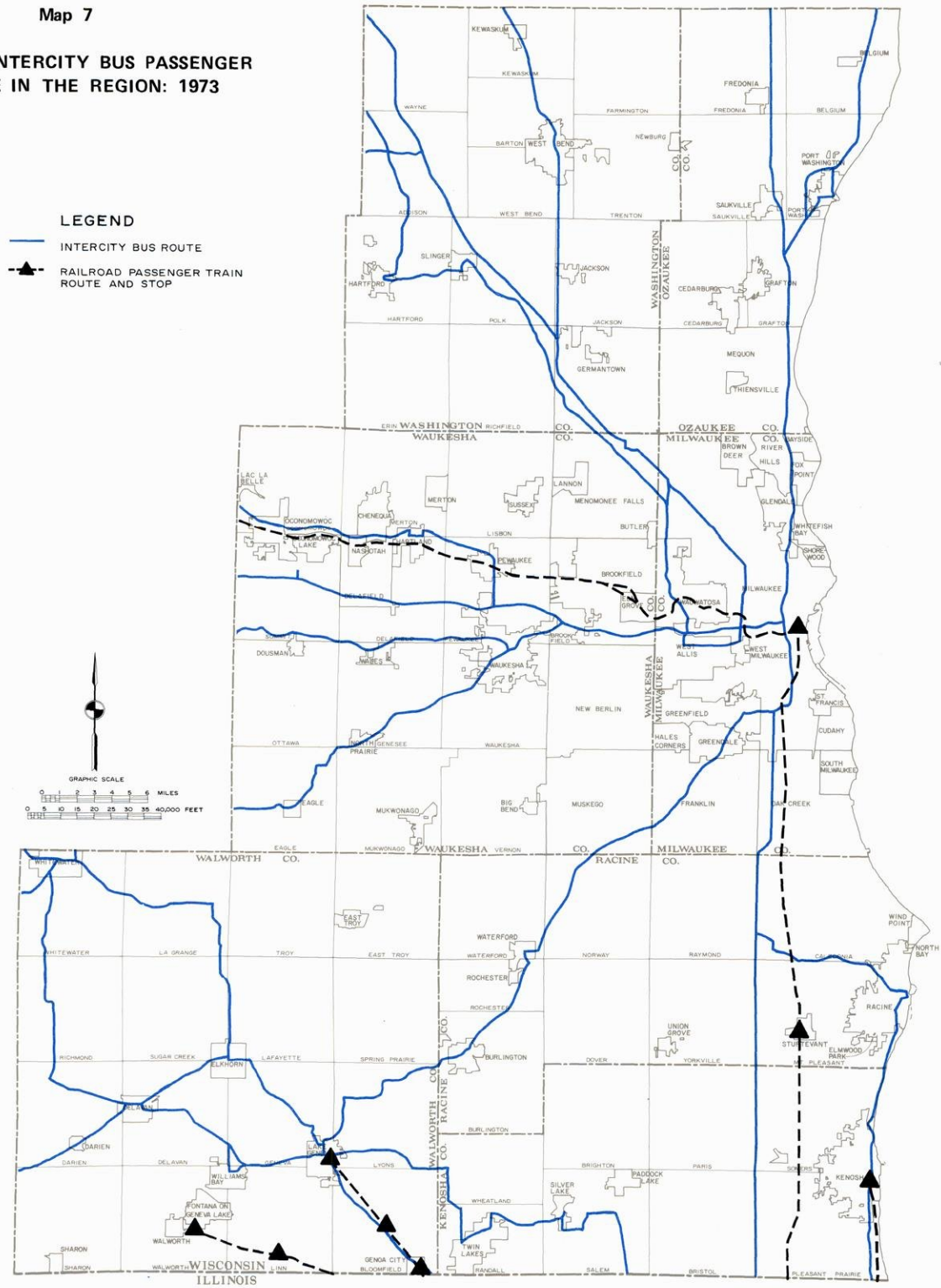
The number of automobiles and trucks available was higher than the Commission forecast levels prepared in 1963 as part of the initial regional land use-transportation study. As shown in Figure 13 and Table 14, the number of automobiles available is about 5 percent above the forecast level, with the largest variation occurring in Washington County. While the number of automobiles available continued to increase, the ratio of persons per automobile continued to decline, reaching 2.45 in 1973, which is below the forecast 1990 level (see Table 12 and Figure 14). The number of trucks available is 16 percent above the forecast level, as shown in Table 13 and Figure 15, with the largest variation from the forecast occurring in Waukesha County.

Transportation Movement—Travel Habits and Patterns (3.2.2, 4.2.6, and 4.3.6)

During 1973 work continued in the editing, coding, checking, and processing of the large volume of data

Map 7

RAIL AND INTERCITY BUS PASSENGER SERVICE IN THE REGION: 1973



In 1973, railroad passenger service in the Region was provided over about 97 miles of railroad line by two privately owned railroads, the Chicago and Northwestern Transportation Company and the Chicago, Milwaukee, St. Paul and Pacific Railroad Company, and by the quasi-public National Railroad Passenger Corporation (Amtrak). The private railroad passenger service consisted solely of Chicago-oriented commuter rail service provided between the Cities of Lake Geneva and Kenosha and the Village of Walworth and the City of Chicago. Amtrak service consisted solely of service between Chicago, Milwaukee, and points west, with four daily trains stopping in the Village of Sturtevant. Intercity bus service was provided by seven private companies operating bus lines over a network of about 500 miles.

Source: SEWRPC.

Table 12

AUTOMOBILE AVAILABILITY AND PERSONS PER AUTO FOR THE REGION BY COUNTY
1963, 1972, and 1973

County	1963		1972		1973	
	Auto Availability	Persons Per Auto	Auto Availability	Persons Per Auto	Auto Availability	Persons Per Auto
Kenosha	35,162	3.03	48,011	2.52	51,293	2.38
Milwaukee	304,123	3.57	397,695	2.67	409,870	2.54
Ozaukee	14,319	2.90	24,426	2.36	26,332	2.29
Racine	47,583	3.16	68,268	2.57	72,742	2.40
Walworth	19,437	2.86	27,427	2.38	28,785	2.27
Washington	16,235	3.05	27,031	2.50	29,488	2.39
Waukesha	61,899	2.98	102,916	2.37	109,110	2.27
Region	498,758	3.36	695,774	2.58	727,620	2.45

Source: SEWRPC.

Table 13

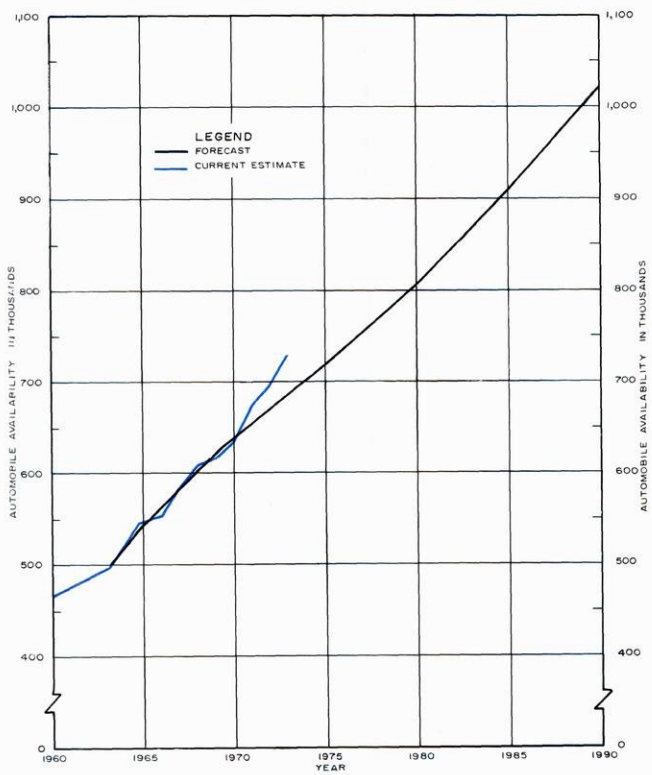
TRUCK AVAILABILITY FOR THE REGION
BY COUNTY: 1963, 1972, and 1973

County	1963	1972	1973
Kenosha	4,855	7,041	7,739
Milwaukee	25,867	33,348	35,126
Ozaukee	2,286	3,291	3,549
Racine	6,201	9,137	9,972
Walworth	4,490	6,436	6,854
Washington	3,413	5,396	5,771
Waukesha	8,283	15,063	16,251
Region	55,395	79,712	85,262

Source: SEWRPC.

Figure 13

AUTOMOBILE AVAILABILITY FORECAST AND
CURRENT ESTIMATE FOR THE REGION: 1960-1990



Source: SEWRPC.

collected under the nine separate surveys which comprise the major reinventory of travel undertaken by the Commission in 1972. The surveys for which data were being processed at the end of the year included the home interview; screenline; truck and taxi; external cordon; interregional bus, rail, and car ferry; mass transit user; mass transit nonuser; major traffic generator; and weekend travel surveys. The specific purpose of each of these surveys was discussed in the 1972 Annual Report. A regional goods movement survey has been scheduled for 1974. This survey will provide information for the first time on the total volume of goods movement into, within, and out of the Region by rail, truck, ship, pipeline, aircraft, and intercity bus.

A preliminary draft of a technical report dealing with the opinions, preferences, and attitudes of survey respondents concerning various aspects of existing and possible future private and public transportation facilities and services, housing facilities and services, and outdoor recreation facilities and services was prepared during 1973 for presentation to the Technical Coordinating and Advisory Committee on Regional Land Use-Transportation Planning. The responses were collected as a part of the home interview survey, the most important and complex of the 10 surveys.

Table 14

COMPARISON BETWEEN AUTOMOBILE AND TRUCK AVAILABILITY ESTIMATES AND FORECASTS FOR THE REGION BY COUNTY: 1973

County	Automobiles		Trucks		Percentage Difference	
	Estimate[a]	Forecast[b]	Estimate[c]	Forecast	Automobiles	Trucks
Kenosha	51,293	49,060	7,739	6,620	4.3	14.5
Milwaukee	409,870	394,700	35,126	30,820	3.7	12.3
Ozaukee	26,332	22,640	3,549	2,980	14.0	16.0
Racine	72,742	70,100	9,972	8,480	3.6	15.0
Walworth	28,785	25,840	6,854	5,860	10.2	14.5
Washington	29,488	24,280	5,771	4,700	17.7	18.6
Waukesha	109,110	102,440	16,251	12,080	6.1	25.7
Region	727,620	689,060	85,262	71,540	5.3	16.1

[a] *Based upon Wisconsin Department of Transportation motor vehicle registration data for the fiscal year ending June 30, 1973. Automobile availability estimates are based on the assumption that 10 percent of the registered automobiles are not in use either because the vehicles have been removed from the state or because they are in salvage yards, used car lots, or in similar storage.*

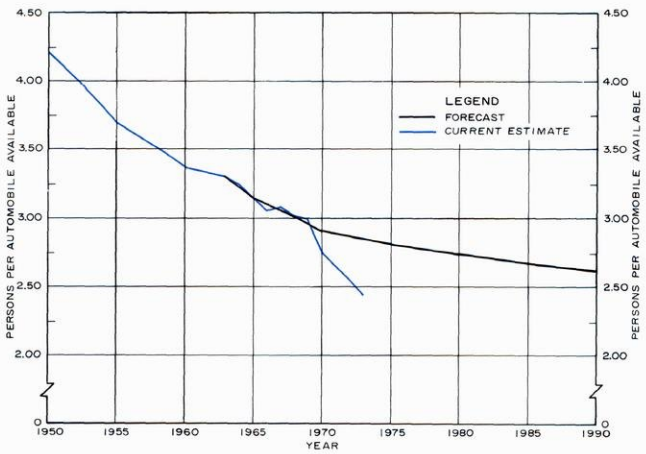
[b] *Based upon automobile availability forecasts for the fiscal year 1973 as shown in SEWRPC Planning Report No. 7, Volume Two, Forecasts and Alternative Plans—1990, 1966.*

[c] *Based upon Wisconsin Department of Transportation motor vehicle registration data. Truck availability estimates are based on the assumption that 6 percent of the registered trucks are not in use either because the trucks are now registered in another state, or because they are in salvage yards, used car lots, or in similar storage.*

Source: SEWRPC.

Figure 14

FORECAST AND CURRENT ESTIMATE OF PERSONS PER AUTOMOBILE AVAILABLE FOR THE REGION 1950-1990

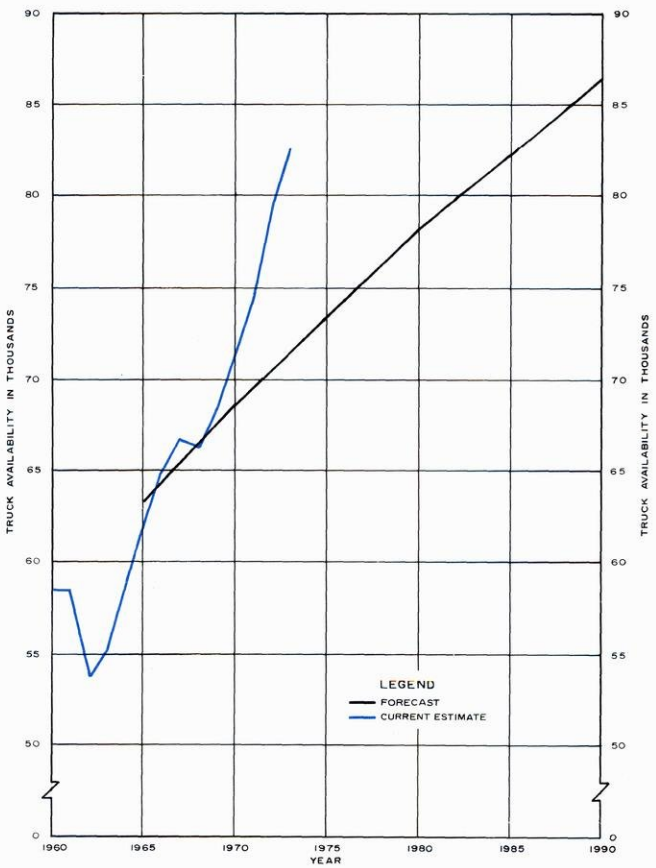


Source: SEWRPC.

Data from two of the surveys were being used as input to other programs at the end of the year. Data from the mass transit user survey were analyzed as part of transit development programs initiated in the Kenosha, Milwaukee, and Racine urbanized areas. The first practical use of data from the major traffic generator survey came with the agreement between the University of Wisconsin-Milwaukee (UWM) and the Milwaukee and Suburban Transport Corporation in 1973 to initiate free crosstown bus service for UWM students, faculty, and staff between the campus and areas of student concentration identified in the survey.

Figure 15

FORECAST AND CURRENT ESTIMATE OF TRUCK AVAILABILITY FOR THE REGION 1960-1990



Source: SEWRPC.

Data Conversion, Filing, and Retrieval (4.1)

The Commission maintains a master file of planning information on magnetic tape. This data bank permits the efficient conversion, filing, and retrieval of planning and engineering data essential for areawide comprehensive planning. The data base generated by the initial and continuing work programs of the Commission consists of over 125 million individual items. The file, while based primarily upon U. S. Public Land Survey quarter section as the unit of geographic reference, is organized to permit ready collation of data for various geographic units, such as civil divisions, census tracts, blocks and block faces, traffic analysis zones, and watersheds.

The Commission in 1973 utilized an IBM system 360 Model 22 disc and tape computer system to maintain its master data file. During 1973 more than 500 requests for data retrieval were processed, resulting in the preparation of 1,500 data reports for use in the regional planning effort. The bulk of the major data processing activities related to processing of data obtained under the 1972 travel inventory.

Service and Plan Implementation

Under the service and plan implementation function, the adopted regional land use and transportation plans and the data and forecasts underlying them are extended to the sponsoring agencies and to the constituent local units of government as a basis for day-to-day development decision making, thereby promoting integration of federal, state, and local planning and plan implementation efforts. This extension is expected to be accomplished primarily through continued compliance with requests by local units of government, private citizens, and service groups for such information and assistance and through an expanded community assistance program. It should be emphasized that this function is considered extremely important by the Commission because the adopted plan elements, to be of use, require almost constant interpretation; because the information collected in the planning process needs to be disseminated on a continuous, "on demand" basis; and because the process of local planning, which can best proceed within the framework of adopted regional plans, requires accurate, current, and uniform information. The following paragraphs reflect the emphasis placed upon this function by the Commission during 1973.

Plan Adoption

As noted earlier, the regional land use and surface transportation plans were formally adopted by the Commission in December 1966. In March 1967, these plans were certified to the local units of government within the Region and to the various state and federal agencies concerned with the development of the Region. All seven county boards adopted the recommended transportation plan in 1967. All but the Ozaukee County Board adopted the recommended regional land use plan in 1967. Since then, the plan has been adopted or endorsed by the governing bodies of 11 of the 28 cities, 12 of the 54 villages, and 13 of the 65 towns in the Region. During 1973 the City of Delavan and the Villages of Saukville and Sussex adopted the regional land use and transportation plans. The plans have also been adopted or endorsed by numerous agencies of local, state, and federal government since 1967, including the State Highway Commission of Wisconsin and the Milwaukee County Expressway and Transportation Commission.

Land Use Plan Implementation (8.0)

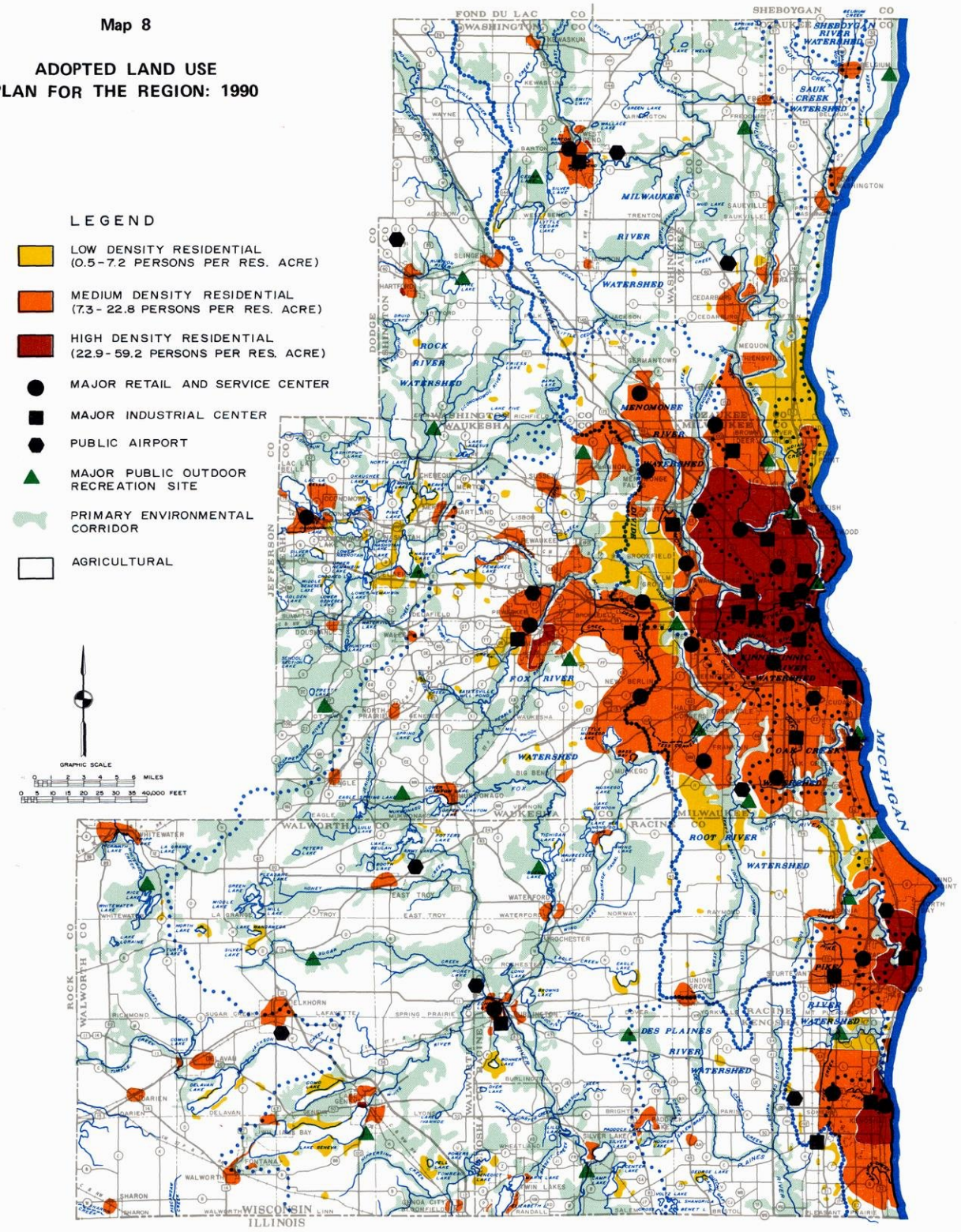
Implementation of the adopted regional land use plan is an extremely difficult process to monitor because of the scope and complexity of the plan, the dynamic nature of development, and the great diffusion of decision-making power concerning land use development within the Region. The major reinventory of existing land use completed in 1972, based upon aerial photography obtained in the spring of 1970, provides a base upon which to determine the extent of land use plan implementation, particularly with respect to the spatial allocation of land uses in the Region. This determination will be fully documented as part of the major plan reevaluation effort scheduled for 1974 and 1975. The following discussion summarizes the most important events or activities which occurred during 1973 and which are considered relevant to implementation of the major land use development proposals contained in the adopted regional land use plan. The plan itself is presented on Map 8.

Major Public Outdoor Recreation Areas

The adopted regional land use plan recommends that 26 major public outdoor recreation areas be provided to serve the needs of the Region through 1990. Fourteen of these areas were already publicly owned, fully or partially developed, and in various stages of use when the plan was being prepared and were recommended to be retained. Twelve were newly proposed areas requiring public land acquisition and development (see Map 9). Between 1966, when the regional land use plan was adopted, and 1973, nine of the 12 proposed sites were totally or partially acquired, with seven of these at least partially developed and opened for public use. During 1973 one of the three remaining unacquired sites—the important Monches site in the Town of Merton—was partially acquired by the Waukesha County Park and Planning Commission for future use as a county park site. This site was identified by the Commission in 1964 as one of the eight best potential park sites remaining in the Region, and its partial acquisition, including acquisition of a parcel held by a developer and intended for urban development, is a very timely and important plan implementation action. About 84 acres of the site were donated to the Wisconsin Department of Natural Resources by Mr. Norman Chester, and were subsequently transferred to the Waukesha County Park and Planning Commission for permanent preservation in open space use. In addition, the Waukesha County Park and Planning Commission acted during 1973 to acquire 110 additional acres, so that a total of 194 acres at this important regional park site were in public ownership by the end of the year.

Map 8

ADOPTED LAND USE PLAN FOR THE REGION: 1990

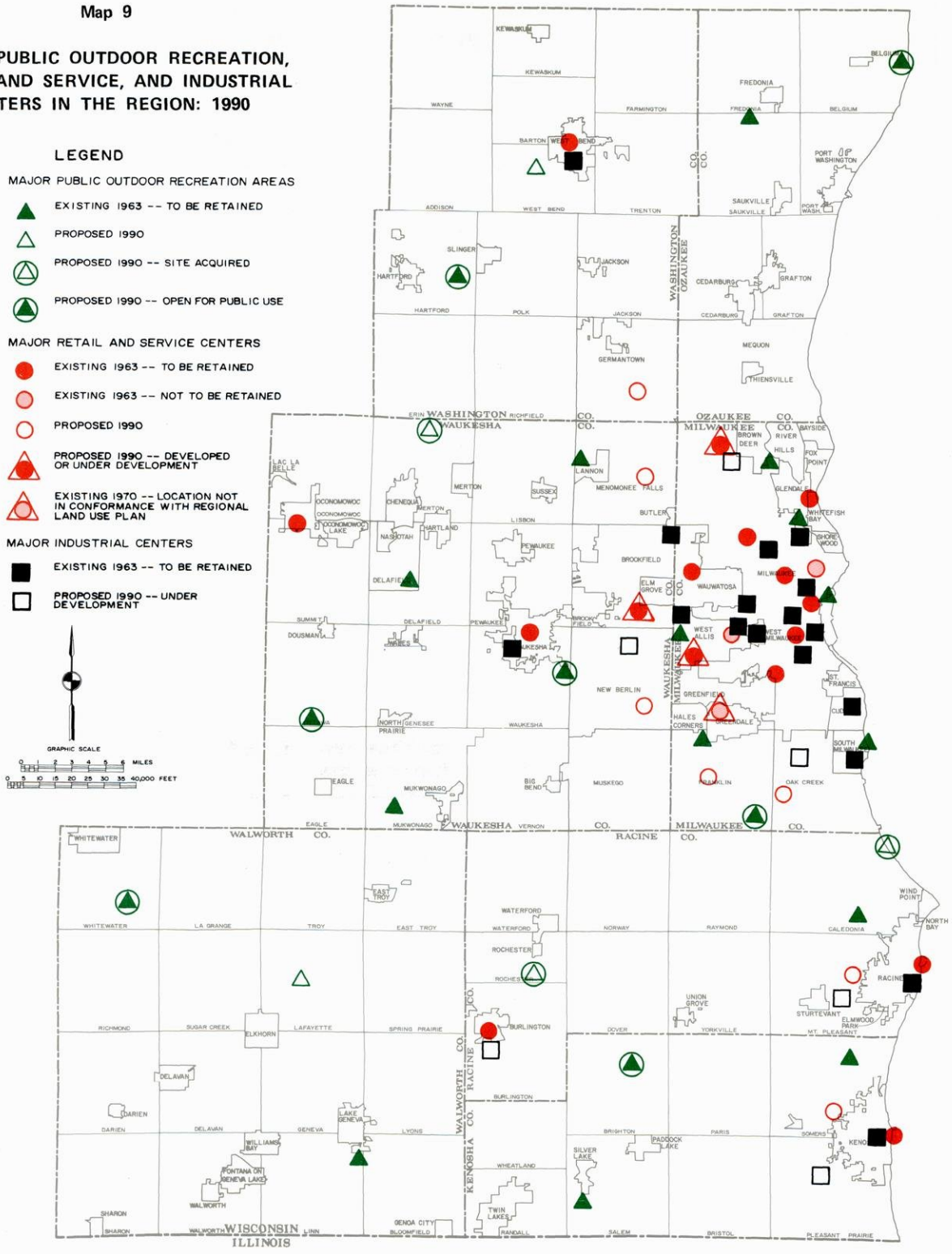


The recommended regional land use plan places heavy emphasis on the continued effect of the urban land market in determining the location, intensity, and character of future development. In so doing, however, it seeks to modify the effect of this market on regional development by attempting to guide new urban development into those areas of the Region most suitable for such development. Most importantly, the plan seeks to prevent urban development from intruding on the primary environmental corridors of the Region, which contain all of the lakes and streams and associated undeveloped shorelands and floodlands; the best remaining woodlands, wetlands, and wildlife habitat; and the best remaining potential park and open space sites within the Region, as well as the recharge areas for the deep aquifer underlying the Region.

Source: SEWRPC.

Map 9

MAJOR PUBLIC OUTDOOR RECREATION, RETAIL AND SERVICE, AND INDUSTRIAL CENTERS IN THE REGION: 1990



The development of new major park and outdoor recreation, retail and service, and industrial centers in the Region is recommended in the regional land use plan. Good progress has been made in establishing new regional parks at the sites recommended in the plan, with 10 of the 12 recommended sites acquired by public agencies, and seven of the 10 sites open for public use by 1973. Significant industrial development has occurred at each of the six new recommended major industrial centers and at three of the 10 recommended major retail and service centers. One major retail and service center has also been developed at a site in the Village of Greendale about three miles north of a site recommended in the adopted plan.

Source: SEWRPC.

The acquisition of the Monches park site leaves only two of the 12 proposed park sites remaining to be acquired. These two sites, located on Sugar Creek in the Town of LaFayette, Walworth County, and in Paradise Valley in the Town of West Bend, Washington County, have been recommended for acquisition by the Wisconsin Department of Natural Resources in the Fox and Milwaukee River watershed plans, respectively, for use as future major state park and recreation areas. Urban development has not intruded into these two areas to date, so they are not yet lost for public use. A summary of the status of implementation of the major regional outdoor recreation areas is set forth in Table 15.

Major Retail and Service Centers

The adopted regional land use plan recommends that 23 major retail and service centers be maintained or provided to serve the needs of the Region through 1990. Thirteen of these centers existed when the plan

Table 15

IMPLEMENTATION STATUS OF MAJOR PUBLIC OUTDOOR RECREATION AREAS RECOMMENDED IN THE ADOPTED REGIONAL LAND USE PLAN: 1973

Recommended Major Public Outdoor Recreation Area		Implementation Status				
		Site Acquisition				
Location	Acres	Yes or No	Acres	Agency Responsible	Site Name	Site Development to Date
Abandoned Bong Air Base Town of Brighton Kenosha County	360	Yes	360	Kenosha County Park Commission	Brighton Dale County Park	200-acre golf course
Root River City of Franklin Milwaukee County	400	Yes	400	Milwaukee County Park Commission	Oakwood County Park	278-acre park and golf course adjacent to Root River Parkway
Quarry Lake- Lake Michigan Town of Belgium Ozaukee County	620	Yes	634	Wisconsin Department of Natural Resources	Harrington Beach State Park	Under development
Lake Michigan Town of Caledonia Racine County	280	Yes	220	Racine County Highway and Park Commission	Cliffside Park	None to date
Fox River Racine County	250	Yes	240	Racine County Highway and Park Commission	Ela Park Site	None to date
Sugar Creek Town of LaFayette Walworth County	770	No	--	--	--	--
Rice Lake Town of Whitewater Walworth County	550	Yes	550	Wisconsin Department of Natural Resources	Whitewater Lake State Recreation Area	192-acre recreation area, including camping
Paradise Valley Town of West Bend Washington County	350	No	--	--	--	--
Pike Lake Town of Hartford Washington County	520	Yes	692	Wisconsin Department of Natural Resources	Pike Lake State Park	30-acre recreation area, including camping
Monches Town of Merton Waukesha County	465	Yes	194	Waukesha County Park and Planning Commission	Monches Park Site	None to date
Ottawa Lake Town of Ottawa Waukesha County	245	Yes	245	Wisconsin Department of Natural Resources	Ottawa Lake State Recreation Area	About 75 acres, including camping
Waukesha Town of Waukesha Waukesha County	300	Yes	310	Waukesha County Park and Planning Commission	Minooka Park	210 acres, including picnic areas and nature trails

Source: SEWRPC.

was being prepared and are to be retained. Two additional sites were identified as declining regional centers not to be retained. Ten centers of at least 70 acres each were to be newly developed by 1990 (see Map 9). Of the 10 sites, three—Brookfield, West Allis, and Granville—were either developed or under development by the end of 1973 as major regional shopping centers. Of the remaining seven sites, five have been properly zoned for future commercial development in local zoning ordinances. In addition, it should be noted that a major retail and service center has been developed at a site in the Village of Greendale not identified for such development in the adopted regional land use plan. This center, known as Southridge Shopping Center, is located approximately three miles from the location recommended for such a center in the City of Franklin. It is, therefore, recognized that the Greendale service center has a service area that overlaps the service areas of nearby major retail centers, and that the development of the Southridge Shopping Center will no doubt adversely affect the future development of the proposed Franklin center. This development activity will have to be taken into account in the major plan reevaluation to be conducted during 1974. A summary of the status of implementation of the major retail and service centers is set forth in Table 16.

Major Industrial Centers

The regional land use plan recommends that 23 major industrial centers be provided to serve the needs of the Region through 1990. Of these, 17 existed when the plan was being prepared and are to be retained, and six, each of which would be at least 640 acres in area, were to be newly constructed on new sites by 1990 (see Map 9). By the end of 1973, development was proceeding at each of the six new centers. Specific site reservations and development acreage as of 1973 at each of the six new sites is set forth in Table 17.

Transportation Plan Implementation (8.0)

Implementation of the adopted regional surface transportation plan is less difficult to monitor than implementation of the regional land use plan because of the smaller number of decision-making agencies concerned with transportation facility development as opposed to land use development within the Region. The Commission annually monitors progress with respect to implementation of freeway and mass transit components of the plan. Implementation of the standard arterial component of the plan involves many more miles of facilities and more implementing agencies and is, therefore, monitored less frequently.

The following discussion summarizes the most important activities during 1973 which are considered relative to the implementation of the proposals contained in the adopted regional transportation plan.

Freeways (8.0)

The regional transportation plan adopted in 1966 recommended development of 291 miles of new freeway facilities within the Region by 1990. The adoption of the Milwaukee County jurisdictional highway system plan by the Commission on June 4, 1970, and of the Walworth County jurisdictional highway system plan on March 1, 1973, amended the adopted regional transportation plan and reduced the total number of miles of planned new freeway facilities from 291 to 288. The decreased mileage represents the net result of the addition of the 1.4-mile Airport Spur Freeway in Milwaukee County and the removal of the 4.7-mile Janesville Spur Freeway in Walworth County.

As shown on Map 10 and in Table 18, all but 6.7 of the approximately 288 miles of proposed freeway were in various stages of implementation during 1973, with 58.3 miles actually open to traffic. The 6.7-mile section not under implementation is a portion of the Bay Freeway in Milwaukee County, where plan implementation work has been suspended by the Milwaukee County Board pending regional plan reevaluation.

During 1973, 16.7 miles of the USH 12 Freeway in Walworth County reverted from the final design to the preliminary design stage due to increased requirements for public hearings and environmental impact statements. In addition, 12 miles of the USH 15 (Rock) Freeway advanced from the facility construction stage to the open to traffic stage, representing the only new miles of freeway open to traffic during 1973.

Of the approximately 288 miles of recommended new freeway, 85.7 miles were in various stages of right-of-way acquisition and reservation. As shown in Table 19, of the 441.1 miles of existing, programmed, and planned freeways in the Region, 185.1 miles of freeway were open to traffic at the close of 1973.

Mass Transit (8.2)

The adopted regional transportation plan recommended that an improved and expanded mass transit system be developed to serve the rapidly urbanizing Region in an effort to reverse continuing downward trends in transit ridership. As noted in the 1972 Annual Report, the Commission in 1972 adopted the Milwaukee area transit plan as a refinement of, and amendment to, the adopted regional transportation plan. The Milwaukee County Expressway and Transportation Commission had previously adopted this plan in 1971. This plan, as set forth on Map 11, reaffirmed original Commission findings that a flexible, rubber tire transit system is the best means for providing a high level rapid transit service within the Milwaukee urbanized area. The plan included an eight-mile transitway in the East-West Freeway corridor and 107 miles of rapid and modified rapid transit lines over nearly the entire existing and proposed freeway system in the Milwaukee urbanized area. In addition, the plan recommends public operation of the Milwaukee transit system, including county purchase of the Milwaukee and Suburban Transport Corporation pending creation of a larger areawide transit authority.

On January 3, 1973, the Ozaukee County Board became the first of the four affected counties to formally adopt the Milwaukee area transit plan. On May 8, 1973, the

Table 16

IMPLEMENTATION STATUS OF MAJOR RETAIL AND SERVICE CENTERS RECOMMENDED IN THE ADOPTED REGIONAL LAND USE PLAN: 1973

Name	Location	Implementation Status
Kenosha-West	Town of Somers Kenosha County (STH 31, STH 43)	Site reserved for commercial use in local zoning ordinance
Franklin	City of Franklin Milwaukee County (USH 45, STH 100, STH 36)	Site included in an adopted neighborhood development plan and properly zoned for commercial use
Granville	City of Milwaukee Milwaukee County (STH 100, STH 181)	Site developed as the Northridge Shopping Center
Oak Creek	City of Oak Creek Milwaukee County (USH 41, STH 100)	Site not yet zoned for commercial use
West Allis	City of West Allis Milwaukee County (STH 100, W. National Avenue)	Site nearly fully developed as a major strip commercial area
Racine-West	City of Racine Racine County (STH 11, STH 31)	Site acquired for construction of major shopping center; development anticipated in 1975-76
Germantown	Village of Germantown Washington County (Mequon Road, Division Road)	Site reserved for commercial use in local zoning ordinance
Brookfield	City of Brookfield Waukesha County (IH 94, USH 18, Moorland-Pilgrim Roads)	Site developed as the Brookfield Square Shopping Center
Menomonee Falls	Village of Menomonee Falls Waukesha County (W. Good Hope Road, Pilgrim Road)	Site reserved for commercial use in local zoning ordinance
New Berlin	City of New Berlin Waukesha County (STH 15, Moorland Road)	Site not yet zoned for commercial use

Source: SEWRPC.

Milwaukee County Board adopted the plan, but with several major modifications and conditions, including the following:

- Deletion of the transitway construction schedule from the plan.
- A call for further investigation of 14 specified alternatives to construction of the proposed transitway in the East-West travel corridor.
- The provision of a higher level of transit service to the University of Wisconsin-Milwaukee area.
- Priority over all other mass transportation proposals embodied in the plan must be given to the preservation, improvement, and upgrading of the existing bus system.

At year's end neither the Washington or Waukesha County Boards of Supervisors had adopted the plan.

Table 17

IMPLEMENTATION STATUS OF MAJOR INDUSTRIAL CENTERS
RECOMMENDED IN THE ADOPTED REGIONAL LAND USE PLAN: 1973

Recommended Major Industrial Center		Implementation Status	
Name	Location	Acres Designated and Reserved	Acres Developed for Industrial-Related Land Use
Kenosha-West	City of Kenosha Town of Pleasant Prairie Kenosha County	930	125
Granville	City of Milwaukee Milwaukee County	1,460	170
Oak Creek	City of Oak Creek Milwaukee County	1,270	268
Burlington	City of Burlington Town of Burlington Racine County	840	97
Racine-West	Town of Mt. Pleasant Racine County	900	179
New Berlin	City of New Berlin Waukesha County	1,030	550

Source: SEWRPC.

While failure of the Milwaukee County Board to endorse the East-West transitway proposal meant that progress toward realization of this important transit facility improvement came to a standstill, other actions proceeded to implement remaining components of the Milwaukee area transit plan and to secure improved transit service in the Kenosha and Racine urbanized areas. The Milwaukee County Board did authorize negotiations to begin toward public purchase of the Milwaukee and Suburban Transport Corporation, and toward this end directed that appropriate appraisals and federal grant applications be secured and processed. In addition, significant progress was made in establishing public transit stations and park-and-ride lots at the locations recommended in the transit plan. During 1973 a public park-and-ride lot was established near the Bay Shore Shopping Center to serve both the North Shore Freeway Flyer and commuter car poolers. A public transit station was also established at the Goerke's Corners interchange of the East-West Freeway (IH-94) in the Town of Brookfield, and steps were taken to establish four additional park-and-ride stations in Milwaukee County during 1974.

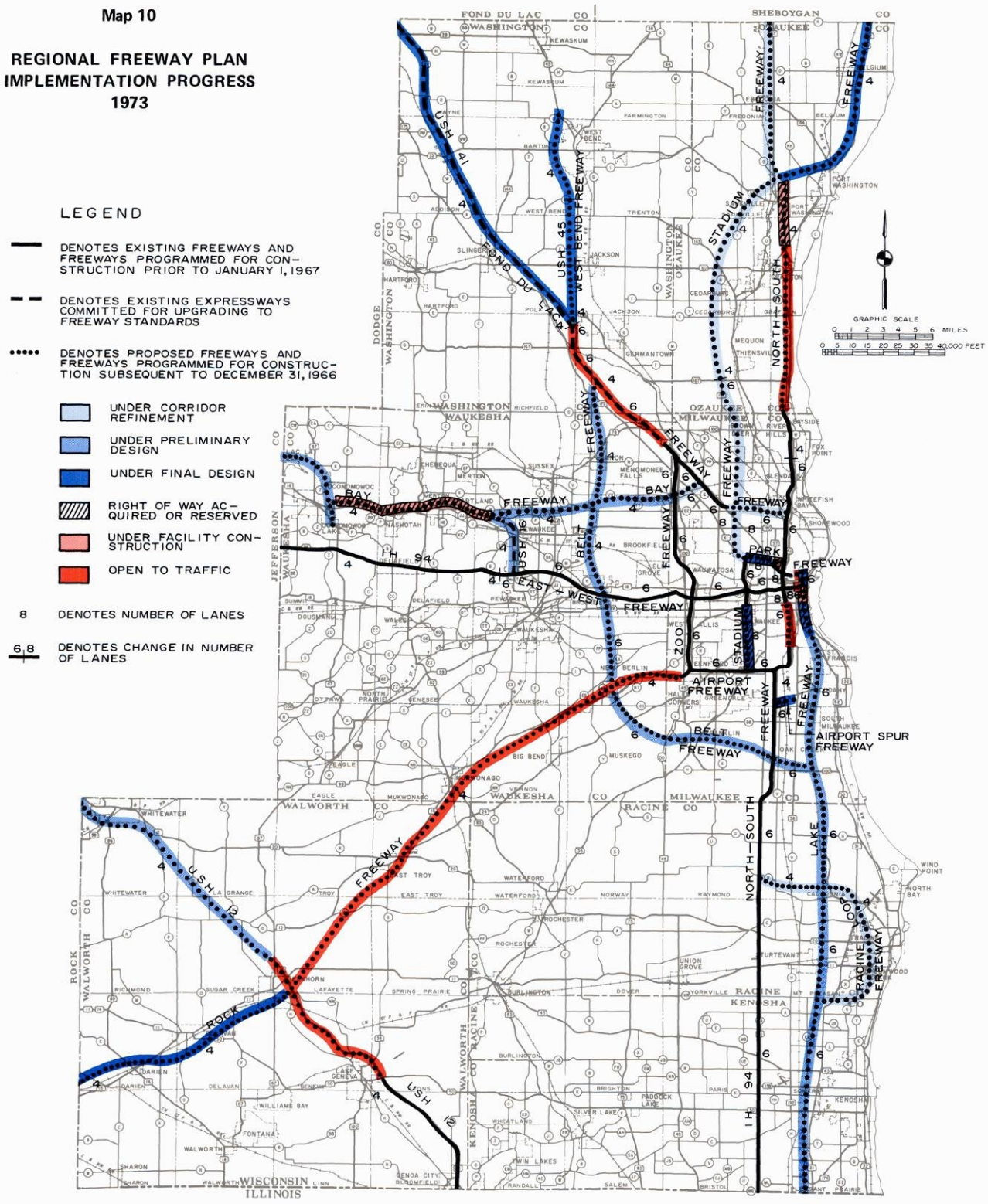
Steps were also initiated in 1973 to prepare short-range transit development programs for the Kenosha, Milwaukee, and Racine urbanized areas. The transit development programs will outline the steps required to implement immediate improvements in transit service to carry out adopted long-range transit plans in a coordinated manner. The transit development programs will thus make recommendations concerning needed and desirable transit routings, transit service areas, schedules and headways, shelter and parking facilities, and ownership and management status. Programs will include recommendations for the coordinated operation of all transit facilities and operations in each of the three urbanized areas and will set forth a five-year capital improvement program for transit facility development. These three programs were formally requested of the Commission by the Milwaukee County Board and the Mayors of the Cities of Kenosha and Racine. During 1973, local technical coordinating and advisory committees were formed to assist in the development of the transit improvement programs.

County Jurisdictional Highway System Plans (8.3)

The adopted regional transportation plan recommends that the functional highway plan adopted for the Region be converted to jurisdictional highway plans on a county-by-county basis in order to more effectively carry out the arterial street and highway plan proposals in the regional transportation plan at the local, county, and state levels. The jurisdictional plans specify not only the governmental unit or agency responsible for construction, maintenance, and operation of each segment of the total arterial street and highway system, but also the capacity of each link in the system, and detail, as required, adjustments in the state and county trunk highways and supporting federal

Map 10

REGIONAL FREEWAY PLAN IMPLEMENTATION PROGRESS 1973



Of the 288 miles of new freeway recommended in the adopted regional transportation plan, as amended by the adopted Milwaukee County and Walworth County jurisdictional highway system plans, all but about seven miles were in various stages of implementation by the end of 1973, with 58 miles actually open to traffic. The seven miles not under current implementation comprise the proposed Bay Freeway from the North-South Freeway to the Zoo Freeway in Milwaukee County. Altogether, right-of-way has been acquired or reserved for about 86 of the 288 miles of planned freeway.

Source: SEWRPC.

Table 18

STATUS OF PLANNED FREEWAY FACILITIES IN THE REGION: DECEMBER 31, 1973

Planned Freeway Facility	Development Stage (Miles)						Right-Of-Way Acquisition Or Reservation[a] (Miles)
	Corridor Refinement	Preliminary Design	Final Design	Facility Construction	Open To Traffic	Total	
Lake	--	35.0	3.2	1.0	--	39.2	3.4
Stadium	35.3	--	4.0	--	--	39.3	4.0
North-South	--	--	13.7	3.5	13.3	30.5	17.8
Bay	6.7[b]	16.9	--	10.7	--	34.3	10.7
Park	--	--	2.4	1.6	0.4	4.4	4.4
East-West	--	--	--	0.2	0.9	1.1	1.1
Belt	--	34.4	--	--	--	34.4	--
Rock	--	--	14.4	--	33.7	48.1[c]	33.7
Loop	15.7	--	--	--	--	15.7	--
USH 12	--	16.7	--	--	10.0	26.7	10.0
West Bend	--	--	12.6	--	--	12.6	--
Airport Spur	--	--	1.4	--	--	1.4[d]	0.6
Total	57.7	103.0	51.7	17.0	38.3	287.7	85.7

[a] *Includes the right-of-way for facilities in final design, under construction, or open to traffic.*

[b] *On December 23, 1969, the Milwaukee County Expressway and Transportation Commission adopted a resolution terminating corridor refinement work on that portion of the proposed Bay Freeway lying within Milwaukee County and extending from the Zoo Freeway to the North-South Freeway, totaling 6.7 miles, and requested the Regional Planning Commission to review and reevaluate the need for this facility and consider appropriate modifications to the regional transportation plan. The Regional Planning Commission has determined that this reevaluation should follow completion of the major inventory of travel initiated in 1972. The 6.7-mile section of the proposed Bay Freeway is shown in this table under "corridor refinement."*

[c] *Excludes 4.7 miles for the Janesville Spur removed from the proposed freeway system when the Walworth County jurisdictional highway system plan was adopted by the Commission on March 1, 1973, as an amendment to the adopted regional transportation plan.*

[d] *Includes 1.4 miles for the Airport Spur Freeway added to the proposed freeway system when the Milwaukee County jurisdictional highway system plan was adopted by the Commission on June 4, 1970, as an amendment to the adopted regional transportation plan.*

Source: Wisconsin Department of Transportation and SEWRPC.

aid route configurations. The plans also provide definitive recommendations for state trunk, county trunk, and local trunk highway system configurations and capacities; for adjustments in the federal aid routes necessary to implement the plan,[3] and, where necessary, for adjustments in the county, state, and federal aid highway formulas.

Jurisdictional highway system plans have been completed for Milwaukee, Walworth, and Ozaukee Counties. During 1973 all technical work was completed on preparation of

---

[3] *Currently (1973), there are four federal aid highway systems:*

Federal Aid Interstate System (FAI): Consists of interstate routes in urban and rural areas connecting the principal metropolitan areas, cities, and industrial centers of the nation to serve the national defense, to be designated by the U. S. Secretary of Transportation and the state highway departments.

Federal Aid Primary System (FAP): Consists of rural arterial routes and their urban extensions, to be designated by each state through its state highway department in accordance with comprehensive, areawide transportation plans.

Federal Aid Secondary System (FAS): Consists of rural "major collector" routes designated by the state highway department and concerned local officials.

Federal Aid Urban System (FAU): Consists of urban arterials designated by local officials with concurrence of the state highway department and in accordance with comprehensive, areawide transportation plans.

Table 19

STATUS OF ALL EXISTING, PROGRAMMED, AND PLANNED FREEWAYS IN THE REGION DECEMBER 31, 1973

Freeway Facility	Number of Miles Opened to Traffic						Number of Miles Scheduled to be Opened		System Mileage		
	Open Prior to January 1, 1973		Opened During 1973		Total						
	Existing and Programmed[a]	Planned[b]	Existing and Programmed[a]	Planned[b]	Existing and Programmed[a]	Planned[b]	Existing and Programmed[a]	Planned[b]	Existing and Programmed[a]	Planned[b]	Total Mileage
Lake	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.2	0.0	39.2	39.2
East-West	32.4	0.9	0.0	0.0	32.4	0.9	0.0	0.2	32.4	1.1	33.5
Zoo	14.4	0.0	0.0	0.0	14.4	0.0	0.0	0.0	14.4	0.0	14.4
Fond du Lac	4.5	0.0	0.0	0.0	4.5	0.0	0.0	0.0	4.5	0.0	4.5
Airport	5.1	0.0	0.0	0.0	5.1	0.0	0.0	0.0	5.1	0.0	5.1
Stadium	2.7	0.0	0.0	0.0	2.7	0.0	0.2	39.3	2.9	39.3	42.2
Park	0.6	0.4	0.0	0.0	0.6	0.4	0.0	4.0	0.6	4.4	5.0
North-South	46.5	13.3	0.0	0.0	46.5	13.3	0.0	17.2	46.5	30.5	77.0
Rock	1.0	21.7	0.0	12.0	1.0	38.7	0.0	14.4	1.0	48.1[d]	49.1
Belt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.4	0.0	34.4	34.4
Bay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.3[c]	0.0	34.3	34.3
Loop	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.7	0.0	15.7	15.7
USH 12	9.1	10.0	0.0	0.0	9.1	10.0	0.0	16.7	9.1	26.7	35.8
West Bend	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	0.0	12.6	12.6
USH 41	10.5	0.0	0.0	0.0	10.5	0.0	21.7	0.0	32.2	0.0	32.2
USH 16	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	4.7	0.0	4.7
Airport Spur	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	1.4[e]	1.4
Total	126.8	46.3	0.0	12.0	126.8	58.3	26.6	229.4	153.4	287.7	441.1

[a] *Includes freeways existing on January 1, 1967, and freeways programmed for construction prior to January 1, 1967.*

[b] *Includes freeways programmed for construction subsequent to December 31, 1966, and all newly proposed freeways contained in the adopted regional transportation and Milwaukee County jurisdictional highway system plans.*

[c] *See Footnote b, Table 18 of this report.*

[d] *See Footnote c, Table 18 of this report.*

[e] *See Footnote d, Table 18 of this report.*

Source: Wisconsin Department of Transportation, Milwaukee County Expressway and Transportation Commission, and SEWRPC.

a jurisdictional plan for Waukesha County, work was begun on preparation of similar plans for Kenosha and Washington Counties, and work continued on preparation of a jurisdictional plan for Racine County. Each study is guided by an advisory committee which includes representatives of the federal and state Departments of Transportation, the respective county highway departments, local municipal engineers, and the Commission staff. In addition, committees in several counties include elected and appointed local public officials and interested citizen members. Membership of the committees is listed in Appendix B.

Each jurisdictional plan constitutes a refinement of, and amendment to, the adopted regional transportation plan as that plan applies to the respective county. In addition to recommending jurisdictional responsibility for each of the individual facilities on the total arterial street and highway system within the respective county, the plans recommend right-of-way and pavement widths for each arterial facility, together with the type of improvement that will be required to serve land use and transportation needs within the respective counties to 1990. Thus, the jurisdictional plans provide for integrated state, county, and local trunk highway subsystems and for realignment of the supporting federal aid highway system.

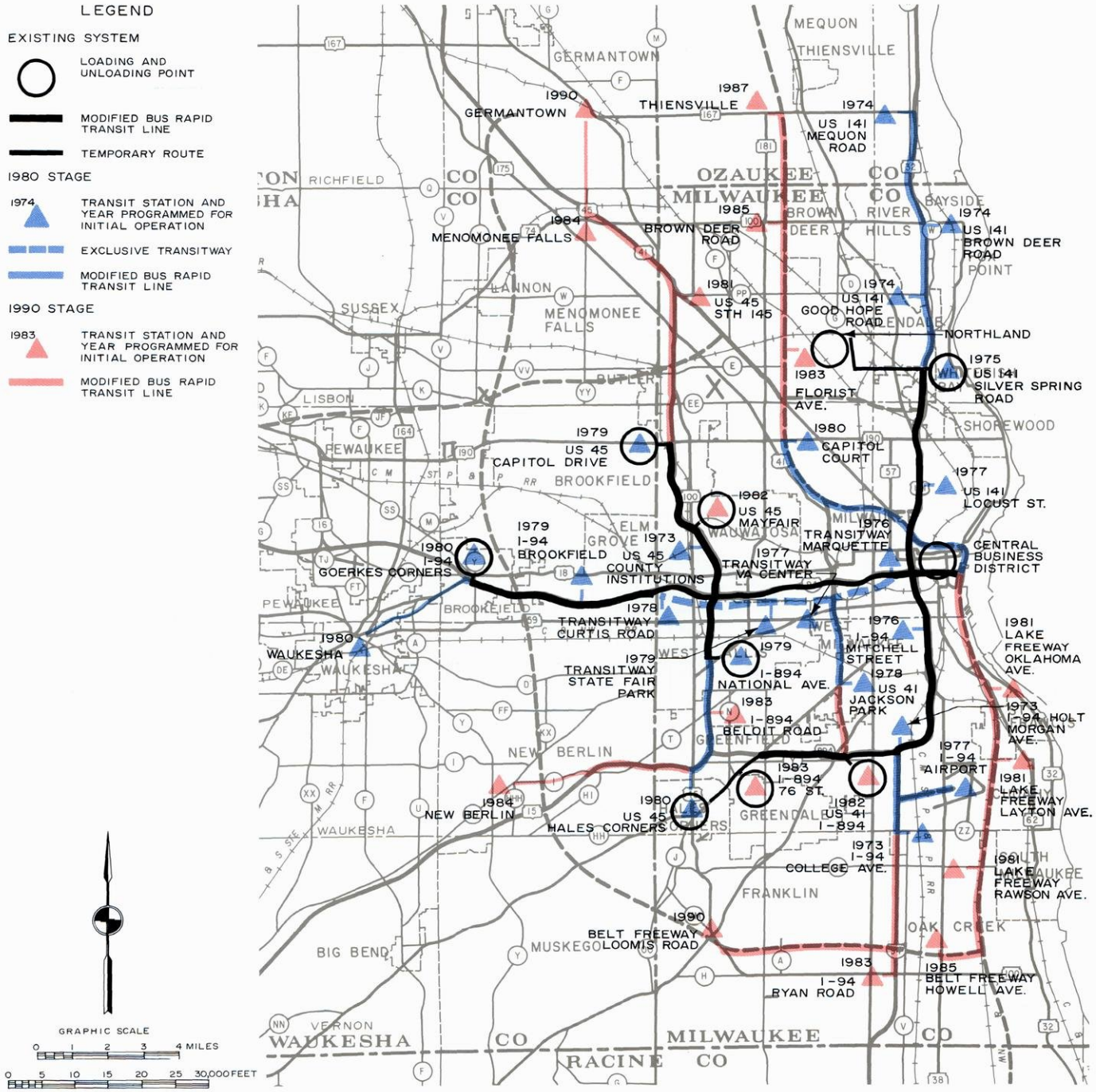
Jurisdictional responsibilities for the various arterial facilities are assigned through application of criteria prepared for this purpose. The criteria relate to three basic characteristics of the arterial facilities: trip service, land use service, and operational characteristics of the facilities themselves. The criteria are prepared for each of these characteristics, and are applied to the functional arterial network in the various counties to develop the recommended jurisdictional highway system plans.

Milwaukee County

The recommended jurisdictional highway system plan for Milwaukee County was completed in 1969 and is set forth in SEWRPC Planning Report No. 11, A Jurisdictional Highway System Plan for Milwaukee County, published in March 1969 (see Map 12). The plan has

Map 11

MILWAUKEE AREA TRANSIT PLAN: 1990

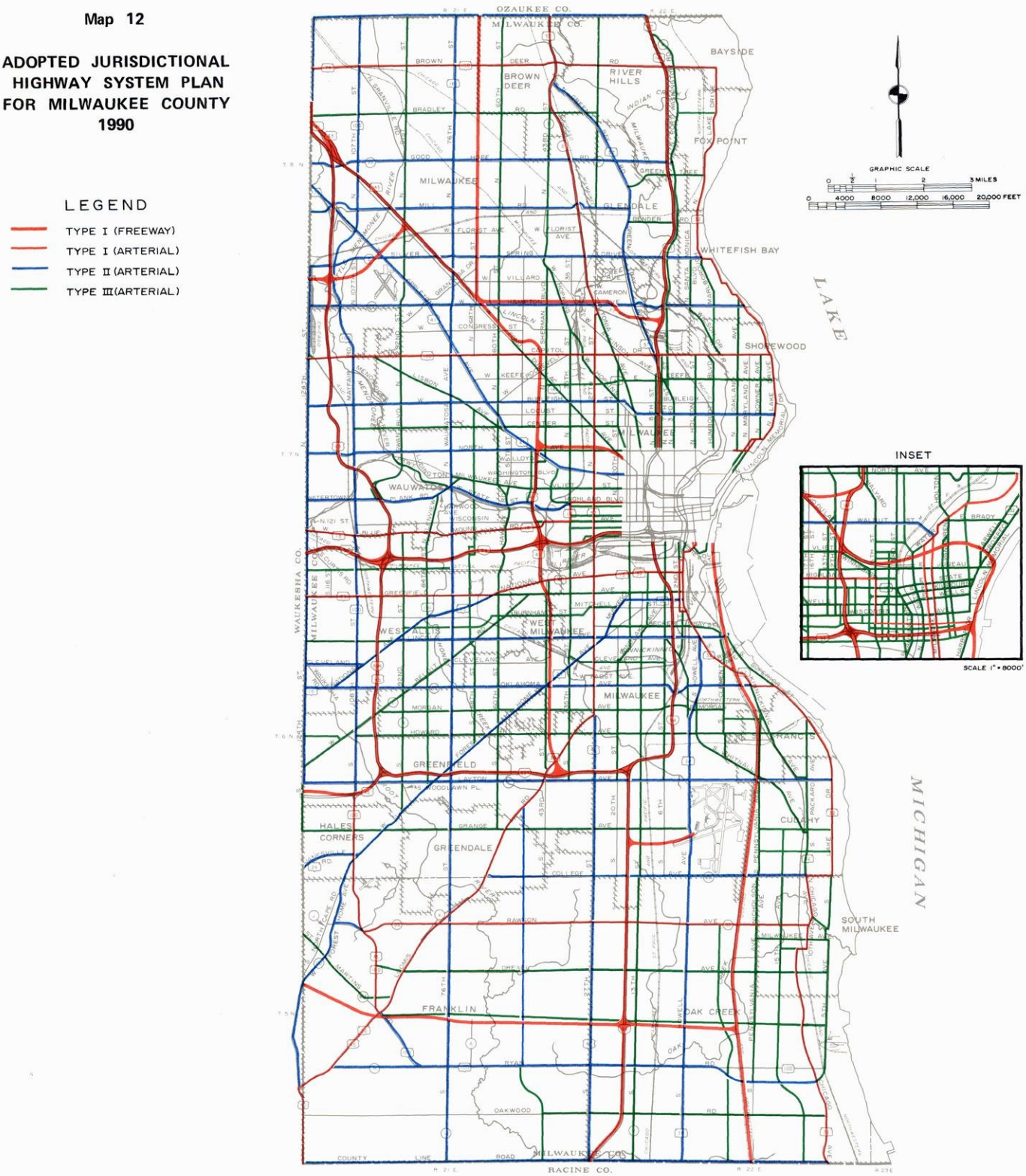


The Commission in 1972 adopted the Milwaukee Area Transit Plan, which reaffirmed original Commission findings that a flexible, rubber-tire transit system is the best means for providing a high level of rapid transit service in the Region. As shown on this map, the plan includes an eight-mile transitway in the East-West travel corridor, and 107 miles of rapid and modified rapid transit lines over nearly the entire existing and proposed freeway system in the Milwaukee urbanized area. The plan also recommends operation of the proposed rapid and modified rapid transit system by Milwaukee County, including county purchase of the Milwaukee and Suburban Transport Corporation pending creation of a larger areawide transit authority. In 1973, the plan was adopted by the Ozaukee and Milwaukee County Boards of Supervisors. The Milwaukee County Board, however, deleted the transitway construction schedule from the plan and called for further study of alternatives to the transitway.

Source: Milwaukee County Expressway and Transportation Commission and SEWRPC.

Map 12

ADOPTED JURISDICTIONAL HIGHWAY SYSTEM PLAN FOR MILWAUKEE COUNTY 1990



The recommended jurisdictional highway systems for Milwaukee County shown on this map represent a synthesis of separate trip length, land use, and vehicle volume systems resulting from application of the jurisdictional classification criteria developed by the Commission into a single, fully integrated, continuous arterial highway system comprised of state trunk highways, county trunk highways, and local trunk highways. This plan has been formally adopted by 16 of the 19 cities and villages in Milwaukee County, as well as the Milwaukee County Board and the Milwaukee County Expressway and Transportation Commission.

Source: SEWRPC.

been formally adopted by eight of the 10 cities, including the City of Milwaukee, and eight of the nine villages in Milwaukee County, by the Milwaukee County Board of Supervisors, and by the Milwaukee County Expressway and Transportation Commission. It has been formally endorsed by the U. S. Department of Transportation, Federal Highway Administration, and the Wisconsin State Highway Commission. The Regional Planning Commission itself formally adopted the plan at its annual meeting on June 4, 1970, as an amendment to the adopted regional transportation plan, and certified it to affected local units of government and interested state and federal agencies.

No additions to, or deletions from, the state trunk highway system were made within the county during 1973. During 1973, approximately three miles of arterial streets were added to the county trunk highway system, as shown on Map 13, and approximately seven miles of county trunk highways, including 4.3 miles of proposed local arterials, reverted to the local units of government, all in accordance with the plan. During 1973, 11.2 miles of new federal aid urban routes were established on local arterial streets, also in accordance with the plan. These additions consisted of S. 43rd Street from W. Greenfield Avenue to W. National Avenue, S. 44th Street from W. Greenfield Avenue to W. Burnham Street, Santa Monica Boulevard and Wilson Drive from E. Silver Spring Drive to E. Capitol Drive, Theodore Trecker Way and W. Schlinger Avenue from S. 124th Street to S. 76th Street, N. Port Washington Road from W. Green Tree Road to W. Hampton Avenue, and N. 68th Street from W. Bluemound Road to W. Lisbon Avenue.

The Milwaukee County Technical and Intergovernmental Coordinating and Advisory Committee on Jurisdictional Highway Planning met on October 30, 1973, to review the status of plan implementation within the county. The Committee at that meeting recommended that the jurisdictional highway system plan be amended to add one block of N. 68th Street between W. Lisbon Avenue and W. Burleigh Street as a local arterial. Further, the Committee acted to identify, as noted in Table 20, the status of proposed state trunk and county trunk improvements in Milwaukee County for the periods 1969-1970, 1971-1975, and 1976-1980.

Walworth County

The recommended jurisdictional highway system plan for Walworth County is set forth in SEWRPC Planning Report No. 15, A Jurisdictional Highway System Plan for Walworth County, published in October 1972. The plan constitutes a refinement of, and amendment to, the previously adopted regional transportation plan as that plan applies to Walworth County. It not only recommends jurisdictional responsibility for each of the individual facilities that together comprise the total arterial street and highway system for Walworth County, but also recommends right-of-way and pavement widths for each arterial facility, together with the type of improvement that will be required to serve land use and transportation needs within the county to the year 1990 (see Map 14).

The Commission adopted the Walworth County jurisdictional highway system plan on March 1, 1973, amending the adopted regional transportation plan by removing the 4.7 mile segment of proposed freeway known as the Janesville spur. The Walworth County Board adopted the plan on April 17, 1973, amending it to change the alignment of the proposed state trunk highway facility in the Village of East Troy between Main Street and STH 20.

Ozaukee County

The recommended jurisdictional highway system plan for Ozaukee County is set forth in SEWRPC Planning Report No. 17, A Jurisdictional Highway System Plan for Ozaukee County, published in December 1973. The plan was adopted by the Ozaukee County Board of Supervisors on December 5, 1973, and at year's end was pending adoption by the Commission.

The arterial street and highway system recommended to serve the growing traffic demand within Ozaukee County through 1990 as shown on Map 15 totals about 319 route miles of facilities, or about 35 percent of the estimated 912 route miles expected to comprise the total street and highway system in the county by 1990. Of this total arterial system, 97 route miles (about 30 percent) are proposed to comprise the Type I (state trunk) highway system, a reduction of two route miles from the present system. The state trunk system as recommended includes all committed and proposed freeways in the county and important surface arterials, and comprises the basic framework of the total highway transportation system in the county. In this respect, it is important to note that the Ozaukee County jurisdictional highway system plan includes among its recommendations an amendment to the adopted regional transportation plan which would delete the proposed Stadium Freeway from the Saukville Interchange to the Sheboygan County line.

The plan proposes a Type II (county trunk) highway system consisting of 176 route miles, or an additional 55 percent of the total arterial mileage required to serve the county in 1990. This represents an increase of 56 route miles over the present county trunk system. It is intended to complement the state trunk system, and together with that system to include all major arterial facilities of areawide significance.

The plan further recommends a Type III (local trunk) highway system consisting of the remaining 46 route miles of arterial facilities, or about 15 percent of the total proposed 1990 arterial mileage in the county. This system represents an increase of about five route miles over the present system, and is intended to serve primarily local arterial street and highway needs.

In addition to these three highway systems, the plan recommends creation of a system of prospective arterial highways totaling 61.5 route miles, which includes about 51.5 miles of existing streets and highways functioning as collector and land access facilities. While it is not anticipated that these prospective arterials will have to

Map 13

CHANGES IN THE JURISDICTIONAL HIGHWAY SYSTEMS IN MILWAUKEE COUNTY: 1967-1973

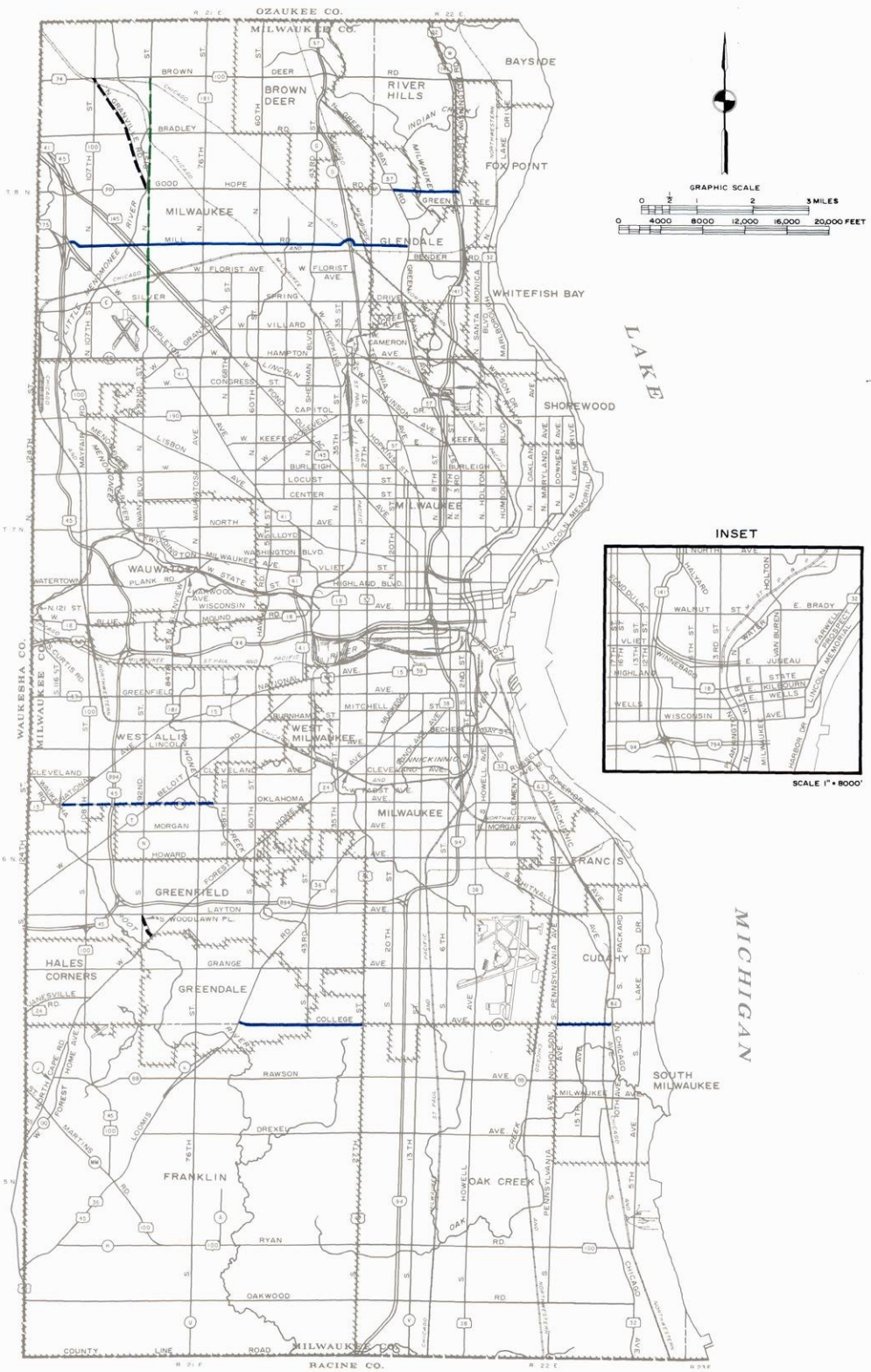
LEGEND

ADDITIONS TO THE STATE TRUNK HIGHWAY SYSTEM
- 1967–1972 (NONE)
- 1973 (NONE)

ADDITIONS TO THE COUNTY TRUNK HIGHWAY SYSTEM
- 1967–1972
- 1973

ADDITIONS TO THE LOCAL TRUNK HIGHWAY SYSTEM
- 1967–1972 (NONE)
- 1973

ADDITIONS TO THE COLLECTOR AND MINOR STREET SYSTEM
- 1967–1972 (NONE)
- 1973



The adopted jurisdictional highway system plan for Milwaukee County recommends the establishment of a county trunk highway system consisting of 217 route miles of facilities, an increase of nearly 141 miles over the county trunk highway mileage as it existed when the jurisdictional highway system plan was prepared for Milwaukee County. Between 1967 and 1973, approximately 14 miles of arterial streets were added to the county trunk highway system, and approximately seven miles of arterial streets or local streets were deleted from the county trunk highway system, all in accordance with the adopted plan. No additions to, or deletions from, the state trunk highway system were made within the county during this time period.

Source: SEWRPC.

Table 20

STATUS OF RECOMMENDED STATE TRUNK AND COUNTY TRUNK ARTERIAL HIGHWAY SYSTEM IMPROVEMENTS IN MILWAUKEE COUNTY: 1969-1980

Arterial Type Classification	Recommended Staging Period	Facility	Limits	Miles	Current Status	
					Improvement Completed	Proposed Construction Program 1974-1978
State Trunk (Type I)	1969-1970	Rock Freeway	S. 108th to Waukesha County line	1.0	X	--
		STH 100 (E. and W. Ryan Road)	S. 13th Street to S. Howell Avenue	1.0	X	--
		STH 100 (W. Brown Deer Road)	N. 43rd Street to N. 91st Street	3.0	X	--
		Subtotal	--	5.0	--	--
State Trunk (Type I)	1971-1975	Airport Spur Freeway	IH-94 (North-South Freeway) to General Mitchell Field	1.1	--	X
		Stadium Freeway	IH-94 (East-West Freeway) to IH-894 (Airport Freeway)	5.0	--	Partial
		Park and Lake Freeway	USH 41 (Stadium Freeway) to IH-794 (East-West Freeway)	5.0	--	Partial
		USH 141 (North-South Freeway)	E. Lexington Boulevard to E. Silver Spring Drive	0.4	--	--
		STH 100 (S. 108th Street)	W. Rawson Avenue to W. Forest Home Avenue	1.5	Partial	--
		STH 15 (W. National Avenue)	S. 84th Street intersection with STH 181	0.2	--	X
		USH 41 (S. 27th Street)	W. Oklahoma Avenue to W. Lincoln Avenue	1.0	X	--
		STH 24 (W. Forest Avenue)	S. 35th Street to S. 27th Street	0.6	X	--
		N. 115th Street	W. Silver Spring Drive to W. Florist Avenue	0.6	X	--
		STH 100 (N. Mayfair Road)	W. Watertown Plank Road to USH 45 (Zoo Freeway)	0.7	X	--
		USH 18 (W. Blue Mound Road)	STH 100 (N. Mayfair Road) intersection with USH 18	0.5	X	--
		STH 32 (N. Lake Drive)	E. Dean Road to E. School Road	2.5	X	--
		USH 18 (W. Highland Avenue)	N. 27th Street to N. 9th Street	1.3	--	X
		STH 175 (W. Appleton Avenue)	Waukesha County line to USH 41 interchange with the Zoo Freeway	0.5	X	--
		STH 59 (W. Greenfield Avenue)	Waukesha County line to S. 110th Street	0.9	--	X
		STH 100 (W. Ryan Road)	W. Loomis Road to S. 27th Street	5.0	--	X
		STH 100 (E. Ryan Road)	S. Howell Avenue to S. Chicago Road	3.0	--	--
		USH 45	W. Loomis Road to W. Rawson Avenue	1.7	--	--
		W. Rawson Avenue	S. 27th Street to USH 45	4.8	--	--
		STH 100 (E. Brown Deer Road)	Milwaukee River to USH 141	2.0	--	X
		STH 100 (S. Brown Deer Road)	N. 107th Street to N. 91st Street	1.0	--	X
		N. Teutonia Avenue	W. Ruby Avenue to W. Lancaster Avenue	0.7	--	--
		STH 181	W. National Avenue to East-West Freeway	1.0	--	X
		Subtotal	--	41.0	--	--
State Trunk (Type I)	1976-1980	Lake Freeway	East-West Freeway to Racine County line	13.7	--	Partial
		Stadium Freeway	Park Freeway to Ozaukee County line	9.7	--	--
		USH 141 (North-South Freeway)	W. Silver Spring Drive to W. Good Hope Road	2.0	--	--
		Bay Freeway	USH 141 to Waukesha County line	6.5	--	--
		Belt Freeway	Lake Freeway to Waukesha County line	9.5	--	--
		STH 36 (W. Loomis Road)	Interchange with S. 76th Street	0.4	--	--
		STH 36 (W. Loomis Road)	Waukesha County line to STH 100	2.2	--	--
		STH 181 (N. 76th Street)	W. North Avenue to W. Wisconsin Avenue	1.5		--
		STH 32 (S. Chicago Road)	Racine County line to E. Forest Hill Avenue	3.7	--	--
		STH 74 (W. Brown Deer Road)	N. 107th Street to Waukesha County line	1.0	--	X
		STH 32	E. Kilbourn Avenue over the N. Milwaukee-N. Broadway one-way pair, N. Water Street, E. Kane Place, N. Oakland Avenue, and E. North Avenue to the N. Prospect-N. Farwell one-way pair	2.2	--	--
		USH 18 (W. Highland Avenue)	N. 9th Street to N. 6th Street	0.2	--	--
		STH 32 (S. Lake Drive)	Cudahy City Limits to S. Kinnickinnic Avenue	2.5	--	--
		STH 59 (W. National Avenue)	S. 27th Street to S. 16th Street	0.8	--	--
		E. Rawson Avenue	S. Nicholson Avenue to STH 32	1.0	--	--
		Subtotal	--	59.6	--	--

Table 20 (continued)

Arterial Type Classification	Recommended Staging Period	Facility	Limits	Miles	Current Status: Improvement Completed	Current Status: Proposed Construction Program 1974-1978
County Trunk (Type II)	1969-1970	S. 76th Street	W. Grange Avenue to W. Layton Avenue	1.0	X	--
		N. 91st Street	W. Appleton Avenue to W. Fond du Lac Avenue	1.1	X	--
		Subtotal	--	2.1	--	--
County Trunk (Type II)	1971-1975	W. Good Hope Road	N. 43rd Street to N. 76th Street	2.0	X	--
		W. Oklahoma Avenue	W. National Avenue to N. 76th Street	2.5	--	X
		E. College Avenue	S. Pennsylvania Avenue to S. Chicago Avenue	1.0	--	X
		E. Layton Avenue	S. Packard Avenue to S. Howell Avenue	2.5	--	--
		S. 76th Street	W. Lincoln Avenue to W. Greenfield Avenue	1.0	--	--
		N. 124th Street	W. North Avenue to W. Capitol Drive	1.0	--	X
		W. Mill Road	N. 91st Street to N. 60th Street	2.0	--	X
		W. College Avenue	S. 27th Street to S. 20th Street	0.5	--	X
		W. Hampton Avenue	STH 100 to N. 92nd Street	1.3	--	X
		W. Appleton Avenue-W. Lisbon Avenue	W. Burleigh Street to W. North Avenue	1.4	--	--
		W. Burleigh Street	N. 60th Street to N. 43rd Street	1.0	--	--
		W. State Street	N. 76th Street to the Stadium Freeway	1.8	--	--
		W. State Street	N. 40th Street to N. 35th Street	0.3	--	--
		W. Burleigh Street-N. Hopkins Street	N. 27th Street to N. Teutonia Avenue	1.0	--	--
		Subtotal	--	19.3	--	--
County Trunk (Type II)	1976-1980	S. 76th Street	W. Grange Avenue to W. Rawson Avenue	2.0	--	--
		W. Rawson Avenue	S. North Cape Road to USH 45	0.7	--	--
		E. and W. College Avenue	S. 13th Street to S. Pennsylvania Avenue	2.5	--	--
		W. Layton Avenue	S. 76th Street to W. Loomis Road	2.0	--	--
		S. Howell Avenue	E. Oklahoma Avenue to E. Lincoln Avenue	1.0	--	--
		W. National Avenue	W. Lincoln Avenue to W. Greenfield Avenue	2.3	--	--
		E. Oklahoma Avenue	S. Chase Avenue to S. Kinnickinnic Avenue	1.3	--	--
		W. Forest Home Avenue-S. Muskego Avenue	S. 27th Street to W. Lapham Street	1.2	--	--
		W. Lapham Street	S. 6th Street to S. Muskego Avenue	0.9	Partial	--
		W. Lincoln Avenue	S. 27th Street to S. 35th Street	0.5	X	--
		S. 76th Street	W. Greenfield Avenue to W. Blue Mound Road	1.3	--	--
		W. Lisbon Avenue- W. Walnut Street	Stadium Freeway to N. 11th Street	2.4	--	--
		E. and W. Walnut Street	N. 6th Street to N. Water Street	0.7	--	--
		W. North Avenue	N. Menomonee River Parkway to N. 49th Street	2.9	--	--
		E. Locust Street	N. Holton Street to N. Lake Drive	1.7	--	X
		W. Mill Road	N. 60th Street to N. Green Bay Avenue	2.7	--	--
		W. Good Hope Road	N. 76th Street to N. 107th Street	2.0	--	--
		N. 124th Street	W. Silver Spring Drive to W. Capitol Drive	0.9	--	--
		N. and S. 124th Street	W. North Avenue to W. National Avenue	2.5	--	--
		Subtotal	--	31.5	--	--
All Facilities	1969-1980	Total	--	158.9	--	--

Source: SEWRPC.

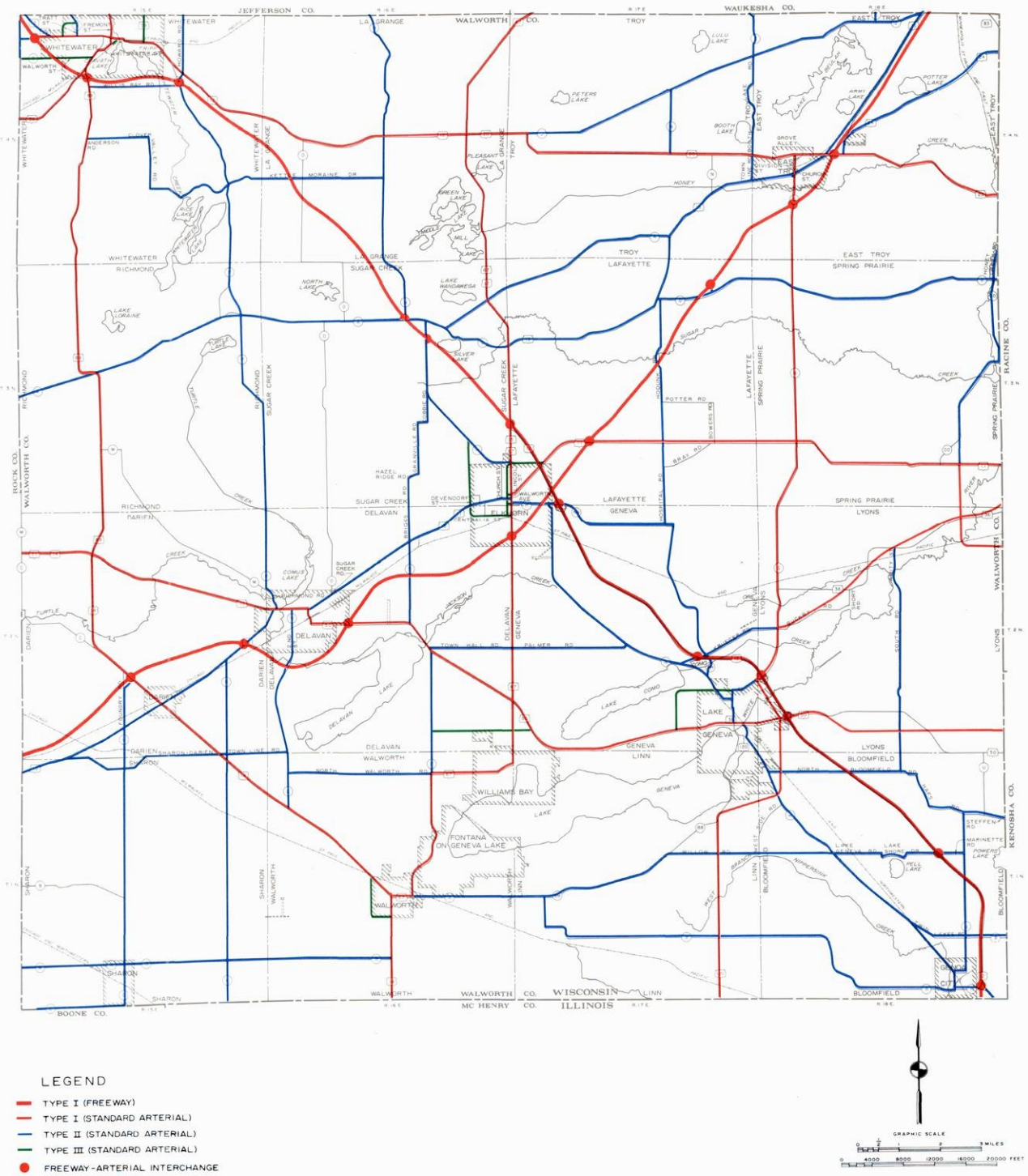
perform an arterial function through 1990, continued urban development requiring arterial service may be expected in the county beyond 1990. Therefore, those routes which would logically serve such demand have been identified and a cross section recommended which would permit proper control of access and reservation of sufficient right-of-way to accommodate a desirable local trunk facility cross section at such time as it is required.

The Technical and Intergovernmental Coordinating and Advisory Committee, which provided policy direction for the study, recognized the need for the designation, marking, and signing of a system of scenic drives to accommodate the anticipated 18,000 annual seasonal Sunday pleasure driving participants in the county by 1990. The plan, therefore, recommends that such a system be established. As shown on Map 16, this system, which includes about 100 miles of existing arterial, collector, and land access streets and highways, consists of three basic drives: one along the Milwaukee River, another along Cedar Creek, and a third along the Lake Michigan shoreline. The system would connect all state and county parks in Ozaukee County, as well as 55 of the 65 sites of cultural, historical, and scientific interest in the county.

One of the most important objectives of the jurisdictional highway planning process—the effective use of public resources to provide highway transportation—is attained by focusing resources and capabilities of the appropriate units of government on corresponding areas and levels of

Map 14

ADOPTED JURISDICTIONAL HIGHWAY SYSTEM PLAN FOR WALWORTH COUNTY: 1990

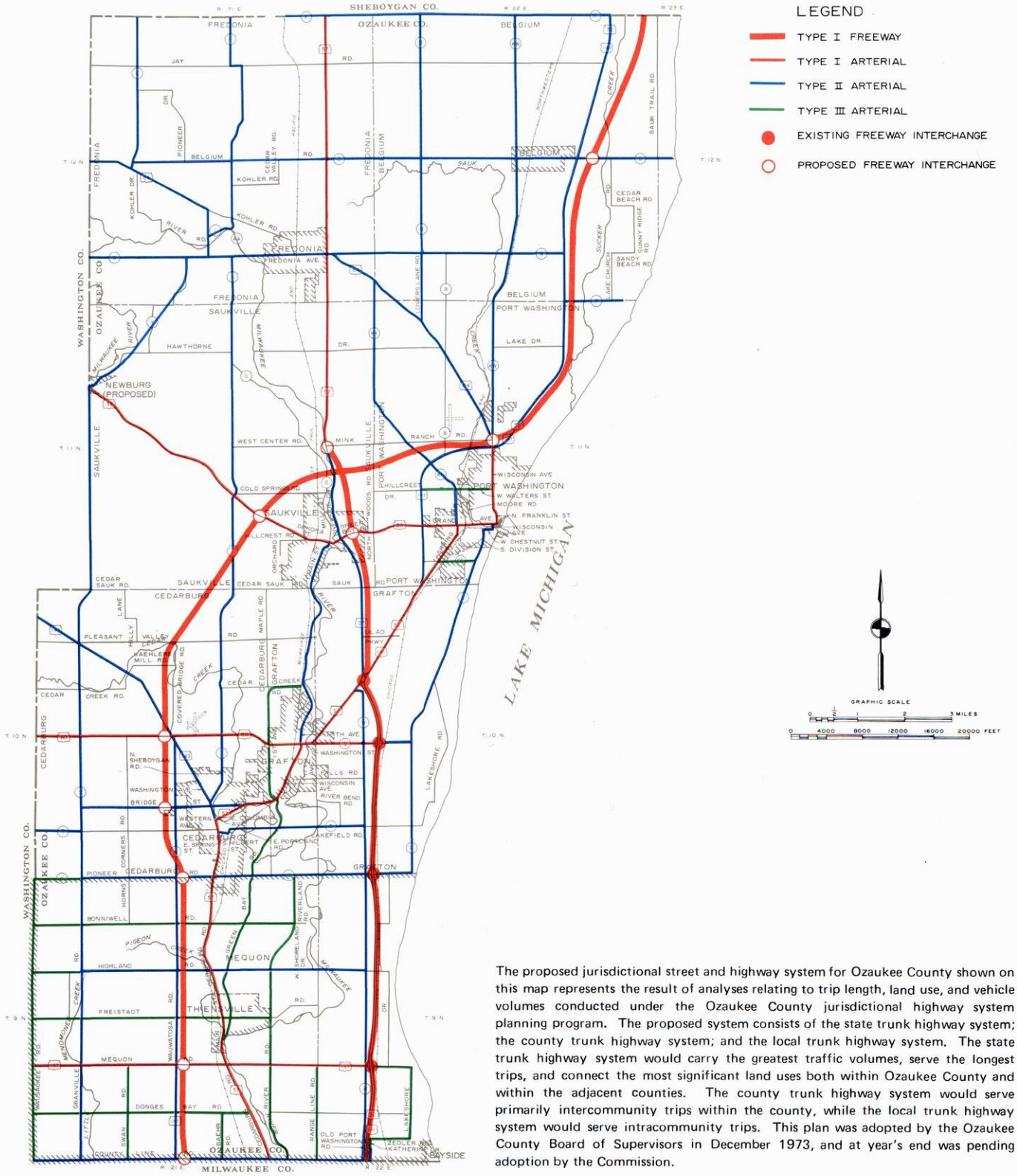


The arterial street and highway system recommended to serve traffic demand in Walworth County through 1990 totals nearly 490 route miles of facilities, or about one-third of the expected total street and arterial highway system in the county by 1990. The system includes about 217 route miles on the state trunk highway system, which includes all committed and proposed freeway facilities in the county and important surface arterials; about 258 route miles on the county trunk highway system, which complements the state trunk highway system and which together with that system includes all arterial facilities having intercommunity significance; and about 14 route miles on the local trunk highway system, which routes serve primarily local arterial street and highway needs.

Source: SEWRPC.

Map 15

PROPOSED JURISDICTIONAL CLASSIFICATION OF THE ARTERIAL STREET AND HIGHWAY SYSTEM IN OZAUKEE COUNTY: 1990

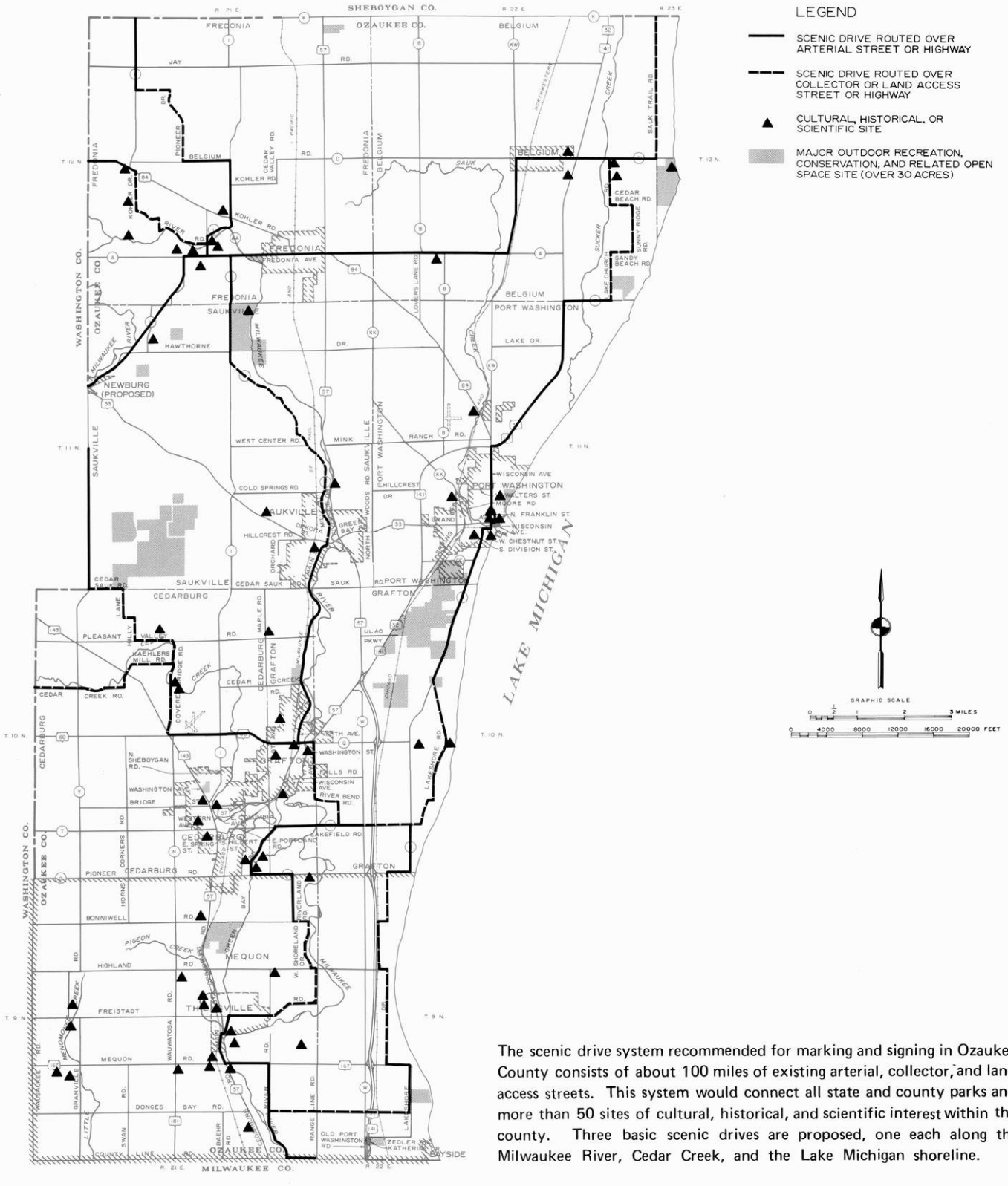


The proposed jurisdictional street and highway system for Ozaukee County shown on this map represents the result of analyses relating to trip length, land use, and vehicle volumes conducted under the Ozaukee County jurisdictional highway system planning program. The proposed system consists of the state trunk highway system; the county trunk highway system; and the local trunk highway system. The state trunk highway system would carry the greatest traffic volumes, serve the longest trips, and connect the most significant land uses both within Ozaukee County and within the adjacent counties. The county trunk highway system would serve primarily intercommunity trips within the county, while the local trunk highway system would serve intracommunity trips. This plan was adopted by the Ozaukee County Board of Supervisors in December 1973, and at year's end was pending adoption by the Commission.

Source: SEWRPC.

Map 16

RECOMMENDED SCENIC DRIVE SYSTEM IN OZAUKEE COUNTY: 1990



The scenic drive system recommended for marking and signing in Ozaukee County consists of about 100 miles of existing arterial, collector, and land access streets. This system would connect all state and county parks and more than 50 sites of cultural, historical, and scientific interest within the county. Three basic scenic drives are proposed, one each along the Milwaukee River, Cedar Creek, and the Lake Michigan shoreline.

Source: SEWRPC.

need. That the recommended jurisdictional highway plan accomplishes this objective is indicated by the fact that the proposed state trunk arterial system may be expected to carry about 1.21 million of the 1.80 million arterial vehicle miles of travel expected daily in the county by 1990. The proposed county trunk system may be expected to carry an additional 440,000 arterial vehicle miles of travel, and the remaining 150,000 arterial vehicle miles of travel would be carried on the proposed local trunk system. Thus, 30 percent of the total arterial street and highway mileage in the county assigned to the state would carry about 67 percent of the total arterial travel demand, 55 percent of the total arterial street and highway mileage assigned to the county would carry 25 percent of the total arterial travel demand, and 15 percent of the total arterial street and highway mileage assigned to local units of government would carry the remaining 8 percent of the total arterial travel demand, as shown in Figure 16. Adoption and implementation of the plan will serve to relieve the local units of government of much of the cost attendant to the movement of heavy volumes of fast, through traffic of areawide importance.

The financial feasibility of the recommended plan was analyzed, and total plan construction and maintenance costs were estimated and compared to anticipated revenues over a 20-year plan implementation period. Costs were also tabulated for each unit and level of government in the county. The financial analysis explored the effect of proposed changes in the jurisdictional highway systems on supplemental aids and allotments received by each municipality in the county, and it was found that the plan, if followed, could be fully implemented with a reduction in the present rate of public highway expenditures.

Specific procedures for implementing the plan are set forth in the report. The most important include formal plan adoption by the federal, state, and local units of government concerned; realignment of the state trunk, county trunk, and federal aid systems to conform with the adopted plan; elimination of the connecting street concept; assumption by the state of full maintenance responsibilities for all state trunk highways and by Ozaukee County for all county trunk highways; abolition of the county aid highway system; establishment of the town road improvement fund; integration of the recommended plan into the construction and programming procedures of the Wisconsin Department of Transportation and Ozaukee County Highway Department; and adoption of common, uniform construction aid formulas and policies for all state and county trunk highways, which would limit the local share of facilities construction costs to 15 percent of the total cost. The report also recommends actions by the state, county, and local units of government to protect needed rights-of-way from development and to protect the traffic carrying capacity of the arterial facilities through the planning and control of roadside access.

Waukesha County

All technical work was completed during 1973 on the preparation of a jurisdictional highway system plan for Waukesha County. At year's end the advisory committee had completed its review of all of the chapters in the planning report documenting the findings and recommendations of the study, and the report was being readied for printing.

Kenosha and Washington Counties

Work began during 1973 on the preparation of jurisdictional highway system plans for Kenosha and Washington Counties. At the end of the year, the advisory committees for each of the studies were nearing approval of the arterial street and highway systems to which jurisdictional responsibilities will be assigned. Analyses of the financial feasibility of each of the recommended plans and the determination of detailed plan implementation steps will be undertaken in 1974.

Racine County

Work on the jurisdictional highway system plan for Racine County was resumed in 1973. Work on the study had been deferred until completion of the Racine Urban District plan, which was achieved late in 1972. By the end of 1973, the Technical Coordinating and Advisory Committee for the study had approved the plan subject to evaluation of its financial feasibility and the determination of detailed plan implementation steps. Both of these analyses will be undertaken in 1974.

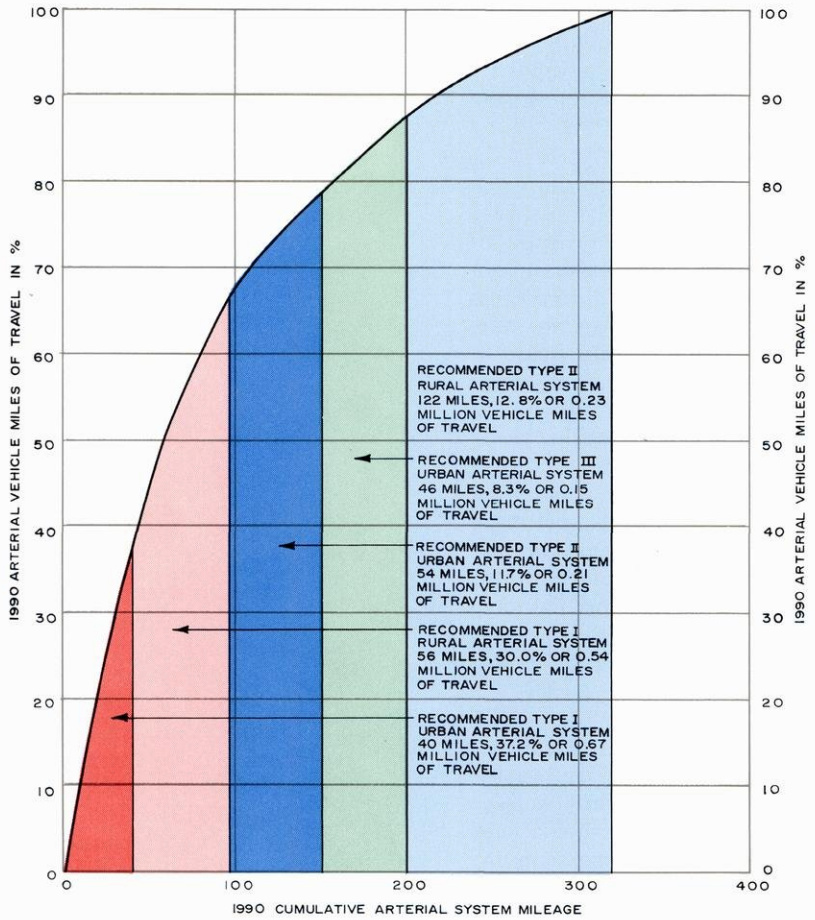
Traffic Corridor Refinement (8.4)

At the request of the District 9 Office of the Wisconsin Department of Transportation, Division of Highways, the Regional Planning Commission made additional traffic assignments and analyses to determine the travel demand for the proposed Stadium Freeway North corridor in northern Milwaukee and southern Ozaukee Counties. This work involved the reassignment of forecast traffic volumes to the arterial street and highway system following the removal of the proposed freeway facility from the network, and reevaluation of the effect on modal choice. This work was undertaken to provide information for evaluation of the need for the proposed freeway facility within the corridor.

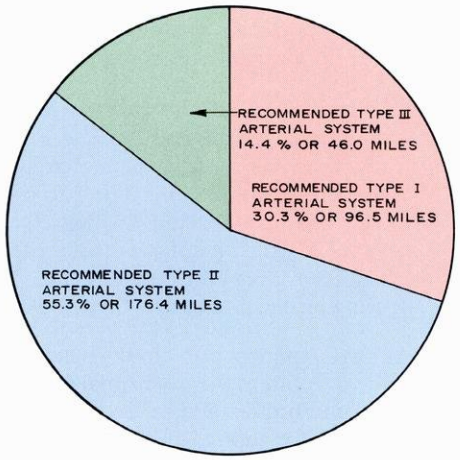
Similarly, the Commission, at the request of the Milwaukee County Expressway and Transportation Commission, prepared additional traffic assignments and analyses to determine travel demand within the proposed Stadium Freeway South corridor between the Airport Freeway (IH-894) and the East-West Freeway (IH-94). This work was undertaken in order to determine the impact on the surrounding land uses and arterial facilities with the removal of the proposed freeway facility. This work involved the reassignment of forecast traffic volumes to the arterial street and highway system and evaluation of the effect on modal choice.

Figure 16

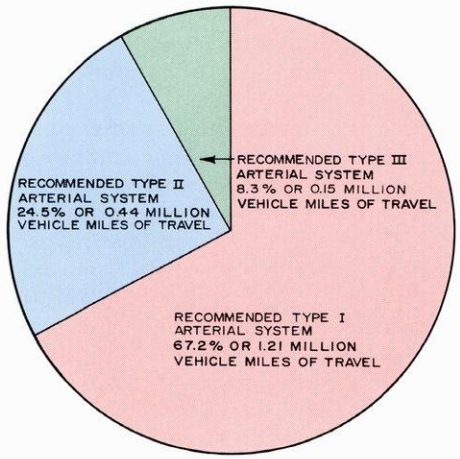
RELATIONSHIP BETWEEN PERCENT OF ARTERIAL VEHICLE MILES OF TRAVEL AND CUMULATIVE ARTERIAL MILEAGE– RECOMMENDED OZAUKEE COUNTY JURISDICTIONAL HIGHWAY SYSTEM 1990



DISTRIBUTION OF MILEAGE ON THE TYPE I, TYPE II, AND TYPE III ARTERIAL SYSTEMS 1990



DISTRIBUTION OF ARTERIAL VEHICLE MILES OF TRAVEL ON THE TYPE I, TYPE II, AND TYPE III ARTERIAL SYSTEMS 1990



Source: SEWRPC.

Transportation Services (8.1)

During 1973 the Commission performed a variety of services to assist federal, state, and local units and agencies of government and private groups and investors in better utilizing the basic transportation planning data available in the Commission files, thereby assisting in implementation of the adopted transportation plan. The Commission also provided services requested by local units of government relative to programs sponsored by the local government units. The following are some of the services which were provided during the year:

- At the request of Milwaukee County, the Commission conducted a two-week ridership survey to determine the effect of a pilot program of reduced bus fares for senior citizens during off-peak periods on total bus ridership during those periods. Funds for the pilot program were appropriated by the Milwaukee County Board of Supervisors in 1973. Under the program, senior citizens in the Milwaukee area were allowed to ride for half fare at all times except during weekday morning and afternoon rush hours.

  In conducting the survey, survey personnel made counts of all boarding passengers in two age categories—under 65 and 65 and older—during one week prior to the start of the program and during another week shortly after the program began. The second survey also included interviews with senior citizen riders.

  The survey found that there was no significant increase in senior citizen ridership during the survey period in which reduced fares were in effect. One significant finding was that a large number of senior citizens preferred the economy and convenience of a weekly bus pass, and said they would continue to use it even if the cash fare were reduced. The results also showed that during the second survey week, about 38 percent of the senior citizen riders used weekly passes, 6 percent paid full fare, and 56 percent took advantage of the reduced fare. The program was continued through the end of the year with the appropriation of additional monies by Milwaukee County and most of the municipalities in the county.

- As part of the major traffic generator survey in its 1972 travel inventory, the Commission used employee and student resident address lists provided by major commercial and industrial firms and by the University of Wisconsin-Milwaukee (UWM) to locate concentrated areas of employee or student residence. With regard to UWM, the Commission found that there were high concentrations of potential bus users in the City of Wauwatosa and adjacent areas of the City of Milwaukee. These data were subsequently used by UWM to establish an experimental program to provide free crosstown bus service for UWM students, faculty, and staff. Based on the data, a test route along North Avenue was chosen (see Map 5).

  Buses used in the "UBUS" program are chartered by UWM from the Milwaukee and Suburban Transport Corporation. The buses operate from 6 a.m. to 6 p.m. Monday through Friday, and in 1973 carried an average of from 1,500 to 1,600 UWM commuters to and from the campus each day. A survey of UBUS riders during the year showed that about 45 percent of the 792 persons who returned questionnaires would have driven a car to the campus if the bus service were not available. The program proved so successful in its first months of operation that by the end of the year sponsors of the project were seeking state funds to expand it. The program was begun in an attempt to reduce parking congestion on residential streets near the UWM campus.

- Assistance was rendered to the Wisconsin Department of Transportation in the conduct of the 1974 National Transportation Study. The Commission, as the agency charged with the responsibility for preparing and maintaining long-range plans for the development of the Kenosha, Milwaukee, and Racine urbanized areas in the Region, participated in the study as it applied to these urbanized areas. The biennial National Transportation Studies are designed to provide information that describes the adequacy of both the current and future transportation system, and to assist in the development of appropriate federal transportation programs and policies. The work accomplished by the Commission for the study during 1973 included the reporting of the physical state and performance of the existing 1972 and planned 1990 transportation systems and the capital investments required to realize the 1990 system as planned, including collation of data on the miles of facilities, the capacity of the facilities, miles and hours of travel, accidents, land area, pollutants, trip activity, and costs for the surface transportation system within the three urbanized areas; and the physical state and performance of the transportation system developed as a result of capital improvements programmed for 1980.

- At the request of the City of Milwaukee, work was undertaken to convert the Federal Highway Administration's car pool matching program for use on the Commission's 370/125 computer. This work was undertaken in anticipation of the receipt of the employee role of the City of Milwaukee area for use in the proposed car pooling promotion by the City of Milwaukee staff.

- At the request of four private groups and investors, 5-minute isochronal line maps of selected communities and subareas of the Region were prepared for input to accessibility determinations as a part of marketability service.

Short-Range Priority Improvement Program

An important step toward implementation of the adopted regional transportation plan is the scheduling of transportation-related improvement projects. To assist the state and local agencies concerned with transportation system development in staging transportation facility construction, the U. S. Department of Transportation, Federal Highway Administration, has requested that the Commission prepare and publish annually a regional transportation system short-range priority improvement program. Accordingly, the Commission has determined to publish in its Annual Report a short-range priority improvement program with respect to both arterial highway and transit facilities in the Region. The priority improvement program would be constructed on the following assumptions:

1. That the schedule for construction of all regional freeway facilities be that established in the initial regional transportation plan.
2. That the schedule for construction of all regional rapid and modified rapid transit facilities be that established in the initial regional transportation plan, as amended by the Milwaukee Area Transit Plan.
3. That the schedule for construction of all nonfreeway state trunk highways and all county trunk highways be established on a county-by-county basis as an integral part of the preparation of county jurisdictional highway system plans.
4. That the schedule for construction of all local transit facilities be established on an urban area by urban area basis as an integral part of the preparation of urban area transit development programs.
5. That local arterial streets not be included in the priority improvement program.

By the end of 1973, the following actions had been taken that directly affect the preparation of the short-range priority improvement program.

1. The regional transportation plan had been adopted, thereby establishing a regional priority schedule for the construction of freeways. This schedule is set forth in Table 21.
2. The Milwaukee Area Transit Plan had been adopted by the Commission and the Milwaukee County Board. The Board deleted the transitway construction schedule from the plan, hence there is no longer a viable construction schedule for the rapid transit element of the plan. The County Board did, however, authorize the construction of park-and-ride facilities in 1974, thus carrying forward implementation of the modified rapid transit element of the plan.
3. County jurisdictional highway system plans had been adopted for Milwaukee and Walworth Counties and had been completed for Ozaukee and Waukesha Counties, thus permitting a county-by-county priority schedule for the construction of nonfreeway state trunk highways and county trunk highways for these four counties. This schedule is set forth in Table 22.

Table 21

PRIORITY IMPROVEMENT PROGRAM FOR FREEWAYS IN THE REGION: 1974-1990

Freeway Facility	Facility Limits	Recommended Staging Period		
		1974-1980	1981-1985	1986-1990
Lake Freeway	IH-794 (East-West Freeway) to STH 20 (Racine County)	X	--	--
	STH 20 (Racine County) to Illinois state line	--	X	--
Stadium Freeway	IH-94 (East-West Freeway) to IH-894 (Airport Freeway)	X	--	--
	Park Freeway to Ozaukee County line	X	--	--
	Ozaukee County line to USH 141 (North-South Freeway)	X	--	--
Park Freeway	Sherman Boulevard to USH 141 (North-South Freeway)	X	--	--
Park and Lake Freeways	Milwaukee Street to IH-794 (East-West Freeway)	X	--	--
North-South Freeway	STH 57 to Sheboygan County line	X	--	--
Rock Freeway	City of Elkhorn to Rock County	X	--	--
Belt Freeway	Lake Freeway to USH 18 (Waukesha County)	--	X	--
	USH 18 (Waukesha County) to USH 141 (Washington County)	--	--	X
Bay Freeway	Hartland to CTH P (Waukesha County)	X	--	--
	CTH P to Jefferson County line	X	--	--
	USH 16 to USH 45 (Zoo Freeway)	--	--	X
	USH 45 (Zoo Freeway) to USH 141 (North-South Freeway)	--	--	X
Loop Freeway	IH-94 (North-South Freeway) to Lake Freeway in Racine County	--	--	X
USH 12	Elkhorn to Jefferson County line	X	--	--
West Bend Freeway	USH 41 to USH 45 north of West Bend	X	--	--
USH 41	Richland to Dodge County line	X	--	--
USH 16	IH-94 (East-West Freeway) to Bay Freeway	X		--
Airport Spur Freeway	IH-94 (North-South Freeway) to General Mitchell Field	X	--	--

Source: SEWRPC.

Table 22

SHORT-RANGE PRIORITY IMPROVEMENT PROGRAM FOR NONFREEWAY STATE TRUNK HIGHWAYS AND COUNTY TRUNK HIGHWAYS: 1974-1980

County	Nonfreeway State Trunk Highways		
	Facility	Limits	Number Of Miles
Milwaukee	STH 100 (S. 108th Street)	W. Rawson Avenue to College Avenue	1.00
	STH 15 (W. National Avenue)	S. 84th Street intersection with STH 181	0.20
	USH 18 (W. Highland Avenue)	N. 27th Street to N. 12th Street	1.20
	STH 59 (W. Greenfield Avenue)	Waukesha County line to S. 110th Street	0.90
	STH 100 (W. Ryan Road)	W. Loomis Road to S. 27th Street	5.00
	STH 100 (E. Ryan Road)	S. Howell Avenue to S. Chicago Road	3.00
	USH 45	W. Loomis Road to W. Rawson Avenue	1.70
	W. Rawson Avenue	S. 27th Street to USH 45	4.80
	STH 100 (E. Brown Deer Road)	Green Bay Road to USH 141	2.00
	STH 100 (S. Brown Deer Road)	N. 107th Street to N. 91st Street	1.00
	STH 74 (W. Brown Deer Road)	N. 107th Street to Waukesha County line	1.00
	N. Teutonia Avenue	W. Ruby Avenue to W. Lancaster Avenue	0.70
	STH 181	W. National Avenue to East-West Freeway	1.00
Ozaukee	STH 32	Proposed North-South Freeway to City of Port Washington and W. Walters Street to E. Grand Avenue	1.10
	STH 33	STH 57 to proposed North-South Freeway	0.60
	STH 33	Back Road to STH 57 and USH 141 to STH 32	1.50
	STH 57	E. Spring Street to CTH C and Bridge Street to USH 141	5.10
	STH 167	Washington County to USH 141	8.10
Walworth	STH 89	STH 59 to CTH A	7.90
	Present STH 11	Racine County line to proposed extension of CTH DD	1.00
	STH 67	STH 50 to Geneva Street (City of Elkhorn)	4.80
	STH 50	CTH F to Village of Williams Bay	4.60
	STH 89	CTH A to USH 14	4.60
	USH 14	Rock County line to Rock Freeway	5.50
	Proposed extension of STH 20	Present USH 12 to USH 12 Freeway	0.80
	Present USH 12	Whitewater Creek to City of Whitewater east corporate limits	1.40
	STH 20	STH 67 to Racine County line	13.90
	Lincoln Street	Geneva Street to City of Elkhorn north corporate limits	1.30
	STH 67	Village of Williams Bay west corporate limits to point 0.7 mile south of STH 50	2.30
	STH 120 and its proposed extension	STH 50 to present CTH BB	3.40
Waukesha	USH 18 (Summit Avenue)	City of Waukesha west corporate limits to STH 83 (Wales Road)	6.40
	STH 67	Delafield Road to proposed USH 16	3.60
	STH 74	West corporate limits of the Village of Sussex to CTH J, the east corporate limits of the Village of Merton to its west corporate limits, and STH 83 (proposed) to old STH 83	3.30
	STH 83 (Rochester Street)	The north corporate limits of the Village of Mukwonago to the south corporate limits of the Village of Mukwonago	1.50
	East Moreland Boulevard	White Rock Avenue to STH 164	0.30
	North Street (new facility)	Madison Street to Wisconsin Avenue	0.30
	USH 16	Present USH 16 from CTH P (Brown Street) to proposed USH 16, and from a point 1.45 miles east of the Jefferson County line to the Jefferson County line	2.40
	STH 24 (Janesville Road)	Milwaukee County line to CTH Y (Racine Avenue)	5.00
	STH 59	The west corporate limits of the Village of North Prairie to the Jefferson County line	8.60
	STH 59 (Arcadian Avenue)	Johnson Road to the east corporate limits of the City of Waukesha	2.30
	STH 59 (Greenfield Avenue)	Milwaukee County line to Johnson Road	5.00
	STH 83 (Mukwonago bypass)	North corporate limits of the Village of Mukwonago on present STH 83 to STH 15 (Rock Freeway)	2.90
	STH 164	IH-94 to the north corporate limits of the City of Waukesha	1.70
	STH 175 (Appleton Avenue)	Garfield Drive to the Washington County line	1.40
	Buckley Street and Union Street	Main Street to STH 164 (North Street)	0.40
	New Facility (Waukesha western bypass)	STH 59 (Genesee Road) to IH-94	5.20

Table 22 (continued)

County	County Trunk Highways		
	Facility	Limits	Number Of Miles
Milwaukee	W. Good Hope Road	USH 141 to N. 107th Street (complete unfinished elements)	
	W. Oklahoma Avenue	W. National Avenue to N. 76th Street	2.50
	E. College Avenue	S. Pennsylvania Avenue to S. Chicago Avenue	1.00
	E. Layton Avenue	S. Packard Avenue to S. Howell Avenue	2.50
	S. 76th Street	W. Lincoln Avenue to W. Greenfield Avenue	1.00
	N. 124th Street	W. North Avenue to W. Capitol Drive	1.00
	W. Mill Road	N. 107th Street to N. 43rd Street	4.00
	W. College Avenue	S. 27th Street to S. 20th Street	0.50
	W. Hampton Avenue	STH 100 to N. 92nd Street	1.30
	W. Appleton Avenue-W. Lisbon Avenue	W. Burleigh Street to W. North Avenue	1.40
	W. Burleigh Street	N. 60th Street to N. 43rd Street	1.00
	W. State Street	N. 76th Street to the Stadium Freeway	1.80
	W. State Street	N. 40th Street to N. 35th Street	0.30
	W. Burleigh Street-N. Hopkins Street	N. 27th Street to N. Teutonia Avenue	1.00
	W. Layton Avenue	S. 76th Street to W. Loomis Road	2.00
	W. North Avenue	N. Menomonee River Parkway to N. 49th Street	2.90
	E. Locust Street	N. Holton Street to N. Lake Drive	1.70
	W. Watertown Plank Road	N. 113th Street to N. 124th Street	1.00
Ozaukee	STH 57	Village of Saukville	1.10
	CTH D	Village of Belgium to proposed North-South Freeway	0.70
	CTH I	Sheboygan County line to STH 84	5.50
	CTH O	Cedar Sauk Road to STH 60	3.30
	CTH Y	CTH A to STH 143 and STH 60 to CTH C	9.80
	CTH C	City of Port Washington to USH 141	6.00
	STH 84	Washington County line to CTH A	3.70
	STH 143	CTH Y to Bridge Street	4.50
	STH 181	STH 167 to Milwaukee County line	2.00
	CTH C	CTH N to Green Bay Road	1.60
	CTH E	Sheboygan County line to STH 84	3.20
	CTH I	STH 33 to Cedar Sauk Road	2.00
	CTH K	Sheboygan County line to STH 57	0.40
	CTH Y	STH 143 to STH 60	2.00
	Bridge Street	Proposed Stadium Freeway to STH 143	1.00
	Granville Road	CTH C to Highland Road and Freistadt Road to Milwaukee	5.00
Walworth	CTH D	CTH A to STH 67	1.70
	CTH U	Hafs Road to point 0.5 mile west of Kenosha County line	0.50
	Willis Ray Road	STH 89 to CTH P	2.30
	Anderson Road	STH 89 to Clover Valley Road	0.80
	Clover Valley Road	Anderson Road to Engel Road	2.10
	North Bloomfield Road	CTH H to USH 12	1.90
	Hafs Road	South Road to CTH U	2.20
	Krueger Road	STH 36 to CTH NN	1.90
	Geneva Street	STH 67 to CTH NN	0.90
	CTH F	STH 67 to STH 50	3.00
Waukesha	CTH I (Lawnsdale Road)	0.38 mile from the west corporate limits of the City of New Berlin to CTH Y (Racine Avenue)	1.17
	CTH JK (Lisbon Avenue)	Merton Avenue to USH 16	1.03
	CTH OO (Cape Road)	Milwaukee County line to a point 0.47 mile north of USH 45	1.80
	CTH P (Brown Street)	Present USH 16 to the Ashippun River	4.35
	CTH T (Grandview Boulevard)	IH-94 to Northview Road	1.10
	Merton Avenue	CTH JK (Capitol Drive) to CTH K	1.03
	New Facility	East corporate limits of the Village of Chenequa to CTH C (Lakeland Road), and CTH C (Lakeland Road) to CTH PPP	2.09
	New Facility	CTH PPP (Wisconsin Avenue) to CTH P (Brown Street)	1.18
	CTH F	CTH SS to a point 0.76 mile north of STH 190 (Capitol Drive)	1.79
	CTH F (Pewaukee Road)	North corporate limits of the City of Waukesha to IH-94	1.50
	CTH HH (College Avenue)	STH 24 (Janesville Road) to CTH Y (Racine Avenue)	4.02
	CTH JJ	CTH JK to east corporate limits of Village of Hartland	0.32
	CTH Q (County Line Road)	CTH V to Milwaukee County line	2.52
	CTH YY (Pilgrim Road)	CTH K (Lisbon Road) to the Washington County line	5.84
	CTH Z (Lake Drive)	STH 67 (Lake Road) to the present terminus of Lake Drive, and Lapham Street to the proposed USH 16 bypass	0.85
	Boundary Road	Washington County line to STH 145	0.89
	Capitol Drive	Merton Avenue to STH 83	1.48
	Capitol Drive	West Street to the north corporate limits of the Village of Pewaukee	0.34
	Jungbluth Road	USH 16 to CTH K	1.02
	Moorland Road	IH-94 to STH 15 (Rock Freeway)	5.00
	Pilgrim Parkway	Watertown Plank Road to North Avenue	1.73
	Pilgrim Road	North Avenue to CTH K (Lisbon Road)	3.17
	West Moreland Boulevard	Pewaukee Road to STH 164	0.16

Source: SEWRPC.

4. Transit development programs had been mounted for the Kenosha, Milwaukee, and Racine urbanized areas. By the end of 1973, however, none of these programs had proceeded to the point where a priority improvement schedule could be established for local transit facilities.

It is anticipated that county jurisdictional highway system plans will be completed by the end of 1974 for all seven counties in the Region. In addition, it is likely that transit development programs for the Region's three urbanized areas will also be completed by the end of 1974, thus permitting significant expansion of the foregoing priority improvement program. In addition, the respective advisory committees will meet annually to review and update the improvement programs, as well as to monitor progress toward plan implementation.

Procedural Development (4.4)

Under the procedural development function, the techniques and procedures used for developing and testing land use and transportation system plans are to be evaluated, improved upon, and, where necessary and as possible, new techniques and procedures developed.

Land Use Plan Design Model

As a major effort under this function, although funded separately from the continuing regional land use-transportation study, the Commission published in 1973 the findings of the third and final phase of the development of a land use plan design model in SEWRPC Technical Report No. 8, A Land Use Plan Design Model, Volume 3, Final Report. The model was intended to be used in land use planning to generate land use plan designs which would meet stated development objectives and forecast requirements at least cost. The final report indicates, however, that while the research project produced a model which is conceptually sound and internally consistent, the model requires certain improvements and refinements if it is to become a truly useful operational planning tool. The improvements and refinements necessary relate to the model inputs and to the manner in which the model is applied. The report concluded that to effect the improvements and refinements necessary to produce a truly operational model would require the extensive application of the model to actual land use plan design by a team, preferably consisting of a knowledgeable land use planner and an experienced system engineer.

Documentation

The Commission published several reports during 1973 which relate directly or indirectly to the continuing regional land use-transportation study and which document efforts during the year. These include:

- SEWRPC Planning Report No. 17, A Jurisdictional Highway System Plan for Ozaukee County.
- SEWRPC Technical Report No. 8, A Land Use Plan Design Model, Volume 3, Final Report.
- SEWRPC Community Assistance Planning Report No. 1, Residential, Commercial, and Industrial Neighborhoods, City of Burlington.
- The 1972 Annual Report.

REGIONAL AIRPORT SYSTEM PLANNING PROGRAM

The Commission continued its work during 1973 on the regional airport system planning program, which began in December 1970 and is now scheduled for completion in 1974. The program was initially requested by Milwaukee County and the Wisconsin Department of Transportation. It is intended to provide a sound and workable plan to guide the staged improvement of public airport facilities to serve the growing demand for air transportation within the Region, as well as to meet federal airport system planning requirements as a prerequisite for continued eligibility of local units of government in the Region for federal grants for the construction of airport facilities. In addition, the regional airport system plan will be fully coordinated with areawide land use, surface transportation facility, and community facility development plans within the Region and will become an element of the state airport system plan.

During 1973, work under the regional airport system planning program concentrated on the design, test, and evaluation of alternative system plans. Following review and approval of the inventory of existing conditions and probable forecast demands for air transportation services by the Technical Coordinating and Advisory Committee, R. Dixon Speas, Inc., the principal consultant to the Commission on the program, prepared a demand distribution model to allocate based aircraft by aircraft type to the existing and proposed airports constituting each of the alternative airport system plans. The model was used initially to allocate future demand to the existing airport system, and a demand/capacity analysis was undertaken to determine deficiencies of the existing system. The analyses indicated that under probable future demand conditions and without airport improvements, landing area capacity deficiencies could be expected to exist at General Mitchell Field and at five major general aviation airports within the Region: Waukesha County, Timmerman Field, Kenosha Municipal, Racine Commercial, and East Troy Municipal. In addition, existing terminal facilities at General Mitchell Field and terminal facilities and facilities for general aviation aircraft could be expected to be inadequate to meet forecast demand at all 20 of the existing public use general aviation airports within the Region.

Alternative airport system plans were developed to overcome these deficiencies and to accommodate future aviation demands in a manner consistent with overall development objectives for southeastern Wisconsin. The number, classification, and location of airports were the variables analyzed under the series of alternative system plans considered. Because of the numerous subsystem planning problems involved, the alternative system plan design process was one of evolution through successive iterations. Twenty-one alternative system plans, involving

various combinations of airports ranging in number from eight to 30 airports, were developed, tested through over 50 applications of the demand distribution model, and analyzed by the Commission staff and the consultant. From this evaluation process, five basic alternative airport system plans were selected by the Technical Coordinating and Advisory Committee for detailed evaluation by the Commission and consultant. These alternative plans are:

1. Alternative A—A "no build" system comprised of existing publicly and privately owned public use airports in the Region.

2. Alternative B—An "ideal" airport system plan which includes the minimum number of publicly owned airports capable of accommodating the probable forecast number and type of aircraft and related operations at airports located in the expected centers of demand.

3. Alternative C—A modification of Alternative B, using, to the extent practical, airports located on existing sites and proposed new airports located on lands potentially available for airport development near the previously identified centers of demand.

4. Alternative D—A nonurban airport system plan wherein all airports in urban or urbanizing areas would be replaced by airports located in less densely developed areas.

5. Alternative E—An upgrading of the existing publicly and privately owned system of public use airports, as appropriate, to accommodate the probable forecast of general aviation demand. Alternative sites for development of air carrier airports, other than General Mitchell Field, were also developed for evaluation.

More extensive evaluation of these basic alternative airport system plans will include a landing area demand/capacity analysis; capital, operating, and system user cost analysis; determination of the environmental impact of the system on regional noise and air quality levels and on the natural resource base; analysis of alternative air carrier airport sites; analysis of the relationships to other recommended physical plan elements; and a comparison with airport development objectives, principles, and supporting standards. It is anticipated that during 1974 the Technical, Coordinating, and Advisory Committee, following an in-depth review of the evaluation of alternative airport system plans, will prepare a recommended regional airport system plan for public consideration through a series of informational hearings and a formal public hearing. Final Commission review report publication and plan adoption will follow in late 1974.

HOUSING PLANNING

Planning for shelter, one of man's most basic and fundamental needs, has received increasing emphasis by the Commission in recent years as an important component of physical development planning. A housing component has long been considered to be an important part of any comprehensive community development plan, and is receiving increasing attention at the regional level of planning. The Commission is currently involved in both a regional housing study, which began in 1970 and was initially scheduled for completion in 1973, and a program of providing ongoing guidance and advice to those segments of the regional population that are experiencing the most difficulties in obtaining decent shelter. Progress during 1973 with respect to both the formal regional housing study and the ongoing housing assistance program are discussed in the following paragraphs.

REGIONAL HOUSING STUDY

The Commission began the formal regional housing study in mid-1970, following a request by the Mayor of the City of Milwaukee to address the problems of providing shelter on an areawide basis in the Southeastern Wisconsin Region. The formulation of a housing element as part of a regional development plan also represents U. S. Congressional policy, and is reflected in the planning requirements set forth by the U. S. Department of Housing and Urban Development (HUD). While initially scheduled for completion in 1973, the regional housing study is now scheduled to be completed late in 1974. Delays in completing the study relate primarily to interruption of the work caused by the conduct of a special short-range action housing program at the request of HUD as reported in the Commission's 1972 Annual Report, and by delays in receiving key data and analyses from a primary contractor under the study, the University of Wisconsin-Milwaukee (UWM). The University is responsible for conducting those elements of the regional housing study which relate to social research into the characteristics, perceptions, and preferences of housing consumers, producers, providers, and facilitators. The University had not completed its report by the end of 1973. Substantial progress was made under the study during 1973, however, particularly in establishing housing objectives, principles, and standards and in identifying true housing need within the Region.

Housing Objectives, Principles, and Standards

One of the most difficult conceptual tasks faced to date by the Commission and staff was the formulation of specific housing development objectives and supporting principles and standards. After many drafts and meetings, the Technical and Citizen Advisory Committee on Regional Housing Studies and the Commission's Planning and Research Committee finally agreed on a series of nine housing objectives. These objectives, together with supporting principles and specific development standards, are set forth in Table 23. They form the basis for the establishment of true housing need, and will ultimately contribute toward the formulation of regional housing strategies directed at the public and private sectors of the economy.

Table 23

REGIONAL HOUSING OBJECTIVES, PRINCIPLES, AND STANDARDS

OBJECTIVE NO. 1

The provision of decent, safe, and sanitary housing for all residents of the Region.

PRINCIPLE (SUPPORTING REASON)

Housing fulfills one of man's basic needs; that is, the need for shelter for protection against the elements. The provision of decent, safe, and sanitary housing thus satisfies certain basic physiological and psychological needs, enhances physical health, and provides a sense of satisfaction and physical well-being which produces overall benefits to society in terms of a more productive, healthier, happier citizenry. Adequately sized housing which contains the necessary total floor area to assure decent living, sleeping, cooking, and dining accommodations; sufficient storage area; and adequate space for privacy provides all household members with the opportunities to carry out basic family functions and will assist in their normal growth and maturation and provide a sense of mental well-being which can help to maintain stability and order in a dynamic society.

STANDARDS

1. Minimum total improved floor area[a] and sleeping area required for decent household living accommodations should be provided as follows:

Number of Persons	Minimum		Total Minimum Square Feet of Improved Floor Area
	Number of Bedrooms[c]	Square Feet of Sleeping Area	
1	0	100	250
2	1	120	420
3	2	200	550
4	2	200	700
5	3	280	830
6	3	280	980
7	4	380	1,130
8	4	380	1,230
9[b]	5	480	1,330

2. Housing should be constructed so as to provide maximum protection from the elements.[d]

   a. Housing units should be properly weather-stripped and insulated.

   b. Housing units should be equipped with heating facilities adequate for healthful and comfortable living.

3. Housing units should be constructed so as to minimize danger to their occupants due to deficiencies in the basic structural and mechanical components.[d]

   a. Sound construction techniques based upon accepted engineering standards and quality workmanship should be utilized.

   b. Building materials should be structurally adequate and resist the damaging effects of weather, decay, and corrosion; fire; and insects and other pests as well as the abuse which may result from wear due to normal occupancy.

   c. Housing units intended for permanent year-round long-term occupancy should be designed and constructed so that the basic structural components have, with timely and proper maintenance, an indefinite physical life and so that the electrical and mechanical equipment have, with proper maintenance and component replacement, a minimum physical life of 20 years.

   d. The electrical service and accompanying system of wiring, equipment, and appurtenances should be properly installed so as to safely supply electrical energy adequate for efficient operation of essential and appropriate appliances and equipment.

   e. Adequate natural and artificial illumination should be provided.

   f. Security devices in the form of sturdy locks for all exterior windows and doors should be provided.

4. Housing units should be constructed to provide adequate protection from infestations of insects, vermin, and rodents.[d]

5. Housing units should contain the following minimum sanitary facilities and services within the unit:[d]

   a. A ready supply of safe and palatable water.

      1) Housing located in, or to be located in, existing areas of medium-[e] or high-density[f] urban development or areas proposed for such development in the regional land use plan should be served by centralized public water supply facilities.

      2) Housing located in, or to be located in, existing areas of low-density[g] urban development or in areas proposed for such development in the regional land use plan where such areas are contiguous to areas of medium- and high-density urban development should be served by centralized public water supply facilities.

      3) Housing located in basically rural areas not serviced by a centralized public water supply facility should be served by individual wells constructed to conform with state and local plumbing and health codes.

   b. Adequate wastewater disposal and treatment facilities.

1) Housing located in or to be located in existing areas of medium- or high-density urban development or in areas proposed for such development in the regional land use plan should be served by centralized sanitary sewerage facilities.

2) Housing located in or to be located in existing areas of low-density urban development or in areas proposed for such development in the regional land use plan where such areas are contiguous to areas of medium- and high-density urban development should be served by centralized sanitary sewerage facilities. Where noncontiguous low-density development already exists and the underlying soil resource base will not properly support onsite soil absorption waste disposal systems, new housing should be allowed only if centralized sanitary sewer service is provided.

c. Adequate solid waste storage, disposal, and/or removal facilities.

1) Facilities should be available in, or adjacent to, the housing unit for storage and/or disposal of garbage and other solid wastes.

2) Solid waste should be removed at least once each week by means of a private or publicly operated collection program.

d. Adequate storm water removal facilities.

Surface and subsurface water which enters the housing unit through basement or foundation drain tile should be collected in a sump pit and mechanically pumped to the exterior of the unit and channeled to an appropriate storm water drainage facility such as a gutter, road ditch, or piped storm water drain.

e. Direct natural ventilation should be provided by means of an operable window to all sleeping rooms, and natural or mechanical ventilation should be provided to all other habitable rooms.

f. Adequate food preparation facilities.

The kitchen or other food preparation facilities should include a sink connected to an adequate water supply and adequate wastewater disposal system; provision for a permanently connected stove; a refrigerator; and adequate space for storage of food, utensils, and dishes.

g. Adequate bathing and toilet facilities.

A separately enclosed bathroom facility should include a permanently installed flush toilet connected to an adequate wastewater disposal system, lavatory/sink, and bathtub or shower with hot and cold running water under pressure.

h. Laundry facilities.

Laundry facilities should include a laundry tray with adequate plumbing connections properly located within the housing structure.

OBJECTIVE NO. 2

The provision of an adequate stock of decent, safe, and sanitary housing to meet the Region's total housing requirement and, as components of that requirement, the effective market demand and true housing need.

PRINCIPLE (SUPPORTING REASON)

Increases in the total number of households within the Region as a result of new household formations and net in-migration of additional households as well as changing size and composition of existing households require a concomitant increase in the supply of housing units.

STANDARDS

1. The supply of vacant and available housing units should be sufficient to maintain and facilitate ready housing consumer turnover. Rental and homeowner vacancy rates at the SMSA or county level and, if possible, within local housing analysis areas[h] should be maintained at a minimum of 4 percent and a maximum of 6 percent for rental units and a minimum of 1 percent and a maximum of 2 percent for homeowner units over a full range of housing types, sizes, and costs.

2. The supply of sound housing units should be provided through the working of the private housing sector to the maximum extent possible, with continued assistance, incentives, and cooperation by various federal, state, and local governmental agencies rendered as necessary.

PRINCIPLE (SUPPORTING REASON)

Housing is not a luxury; it is a necessity and, as such, should be available to all persons within the Region who do not have the sufficient income or assets to provide decent, safe, and sanitary housing for themselves.

STANDARDS

1. Households should not have to pay more than 30 percent of their adjusted gross income[i] in order to secure decent, safe, and sanitary housing, including, in addition to the contract rent payment or the payment of the principal, interest, and taxes, the necessary insurance, utility, and other attendant costs.

2. Alternative housing plans formulated to meet the Region's true housing needs should be designed to satisfy the housing preferences of households in housing need to the maximum extent possible.

OBJECTIVE NO. 3

The maintenance, preservation, and, where necessary, rehabilitation of the existing stock of housing.

PRINCIPLE (SUPPORTING REASON)

Housing is remarkably durable, and with adequate maintenance, most dwellings will deteriorate rather slowly with age. Important to the establishment of an adequate supply of sound housing, therefore, is the continual need for preventive maintenance of basically sound housing units and early rehabilitation of deteriorating housing units.

STANDARDS

1. Basically sound housing units which have only minor defects[j] should be upgraded and maintained in sound condition to the maximum extent possible.

2. Basically sound housing units which have major defects[k] should be repaired and rehabilitated and measures taken to eliminate or minimize future deterioration.

3. Housing units which have deteriorated to the point of becoming a health or safety hazard for their occupants and which are not economically feasible to rehabilitate should be removed and replaced by decent, safe, and sanitary housing units.

OBJECTIVE NO. 4

The relocation of persons to be displaced by publicly related development programs to housing which is not only decent, safe, and sanitary but is of at least equal quality and, if necessary, the public provision of the replacement housing.

PRINCIPLE (SUPPORTING REASON)

Publicly instituted actions for various types of development programs, which include but are not limited to school and freeway construction; park development; and street widening, urban renewal, and code enforcement projects which cause housing units to be removed from the total housing stock, should proceed only after assurance has been made that the persons being displaced can and will be adequately provided with suitable alternative housing and necessary services to ease the transitional move to their next place of residence. At times, the public provision of replacement housing may be necessary in order to provide these assurances and/or to assure that the demolition of units does not create or compound a shortage of the housing supply.

STANDARDS

1. Projects or activities necessitating displacement of people from their housing units should be planned and carried out so the total number of persons being displaced is minimized.

2. Persons who are displaced should be relocated to adequate, decent, safe, and sanitary housing within a suitable living environment.

3. The relocation program should be carried out in a manner which will promote maximum housing choice and assure equal treatment of all eligible relocatees.

4. Relocation assistance should meet the needs of those persons being displaced and should, in addition to rehousing, include social service counseling, guidance, and financial and technical assistance, where needed.

5. Replacement housing should be publicly provided whenever there is a deficit in the housing supply for one or more categories of housing sizes and costs. It should be considered to be the ultimate responsibility of the displacing agency to provide replacement housing, the cost of which, if any, should be viewed as a legitimate part of the related total project cost.

OBJECTIVE NO. 5

The provision of housing which is designed to be functionally suitable for the occupants residing therein.

PRINCIPLE (SUPPORTING REASON)

Housing unit layout and design will strongly influence a household's satisfaction or dissatisfaction with the unit it occupies. Good housing design will provide for the economical, efficient, and practical distribution of interior space and include necessary appurtenances to afford maximum living comfort, safety, convenience, and living flexibility to its occupants.

STANDARDS

1. The interior design should facilitate easy, noncongested access from room to room throughout the structure.

2. Doors should be located to facilitate circulation and be installed so they can be operated without interfering with each other.

3. Windows should be designed and located so as to maximize the benefits received through natural ventilation and illumination and take advantage of views of the exterior landscape.[d]

4. Storage space should be provided in areas where it will be utilized and be flexible enough to accommodate varying household needs.[d]

5. Stairs should be designed and arranged to provide safety in ascent and descent and to assure adequate head room and space for passage of people, furniture, and equipment.[d]

OBJECTIVE NO. 6

The provision of adequate locational choice of housing.

PRINCIPLE (SUPPORTING REASON)

The Southeast Wisconsin Region provides a wide variety of employment, educational, cultural, and recreational facilities. Adequate choice in the size, cost, and location of housing units will assure equal opportunity for all households to utilize and enjoy these facilities. Geographic distribution and price level variety of housing units can also assist in reducing economic and racial imbalances and equalize fiscal disparities and services differences among communities within the Region.

STANDARD

Vacant and available[l] housing units within local housing analysis areas should be geographically well distributed and include a full range of housing by type, size, and cost.

OBJECTIVE NO. 7

The provision of aesthetically pleasing housing properly sited and designed to maintain or improve the overall character and appearance of the neighborhood in which it is located.

PRINCIPLE (SUPPORTING REASON)

A properly designed and sited housing unit, in addition to providing satisfaction, comfort, and pleasure to its occupants, enhances the desirability of residential neighborhoods and may assist in maintaining neighborhood stability and property values. Good design will also assist in prolonging the physical and economic life of the housing unit, thereby ultimately benefiting both the individual property owner and society as a whole through greater utilization of the existing stock of housing.

STANDARDS

1. The exterior of the housing unit should, to the maximum extent possible, be attractively and effectively related to the size, shape, and topography of the lot.

2. The housing unit should be oriented on the site to maximize the benefits resulting from pleasant views, prevailing winds, direction of sun, and other amenities which tend to enhance the desirability of the unit and increase the comfort and pleasure of the occupants.

3. The housing unit site area should be properly graded to divert water away from buildings to a suitable storm water drainage facility, prevent standing water and soil saturation detrimental to structures and lot use, preserve desirable site features, and provide grades for safe and convenient access to and around buildings and lot for their use and maintenance.[d]

4. Lawns and ground cover should be provided to prevent erosion of swales and slopes and to make yard space usable.[d]

5. Safe, convenient, all-weather vehicular access should be provided in reasonable proximity to the housing unit, with an onsite area for the parking of at least one automobile per housing unit.[d]

6. Sufficient outdoor space should be provided on an individual household or shared basis for play space for small children, gardening, or other outdoor activities; storage of refuse awaiting removal; and storage of lawn and garden tools or other household implements or toys.[d]

7. Outdoor space, especially play space for small children, should be located with proper concern for access and visibility from the interior of the housing unit.

OBJECTIVE NO. 8

The provision of housing within a suitable physical environment and so sited and designed to comprise an integral part of the neighborhood and the community in which it is located.

PRINCIPLE (SUPPORTING REASON)

Housing should be properly located in relation to the underlying and sustaining natural resource base so as to not only enhance and preserve irreplaceable natural resources but also to minimize physical danger, financial losses, and personal aggravation to housing occupants which could occur as a result of improper location of housing units related to certain elements of the natural resource base.

STANDARDS

1. Residential development served by centralized sanitary sewerage facilities or utilizing onsite soil absorption sewage disposal systems should be prohibited on soils which have severe or very severe limitations for such development.[m]

2. Residential development should be prohibited on prime agricultural lands,[n] except those prime agricultural lands proposed to be converted to urban use, as indicated in the Southeastern Wisconsin Regional Planning Commission's adopted 1990 land use plan.

3. Residential development within primary environmental corridors[o] should be discouraged, but, if permitted, should be limited to densities equivalent to a lot area of five acres or greater in size per dwelling unit provided the construction does not alter or destroy the environmental value of the corridor.

4. Residential development within floodlands should be prohibited.

5. Residential development in shoreland areas should be minimized and, when allowed, should conform to the standards published in Chapter NR 115 of the Wisconsin Administrative Code.

PRINCIPLE (SUPPORTING REASON)

Residential areas developed in planned neighborhood units can assist in stabilizing community property values, preserving residential amenities, and promoting efficiency in the provision of public and community service facilities; can best provide a desirable environment for family life; and can provide the population with improved levels of safety and convenience.

STANDARDS

1. Residential neighborhood units should be physically self-contained within clearly defined and relatively permanent isolating boundaries, such as arterial streets and highways, major park and open-space reservations, or significant natural features, such as rivers, streams, or hills.

2. Residential neighborhood units should contain enough area to provide housing for the population served by one elementary school and one neighborhood park; an internal street system which discourages penetration of the unit by through traffic; and all of the community and commercial facilities necessary to meet the day-to-day living requirements of the family within the immediate vicinity of its dwelling unit. To meet these requirements at varied residential densities, the following guidelines should be approximated:

Land Use	Low-Density Development (2 Miles Square)	Medium-Density Development (1 Mile Square)	High-Density Development (1/2 Mile Square)
	Percent of Area	Percent of Area	Percent of Area
Residential	80.0	71.0	66.0
Streets and Utilities	16.5	23.0	25.0
Parks and Playgrounds	1.5	2.5	3.5
Public Elementary School	0.5	1.5	2.5
Other Governmental and Institutional	1.0	1.0	1.5
Commercial	0.5	1.0	1.5
Total	100.0	100.0	100.0

PRINCIPLE (SUPPORTING REASON)

Households require a myriad of goods and supportive neighborhood and community services and, therefore, should be properly located to afford convenient access to existing and proposed commercial facilities, educational facilities, health care facilities, transportation facilities, recreation facilities, and employment opportunities.

STANDARDS

The following maximum walking distance and travel time standards for supportive neighborhood and community services should be met:

Facility	Maximum One Way Walking Distance (Miles)			Maximum One Way Travel Time (Minutes)	
	Neighborhood Density			Automobile At 25 MPH	Transit Facility[p] Total Elapsed Time[q]
	Low	Medium	High		
Shopping Facilities					
Local Retail and Service Center[r]	1 1/4	3/4	1/3	3	--
Community Retail and Service Center[s]	--	1 1/2	1	15	20
Major Retail and Service Center[t]	--	--	--	20	30
Industrial Employment Facilities					
Community Industrial Center[u]	--	--	--	15	20
Major Industrial Center[v]	--	--	--	20	30
Local Transit Facilities	--	3/4	1/3	--	--
Educational Facilities					
Elementary School (K-6)	1 1/4	3/4	1/3	--	--
Junior High (7-9)	--	1 1/2	1	15	20
Senior High (10-12)	--	--	--	20	30
Vocational and Higher Education	--	--	--	30	40
Outdoor Recreational Facilities					
Sub-Neighborhood[w]	--	1/4	1/8	--	--
Local Recreation[x]	1 1/4	3/4	1/3	--	--
Community Recreation[y]	--	--	--	20	30
Major Recreation[z]	--	--	--	30	40
Health Care Facilities					
Community Hospital	--	--	--	20	30
Major Medical Center[aa]	--	--	--	30	40
Other Supportive Community Services and Facilities					
Day Care Center[bb]	--	1 1/2	1	15	20

PRINCIPLE (SUPPORTING REASON)

The health and comfort of housing unit occupants are prime concerns in determining a suitable physical living environment. To this end, housing units should not be located within an environment which includes existing or potential objectionable odors, excessive noise, or dangerous atmospheric contaminants.

STANDARDS

1. The development of residential housing units adjacent to, or in the vicinity of, various nonresidential land uses which release malodorous or unhealthful substances into ambient air should be minimized.

2. The development of residential housing units in areas where noise levels exceed the guidelines established by the U. S. Department of Housing and Urban Development specified in Report No. 2176, "Noise Assessment Guidelines," August 1971, should be minimized.

3. The development of residential housing units in areas which do not meet the ambient air quality standards as published in Section NR 155.03 of the Wisconsin Administrative Code should be minimized.

OBJECTIVE NO. 9

The efficient and economical satisfaction of housing need meeting all other objectives at the lowest possible cost.

PRINCIPLE (SUPPORTING REASON)

The total public financial resources of the Region are limited, and any undue expenditures to meet housing need must occur at the expense of other public or private investment. Private financial resources are also limited, and the cost of housing for all citizens of the Region should be minimized.

STANDARD

The sum of all expenditures required to meet housing need should be minimized.

[a] *Minimum total improved floor area includes total usable floor area, including bathrooms, hallways within the living unit, and closets, but excludes basements, garages, and attics except those portions of same which are improved and could be utilized as year-round living space.*

[b] *For one additional person, add 100 square feet to total minimum square feet of improved floor area. For each two additional persons, add one bedroom or 100 square feet of sleeping area and 200 square feet of improved floor area.*

[c] *The standard of no more than two persons per bedroom is appropriate for regional analysis purposes. Ideally, however, assuming detailed data were available, each household's bedroom needs should be evaluated on an individual basis, and the number of bedrooms required for each household should be allocated in the following order:*

1. *One bedroom to each married couple.*
2. *One bedroom to other single persons 21 years of age or older.*
3. *One bedroom to each pair of persons age 10 to 20 of the same sex.*
4. *One bedroom to an individual age 10 to 20 paired with an individual under 10 of the same sex.*

   (If no pairing of this kind is possible, individual age 10 to 20 should have separate bedroom.)
5. *One bedroom to each remaining pair of individuals under 10 years of age. (Any remaining child under 10 should have a separate bedroom.)*

[d] *There is no singular clear-cut set of universally accepted quantifiable criteria available to substantiate this standard, but for purposes of this report, the relevant data included in FHA document No. 300, "Minimum Property Standards for One- and Two-Family Living Units," and document No. 2600, "Minimum Property Standards for Multi-Family Housing," can be utilized as a guide to substantiate and quantify the standard herein presented.*

[e] *Medium density is defined as 7.3-22.8 persons and 2.3-6.9 dwelling units per net residential acre.*

[f] *High density is defined as 22.9-59.2 persons and 7.0-17.9 dwelling units per net residential acre.*

[g] *Low density is defined as 0.5-7.2 persons and 0.2-2.2 dwelling units per net residential acre.*

[h] *Local housing analysis areas are defined as groups of minor civil divisions, individual communities, or subcommunity areas where there is an assumed existence of a "community of interest" that can be marshalled in the establishment of subregional planning programs.*

[i] *Adjusted gross income equals gross annual income from all sources before taxes and withholding minus 5 percent of such income as allowance in lieu of amounts withheld for such items as social security and civil service retirement minus $300 for each minor dependent.*

[j] *Minor defects are those defects which do not impair the livability of the housing unit nor accelerate the physical deterioration of the structure, e.g., peeling paint, loose gutter or downspout, or cracked window.*

[k] *Major defects are those defects which can impair the livability of the housing unit and may accelerate the physical deterioration of the structure, e.g., large areas of exposed unpainted or unprotected wood, cracks in walls, or missing roof shingles or siding materials.*

[l] *Based upon homeowner and renter vacancy rate standards established in Objective No. 2, Principle No. 1, Standard No. 1.*

[m] *See Table 8 of SEWRPC Planning Report No. 8, Soils of Southeastern Wisconsin.*

[n] *Primary agricultural areas, as delineated in SEWRPC Planning Report No. 7, The Land Use-Transportation Study, Volume 3, Recommended Regional Land Use and Transportation Plans—1990, are defined as those areas which: a) contain soil rated in the regional detailed operational soil survey as very good or good for agriculture, and b) occur in concentrated areas over five square miles in extent which have been designated as exceptionally good for agricultural production by agricultural specialists.*

[o] *Primary environmental corridors, as delineated in SEWRPC Planning Report No. 7, Volume 3, are defined as linear patterns of land which encompass a combination of major elements of the sustaining natural resource base which are essential to maintenance of both the ecological balance and natural beauty of the Region. Resource elements of the corridors include lakes, rivers, and streams, together with their natural floodplains; wetlands; forests and woodlands; wildlife habitat areas; rough topography; significant geological formations; and wet or poorly drained soils.*

[p] *Transit facilities consist of four types of facilities as follows:*

Type I, or interurban, transit facilities are defined as facilities extending beyond a single urban area, as delineated on the regional land use plan, providing public passenger service over established routes on a regularly scheduled basis.

Type II, or intraurban, rapid or modified rapid transit facilities are defined as facilities providing public passenger service over established routes within a single urban area on a regularly scheduled basis with maximum headways of one hour during the daylight hours (6:00 a.m. to 8:00 p.m.), by transit vehicles operating in a modified rapid transit service over freeways or in true rapid transit service over an exclusive right-of-way, or a combination thereof, for at least 50 percent of the trip distance.

Type III, or local intraurban, transit facilities shall be defined as those providing public passenger service over established routes within a single urban area on a regularly scheduled basis with maximum headways of one hour by transit vehicles operating over surface streets.

Type IV, or intraurban center system, transit facilities shall be defined as those providing shuttle or loop service within an urban center or other extensive major land use complexes by transit vehicles operating either over local surface streets or special transitways.

[q] *Overall transit travel time is defined as the summation of the following travel time components:*

1. *Time to reach vehicle boarding point: the average length of time it takes all tripmakers from a given service area to travel from the points of trip origin to the transit vehicle boarding point.*

2. *Time waiting for transit vehicle: the average length of time spent by the tripmakers waiting for the transit vehicle at the transit boarding point.*

3. *Transit vehicle travel time: the average length of time spent by the tripmakers aboard the transit vehicle, including initial embarkation time, all stop times, and all running times.*

4. *Transfer delay time: the length of time spent by the tripmakers in transferring from one transit vehicle to another.*

5. *Time to reach final destination: the length of time spent by the tripmakers to travel from the transit vehicle debarkation point to the final trip destination point.*

[r] *A local retail and service center shall be defined as those facilities which provide the day-to-day retail and service necessities and conveniences for one residential neighborhood with a population of 4,000-8,000 persons.*

[s] *A community retail and service center shall be defined as an existing or officially designated concentration of retail and service uses having a gross site ranging in size from 20 to 60 acres, and intended to serve the retail and service use needs of a community of 10,000 to 25,000 population consisting of two to five residential neighborhoods.*

[t] *A major retail and service center shall be defined as an existing or officially designated concentration of retail and service uses having a minimum gross site of 60 acres and intended to serve areawide retail and service needs for a multi-community population ranging from 75,000 to 150,000 persons located within a 10-mile radius. The term "officially designated," as applied to concentrations of various land uses, shall be defined as an area shown on adopted regional or local land use plans or recognized on local zoning district maps.*

[u] *A community industrial center shall be defined as an existing or officially designated concentration of manufacturing, wholesaling, and related use establishments having a gross site area ranging in size from 20 to 640 acres or providing employment for 300 to 5,000 persons.*

[v] *A major industrial center shall be defined as an existing or officially designated concentration of manufacturing, wholesaling, and related use establishments having a minimum gross site area of 640 acres or providing employment for over 5,000 persons.*

[w] *A sub-neighborhood recreation area shall be defined as an outdoor recreation area which provides the necessary outdoor recreation facilities for a sub-neighborhood population of 1,000-2,000 persons and includes such facilities as tot lots and small parks.*

[x] *A local recreation area shall be defined as the outdoor recreation area which provides the necessary outdoor recreation facilities for one residential neighborhood with a population of 4,000-8,000 persons.*

[y] *A community recreation area shall be defined as an outdoor recreation area having a broad range of recreational facilities on one site having a gross size ranging from 30 to 250 acres, and intended to serve the basic outdoor recreation needs of a surrounding community of 10,000 to 25,000 population consisting of two to five residential neighborhoods.*

[z] *A major recreation area shall be defined as an outdoor recreation area having a broad range of recreational facilities on one site having a minimum gross size of 250 acres, and intended to serve the outdoor recreation needs of a multi-community population.*

[aa] *A major medical center shall be defined as an existing or officially designated complex of buildings and services for the provision of the highest level of health services within a region, including one or more inpatient facilities; one or more outpatient facilities; facilities for specialized services, such as mental health and long-term care and rehabilitation; educational facilities; clinical research facilities; laboratory research facilities; and living quarters.*

[bb] *A day care center shall be defined as a facility established for the protection, care, and supervision of children during a 24-hour day at a fee commensurate with a household's ability to pay.*

Source: SEWRPC.

Housing Need Established

As part of the long-range study the Commission attempted to determine the extent of existing housing problems in the Region by quantifying existing housing need. For purposes of the study, a household is considered to be in need of housing if it cannot secure decent, safe, and sanitary housing at a cost which is consistent with the household income, or if it is precluded from securing such housing because of noneconomic constraints such as discrimination based on race, head of household, or family size.[4]

The adopted objectives and supporting standards specify what is meant by decent, safe, and sanitary housing as well as the level of housing expenditure which is consistent with household income. The concept of decent housing relates to the adequacy of total improved floor area, sleeping area, or the number of bedrooms for households of different size. For households, a housing unit was considered decent if there was an average of no more than two persons per bedroom.

The concept of safe and sanitary housing relates to the soundness of construction; the ability of a unit to protect its occupants from the elements and from infestation by insects, vermin, and rodents; and to the provision of facilities necessary for sanitary requirements. For the housing need analysis, the Commission used the findings of a specially conducted exterior housing condition survey as the best single indicator of whether a housing unit provides safe and sanitary housing.

The standard relating to the level of housing expenditures indicates that a household should not be required to spend more than 30 percent of its adjusted gross income to secure decent, safe, and sanitary housing.

These three criteria were applied to households in the Region in 1970 to determine the extent of housing need. It was found that about 96,100 households, or nearly 18 percent of the total, were in housing need, as shown in Table 24. Of those in housing need, about 69,600 households were in economic need only, that is, they occupied decent, safe, and sanitary housing but had to pay more than 30 percent of their adjusted gross income to do so, while the remainder of the households occupied units which did not meet the standards for decent, safe, and sanitary housing and could not secure adequate housing either because of economic or noneconomic constraints.

---

[4] *An accurate measurement of existing housing need within the Region as defined above requires data for each household on household size and income, as well as the required monthly payment for the unit, the number of bedrooms, and the unit's physical condition. No existing data source furnishes the required information on a complete count basis for all households. However, the Commission's 1972 origin and destination survey and its exterior housing condition survey together provide all of the required data on a statistically valid sample basis, the results of which can be expanded to represent the total universe of households in the Region. Estimates of housing need were thus achieved by applying the housing need criteria to the expanded results of the origin and destination survey.*

Table 24

HOUSING NEED STATUS BY TENURE FOR HOUSEHOLDS IN THE REGION: 1970

Housing Need Status	Occupied Housing Units (Households)					
	Owner Occupied		Renter Occupied		Total	
	Number	Percent	Number	Percent	Number	Percent
Housing Need	31,988	9.7	64,101	31.3	96,089	17.9
Economic Need Only[a]	21,047	6.3	48,570	23.7	69,617	13.0
Substandard	2,032	0.6	5,821	2.8	7,853	1.5
Economic Need[b]	982	0.3	4,643	2.2	5,625	1.1
Noneconomic Need[c]	1,050	0.3	1,178	0.6	2,228	0.4
Overcrowded	8,734	2.7	8,530	4.2	17,264	3.2
Economic Need[b]	2,530	0.8	5,891	2.9	8,421	1.6
Noneconomic Need[c]	6,204	1.9	2,639	1.3	8,843	1.6
Substandard and Overcrowded	175	0.1	1,180	0.6	1,355	0.2
Economic Need[b]	92	--[d]	1,048	0.5	1,140	0.2
Noneconomic Need[c]	83	--[d]	132	0.1	215	--[d]
Non-Need	299,351	90.3	141,046	68.7	440,397	82.1
Total	331,339	100.0	205,147	100.0	536,486	100.0

[a] *Households in economic need only presently occupy decent, safe, and sanitary housing but are able to obtain this housing only at a cost which is high relative to the household income.*

[b] *Households in economic need which occupy substandard or overcrowded housing presently reside in substandard or overcrowded housing units and are unable to secure adequate alternative housing because of insufficient household income relative to housing costs.*

[c] *Households in noneconomic need which occupy substandard or overcrowded housing presently reside in substandard or overcrowded housing units because of noneconomic constraints within the housing market, such as discrimination based on race or family size, even though, on the basis of their income, it would appear that they are able to afford decent, safe, and sanitary housing.*

[d] *Less than 0.1 percent.*

Source: SEWRPC.

It should be noted that the housing problem is primarily an economic one for the majority of households in the housing need category. About 72 percent of the households in this category live in decent, safe, and sanitary housing but are able to obtain this housing only at a cost which is high relative to household income. The housing problem is much more severe for the remaining households who live in substandard or overcrowded housing units.

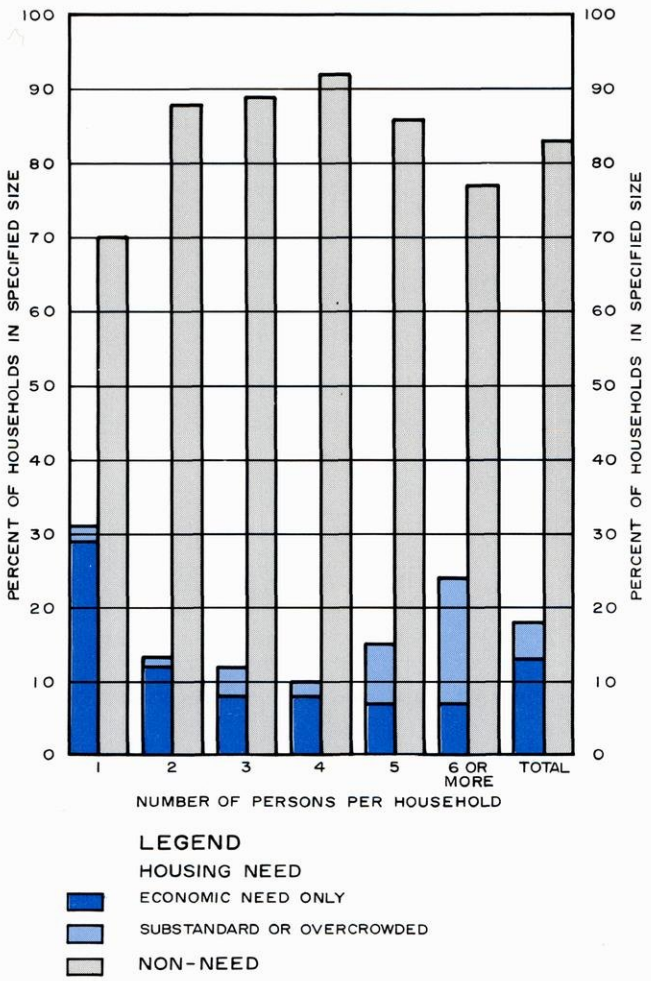
It was found that certain factors such as tenure status (ownership or rental of the unit), household size and income, and the age and race of household members particularly affect housing need status. As shown in Table 24, for example, an estimated 31 percent of all renter households in the Region were in housing need in 1970, compared to only 10 percent of owner occupied households. About 24 percent of the renters were in economic need only, compared to 6 percent of the homeowners. The proportion of renters occupying substandard or overcrowded housing (nearly 8 percent) was also somewhat higher than the corresponding proportion for homeowners (3 percent).

The effects of household size on housing need are shown in Figure 17. Housing need was highest for one-person households and for households with six persons or more. Most one-person households are classified as being in economic need only, living in decent, safe, and sanitary housing but paying more than 30 percent of their adjusted gross income to do so. The majority of six-person households in housing need, on the other hand, occupy substandard or overcrowded housing.

As noted before, the housing problem is largely an economic one for the majority of households in housing need. Thus, it is not surprising to find that the incidence of housing need decreases as income increases. The proportion of households in housing need ranged from 70 percent for households earning less than $3,000 annually to 3 percent for households earning $10,000 or more (see Figure 18).

Figure 17

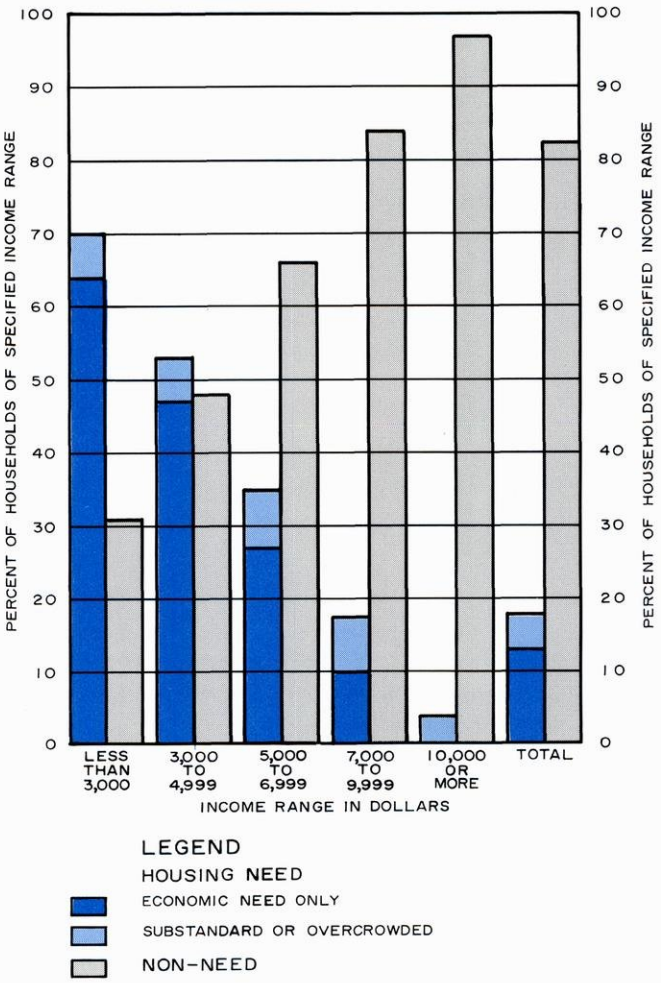
HOUSING NEED STATUS BY SELECTED HOUSEHOLD SIZE IN THE REGION: 1970



Source: SEWRPC.

Figure 18

HOUSING NEED STATUS BY SELECTED HOUSEHOLD INCOME RANGE IN THE REGION: 1970



Source: SEWRPC.

Certain subgroups of the population have more severe housing problems than the population as a whole. In the recent past, a growing social awareness of the housing plight of the elderly, in particular, has developed. As shown in Table 25, 31 percent of all elderly households in the Region in 1970 were in the housing need category, with the majority in economic need. This is due mainly to the fact that many elderly persons are forced to live on a fixed income despite rapidly increasing costs, and in the face of rising housing costs can obtain decent, safe, and sanitary housing only with considerable economic hardship.

The black population, which is concentrated in the Cities of Kenosha, Milwaukee, and Racine, is another subgroup of the total population for which severe housing problems were found to exist. It is estimated that nearly half of the black households in the Region were in housing need in 1970, compared to 18 percent of the total households in the Region. The percentage of black households living in substandard or overcrowded housing is considerably higher (20 percent) than for households as a whole (5 percent). The high incidence of housing need among black households is consistent with their low household income distribution. But an explanation of the high incidence of housing need for the black population in economic terms only may be an oversimplification of the problem. It is strongly suspected that racial prejudice and discrimination have limited the earning power of blacks and therefore their economic ability to secure adequate housing, as well as restricting the freedom of housing choice for those black households which have the ability to pay.

Housing Simulation Model

During the year, work continued on the development of a regional housing model to simulate the dynamic operation of the housing market in the Region. The model is intended to provide insight into future housing demand and need and the future need for residential land, and to

Table 25

HOUSING NEED FOR ELDERLY AND BLACK HOUSEHOLDS IN THE REGION: 1970

Housing Need Status	Percentage Distribution of Households By Housing Need		
	Elderly Households	Black Households	All Households
Housing Need	30.8	49.6	17.9
Economic Need Only	28.9	29.7	13.0
Substandard	1.6	7.1	1.5
Economic Need	1.1	6.0	1.1
Noneconomic Need	0.5	1.1	0.4
Overcrowded	0.3	10.6	3.2
Economic Need	0.1	7.5	1.6
Noneconomic Need	0.2	3.1	1.6
Substandard and Overcrowded	0.0	2.2	0.2
Economic Need	0.0	1.9	0.2
Noneconomic Need	0.0	0.3	--[a]
Non-Need	69.2	50.4	82.1
Total	100.0	100.0	100.0

[a] *Less than 0.1 percent.*

Source: SEWRPC.

provide assistance in the testing and evaluation of alternative governmental actions with respect to housing, in the evaluation of the impact of various land use controls on the supply and choice of housing within subareas of the Region, and in the evaluation of the impact of changes in construction and occupancy costs on the supply and demand for housing. Work on the model also includes collation of housing supply and demand data in a form suitable for use in the model; determination of the factors which most significantly affect housing supply and demand; and the basic mathematical formulation of the model itself.

Housing Consumer, Provider Survey

During 1973 the data compiled as part of the 1972 housing consumer survey were analyzed in the areas of consumer satisfaction with various aspects of his dwelling unit; satisfaction with various aspects of the neighborhood; perceived housing needs relative to the dwelling unit and the neighborhood; and attitudes with regard to various government programs designed to resolve existing housing problems. Survey results were also analyzed for selected geographic areas in the Region. In addition, attitudes and preferences of various subgroups in the sample were analyzed to help identify those segments of the population with special housing problems. These subgroups include blacks, Spanish-speaking persons, large low and moderate income families, elderly persons, and occupants of government sponsored housing.

Responses from producers, providers, and facilitators of housing including lenders, contractors, realtors, and public housing officials were also analyzed to determine their perceptions of existing housing problems as well as proposed solutions to these problems.

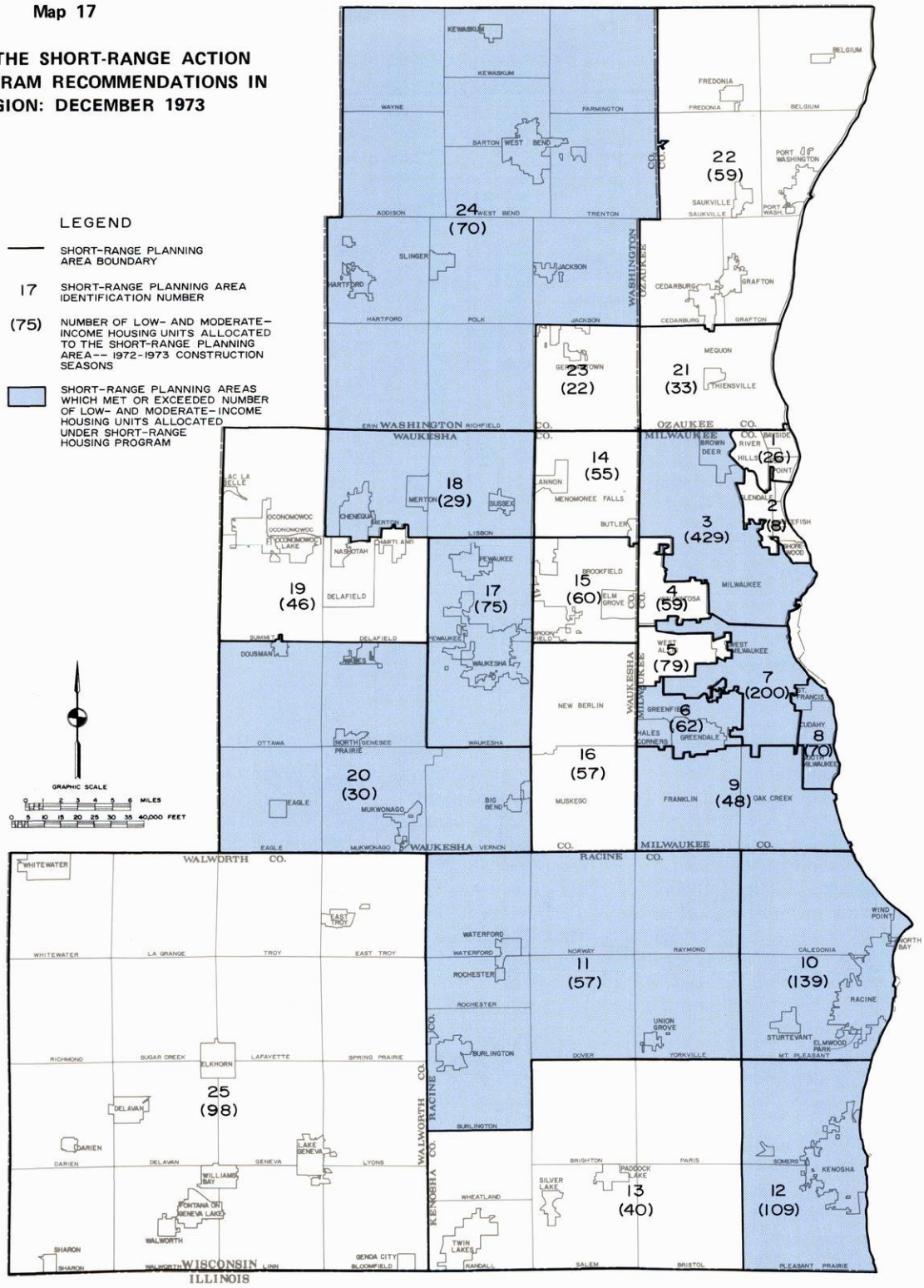
During the year work also began on the preparation of forecasts of the future demand for housing and future housing need in the Region. The anticipated housing demand and future housing need will be derived from 1990 forecasts of the number and characteristics of households in the Region.

CONTINUING HOUSING OUTREACH PROGRAM

As noted earlier, even before completing the regional housing study and formulating a regional housing plan element, the Commission embarked upon a program designed to provide functional guidance and advice particularly to those segments of the regional population which have the most difficulty in obtaining decent, safe, and sanitary shelter. As an initial step in this effort, the Commission conducted a short-range action housing program to identify areas in the Region where publicly subsidized housing could be developed, and to further identify the proportionate share of some 2,000 housing units which should be built during the 1972 and 1973 construction seasons throughout the Region. For purposes of the short-range program, the Region was divided into 25 areas based primarily on the homogeneity of existing development (see Map 17). Each planning area

Map 17

STATUS OF THE SHORT-RANGE ACTION HOUSING PROGRAM RECOMMENDATIONS IN THE REGION: DECEMBER 1973



Prior to 1973 the Commission conducted a short-range action housing program to identify areas in the Region where publicly subsidized housing could be developed, and to further identify the proportionate share of some 2,000 housing units which should be built throughout the Region during the 1972-1973 construction seasons. For this purpose the Region was divided into 25 areas based primarily on the homogeneity of the existing development. Each planning area was assigned a proportion of the 2,000 housing units based on an allocation formula related to housing need, fiscal capability of communities, population growth, and land suitability. During the two-year construction period of the short-range study, more than 5,000 new federally subsidized housing units were built in the Region, far exceeding the 2,000 unit allocation. The above map identifies those planning areas where the allocation was met or exceeded, and those areas where the allocation has not been met. Construction surpassed the allocation within 12 of the 25 planning areas, while nine planning areas met less than 20 percent of their allocations and five areas had no government subsidized housing construction during this period.

Source: SEWRPC.

was assigned a proportion of the 2,000 housing units based on an allocation formula which considers the need for low and moderate income housing in the planning area, the fiscal capability of the communities in each area to absorb new residential construction, population growth in the area as a measure of the need for all types of housing, and the amount of suitable land in the area as a measure of its physical ability to absorb new development.

During the two-year construction period of the short-range study, more than 5,000 new federally subsidized housing units were built in the Region, far exceeding the recommended 2,000 units. But while construction surpassed the allocation within 12 of the 25 planning areas, little has been accomplished to date in some areas to meet the specific allocations (see Table 26). Nine planning areas met less than 20 percent of their allocations in 1972 and 1973, with no government subsidized housing being built in five of these areas during this period.

It is important to note that the Administration's placement of a moratorium on all federally subsidized housing early in 1973 suspended funding for a time for the construction of housing units under all federal subsidy programs, including Section 235 homeownership and Section 236 rental housing, and under all federally supported public housing developments. Since the moratorium, some exceptions have been made, including in Wisconsin those Section 236 and 221(d) (3) units related to urban renewal and other commitments, Section 502 housing, and Section 23 leased housing. Even with these exceptions, however, the effect of the moratorium within the Region in 1973 was to significantly curtail construction of federally subsidized housing. The only other construction activity was limited to single-family housing units subsidized under the Section 235 homeownership program which had received a firm commitment for construction prior to the moratorium.

In addition to monitoring implementation of the short-range action housing program during 1973, the Commission continued to assign one staff member full time to provide guidance and advice to organizations and individuals that are concerned with the provision of decent shelter for those segments of the Region's population experiencing the most difficulty in securing such shelter through the private sector. Under this effort the Commission staff, for example, worked with the U. S. Department of Commerce, Small Business Administration, to identify minority building contractors and to assist in educating such contractors on matters relating to the business end of building programs, including financing, accounting, and general business organization.

In addition, the Commission staff served on the Board of Directors of the Wisconsin Co-op Housing Foundation, which was established in 1973 in an effort to focus attention on cooperative housing as an alternative form of providing shelter. The Commission staff also served as a technical advisor to such special counseling groups as the Milwaukee Urban League and the Center for Civic Initiative in providing guidance and advice to prospective minority and low income home owners. Finally, the Commission staff worked directly with public officials in the City of Kenosha in creating a City Housing Authority and in providing guidance and advice in getting that Housing Authority off the ground toward providing public housing in the community. Such efforts by the Commission recognize, even in advance of the adoption of a formal regional housing element, a need to provide functional guidance and advice to producers, providers, and facilitators of housing for those segments of the population which have difficulty in securing decent, safe, and sanitary housing on their own, as well as to occupants of such housing.

Table 26

SUBSIDIZED LOW AND MODERATE INCOME HOUSING UNITS IN THE REGION BY SHORT-RANGE HOUSING PLANNING AREAS

Short-Range Housing Planning Area	Number of Housing Units Committed Through December 31, 1971				Number of New Housing Units Committed Between January 1, 1972 and December 31, 1973				Total Number of Subsidized Units Allocated Under SEWRPC Short-Range Program
	Federally Subsidized Housing				Federally Subsidized Housing				
	Public Housing	Multifamily	Single-Family	Total	Public Housing	Multifamily	Single-Family	Total	
Milwaukee County	5,471	1,470	1,673	8,614	- 32[b]	1,847	1,502	3,317	1,021
1	--	--	--	--	--	--	--	0	26
2	--	--	1	1	--	--	--	0	48
3[a]	5,411	1,191	1,557	8,159	- 32[b]	1,547	1,357	2,872	629
4	--	--	--	--	--	--	9	9	59
5	--	175	17	192	--	--	8	8	79
6	--	--	37	37	--	172	32	204	62
8	60	--	59	119	--	--	74	74	70
9	--	104	2	106	--	128	22	150	48
Racine County	--	348	591	939	--	186	572	758	196
10	--	311	551	862	--	186	477	663	139
11	--	37	40	77	--	--	95	95	57
Kenosha County	--	320	268	588	--	--	456	456	149
12	--	320	253	573	--	--	420	420	109
13	--	--	15	15	--	--	36	36	40
Waukesha County	--	33	238	271	180	32	165	377	352
14	--	--	4	4	--	--	1	1	55
15	--	--	--	--	--	--	--	0	60
16	--	--	--	--	--	--	2	2	57
17	--	33	104	137	180	--	107	287	75
18	--	--	8	8	--	32	3	35	29
19	--	--	32	32	--	--	21	21	46
20	--	--	90	90	--	--	31	31	30
Ozaukee County	--	--	23	23	--	--	9	9	92
21	--	--	--	--	--	--	--	0	33
22	--	--	23	23	--	--	9	9	59
Washington County	73	168	64	305	--	--	170	170	92
23	--	--	--	--	--	--	--	0	22
24	73	168	64	305	--	--	170	170	70
Walworth County	--	108	21	129	--	--	46	46	98
25	--	108	21	129	--	--	46	46	98
Total	5,544	2,447	2,878	10,869	148	2,065	2,920	5,133	2,000

[a] *Planning area 3 includes southern Milwaukee from planning area 7.*

[b] *Conversion of one-bedroom units to multibedroom units in the Hillside Terrace project in 1972 resulted in a decrease in the number of public housing units in planning area 3.*

Source: U. S. Department of Housing and Urban Development and SEWRPC.

COMMUNITY FACILITY PLANNING

Community facilities are those buildings and structures together with their related sites which are normally provided by local units of government in the delivery of public services. Community facilities include municipal buildings, police and fire stations, libraries, parks and recreation areas, and schools. These facilities vary greatly with respect to their areawide, or multicommunity, significance. To date the Commission has embarked upon programs that will provide two regional plan elements directly relating to community facilities—a regional library facilities and services plan and a regional park, outdoor recreation, and related open-space plan. In addition, the Commission has completed community facility elements of two urban-oriented, areawide, comprehensive plans for subregional districts—the Kenosha and Racine Urban Planning Districts—which are reported elsewhere. The following discussion summarizes Commission activities in 1973 with respect to each of the two regional community facility plan elements.

REGIONAL LIBRARY PLANNING PROGRAM

All technical work was completed by the Commission during 1973 on the regional library facilities and services plan. Preparation of this plan is being carried out by the Commission utilizing funds provided by the Wisconsin Department of Public Instruction, Division for Library Services. The final draft of the planning report documenting the findings and recommendations of the regional library services and planning program was reviewed and approved during 1973 both by the Technical Advisory Committee on Regional Library Planning and the Commission Planning and Research Committee.

Essential elements of the recommended regional library facilities and services plan include the establishment of library facility and service standards which are directly related to the level of population growth in the Region and its subareas. The plan itself focuses primarily on recommendations for the formulation of intergovernmental areawide library systems through a federation procedure provided for under recent Wisconsin legislation. In essence, the plan recommends that full policy control of all libraries in the Region be overseen by local library boards, with the necessary areawide library services being provided through the cooperative, voluntary establishment of a seven-county regional library federation. The establishment of a regional federation of local library boards would serve to ensure the provision of a uniformly high level of library services to all of the Region's residents, and would replace the existing, rather cumbersome system of relying upon a series of individual interagency library contracts or agreements to provide such services. It is expected that the plan recommendations will be very useful to the county library committees now being activated in the Region for the purpose of reviewing the new state legislation and determining the best way within each county for organizing to provide for areawide library services.

REGIONAL PARK, OUTDOOR RECREATION, AND RELATED OPEN SPACE PLANNING PROGRAM

The Commission began in 1973 a major new regional planning program designed to result in the preparation of a regional park, outdoor recreation, and related open space plan. This planning program was initially proposed by the Commission early in 1967, but was delayed for several years due to budgetary constraints. At the urging of the Common Council of the City of Racine and the Milwaukee County Planning Commission, and in response to a notice from the U. S. Department of Housing and Urban Development that a regional park and open space plan was essential to continue to qualify the constituent local units of government in the Region for federal funds in support of the construction of various capital facilities, the Commission determined late in 1972 to prepare a prospectus to determine the need for a regional park and open space planning program; determine the desirable scope and content of such a program; and prepare a recommended time schedule, budget, and cost allocation for the program. To assist the Commission staff in this task, the Commission created a new Technical and Citizen Advisory Committee on Regional Park, Outdoor Recreation, and Open Space Planning. The Committee completed its work in January 1973, and published a Regional Park, Outdoor Recreation, and Related Open Space Planning Program Prospectus in March 1973.

The prospectus identifies seven major factors which establish the need to prepare a regional park, outdoor recreation, and related open space plan in southeastern Wisconsin:

1. The areawide nature of the use of outdoor recreation facilities.

2. The increasing demand for outdoor recreation.

3. The changing character of outdoor recreation activities.

4. The massive conversion of land from rural to urban use within the Region and the concomitant loss of sites having potential for public and private recreational development, together with the conversion of existing areas devoted to private outdoor recreation use to other urban uses.

5. The changing approach to the planning, design, acquisition, development, and management of park, outdoor recreation, and related open space facilities.
6. The limited local funding available for park and related open space acquisition and development.
7. The absence of adequately coordinated planning for public and private park, outdoor recreation, and related open space facility acquisition and development on an areawide basis which will meet the planning prerequisites of state and federal grant-in-aid programs for public park and related open space facility acquisition and development.

The prospectus recommended that the program be undertaken at a total estimated cost of $180,000, further recommending that the cost of conducting the program be allocated on the following basis: U. S. Department of Housing and Urban Development—two-thirds of total cost; Wisconsin Department of Natural Resources—one-sixth of total cost; and the seven constituent counties in the Region—one-sixth of total cost. These funding arrangements were completed as recommended, and actual work on the program began in June 1973. Staff work efforts on the study during 1973 were concentrated in the preparation of a detailed study design and the collection of basic inventory data.

Preparation of the study design took the form of a series of detailed staff memoranda setting forth data needs and sources and procedures required to collect and properly analyze data for integration into the overall work program. Study design memoranda approved by the Technical and Citizen Advisory Committee for the study were related to the following work elements: the organizational framework of the study; mapping; population and economic activity; climatological data; existing land use; the natural resource base of the Region; existing park, outdoor recreation, and related open space facilities; existing recreation use; potential park, outdoor recreation, and related open space areas; existing recreation plans, programs, policies, and administration; existing financial condition; and recreation laws and regulations.

Field work was completed during the year with respect to inventory of about 75 percent of the total stock of existing park, outdoor recreation, and related open space sites within the Region. Such field work includes the identification, delineation, measurement, coding, and description of all existing outdoor recreation facilities, both public and private. The program is anticipated to take three years to complete, with selection and adoption of the final regional park, outdoor recreation, and related open space plan by mid-1976.

ENVIRONMENTAL PLANNING

From its inception, the Commission planning program placed strong emphasis on planning for the protection and enhancement of the Region's environment. This emphasis on environmental protection, which preceded popular concern in this area by at least a decade, is now being recognized by the public as an increasingly important aspect of the Commission's overall work program. During 1973 the Commission completed all technical work and public hearings on a regional sanitary sewerage system plan. In addition, the Commission moved forward with the inventory and analysis stages of the Menomonee River watershed study, and continued to monitor progress toward implementation of the comprehensive watershed development plans adopted in previous years for the Root, Fox, and Milwaukee River watersheds. As part of this function, the Commission reevaluated a specific flood control recommendation contained in the Root River watershed plan—the removal of existing floodprone homes along a reach of the Root River through the City of Greenfield. Similarly, the Commission worked with the local units of government in the upper Fox River watershed in preparing an amendment to the Fox River watershed plan concerning water quality management. Finally, the Commission continued to conduct programs related to water quality monitoring, stream flow gaging, the preparation and compilation of floodland data, and the conduct of a special study designed to develop a mathematical model that will simulate performance within the deep sandstone aquifer. A discussion of each of these important Commission work elements follows.

REGIONAL SANITARY SEWERAGE SYSTEM PLANNING PROGRAM

After more than four years of intensive work, the Commission completed in 1973 a regional sanitary sewerage system plan. Sanitary sewerage facilities are among the most important public works facilities influencing the environmental quality as well as the development of an urbanizing region. The location and adequacy of these facilities greatly affect the public health, safety, and welfare; the overall quality of the environment; recreational activities; industrial productivity; and the value and use to which land may be put. If not properly attended to, sanitary sewerage system development will inevitably emerge as a major obstacle to the sound development of the Region and will become a major public policy issue.

The plan includes definitive recommendations for the establishment of sewer service areas, the location of sewage treatment plants, the configuration and sizing of major trunk sewers, the treatment levels and standards of performance at sewage treatment plants, and the abatement of combined sewer overflows. The plan was designed to meet applicable federal and state planning requirements and thereby be able to serve as an important portion of the official water quality management plan for the Region, and as such, to provide a sound basis for the approval of waste discharge permits and federal and state grants-in-aid. The plan provides the most cost effective way to extend sanitary sewer service to the urbanizing areas of the Region while at the same time abating serious water pollution problems.

Technical guidance in the preparation of the regional sanitary sewerage system plan was provided by the Technical Coordinating and Advisory Committee on Regional Sanitary Sewerage System Planning, a committee composed of 24 distinguished public works officials and sanitary engineers representing the major universities and certain local, state, and federal units and agencies of government within the Region. Technical work for the plan was carried out principally by the Commission staff, with the assistance of a private engineering firm for certain aspects of the work—Harza Engineering Company, Chicago, Illinois. The program was undertaken at a total cost of $206,000, with two-thirds funding provided by the U. S. Department of Housing and Urban Development and one-third funding by the seven county boards in the Region. The major findings and recommendations of the planning program have been documented in SEWRPC Planning Report No. 16, A Regional Sanitary Sewerage System Plan for Southeastern Wisconsin. The following summarizes the findings and recommendations set forth in the planning report, as well as the public reaction to the plan recommendations.

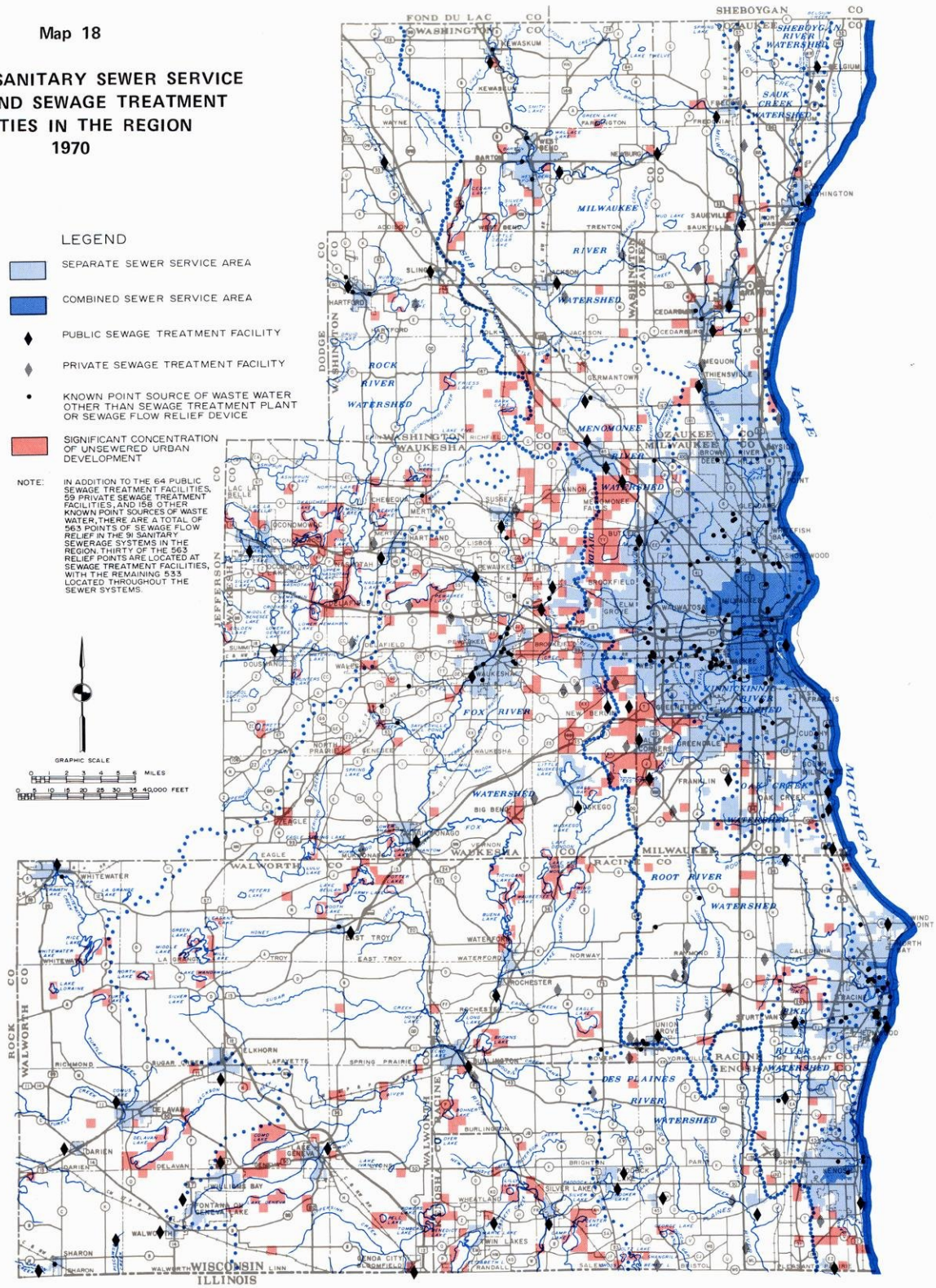
Inventory, Analysis, and Forecast

Inventories conducted under the program found that there are a total of 91 public sanitary sewerage systems serving a total area of about 310 square miles, or about 10 percent of the total area of the Region, and a total population of about 1.5 million, or nearly 85 percent of the total population of the Region. About 31 square miles, or 10 percent of the 310 square miles of sewer service area, are served by combined sewers (see Map 18).

Treatment for sewage generated in the 91 centralized sanitary sewerage systems is provided by 64 sewage treatment facilities, the location of which is also shown on Map 18. All but three of the 64 facilities discharge wastes to surface waters of the Region. The remaining three, serving the Villages of Darien, Fontana, and Williams Bay in Walworth County, discharge treated wastes to the groundwater reservoir through seepage lagoons. The existing sewage treatment facilities range in size from about 30,000 gallons per day at the facilities serving the Town of Somers Sanitary District No. 2 in Kenosha County and the Village of Jackson in Washington County, to about

Map 18

EXISTING SANITARY SEWER SERVICE AREAS AND SEWAGE TREATMENT FACILITIES IN THE REGION 1970



Centralized public sanitary sewer service in the Region is currently provided by 91 public sewerage systems to an area of about 309 square miles, or about 11 percent of the total area of the Region. These 91 systems serve nearly 1.5 million persons, or about 85 percent of the total population of the Region. About 31 square miles, located in the central cities of Kenosha, Milwaukee, and Racine, are served by combined storm and sanitary sewers. Treatment for sewage generated in the Region is provided at 64 public sewage treatment facilities, which collectively discharge about 265 million gallons of sewage effluent per day. There are also 59 sewage treatment facilities serving isolated enclaves of urban land use development, as well as 158 known point sources of wastewater other than sewage treatment plants, consisting primarily of industrial cooling, rinse, and wash waters discharged directly to storm sewers or streams. While not shown on this map, there are an additional 533 known points of sewage flow relief in the Region, consisting of combined sewer overflows, relief pumping stations, cross-overs from the sanitary to the storm sewer system, and gravity bypasses directly to the streams of the Region. In total, then, there are over 800 point sources of raw sewage, sewage effluent, and industrial waste discharge throughout the Region.

Source: SEWRPC.

200,000,000 gallons per day at the Jones Island plant of the Milwaukee-Metropolitan Sewerage Commissions. Of the 64 sewage treatment facilities, three as of 1970 were equipped to provide only a primary level of waste treatment—Port Washington, Milwaukee-Metropolitan Sewerage Commissions-South Shore, and South Milwaukee facilities; 58 were equipped to provide a secondary level of waste treatment; two were equipped to provide a tertiary level of waste treatment—Walworth and Menomonee Falls facilities; and one was equipped to provide an advanced level of waste treatment—Milwaukee-Metropolitan Sewerage Commissions-Jones Island facility. Of the 64 public sewage treatment facilities, 20 were found to be operated at or over their design capacity in 1970.

Total effluent discharged from municipal sewage treatment plants in the Region in 1970 was about 265 million gallons per day (mgd). About 88 percent of this total, or 233 mgd, was discharged directly to Lake Michigan, while an additional 4 percent, or about 10 mgd, was discharged to streams draining to Lake Michigan. About 8 percent, or 21 mgd, was discharged to streams west of the subcontinental divide, with less than 1 percent discharged to the groundwater reservoir.

In addition to the 64 public sewage treatment facilities, there are a total of 59 sewage treatment facilities—generally privately owned—which serve isolated enclaves of urban land use development in the Region. Of these, 30 are located in the Lake Michigan basin and 29 in the Mississippi River basin. Thus, there are in all a total of 123 sewage treatment facilities in the Region. Of this total, all but 22 discharge wastes to the surface waters of the Region.

An attempt was made under the program to inventory all of the known existing devices designed to enable sewage flow relief either at sewage treatment facilities or in the sewer systems tributary to such facilities. These devices discharge raw sewage directly to the Region's surface waters or to storm sewer systems which eventually discharge to the surface water system. Thirty of the 64 public sewage treatment facilities were found to have flow relief devices located at, or just ahead of, the treatment plant. Such devices allow the direct bypass of raw sewage at times when the plant capacity is exceeded or the plant is not operable for some reason. In addition, a total of 536 flow relief devices in the sewer systems were found, which devices intermittently or continuously discharge raw sewage to the surface waters of the Region. Of this total of known flow relief devices, 148 consist of combined sewer outfalls, 235 are gravity crossovers from sanitary sewer to storm sewer systems; 75 are gravity bypasses from sanitary sewers directly to surface watercourses; 18 are stationary relief pumping stations; and 60 are portable relief pumping stations.

About 15 percent of the total regional population in 1970, or about 268,000 persons, were found to rely on septic tank or other onsite sewage disposal systems. About 27,000 of these persons reside on farms, while the remaining 241,000 persons constitute urban dwellers generally living in a scattered fashion throughout the suburban and rural urban fringe areas of the Region. The existing major concentrations of such dwellers are shown on Map 18.

The inventories indicated that local units of government in the Region have proposed the extension of sanitary sewer service to about an additional 447 square miles of land in the Region. This can be compared to the approximately 309 square miles of area in the Region now served by sanitary sewers. This locally proposed sewer service area could accommodate more than two times the forecast population increase for the Region, thus indicating a need to better coordinate land use development with sewerage system planning and development.

Finally, the inventories revealed that total public expenditures during 1970 for operation, maintenance, and capital improvements, including debt retirement, for the sanitary sewerage systems in the Region approximated $43.1 million, or about $29 per capita, with the per capita cost based upon the estimated total population served by sewers. Of this total, about $9.4 million, or about $6 per capita, was expended for operation and maintenance, and about $33.7 million, or about $23 per capita, was expended for capital improvements. The sanitary sewerage expenditures in the Region in 1970 as reported by the units of government involved are presented in Table 27, while the relationship between sanitary sewerage operation and maintenance expenditures and sewerage system size is shown in Figure 19. In general, it was found that per capita operation and maintenance costs for sanitary sewerage systems decreased with increasing system size.

Sewerage System Development Objectives and Design Standards

Four regional sanitary sewerage system development objectives, together with supporting principles and standards and engineering design criteria, were formulated under the regional sanitary sewerage system planning program. The four development objectives are:

1. The development of sanitary sewerage systems which will effectively serve the existing regional urban development pattern and promote implementation of the regional land use plan, meeting the anticipated sanitary waste disposal demand generated by the existing and proposed land uses.

2. The development of sanitary systems so as to meet established water use objectives and supporting water quality standards (see Map 19 and Table 28).

3. The development of sanitary sewerage systems that are properly related to and will enhance the overall quality of the natural and manmade environments.

4. The development of sanitary sewerage systems that are economical and efficient, meeting all other objectives at the lowest cost possible.

Table 27

ESTIMATED SANITARY SEWERAGE EXPENDITURES IN THE REGION BY PUBLIC SANITARY SEWERAGE SYSTEM: 1970

Public Sanitary Sewerage System	Estimated Population Served	Sanitary Sewerage Expenditures						Code Number on Figure 19
		Operation and Maintenance		Capital Improvements Including Debt Retirement		Total		
		Dollars	Dollars Per Capita	Dollars	Dollars Per Capita	Dollars	Dollars Per Capita	
Kenosha County								
City of Kenosha	80,900	378,494	5	588,174	7	966,668	12	1
Village of Paddock Lake	1,500	N/A	N/A	N/A	N/A	N/A	N/A	--
Village of Silver Lake	1,200	14,944	12	65,756	55	80,700	67	2
Village of Twin Lakes	1,700	15,651	9	29,000	17	44,651	26	3
Town of Bristol Utility District No. 1	500	4,744	9	61,337	123	66,081	132	4
Town of Pleasant Prairie								
Sewer Utility District No. 1	1,400	15,975	11	8,062	6	24,037	17	5
Sewer Utility District No. 2	600	11,485	19	23,395	39	34,880	58	6
Sewer Utility District A	400	1,850	5	7,365	18	9,215	23	7
Sewer Utility District B	900	2,904	3	6,285	7	9,189	10	8
Sewer Utility District C	400	2,204	5	6,658	17	8,862	22	9
Sewer Utility District D	800	10,071	13	35,244	44	45,315	57	10
Pleasant Park Utility Company, Inc.	800	2,230	3	1,635	2	3,865	5	11
Town of Salem Sewer Utility District No. 1	800	N/A	N/A	N/A	N/A	N/A	N/A	--
Town of Somers								
Sanitary District No. 1	1,700	22,894	13	36,363	22	59,257	35	12
Sanitary District No. 2	400	3,318	8	5,776	15	9,094	23	13
Subtotal	94,000[a]	486,764	5	875,050	10	1,361,814	15	--
Milwaukee County[b]								
City of Cudahy	22,000	183,161	8	353,093	16	536,254	24	14
City of Franklin	2,600	2,402	1	1,201,189	462	1,203,591	463	15
City of Glendale	18,700	96,322	5	388,891	21	485,213	26	16
City of Greenfield	21,800	138,913	6	1,984,291	91	2,123,204	97	17
City of Milwaukee	703,700	4,350,628	6	12,442,192	18	16,792,820	24	18
City of Oak Creek	10,600	103,061	10	2,553,786	241	2,656,847	251	19
City of South Milwaukee	23,300	92,883	4	213,869	9	306,752	13	20
City of St. Francis	11,200	61,734	5	63,402	6	125,136	11	21
City of Wauwatosa	59,500	234,524	4	811,456	14	1,045,980	18	22
City of West Allis	78,200	303,037	4	1,750,270	22	2,053,307	26	23
Village of Bayside	3,900	28,601	7	61,284	16	89,885	23	24
Village of Brown Deer	12,500	43,496	3	260,204	21	303,700	24	25
Village of Fox Point	8,600	34,869	4	125,895	15	160,764	19	26
Village of Greendale	14,700	92,323	6	214,280	15	306,603	21	27
Village of Hales Corners	7,300	59,395	8	180,411	25	239,806	33	28
Village of River Hills	1,900	17,620	9	55,998	30	73,618	39	29
Village of Shorewood	12,600	61,629	5	152,247	12	213,876	17	30
Village of West Milwaukee	5,600	124,915	22	209,345	38	334,260	60	31
Village of Whitefish Bay	14,900	71,556	5	187,004	12	258,560	17	32
Mission Hills Water and Sewer Trust	500	3,829	8	6,600	13	10,429	21	33
Rawson Homes Sewer and Water Trust	600	3,550	6	--	--	3,550	6	34
Subtotal	1,034,700[a]	6,108,448	6	23,215,707	22	29,324,155	28	--
Ozaukee County								
City of Cedarburg	8,000	37,500	5	25,000	3	62,500	8	35
City of Mequon	6,600	47,849	7	598,208	91	646,057	98	36
City of Port Washington	8,800	24,952	3	157,875	18	182,827	21	37
Village of Belgium	800	8,082	10	5,038	6	13,120	16	38
Village of Fredonia	1,000	N/A	N/A	N/A	N/A	N/A	N/A	--
Village of Grafton	6,400	15,055	2	121,840	19	136,895	21	39
Village of Saukville	1,100	17,045	16	9,105	8	26,150	24	40
Village of Thiensville	3,600	28,778	8	71,120	20	99,898	28	41
Subtotal	36,300[a]	179,261	5	988,186	28	1,167,447	33	--

Table 27 (continued)

Public Sanitary Sewerage System	Estimated Population Served	Sanitary Sewerage Expenditures: Operation and Maintenance Dollars	Operation and Maintenance Dollars Per Capita	Capital Improvements Including Debt Retirement Dollars	Capital Improvements Including Debt Retirement Dollars Per Capita	Total Dollars	Total Dollars Per Capita	Code Number on Figure 19
Racine County								
City of Burlington	7,500	45,163	6	193,851	26	239,014	32	42
City of Racine	95,400	599,920	6	2,996,884	32	3,596,804	38	43
Village of North Bay	1,000	N/A	N/A	N/A	N/A	N/A	N/A	--
Village of Rochester[c]	500	8,449	17	26,651	53	35,100	70	44
Village of Sturtevant	3,200	20,822	6	11,300	4	32,122	10	45
Village of Union Grove	2,800	37,538	13	59,955	21	97,493	34	46
Village of Waterford[c]	1,800	53,500	30	N/A	N/A	53,500	30	47
Caddy Vista Sanitary District	1,200	12,465	10	8,438	7	20,903	17	48
Caledonia Sewer Utility District No. 1	3,500	44,480	12	86,502	25	130,982	37	49
Crestview Sanitary District	1,500	15,518	10	94,000	63	109,518	73	50
Mt. Pleasant Sewer Utility District	10,300	199,700	19	273,424	27	473,124	46	51
North Park Sanitary District	7,000	39,069	6	56,500	8	95,569	14	52
Town of Rochester Sewer Utility District No. 1[c]	200	4,142	21	32,582	163	36,724	184	53
Subtotal	135,900[a]	1,080,766	8	3,840,087	28	4,920,853	36	--
Walworth County								
City of Delavan	5,400	N/A	N/A	N/A	N/A	N/A	N/A	--
City of Elkhorn	4,000	25,843	7	224,583	56	250,426	63	54
City of Lake Geneva	4,700	65,153	14	48,000	10	113,153	24	55
City of Whitewater	12,000	83,581	7	52,338	4	135,919	11	56
Village of Darien	900	N/A	N/A	N/A	N/A	N/A	N/A	--
Village of East Troy	1,700	11,734	7	23,519	14	35,253	21	57
Village of Fontana	1,600	20,800	13	36,877	23	57,677	36	58
Village of Genoa City	900	9,457	11	24,361	27	33,818	38	59
Village of Sharon	1,200	12,820	11	13,218	11	26,038	22	60
Village of Walworth	1,600	N/A	N/A	N/A	N/A	N/A	N/A	--
Village of Williams Bay	1,500	31,015	21	20,885	14	51,900	35	61
Subtotal	35,500[a]	260,403	9	443,781	16	704,184	25	--
Washington County								
City of Hartford	6,800	51,580	7	65,264	10	116,844	17	62
City of West Bend	16,400	91,851	5	223,771	14	315,622	19	63
Village of Germantown	2,400	42,981	18	454,014	189	496,995	207	64
Village of Jackson	600	N/A	N/A	N/A	N/A	N/A	N/A	--
Village of Kewaskum	1,900	16,650	9	14,954	8	31,604	17	65
Village of Slinger	1,000	N/A	N/A	N/A	N/A	N/A	N/A	--
Allenton Sanitary District	700	10,329	15	9,000	13	19,329	28	66
Newburg Sanitary District	400	7,871	20	10,896	27	18,767	47	67
Subtotal	30,200[a]	221,262	8	777,899	26	999,161	34	--
Waukesha County								
City of Brookfield	20,800	220,758	11	445,816	21	666,574	32	68
City of Muskego	4,500	6,908	1	1,233,340	275	1,240,248	276	69
City of New Berlin	8,700	206,869	24	21,600	2	228,469	26	70
City of Oconomowoc	9,500	50,000	5	74,708	8	124,708	13	71
City of Waukesha	40,700	221,905	5	911,133	23	1,133,038	28	72
Village of Butler	2,100	39,922	19	20,883	10	60,805	29	73
Village of Dousman	600	26,834	45	7,274	12	34,108	57	74
Village of Elm Grove Sanitary District No. 1	3,900	49,151	13	33,640	8	82,791	21	75
Sewerage District No. 2	2,700	21,498	8	199,673	74	221,171	82	76
Village of Hartland	2,900	N/A	N/A	N/A	N/A	N/A	N/A	--
Village of Menomonee Falls	17,400	141,869	8	517,552	30	659,421	38	77
Village of Mukwonago	2,600	8,123	3	1,233	1	9,356	4	78
Village of Pewaukee	2,900	35,977	12	43,666	15	79,643	27	79
Village of Sussex	2,800	24,086	8	21,719	8	45,805	16	80
Subtotal	122,100[a]	1,053,900	9	3,532,237	29	4,586,137	38	--
Region Total	1,488,700	9,390,804	6	33,672,947	23	43,063,751	29	--

NOTE: N/A indicates data not available.

[a] *In calculating the per capita costs on a county basis, only that aggregate population in those communities providing expenditure data was included.*

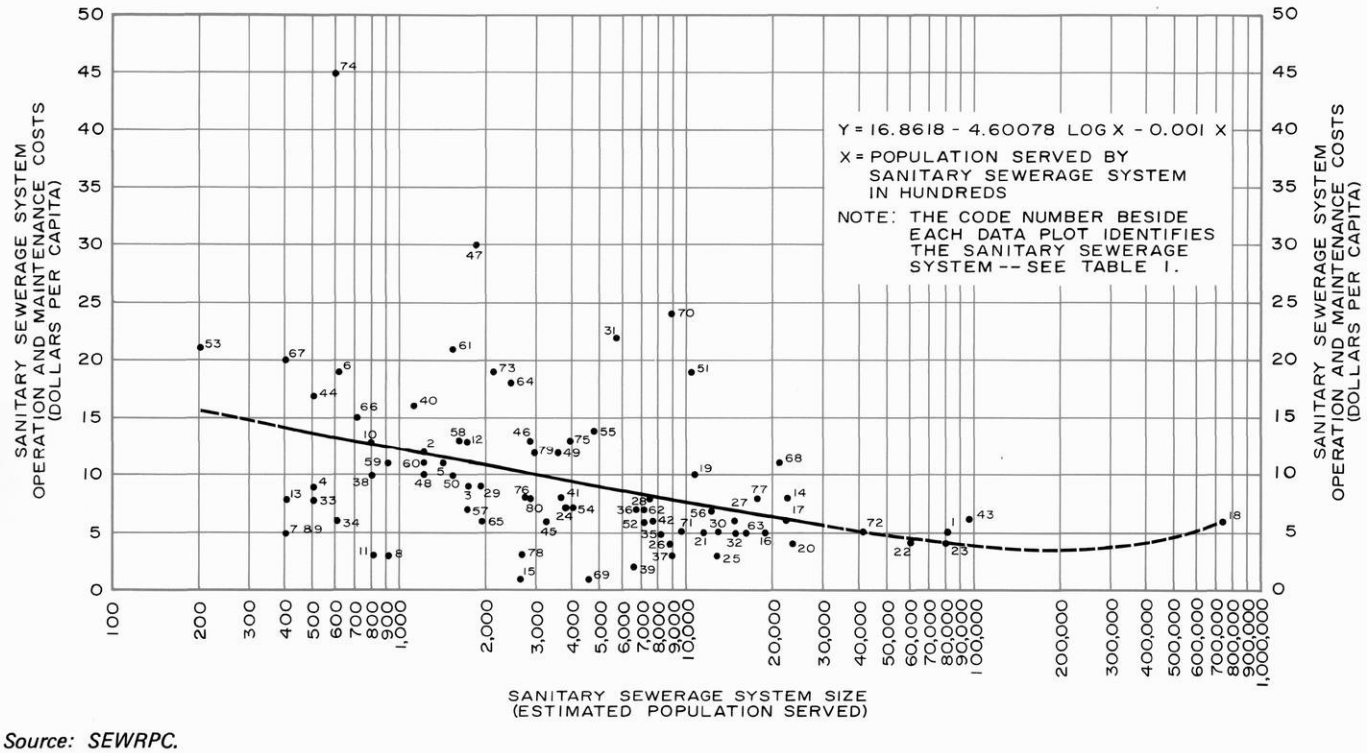
[b] *The expenditures noted for each of the communities included in the Metropolitan Sewerage District of the County of Milwaukee, which includes all municipalities in Milwaukee County except the City of South Milwaukee, include expenditures for the Milwaukee-metropolitan sanitary sewerage system apportioned back to the municipalities in the District. Capital improvement costs for the metropolitan system were prorated back to the communities based upon equalized assessed valuation. Operation and maintenance costs for the metropolitan system were prorated back to the communities based upon sewage flow.*

[c] *Includes expenditures related to operation, maintenance, and capital improvements for the Western Racine County Sewerage District.*

Source: SEWRPC.

Figure 19

RELATIONSHIP BETWEEN SANITARY SEWERAGE OPERATION AND MAINTENANCE EXPENDITURES AND SEWERAGE SYSTEM SIZE IN THE REGION: 1970



Source: SEWRPC.

Together with the land use and water control facility development objectives previously established under related Commission work programs, these new development objectives and their supporting principles and standards provided the basic framework within which alternative regional sanitary sewerage system plans were formulated and the recommended regional sanitary sewerage system plan prepared.

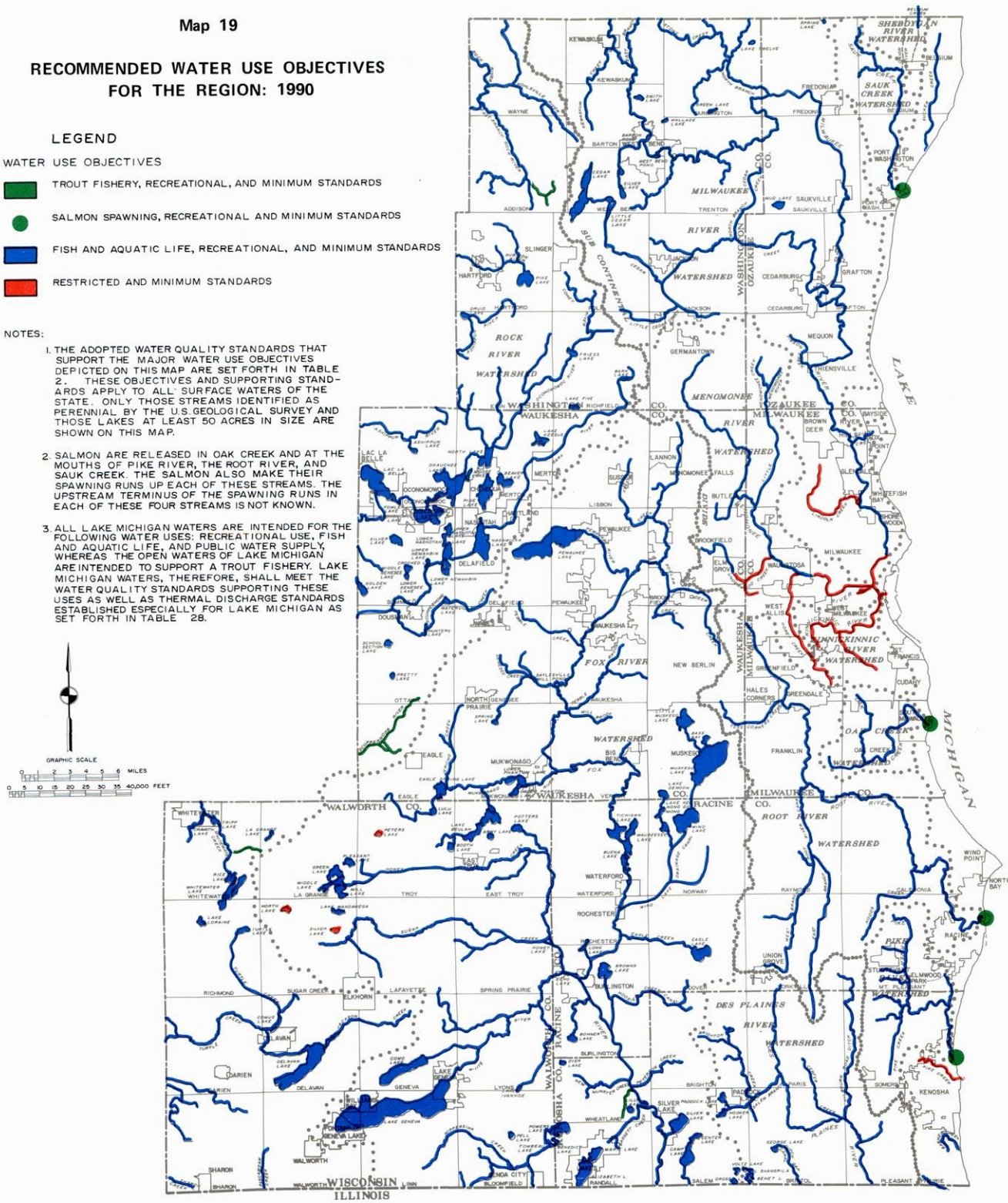
While the foregoing sanitary sewerage system development objectives provided the broad framework for plan formulation and evaluation, it was necessary in the program to also select engineering design criteria and analytic procedures to be utilized in the specific design of alternative plans and in the essential comparisons between such plans. While the design criteria in general are widely accepted and firmly based in current civil and sanitary engineering practice, it was nevertheless deemed important to fully document all of the criteria selected.

After analyzing inventory data relating to actual sewage flows in the Region and comparing such data with generally recommended sewage flow design standards, criteria were developed relating average daily and instantaneous peak sewage flows to the major land use categories identified on the adopted regional land use plan and to allowances for normal groundwater infiltration and storm water inflow. An average daily sewage flow contribution of 125 gallons per capita per day was utilized for sizing sewerage system components, including all domestic, commercial, and industrial sewage contributions exclusive of inflow and infiltration. For major industrial and retail land use concentrations, a peak daily sewage flow contribution of 7,500 gallons per acre was utilized. A variable peak-to-average ratio for sanitary sewage, excluding infiltration and storm water inflow, was utilized to design trunk sewers, with the ratio varying from a low of 2.5 to 1 to a high of 5.0 to 1 depending upon the population of the service area tributary to the given sewer. A total peak infiltration flow allowance of 0.6 gallon per minute per acre was established, which allowance was intended to be added to the peak flow rate derived by appropriate application of the base flow rate of 125 gallons per capita per day. In addition, a peak storm water inflow allowance of an additional 0.6 gallon per minute per acre was established which, like the infiltration allowance, was intended to be added to the peak flow rate derived by appropriate application of the base flow rate.

The design criteria with respect to sewage treatment plants involved such factors as hydraulic loadings, pollution loadings, receiving streamflows, receiving stream waste assimilative capacities, and the kind and level of treatment to be provided. In the regional sanitary sewerage system plan, the design capacity of sewage treatment plants was established by calculating the estimated average daily sewage flow from the entire tributary sewer service area, based on a flow rate of 125 gallons per capita per

Map 19

RECOMMENDED WATER USE OBJECTIVES FOR THE REGION: 1990



The 1990 water use objectives shown on this map provide an important basis for regional sanitary sewerage system plan design, test, and evaluation. Since sewage effluent from treatment plants is one of the most significant sources of pollution of the lakes and streams of the Region, it is essential that the recommended regional sanitary sewerage system plan include performance standards with respect to each sewage treatment facility so as to assure that the designated water use objectives for a particular stream or lake are ultimately reached. Generally, the surface waters of the Region are recommended to be maintained in a condition suitable for both recreational use and for the preservation and enhancement of fish and aquatic life. The attainment of these objectives will require the provision of levels of waste treatment beyond those normally found in the Region today.

Source: SEWRPC.

Table 28

WISCONSIN DEPARTMENT OF NATURAL RESOURCES WATER USE OBJECTIVES AND SUPPORTING WATER QUALITY STANDARDS FOR SURFACE WATERS: 1973

Water Quality Parameters	Water Use Objectives[a,b,c,d]						Combinations of Water Use Objectives Applicable to Southeastern Wisconsin Inland Lakes and Streams		
				Fish and Aquatic Life					
	Restricted Use	Recreational Use	Public Water Supply	Fishery	Salmon Spawning	Trout Fishery	Recreational Use and Fish and Aquatic Life	Recreational Use and Salmon Spawning	Recreational Use and Trout Fishery
Temperature (^{o}F)	--[e]	--[e]	--[e]	--[e,f]	--[e]	--[e,g]	--[e,g]	--[e]	--[e,g]
Total Dissolved Solids (mg/l)	--	--	500 and 750[h]	--	--	--	--	--	--
Dissolved Oxygen (mg/l)	2.0_{min}	--	--	5.0_{min}	5.0_{min}[i]	6.0_{min}[i]	5.0_{min}	5.0_{min}[i]	6.0_{min}[j]
pH (Units)	6.0-9.0[k]	--	6.0-9.0[k]	6.0-9.0[k]	6.0-9.0[k]	6.0-9.0[k]	6.0-9.0[k]	6.0-9.0[k]	6.0-9.0[k]
Fecal Coliforms (MFFCC/100 ml)	1,000 and 2,000[l]	200 and 400[m]	200 and 400[m]	--	--	--	200 and 400[m]	200 and 400[m]	200 and 400[m]
Miscellaneous Parameters[n]	--[o]	--[o,p]	--[o,q]	--[o]	--[o]	--[o,r]	--[o,p]	--[o,p]	--[o,p,r]

[a] *Includes all basic water use categories established by the Wisconsin Department of Natural Resources plus those combinations of water use categories applicable to the Southeastern Wisconsin Region.*

[b] *Standards are expressed in mg/l except as indicated. Single numbers are maximum permissible values, except where minimum limits are denoted by the subscript Min.*

[c] *All waters shall meet the following conditions at all times and under all flow conditions: Substances that will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state. Floating or submerged debris, oil, scum, or other material shall not be present in such amounts as to interfere with public rights in the waters of the state. Materials producing color, odor, taste, or unsightliness shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant, or aquatic life.*

[d] *Water quality standards have not been formulated for commercial shipping and navigation since suitability for these uses depends primarily on quantity, depth, and elevation.*

[e] *There shall be no temperature changes that may adversely affect aquatic life. Natural daily and seasonal temperature fluctuations shall be maintained. The maximum temperature rise at the edge of the mixing zone above the existing natural temperature shall not exceed 5^{o}F for streams and 3^{o}F for lakes.*

[f] *The temperature shall not exceed 89^{o}F for warm water fish.*

[g] *There shall be no significant artificial increases in temperature where natural trout reproduction is to be protected.*

[h] *Not to exceed 500 mg/l as a monthly average nor 750 mg/l at any time.*

[i] *The dissolved oxygen in the Great Lakes tributaries used by stocked salmonids for spawning runs shall not be lowered below natural background during the period of habitation.*

[j] *Dissolved oxygen shall not be lowered to less than 7.0 mg/l during the spawning season.*

[k] *The pH shall be within the range of 6.0 to 9.0 with no change greater than 0.5 units outside the estimated natural seasonal maximum and minimum.*

[l] *Shall not exceed a monthly geometric mean of 1,000 per 100 ml based on not less than five samples per month nor a monthly geometric mean of 2,000 per 100 ml in more than 10 percent of all samples during any month.*

[m] *Shall not exceed a monthly geometric mean of 200 per 100 ml based on not less than five samples per month nor a monthly geometric mean of 400 per 100 ml in more than 10 percent of all samples during any month.*

[n] *Lake Michigan thermal discharge standards, which are intended to minimize the effects on aquatic biota, apply to facilities discharging heated water directly to Lake Michigan, excluding that from municipal waste and water treatment plants and vessels or ships. Such discharges shall not raise the temperature of Lake Michigan at the boundary of the mixing zone established by the Wisconsin Department of Natural Resources by more than 3^{o}F and, except for the Milwaukee and Port Washington Harbors, thermal discharges shall not increase the temperature of Lake Michigan at the boundary of the established mixing zones during the following months above the following limits:*

January, February, March	45^{o}F
April	55^{o}F
May	60^{o}F
June	70^{o}F
July, August, September	80^{o}F
October	65^{o}F
November	60^{o}F
December	50^{o}F

Table 28 (continued

All owners utilizing, maintaining, or presently constructing thermal discharge sources exceeding a daily average of 500 million BTU per hour shall submit monthly temperature and flow data on forms prescribed by the Department of Natural Resources and shall, on or before February 1, 1974, submit to the Department a report on the environmental and ecological impact of such thermal discharges in a manner approved by the Department. After a review of the ecological and environmental impact of the discharge, mixing zones shall be established by the department. New thermal discharge facilities (construction commenced after February 1, 1972 and prior to August 1, 1974) shall be so designed as to avoid significant thermal discharges to Lake Michigan. Any plant or facility, the construction of which is commenced on or after August 1, 1974, shall be so designed that the thermal discharges therefrom to Lake Michigan comply with mixing zones established by the Department. In establishing a mixing zone, the Department will consider ecological and environmental information obtained from studies conducted pursuant to February 1, 1974 and any requirements of the Federal Water Pollution Control Act Amendments of 1972.

[o] *Unauthorized concentrations of substances are not permitted that alone or in combination of, with other materials present, are toxic to fish or other aquatic life. Questions concerning the permissible levels, or changes in the same, of a substance, or combination of substances, of undefined toxicity to fish and other biota shall be resolved in accordance with the methods specified in "Water Quality Criteria." Report of the National Technical Advisory Committee to the Secretary of the Interior, April 1, 1968. The committee's recommendations will also be used as guidelines in other aspects where recommendations may be applicable.*

[p] *A sanitary survey and/or evaluation to assure protection from fecal contamination is the chief criterion in determining the suitability of a surface water for recreational use.*

[q] *The intake water supply shall be such that by appropriate treatment and adequate safeguards it will meet the Public Health Service Drinking Water Standards established in 1962.*

[r] *Streams classified as trout waters by the DNR (Wisconsin Trout Streams, publication 213-72) shall not be altered from natural background by effluents that influence the stream environment to such an extent that trout populations are adversely affected.*

Source: Wisconsin Department of Natural Resources and SEWRPC.

day. In addition, a constant rate of infiltration of 0.6 gallon per minute per acre was assumed, with the acreage being computed by dividing the forecast 1990 population by a medium population density of 10.2 persons per acre. This procedure results in an equivalent infiltration flow of 85 gallons per capita per day which, when added to the sanitary sewage flow of 125 gallons per capita per day, resulted in a design flow of 210 gallons per capita per day. Design flows for sewage treatment plants were, therefore, computed as the product of 210 gallons per capita per day and the forecast 1990 population of the service area, except where 1970 sewage treatment plant flows were known, in which case the design flow was calculated as the 1970 flow plus the product of 210 gallons per capita per day and the forecast 1990 population increment.

With respect to pollution loadings, the following criteria were utilized: suspended solids—0.21 pound per capita per day; carbonaceous biochemical oxygen demand ($CBOD_5$)—0.21 pound per capita per day; nitrogen—0.054 pound per capita per day as total nitrogen, 0.027 pound per capita per day as ammonia; and phosphorus—0.01 pound per capita per day. Equivalent influent sewage strengths were 120 mg/l of suspended solids, 120 mg/l of $CBOD_5$, 31 mg/l of total nitrogen, 15.5 mg/l of ammonia nitrogen, and 5.7 mg/l of total phosphorus.

Each sewage treatment facility was designed based on an assumed streamflow at the discharge point equivalent to the lowest average flow over seven consecutive days in the last decade. The forecast 1990 seven day-ten year low flows were estimated for all existing and potential sewage treatment plant locations as the sum of the natural low flow plus the forecast 1990 flow from upstream sewage treatment plants. An oxygen sag curve model was developed to determine for each sewage treatment plant location the treatment levels required in order to assure adequate dissolved oxygen in the receiving stream so as to meet the water quality standards that support the water use objectives. Based on the application of the model, design curves were prepared for use in determining the level and type of treatment required at a potential sewage treatment plant site. Consideration was also given in establishing the level of treatment required to the steps necessary to avoid ammonia toxicity in the receiving streams.

A comparison of sewage flow and strength flows found in the Region with design criteria selected for use in the regional sanitary sewerage system planning program is set forth in Table 29. In general, it may be concluded that the sewage flow and sewage strength design criteria selected for use in the regional sanitary sewerage system planning program compare favorably with the actual sewage flow and sewage strength data collected within the Region, with the former based not only on the latter but also upon a careful search of the literature and the experienced judgment of the very knowledgeable sanitary engineers who served on the Technical Coordinating and Advisory Committee.

Alternative Plans

In the preparation of the recommended regional sanitary sewerage system plan, a concerted effort was made to examine and offer for public examination all physically feasible alternative plan elements which might satisfy the stated development objectives. Alternatives were considered with respect to the locations of sewage treatment plants, the configuration of trunk sewer arrangements to convey sewage to the alternative sewage treatment plant locations, and alternative levels of sewage treatment. In addition, other concepts of waste management, including the diversion of effluent out of the Lake Michigan basin and disposal of effluent on land, were considered; neither of these latter alternative waste management concepts, however, was considered viable on a regionwide scale.

Table 29

COMPARISON OF SEWAGE FLOW AND STRENGTH VALUES FOUND IN THE REGION WITH DESIGN CRITERIA SELECTED FOR USE IN THE REGIONAL SANITARY SEWERAGE SYSTEM PLANNING PROGRAM

Determined Values or Selected Criteria	Sewage Flow											
	Per Capita Domestic Sewage Flow Contribution (gpcd)	Major Industrial Land Use Sewage Flow Contribution (gpad)	Major Commercial Land Use Sewage Flow Contribution (gpad)	Groundwater Infiltration (gpm/acre)		Storm Water Inflow (gpm/acre)		Peak-to-Average Ratios			
								Trunk Sewers		Sewage Treatment Plants	
Average Values Found in Region	88	12,270	7,640	0.24		0.57		3.72		1.87	
Range of Values Found in Region	78-103	1,430-24,660	2,580-13,620	0.09-0.73		0.23-1.68		2.83-4.61		1.34-2.66	
Design Criteria Selected for Regional Sanitary Sewerage System Planning Program	125	7,500	7,500	Type of Development		Type of Development		Population Range			
				High Density	0.5	High Density	0.5	0- 2,000	5.0		
								2-10,000	4.0		
				Medium Density	0.6	Medium Density	0.6	10-20,000	3.0		
								20,000	2.5	2.00	
				Low Density	0.5	Low Density	0.5				

Determined Values or Selected Criteria	Sewage Strength				
	Carbonaceous Biochemical Oxygen Demand (Five-Day) (lbs/capita/day)	Suspended Solids (lbs/capita/day)	Phosphorus (lbs/capita/day)	Organic Nitrogen (lbs/capita/day)	Ammonia Nitrogen (lbs/capita/day)
Average Values Found in Region	0.259	0.219	0.0138	0.0111	0.0143
Range of Values Found in Region	0.0627-1.523	0.0656-0.676	0.0055-0.0535	0.0061-0.0208	0.0063-0.0233
Design Criteria Selected for Regional Sanitary Sewerage System Planning Program	0.21	0.21	0.01	0.024	0.027

Source: SEWRPC.

Not only would sewage effluent diversion from the Lake Michigan basin to the Mississippi River basin constitute a task of major proportions, involving over 90 percent of all sewage effluent currently discharged within the Region, but the cost of diversion would almost totally be an "add-on" cost to any of the alternative system plans considered. Similarly, land disposal of sewage effluent was found to have many interrelated problems, not the least of which would be the extremely large amount of land needed to successfully dispose of the large volume of liquid wastes generated daily within the Region. It was concluded, however, that land disposal of sewage effluent may be practical and applicable for smaller, individual communities, particularly such communities located in the more rural areas of the Region.

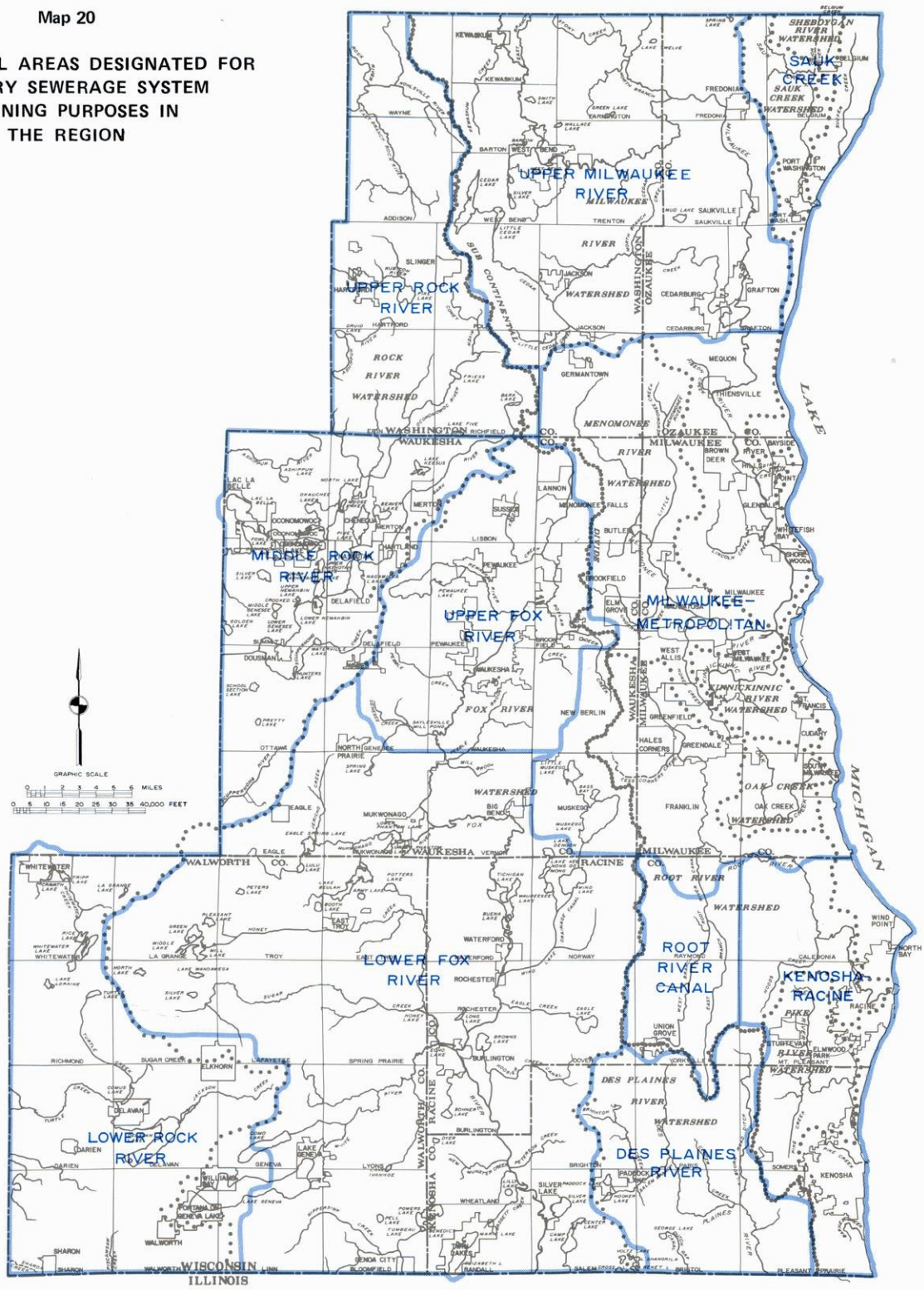
In the formulation of sanitary sewerage system plans, the Region was divided into 11 subregional areas based upon natural watershed boundaries, existing and potential areas of population concentration, and existing sewerage systems (see Map 20). A total of 92 individual sewer service analysis areas were further identified within the 11 subregional sewerage system planning areas, and alternative system plans were prepared for these analysis areas. A total of 66 sanitary sewerage system plans were prepared, costed, and evaluated for the subareas. Each of these system plans included recommendations concerning the location, capacity, level of treatment, and performance standards for sewage treatment facilities, as well as proposed configurations and sizes of needed intercommunity trunk sewers.

Recommended Plan

The recommended regional sanitary sewerage system plan is comprised of five major elements: sewer service areas, sewage treatment facilities, trunk sewers, abatement of combined sewer overflows, and auxiliary elements applicable in general to all of the recommended systems and alternatives thereto. In addition, the plan includes specific implementation schedules.

Map 20

SUBREGIONAL AREAS DESIGNATED FOR SANITARY SEWERAGE SYSTEM PLANNING PURPOSES IN THE REGION



Eleven distinct subregional areas were identified for sanitary sewerage system planning purposes within the Region. The boundaries of these 11 areas were delineated on the basis of natural major watershed divides, existing and potential service areas of existing centralized sanitary sewerage systems, and existing and probable future areas of urban concentration as recommended in the adopted regional land use plan. In determining the boundaries of the subregional areas, natural watershed divides were crossed only where necessary to recognize the effects of potential urban development and attendant sewerage facilities which cross such divides.

Source: SEWRPC.

Sewer Service Areas

The plan recommends that centralized sanitary sewer service be extended to a total area of about 675 square miles, or about 25 percent of the total area of the Region. It is anticipated that about 2.6 million persons would reside in this area and be provided centralized sanitary sewer service, representing nearly 97 percent of the total anticipated future population level. This recommended incremental sewer service area totals about 366 square miles, considerably less than the locally proposed future incremental service area of nearly 450 square miles. Recommended sewer service areas for the Region are shown on Map 21.

Sewage Treatment Facilities

The plan recommends that sewage treatment be provided at a total of 52 public sewage treatment facilities. In order to meet the established water use objectives, the plan recommends that 41 of the 52 facilities provide an advanced level of waste treatment, with the remaining 11 plants to provide a secondary level of waste treatment. Implementation of the recommended plan will enable the abandonment of 22 existing public sewage treatment facilities, 13 of which are currently located in the existing and proposed service areas of the Milwaukee-Metropolitan sewerage system. Implementation of the plan would further permit the abandonment of 29 of the existing 59 private sewage treatment facilities now serving isolated land use enclaves in the Region. The location of the recommended 52 public sewage treatment facilities for the Region as a whole is shown on Map 21.

Trunk Sewers

The plan recommends the general alignment and approximate size of those intercommunity trunk sewers required to extend sewer service from the recommended treatment plant locations into the recommended sewer service areas. Those additional trunk sewers needed to permit the relocation of certain existing sewage treatment facilities, and the abandonment of other existing sewage treatment facilities, are also included in the recommended plan (see Map 21).

Abatement of Combined Sewer Overflows

The plan contains recommendations for the abatement of existing combined sewer overflows in the Milwaukee, Racine, and Kenosha areas. In the Milwaukee area the plan recommends proceeding with full implementation of the recommendations contained in the adopted Milwaukee River watershed plan to construct a combination deep tunnel/mined storage flow-through treatment system to collect, convey, and adequately treat all combined sewer overflows throughout the approximately 27-square mile combined sewer service area in Milwaukee County. In the Kenosha and Racine areas, the plan recommends that definitive recommendations concerning which of the remaining combined sewer areas should be separated and which should receive specialized treatment facilities be held in abeyance until completion of current research and demonstration studies in each of these communities.

Auxiliary Plan Elements

In addition to the foregoing specific recommendations concerning the construction of needed sewerage facilities, the plan includes several important auxiliary elements. The plan recommends that clear water elimination efforts be mounted in all communities, and that the design criteria utilized to prepare the plan become the standard for determining whether or not excessive clear water inflows exist within the existing sewerage systems or subsystems. The plan further recommends that steps be taken to eliminate all of the nearly 600 known points of sewage flow relief found to exist within the Region. The plan recognizes the need to substantially upgrade the operation and maintenance of sewage treatment plants in order to provide the required levels of waste treatment, and toward this end sets forth recommended staffing and operational standards for typical plant sizes. The plan also recommends that steps be taken to provide for full metering of all sewage flows, including bypassed flows. The plan recommends that careful attention be given to the means for sludge handling and disposal of recycling. Finally, the plan recommends that a continuing water quality monitoring program be established to assess the status and effect of plan implementation on surface water quality.

Implementation Schedules

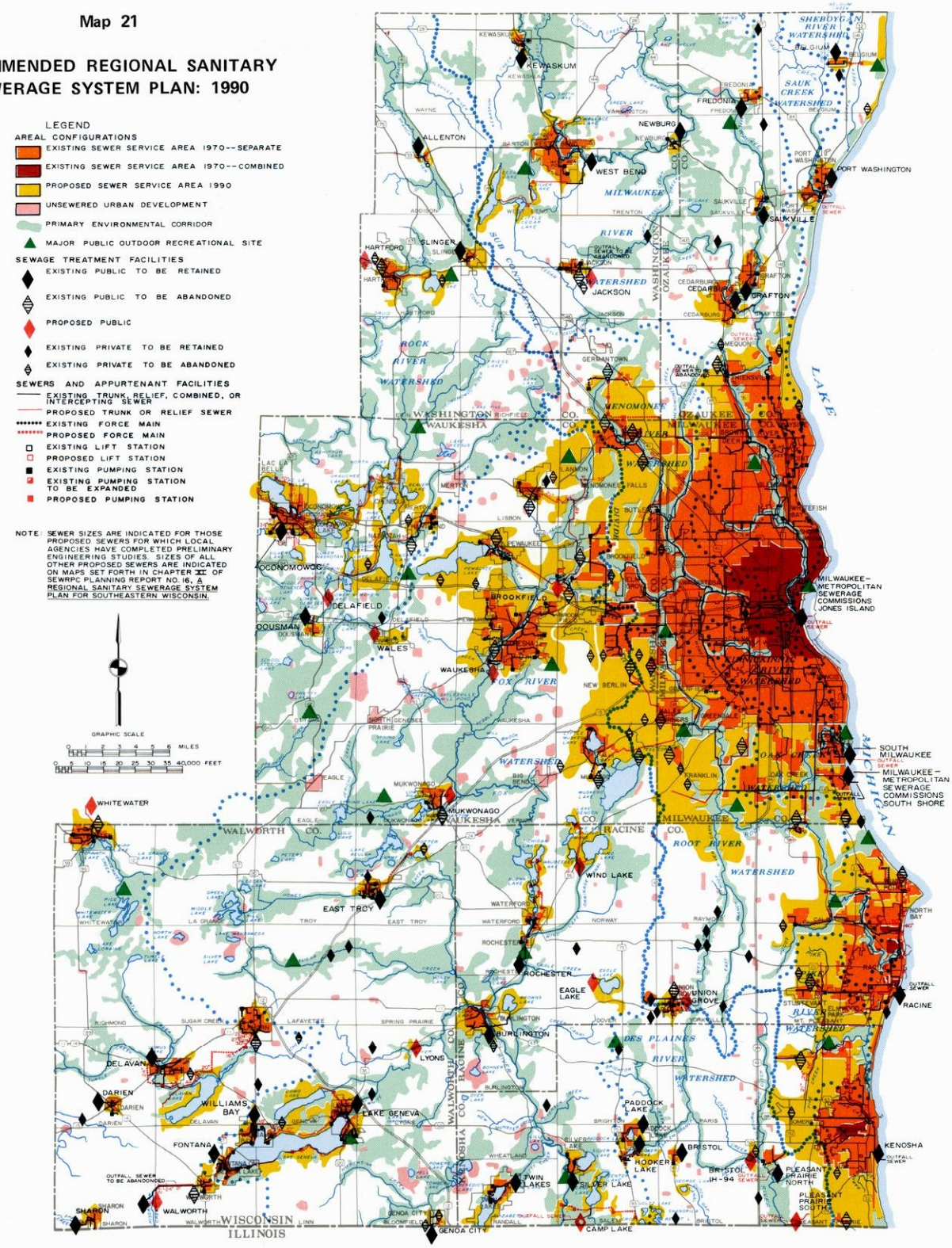
In order to provide a point of departure for intergovernmental discussions and negotiations involving the development of necessary areawide sewerage systems, and to further provide a basis for tentative federal and state agency programming, including the issuance of waste discharge permits and the disposition of federal and state grant-in-aid monies, a series of proposed implementation schedules was prepared relating to the specific sewerage facility recommendations contained in the recommended regional sanitary sewerage system plan. One schedule was prepared for each subregional planning area (see Map 20). These schedules include proposed dates for sewage treatment plant construction, trunk sewer extensions, and the abatement of combined sewer overflows. While these schedules contain specific dates for the completion of each individual recommended plan component, it should be recognized that the actual timing of implementation may be expected to vary somewhat from the schedule depending upon the rate of urban growth and development in various subareas of the Region and upon the availability of sufficient federal and state grant-in-aid monies.

Costs of Plan Implementation

As noted earlier, the inventory findings indicated that total expenditures for operation, maintenance, and capital improvements, including debt retirement, for sanitary sewerage systems within the Region presently approximate $43 million per year, or about $29 per capita served. Of this total, about $9.4 million, or about $6 per capita, was expended for operation and maintenance, and about $33.7 million, or $23 per capita, was expended for capital improvements. The full capital cost of implementing the recommended sanitary sewerage system plan is estimated at about $507 million over a 20- to 30-year

Map 21

RECOMMENDED REGIONAL SANITARY SEWERAGE SYSTEM PLAN: 1990



The recommended regional sanitary sewerage system plan proposes to extend centralized sanitary sewer service to a total area of about 675 square miles, or about 25 percent of the area of the Region. The plan would serve about 97 percent of the total anticipated future population of the Region. Sewage treatment in the Region would be provided under the plan recommendations at a total of 52 public sewage treatment facilities. In order to meet the established water use objectives set forth on Map 19, the plan recommends that 41 of the 52 facilities provide an advanced level of waste treatment, with the remaining 11 plants to provide a secondary level of treatment. Implementation of the recommended plan would enable the abandonment of 22 existing public sewage treatment facilities, 13 of which are currently located within the existing and proposed service area of the Milwaukee-metropolitan sewerage system. Implementation of the plan would further permit the abandonment of 29 of the existing 59 private sewage treatment plants now serving isolated urban land use enclaves in the Region. Finally, the plan also recommends the general alignment and approximate size of those intercommunity trunk sewers required to extend sewer service from recommended treatment plant locations into the proposed sewer service areas.

Source: SEWRPC.

implementation period. Of this total, about $134 million, or 26 percent, is required to fully implement the recommended sewage treatment plant element of the plan; about $194 million, or about 38 percent, the trunk sewer element; with the remaining $179 million, or 36 percent, required to implement the combined sewer overflow abatement element. The average annual cost of the capital investment thus approximates $25 million, or about $12 per capita. Thus, the plan is considered to be financially feasible. In addition, it is anticipated that all of the components of the plan requiring capital investment will be eligible for federal and state grants-in-aid, which could serve to reduce the local plan implementation costs with respect to capital investment by as much as 80 percent.

Public Reaction to Plan Recommendations

In order to fully inform public officials and interested citizens about the findings and preliminary recommendations of the regional sanitary sewerage system planning program, and to obtain their reactions to the staff and Technical Advisory Committee recommendations, a series of six informal public informational meetings and one formal public hearing was held late in 1973 within the Region. Well over 600 persons attended these meetings. In addition, five special informational meetings were requested by local officials and citizens to discuss specific recommendations in certain subareas of the Region. Minutes of the six general informational meetings and the public hearing have been published and are on file at the Commission offices.

The record of the proceedings indicates that public reaction to the preliminary plan recommendations, including most importantly the water use objectives, the waste treatment levels required to meet these objectives throughout the Region, the sewer service areas, and the trunk sewer and treatment facilities required to serve such areas, all met with a very favorable response. The meetings and hearing did indicate, however, that significant controversy existed with respect to the following five problem areas:

1. The Delavan-Delavan Lake-Elkhorn area of Walworth County, the issue being whether or not one single integrated sewerage system with one areawide sewage treatment plant or multiple sewerage systems should serve this urbanizing area.

2. The Delafield-Hartland area of Waukesha County, the issues being a dispute over the best specific location for the recommended areawide sewage treatment plant to serve the City of Delafield, the Villages of Hartland and Nashotah, and adjacent urban development in the Town of Summit on the Nashotah and Nemahbin Lakes; and whether a sanitary sewerage system is required for the Village of Merton.

3. The West Bend area of Washington County, the issues being whether existing urban development along the shorelines of Big Cedar Lake, Little Cedar Lake, and Silver Lake should be served by centralized public sanitary sewerage facilities from West Bend, and whether a sanitary sewerage system is required for the Green Lake area in the Town of Farmington.

4. The Lake Church area of Ozaukee County, the issue being whether property owners along the shoreline of Lake Michigan in the Town of Belgium should be included in the recommendation for sewerage facilities to serve the unincorporated village of Lake Church and the Harrington Beach State Park.

5. Milwaukee County, where the Cities of Glendale, Oak Creek, and Franklin objected to the proposed priority schedule for trunk sewer construction and requested that the time schedule for certain specific trunk sewers be advanced.

At year's end the Commission was in the process of considering the comments and reactions to the plan recommendations brought out by the informational meetings and the public hearing, with particular emphasis on investigating the five specific issues raised.

ROOT RIVER WATERSHED PLANNING PROGRAM

The comprehensive plan for the Root River watershed was adopted by the Commission in September 1966. The plan is documented in SEWRPC Planning Report No. 9, A Comprehensive Plan for the Root River Watershed. As part of the continuing environmental planning and engineering program, the Commission continues to monitor development in the watershed, to coordinate and advise on the execution of the watershed plan, and to review progress toward plan implementation. The adopted plan for the Root River watershed includes a basic land use and parkway plan element, a flood control plan element, and a water pollution abatement plan element.

Plan Adoption

Many of the local units of government in the Root River watershed have adopted the plan as a guide for development, including the Milwaukee and Racine County Boards of Supervisors; the Common Councils of the Cities of Oak Creek, Racine, and Franklin; the Town Board of Mt. Pleasant; and the Metropolitan Sewerage Commission of the County of Milwaukee and the Sewerage Commission of the City of Milwaukee, acting jointly for and on behalf of the Metropolitan Sewerage District of the County of Milwaukee.

The Root River watershed plan has also been endorsed by the Wisconsin Natural Resources Board and certified by the Department of Natural Resources (DNR) to the U. S. Environmental Protection Agency (EPA) as the official water quality management plan for the Root River basin. The EPA initially approved the Root River watershed plan on September 14, 1971, indicating, however, that further investigation and analysis was necessary to supplement the plan with respect to the potential of combining existing sewage treatment facilities at the

Village of Union Grove and the Wisconsin Southern Colony Institution and with respect to resolving combined sewer overflow problems in the City of Racine. During 1973 the Commission completed its technical planning work concerning these two matters as an integral part of the regional sanitary sewerage system planning program. Information was provided on March 20, 1973, to the DNR and EPA relating to each of these two matters. The Commission recommended that the treatment plants for the Wisconsin Southern Colony Institution and the Village of Union Grove be functionally integrated for advanced waste treatment purposes, with a common discharge point to the west branch of the Root River canal. With respect to the combined sewer overflow problem in the City of Racine, the Commission recommended that definitive recommendations as to which of the remaining combined sewered areas in the City of Racine should be separated and which should be left combined, with treatment provided at combined sewer overflow points, be held in abeyance until meaningful findings become available from a joint research and demonstration project now being conducted by the City of Racine with the cooperation of the DNR and EPA. This project will result in a determination as to which alternative plan is the most cost effective. On October 18, 1973, the EPA completed its approval to the Root River watershed plan, removing the exceptions stated in 1971 concerning the Union Grove-Southern Colony area and the combined sewer area in the City of Racine.

Plan Reevaluation

At the request of the Common Council of the City of Greenfield, the Commission undertook a reevaluation of the adopted comprehensive plan for the Root River watershed during 1973 as that plan relates to the flood problems along the North Branch of the Root River in the City of Greenfield. As adopted, the plan recommended the public acquisition and removal of an estimated 23 flood-prone homes in the City of Greenfield which would experience first floor inundation during a 100-year recurrence interval flood, with floodproofing of any remaining flood-prone residences. The lands so vacated were recommended in the plan to be converted to park and parkway use. The Greenfield Common Council requested the Commission to reexamine this specific plan recommendation after a serious flood on the Root River on September 18, 1972, and in light of 1973 economic and floodland occupancy conditions. The Commission conducted such a reevaluation and presented the results of the study to the Common Council in a letter report dated February 21, 1973.

The reevaluation included a reexamination of three alternative floodland management plants. Two of these alternatives—the recommended floodland removal-floodproofing alternative and a channel improvement alternative—were initially evaluated under the Root River study. A third alternative—construction of earthen dikes for nearly a mile reach of the North Branch of the Root River—was not initially considered under the watershed study. Detailed data collected by the City and Commission staffs as part of this reevaluation indicated that, at the present time, 18 residences in the Greenfield flood-prone reach of the river would be subject to first floor flooding during a 100-year recurrence interval flood, representing a reduction of five such homes from the original estimate of 23. This reduction may be attributed to the availability of more precise information concerning actual first floor elevations. An additional 19 private homes would incur basement flood damage under 100-year recurrence interval flood conditions. The study further revealed that three of the 37 flood-prone private residences in this reach of the river have been constructed since completion of the Root River watershed study and adoption of the comprehensive watershed plan.

The Commission review of the three floodland management alternatives indicated that on a strictly economic basis and incorporating only tangible costs and benefits, both the floodland removal-floodproofing alternative and the channelization alternative would be uneconomic in that the costs would considerably exceed the anticipated benefits. This finding confirmed similar findings under the initial Root River watershed study. The new earthen dike alternative was found to be both technically feasible and economic, yielding an excess of annual benefits over annual costs. Since the crest of the earthen dike would, along most of its length, be positioned four to five feet above existing ground grades immediately adjacent to existing parkway drives, however, the dike alternative was judged not only to be aesthetically objectionable but also in conflict with a land use objective, as set forth in the watershed plan, calling for the preservation and provision of open space to enhance the total quality of the environment while maximizing essential natural resources availability.

The review of the three floodland management alternatives indicated that the channel improvement alternative was not only economically unsound but could be considered to be in direct conflict with the land use development objectives expressed in the plan. The remaining two alternatives were found to be less in conflict with those objectives, with the selection of a recommended course from these two alternatives found to be primarily of local option and concern. The Commission recommended to the City of Greenfield, therefore, that they determine locally which of the two acceptable alternatives would be most desirable from the point of view of the city and the riverine area residents. This Commission recommendation was endorsed by the Root River Watershed Committee.

On May 18, 1973, a public informational meeting was held in the City of Greenfield to present the results of the reevaluation to the local residents and to offer an opportunity to such residents to ask questions and become fully informed concerning the matter. Following this meeting, the Greenfield Common Council determined to elicit views of the affected property owners concerning which of the two remaining alternatives—earthen dikes or structure removal and floodproofing—they preferred. The residents were given the choice of opting for either of the two alternatives or of a limited number of combinations of the two alternatives involving

one side or the other of the river. The results of the survey revealed that, while all of the property owners affected favored some action, no clear concensus existed with respect to which of the alternatives or combinations thereto should be pursued. After careful consideration of the Commission report and the survey results, the Greenfield Common Council subsequently determined to adopt the structure removal and floodproofing alternative, and to request the Milwaukee County Park Commission to take appropriate steps toward implementation of this alternative. At year's end the Park Commission staff was reviewing the request and preparing a report for the Park Commission.

Plan Implementation

Previous Commission annual reports have documented a number of significant steps that had been taken toward implementation of the Root River watershed plan. Specific actions taken during 1973 include:

- The acquisition of additional riverine lands for parkway purposes along the Root River, including seven acres acquired by the Milwaukee Park Commission and 28 acres acquired by the Racine County Board. The watershed plan recommends the ultimate acquisition of about 6,900 acres in the two counties, of which about 3,800 acres had been acquired prior to plan adoption, leaving about 3,100 acres of additional land acquisition to be accomplished during the plan implementation period. As reflected in Table 30, the two county agencies have to date acquired about 625 acres of land since plan adoption, indicating that one-fifth of this important goal has been reached. In addition, during 1973 the City of Racine acted to acquire nearly two acres of land adjacent to the 100-year recurrence interval floodplain as an addition to Colonial Park.

- Steps were taken by the Cities of Franklin and Oak Creek and the Village of Greendale to construct local sanitary sewer systems to serve existing urban development now served by septic tank systems. The City of Franklin initiated action to construct local sanitary sewers to serve the Woodcrest Acres Subdivision, which will eliminate about 170 septic tank systems. The City of Oak Creek initiated action to construct local sanitary sewers to serve a portion of the southwest area of the city, which will eliminate 30 existing septic tank systems. The Village of Greendale initiated action to construct local sanitary sewers to serve a portion of the northwest area of the village, which will eliminate about 110 septic tank systems.

- The Root River Watershed Committee met late in 1973 to review a request for a recommendation from the City of Franklin concerning a rezoning petition to permit filling in the natural 100-year recurrence interval floodplain. In deliberating this matter, the Committee referred to a 1968 analysis conducted in accordance with a similar request from the Village of Greendale, which indicated that floodplain fills south of W. Loomis Road should be discouraged and the entire 100-year floodplain committed to future park and parkway use. The Committee voted to recommend to the City of Franklin that the request be denied in accordance with the previous flood encroachment analysis conducted by the Committee for the Village of Greendale. In making this recommendation, the Committee noted that ample opportunity to redesign the proposed subdivision existed, and that it was possible to accommodate both the land development objectives and the floodplain protection objectives.

- The abandonment of the Mission Hills sewage treatment plant and the connection of the tributary area served by the plant to the Milwaukee metropolitan sewerage system.

- The continued recording of stream flow data in the watershed through the cooperative mainte-

Table 30

PARKWAY LAND ACQUISITION PROGRESS IN THE ROOT RIVER WATERSHED IN ACRES: 1973

County	Recommended Park and Parkway Acquisition Total 1990	Park and Parkway Acquired Prior to Plan Adoption	Recommended Additional Public Acquisition	Public Acquisition Since Plan Adoption		Total Parkway Lands Remaining To Be Acquired
				During 1973	Total To Date	
Milwaukee . . .	4,490	3,760	730	7	300	430
Racine	2,460	76	2,384	28	325	2,059
Total	6,950	3,836	3,114	35	625	2,489

Source: Milwaukee County Park Commission, Racine County Highway and Park Commission, and SEWRPC.

nance of three continuous recording stream gages by the U. S. Geological Survey, Racine County Board of Supervisors, and the Metropolitan Sewerage Commission of the County of Milwaukee.

- Continuation by the Commission and the Wisconsin Department of Natural Resources of a stream water quality monitoring program on the Root River system.

- Commission staff review, at the request of the Wisconsin Department of Natural Resources, of the hydraulic effect of a proposed bridge over the West Branch of the Root River in the Town of Yorkville to serve the C & D Duck Company, Inc. The Commission staff found that the increase in the 100-year recurrence interval stage which would be attributable to the proposed new bridge would be less than 0.1 foot and, therefore, was in conformance with the river crossing standards adopted as part of the Root River watershed plan.

FOX RIVER WATERSHED PLANNING PROGRAM

A comprehensive plan for the Fox River watershed was adopted by the Commission in June 1970. The plan is documented in the two-volume SEWRPC Planning Report No. 12, A Comprehensive Plan for the Fox River Watershed. As part of the continuing environmental engineering and planning program, the Commission continues to monitor development within the watershed, to coordinate and advise on the execution of the watershed plan, and to review progress toward plan implementation. The adopted plan for the Fox River watershed includes a basic land use element, a natural resource protection and park and open space element, a flood control element, a water pollution abatement element, and a public water supply element.

Plan Adoption

Prior to 1973, the Fox River watershed plan had been adopted by all of the county boards concerned—Kenosha, Racine, Milwaukee, Walworth, and Waukesha; by the City of Burlington; the Village of Rochester; the Town of Waterford; and the Kenosha County Soil and Water Conservation District. The plan had also been formally endorsed or acknowledged by the U. S. Department of Housing and Urban Development; the U. S. Department of Agriculture, Soil Conservation Service; the U. S. Department of the Interior, Geological Survey; and the State Highway Commission of Wisconsin. During 1973 the plan was adopted in whole or in part by the Cities of Brookfield, New Berlin, and Waukesha; the Villages of Silver Lake, Menomonee Falls, Pewaukee, and Sussex; the Towns of Brookfield, Lisbon, and Pewaukee; and the Lake Pewaukee Sanitary District, and was endorsed by the U. S. Department of Transportation, Federal Highway Administration.

The Fox River watershed plan has also been endorsed by the Wisconsin Natural Resources Board and certified by the Department of Natural Resources (DNR) to the U. S. Environmental Protection Agency (EPA) as the official water quality management plan for the Fox River basin. During 1972 the EPA completed its review of the plan, and indicated that before formal EPA approval would be forthcoming, two issues relating to the timetable for plan implementation should be completed, one dealing with the nutrient removal requirements in the plan and the other with implementation of the proposed areawide sewerage system in the upper watershed. As discussed below, good progress was made during 1973 in working toward meeting both of these additional planning requirements.

Plan Reevaluation and Amendment

In response to the aforementioned request by the EPA to establish specific timetables for implementation of both the nutrient removal recommendations and the upper Fox River watershed areawide sewerage system recommendation included in the Fox River watershed plan, the DNR in cooperation with the Regional Planning Commission, published a preliminary implementation schedule addressing these matters in late 1972. This implementation schedule was the subject of a public informational meeting held by the DNR on January 18, 1973. Generally, the public officials representing the local units of government in the upper Fox River watershed expressed opposition to the creation of a metropolitan sewerage district for the upper Fox River area, as proposed in the draft implementation schedule. Subsequent to the meeting, these public officials created an ad hoc intergovernmental committee to formulate a joint response to the plan implementation schedule initiated by the DNR. The committee membership included the heads of the key local governments concerned, the engineering staffs of these governments, and staff representatives of the DNR and the Regional Planning Commission.

After a series of meetings and after careful deliberation, all of the key units of government in the upper Fox River watershed area agreed to support full implementation of the recommended sanitary sewerage system plan contained in the adopted Fox River watershed plan, provided that the plan be amended to provide for two major areawide sewage treatment plants to serve the upper watershed, one each at Brookfield and Waukesha, as opposed to a single areawide plant to serve the upper watershed, proposed in the adopted plan to be located below Waukesha. The local units of government involved rejected the initial plan recommendation to establish only one major areawide sewage treatment facility on the basis that, as documented in the Fox River watershed report, the two-plant subalternative plan would meet the established water use objectives for the Fox River equally well; that the adopted plan and the two-plant alternative plan were virtually identical with respect to cost effectiveness; and, most importantly, that while full implementation of the proposed two-plant alternative was highly likely and feasible within the design year of the plan, political experience indicated that the same conclusion could not be drawn for the adopted plan recommendation of only one major sewage treatment facility to serve the upper Fox River watershed. The agreement of the key local

units of government involved to support and implement a two-plant alternative for the upper watershed area was formally reflected in resolutions adopted by the governing bodies of the Cities of Brookfield, New Berlin, and Waukesha; the Villages of Menomonee Falls, Pewaukee, and Sussex; the Towns of Brookfield, Lisbon, and Pewaukee; and the Lake Pewaukee Sanitary District.

Subsequent to this agreement at the local level, the local officials involved directed the preparation of a specific implementation schedule that would include the two sewage treatment plant recommendation for the upper watershed area, as well as timely phosphorus removal recommendations for the entire watershed, and requested that the Regional Planning Commission appropriately amend the adopted watershed plan and seek all necessary plan approvals at the state and federal levels of government. On September 13, 1973, the Commission took formal action to amend the Fox River watershed plan to include the two sewage treatment plant alternative in lieu of the one sewage treatment plant alternative for the upper watershed area in the adopted plan, and to further include as part of the adopted plan the Revised Implementation Schedule for Meeting Water Quality Objectives and Waste Treatment Requirements for the Fox (Illinois) River Watershed, which was published in August 1973 by the Wisconsin Department of Natural Resources. Subsequently, during 1973, three local units of government acted to formally adopt the plan amendment—the Cities of Brookfield and Waukesha and the Village of Pewaukee. At year's end, approval of the amendment by the Wisconsin Natural Resources Board and the U. S. Environmental Protection Agency was pending.

The adoption of the Fox River watershed plan amendment clearly illustrates the proper use by local units of government of the areawide plans prepared and adopted by the Commission in the making of important development decisions. Alternatives to Commission recommended plan elements are always fully described in published SEWRPC reports, along with the recommended plan elements, in order to facilitate the reconsideration of the recommendations by elected officials and concerned citizens as plan implementation proceeds. If changing conditions within the Region so indicate, the plans are flexible and can be revised. Such plan revision should, however, like the original plan preparation, be a cooperative effort of all of the federal, state, and local units and agencies of government concerned.

Plan Implementation

Previous Commission annual reports have documented a number of significant steps that have been taken toward implementation of the Fox River watershed plan. Specific additional actions taken during 1973 toward plan implementation include the following:

- The completion of flood hazard delineations on large-scale 1" = 200', 2'-4' contour interval topographic maps for 4.1 miles of stream channel in the Fox River watershed. The preparation of these additional large-scale flood hazard maps by the Commission was made possible by the ongoing large-scale topographic mapping program being conducted by the Racine County Board of Supervisors.

- The establishment of two new continuous recorder stream gages in the watershed as recommended in the plan. The first new gage was installed on the Mukwonago River in the Village of Mukwonago, Waukesha County, and is being made possible through local funds provided by the Waukesha County Board of Supervisors. The second new gage was installed on the White River near the City of Burlington, Racine County, with the necessary local funds being provided by the Racine County Board of Supervisors. These two new gages, together with the two existing continuous recorder stream gages on the main stem of the Fox River, one at Waukesha and the other at Wilmot, Kenosha County, provide essential long-term streamflow data.

- The continuation of a water quality monitoring program on the Fox River system by the Commission in cooperation with the Wisconsin Department of Natural Resources.

- The initiation of efforts by the Village of Menomonee Falls to permanently preserve the Tamarack Swamp in public open space use. The Fox River watershed plan recommends that all of the Tamarack Swamp be preserved from encroachment by incompatible urban land uses. Toward this end the Village of Menomonee Falls took title to a 60-acre parcel of the swamp donated to the Village by the Miller Brewing Company of Milwaukee.

- The establishment of a sanitary district in the Town of Waterford for the purpose of providing a vehicle to extend centralized sanitary sewer service to existing urban development in the Tichigan Lake and Fox River main stem areas of the town. During 1973 the Town of Waterford Sanitary District No. 1 conducted preliminary engineering studies to provide such centralized sanitary sewer service, and reached tentative agreement for sewage treatment purposes with the adjacent downstream Western Racine County Sewerage District, which operates a sewage treatment plant at Rochester. Federal and state grant applications are processed during the year for both the necessary local trunk sewers to serve the Town of Waterford urban areas and for the necessary expansion of the Rochester sewage treatment facility to handle anticipated waste flows from the Waterford Sanitary District. The ultimate installation of sanitary sewer service in the Town of Waterford Sanitary District would eliminate septic tank systems presently serving nearly 1,100 residences and businesses.

- The initiation of efforts by the Town of East Troy Sanitary District No. 2 to secure federal and state grants in partial support of the construction of a sewerage system to serve existing urban development along the shoreline of Potter Lake. The Sanitary District has reached tentative agreement with the Village of East Troy to provide for sewage treatment services through a force main connection to the village sanitary sewerage system.

- The initiation of efforts by the Village of Sussex toward establishment of a new municipal water supply system, including filing a federal grant application in partial support of the project, which is designed to integrate three existing subdivision water supply and distribution systems and to expand the integrated system to serve the entire village.

- The acquisition of nearly 160 acres of primary environmental corridor land along the main stem of the Fox River in the Town of Vernon by the Waukesha County Park and Planning Commission as an initial step toward public parkway development along the entire main stem of the Fox River within the rural areas of the county.

While the foregoing actions are typical of those which have been taken by units and agencies of government in the watershed toward plan implementation, the Commission also notes that the Village of Waterford in 1973 abandoned its efforts to publicly acquire an important parcel of urban environmental corridor land known as Fox Isle. The village had taken initial steps toward acquisition of this land but, in apparent frustration over the procedures and requirements involved in obtaining state and federal aids, determined not to proceed with the planning acquisition. Subsequent to this decision, a private developer initiated steps to develop the land for multiple-family residential development purposes.

MILWAUKEE RIVER WATERSHED PLANNING PROGRAM

The comprehensive plan for the Milwaukee River watershed was adopted by the Commission in March 1972. The plan is documented in the two-volume SEWRPC Planning Report No. 13, A Comprehensive Plan for the Milwaukee River Watershed. As part of the continuing environmental engineering and planning program, the Commission continues to monitor development within the watershed, to coordinate and advise on the execution of the watershed plan, and to review progress toward plan implementation. The adopted plan for the Milwaukee River watershed includes a basic land use element, a natural resources protection and park and open space element, a flood control element, a water pollution abatement element, and a public water supply element.

Plan Adoption

Prior to 1973 the Milwaukee River watershed plan had been adopted by all but one of the county boards concerned—Milwaukee, Ozaukee, Sheboygan, and Washington—Fond du Lac County being the single exception; by the City of Milwaukee; the Village of River Hills; and the Sewerage Commission of the City of Milwaukee and the Metropolitan Sewerage Commission of the County of Milwaukee acting on behalf of the Metropolitan Sewerage District of the County of Milwaukee. In addition, the plan had also been formally endorsed or acknowledged prior to 1973 by the Milwaukee County Park Commission; the Milwaukee Board of Harbor Commissioners; the U. S. Department of Housing and Urban Development; the U. S. Department of the Interior, Geological Survey and Bureau of Outdoor Recreation; the U. S. Department of Agriculture, Soil Conservation Service and Farmers Home Administration; the U. S. Army Corps of Engineers; the State Highway Commission of the State of Wisconsin; the State Board of Soil and Water Conservation Districts; the State Board of Health and Social Services; and the Wisconsin Department of Local Affairs and Development. During 1973 the plan was adopted by the Village of Saukville and the Town of Fredonia and was endorsed by the U. S. Department of Transportation, Federal Highway Administration.

The Milwaukee River watershed plan was adopted by the Wisconsin Natural Resources Board in 1972 and certified by the Department of Natural Resources to the U. S. Environmental Protection Agency as the official water quality management plan for the Milwaukee River basin. During 1973 the U. S. Environmental Protection Agency completed its review of the plan and gave its unconditional approval.

Plan Implementation

Previous Commission annual reports have documented a significant number of steps that have been taken toward implementation of the Milwaukee River watershed plan. Specific additional actions taken during 1973 toward plan implementation include the following:

- The completion of a prospectus for a proposed preliminary engineering study as the initial step toward implementing the watershed plan recommendation directed at abating water pollution from combined sewer overflows in the Milwaukee urbanized area.[5] The adopted watershed plan recommends the construction of a combination deep tunnel/mined storage flow-through treatment system to collect, convey, and adequately treat all combined sewer overflows throughout the nearly 27-square mile combined sewer service area in Milwaukee County. By formal resolution adopted on April 20, 1973, the joint Milwaukee-Metropolitan Sewerage Commissions requested the Regional Planning Commission to prepare the prospectus, which documents the need for and

[5]*See SEWRPC Prospectus, Preliminary Engineering Study for the Abatement of Pollution from Combined Sewer Overflow in the Milwaukee Metropolitan Area, July 1973.*

outlines the scope and content of the necessary preliminary engineering study, as well as recommends the best means for conducting, budgeting, and financing the study. The prospectus was prepared under the direction of a Technical Advisory Committee of distinguished sanitary and public engineers drawn from federal, state, and local agencies of government and the major universities in the Region. The prospectus was published in July 1973 and adopted by the Regional Planning Commission and certified to the implementing agencies on September 13, 1973.

The prospectus recommends that the preliminary engineering study begin with a careful review of the findings and recommendations of the adopted Milwaukee River watershed plan and, based upon a review of the findings of any research and demonstration projects completed since preparation and adoption of the watershed plan, either reaffirm the basic validity of the combined sewer overflow abatement recommendations contained in the Milwaukee River watershed plan or provide alternative recommendations. Two of the most important purposes of the preliminary engineering study will be to determine an optimum combination of storage and flow-through treatment and to determine the practicality of the required tunnel and mined storage construction in the bedrock as a basis for the engineering design of the facilities necessary to carry out the plan recommendations.

Of particular importance will be a determination of the subsurface geophysical and geohydrologic conditions existing in the areas in which subsurface conveyance and storage facilities are proposed to be constructed. Subsurface explorations will be required to provide information on the bedrock conditions, including information on the type and location of the various strata of bedrock underlying the study area; the location of any faults that may affect the design of the required facilities; the chemical and physical characteristics of the rock, including its hardness, porosity, hydraulic conductivity, and structural stability and the suitability of the rock, if mined, for use as aggregate in construction within the Milwaukee area, including the construction of shoreline erosion protection structures; and groundwater conditions and their potential effect upon the location, design, and cost of the necessary facilities.

Also of particular importance will be the provision of a basis for selecting the type of conventional or flow-through treatment to be used, as well as to determine the balance between conveyance, storage, and treatment in the system design, including the establishment of the characteristics and treatability of the combined sewer overflows after variable periods and conditions of storage.

It is anticipated that the necessary preliminary engineering study will begin in 1974 and will be conducted over a three-year period.

At year's end the joint Commissions were processing the necessary federal and state grant applications to conduct this important engineering study.

- The continuation of extensive floodland zoning activity throughout the watershed. Draft floodland ordinances were prepared or reviewed by the Commission staff during 1973 for the Cities of Cedarburg and West Bend and the Villages of Brown Deer, Jackson, Saukville, and Thiensville. Floodland zoning ordinances designed to implement the watershed plan recommendations were adopted during 1973 by the City of Glendale and the Villages of Jackson and Saukville. In addition, the Ozaukee County Board amended its existing county floodplain-shoreland zoning ordinance during 1973 to adopt by reference the flood hazard data and maps prepared under the Milwaukee River watershed study.

- The establishment of two new continuous recorder stream gages in the watershed as recommended in the plan. The first new gage involved the conversion of an existing staff and crest stage gage at Kewaskum on the Milwaukee River to a continuous recorder gage, and was made possible through local funds provided by the Washington County Board of Supervisors. The second new gage was established at Cedarburg on Cedar Creek, with the necessary local funds being provided by the Ozaukee County Board of Supervisors. These two new gages, together with the four existing continuous recorder stream gages—one located on the Milwaukee River in the City of Milwaukee, the second located on the Milwaukee River at Waubeka in Ozaukee County, the third located on the Milwaukee River North Branch at Filmore in Washington County, and the fourth located on the Milwaukee River East Branch at New Fane in Fond du Lac County—provide essential long-term streamflow data.

- The continuation of a water quality monitoring program on the Milwaukee River system by the Commission in cooperation with the Wisconsin Department of Natural Resources.

- The initiation of a program by the Village of Kewaskum to obtain large-scale topographic mapping of the village, including Milwaukee River floodland areas. This program was conducted in accordance with standard SEWRPC specifications for large-scale topographic mapping programs, including the establishment and remonumentation of U. S. Public Land Survey section and quarter-section corners and the conduct of horizontal and vertical control surveys. When completed, these topographic maps will be useful in

the preparation of detailed flood hazard maps for the Milwaukee River through the Village of Kewaskum.

- The provision by the Commission staff of Milwaukee River system flood hazard data to the U. S. Geological Survey (USGS) to be utilized in the preparation of a federal flood insurance study report. The USGS will directly incorporate the flood hazard data developed under the watershed study in the determination of flood hazard areas and insurance rate zones.

- The continuation of park and open space land acquisition efforts by local communities throughout the watershed. During 1973 Washington County acted to acquire nearly 245 acres of land in the Town of Trenton for park and recreation purposes, including lands designated for acquisition as "urban environmental corridor" in the watershed plan. In addition, the City of West Bend acted to acquire about 18 acres of land along the Milwaukee River as an addition to Riverside Park, such lands also being designated for public acquisition in the plan. Finally, Milwaukee County took steps toward acquiring nearly 14 acres of floodplain land adjacent to Lincoln Park as recommended in the plan for acquisition as an addition to this major regional park site.

- The formation by the Mayor of the City of Milwaukee of a Milwaukee River Technical Task Force. The Task Force is to review the recommendations contained in the adopted Milwaukee River watershed plan and in previous related studies as they may affect the City of Milwaukee and environs, and to develop a specific implementation program. The Commission is represented on this task force by the Executive Director.

- The initiation of efforts by the City of Milwaukee to conduct a major infiltration and inflow study of its sanitary sewer system. In its comments concerning a federal grant application for this study, the Commission recommended that any such studies be conducted in full coordination with efforts by the Milwaukee-Metropolitan Sewerage Commissions in order to avoid duplicative investigative efforts.

- The initiation of efforts by the Village of Fredonia to conduct a preliminary engineering study as a step toward preparation of plans and specifications for additional sewage treatment facilities to serve the village.

- The continuation of efforts by the Milwaukee-Metropolitan Sewerage Commissions to proceed as rapidly as possible on the construction of the trunk and relief sewers necessary to resolve separate sewer overflow and pollution problems in the lower watershed. A key trunk sewer located in Hawley Road and N. 51st Boulevard was placed into service in January 1973, and has served to abate the most serious, daily separate sanitary sewer overflow problems along Lincoln Creek. Lack of available federal funds has delayed the construction of the remaining major trunk and relief sewers proposed to serve the Milwaukee River watershed.

MENOMONEE RIVER WATERSHED PLANNING PROGRAM

The Commission continued the inventory and analytical phases of the Menomonee River watershed planning program during 1973. This program which began late in 1972, is being conducted in response to requests from the Cities of Brookfield and Wauwatosa and Milwaukee County, and is being carried out in accordance with a prospectus completed in November 1969. Funds for the study are being provided in part by the U. S. Department of Housing and Urban Development, the U. S. Environmental Protection Agency, the Wisconsin Department of Natural Resources, and the four counties concerned—Milwaukee, Ozaukee, Washington, and Waukesha. Technical and policy guidance for the study is being provided by the Menomonee River Watershed Committee.

Of particular importance in 1973 were the following activities:

- The conduct of two of three planned 24-hour watershedwide field surveys to provide detailed data on the quantity and quality of the surface water resources in the Menomonee River watershed. The water quality surveys are cooperative efforts conducted jointly by the Commission, the Wisconsin Department of Natural Resources, and the U. S. Geological Survey. In each of these two surveys, streamflow measurements were made at five locations on the stream system, while physical, chemical, and biological quality indicators were measured at 17 instream sampling sites. In addition, the surveys involved the conduct of water quality analyses on the effluent from five municipal sewage treatment plants and two industrial facilities, and on the runoff from four watershed subbasins, each exhibiting a different type of land use. When completed and analyzed, the water quality surveys will provide the following information: an indication of the relative amount of pollutants contributed by point sources, such as municipal and industrial waste water treatment plants; the nature and quantity of pollutants contained in surface runoff from the wide variety of urban and rural land uses existing in the watershed; and the condition of the surface waters of the major streams in the watershed relative to the recommended water use objectives and supporting water quality standards. The water quality surveys will also provide background water

quality data, rate coefficients, and other information needed for the development, calibration, and application of water quality models in the watershed study.

- The conduct of field surveys concerning flood data in the watershed. A major flood—estimated to approximate a 100-year recurrence interval event—occurred in the Menomonee River watershed on Saturday, April 21, 1973. Beginning that day and continuing for a period of several days thereafter, the Commission staff conducted intensive field surveys, obtaining data on peak flood stages and on the lateral extent of flood inundation. In addition to contributing to the historical record of Menomonee River watershed flood problems, the flood data collected during 1973 will be used to calibrate a hydrologic-hydraulic model of the watershed. In turn, this model will be used to evaluate alternative floodland management plan elements.

- The completion by the Wisconsin Department of Natural Resources, under a cooperative agreement, of inventories and analyses of fishery resources and fishery potential, existing wildlife habitat, and existing natural areas in the Menomonee River watershed.

- The conduct, through a contract with Alster and Associates, Inc., Madison, Wisconsin, of two important studies. The first involves the preparation of large-scale topographic maps and of channel-floodplain cross sections for selected riverine areas of the watershed, as well as the conduct of a U. S. Public Land Survey remonumentation program and horizontal and vertical control surveys in connection with the large-scale mapping effort. Large-scale topographic maps will be prepared under the watershed study for about 3.25 square miles of riverine area, with supplemental channel floodplain cross sections being obtained for an additional 6.9 stream miles in the lower Menomonee River watershed. The second program involved the conduct of surveys to provide cross sections and physical data on most of the bridges, culverts, and dams that exist within the watershed.

It is anticipated that during 1974 the Commission will complete most of the technical work for the Menomonee River watershed study, and that public informational meetings and hearings on the Menomonee River watershed plan recommendations, and alternatives thereto, will be held by mid-1975.

WATER QUALITY MONITORING PROGRAM

In 1968 the Commission entered into a cooperative agreement with the Wisconsin Department of Natural Resources whereby the Department and the Commission undertook a continuing stream water quality monitoring program within the Region. The objective of the program is to provide, on a continuing basis, the water quality information necessary to assess the long-term trends within the rapidly urbanizing seven-county Region.

The continuing monitoring program was designed to build upon the bench mark stream water quality data base established by the Commission in the initial stream water quality study, the findings of which were published in SEWRPC Technical Report No. 4, Water Quality and Flow of Streams in Southeastern Wisconsin, November 1966. Subsequent to the completion of the water quality monitoring work presented in this report, the Commission staff monitored water quality once in late 1966 and twice in 1967.

The cooperative SEWRPC-DNR stream water quality monitoring program involved, during 1968 and 1969, the operation of 87 stream water quality sampling stations established by the Commission in the initial study of 43 streams and watercourses within the 12 watersheds of the Region (see Map 22). Sampling was done twice yearly at all 87 sampling stations during the periods of high and low flow, with the samples being analyzed for dissolved oxygen, temperature, fecal and total coliform, nitrate nitrogen, nitrite nitrogen, dissolved phosphorus, pH, chloride, and specific conductance.

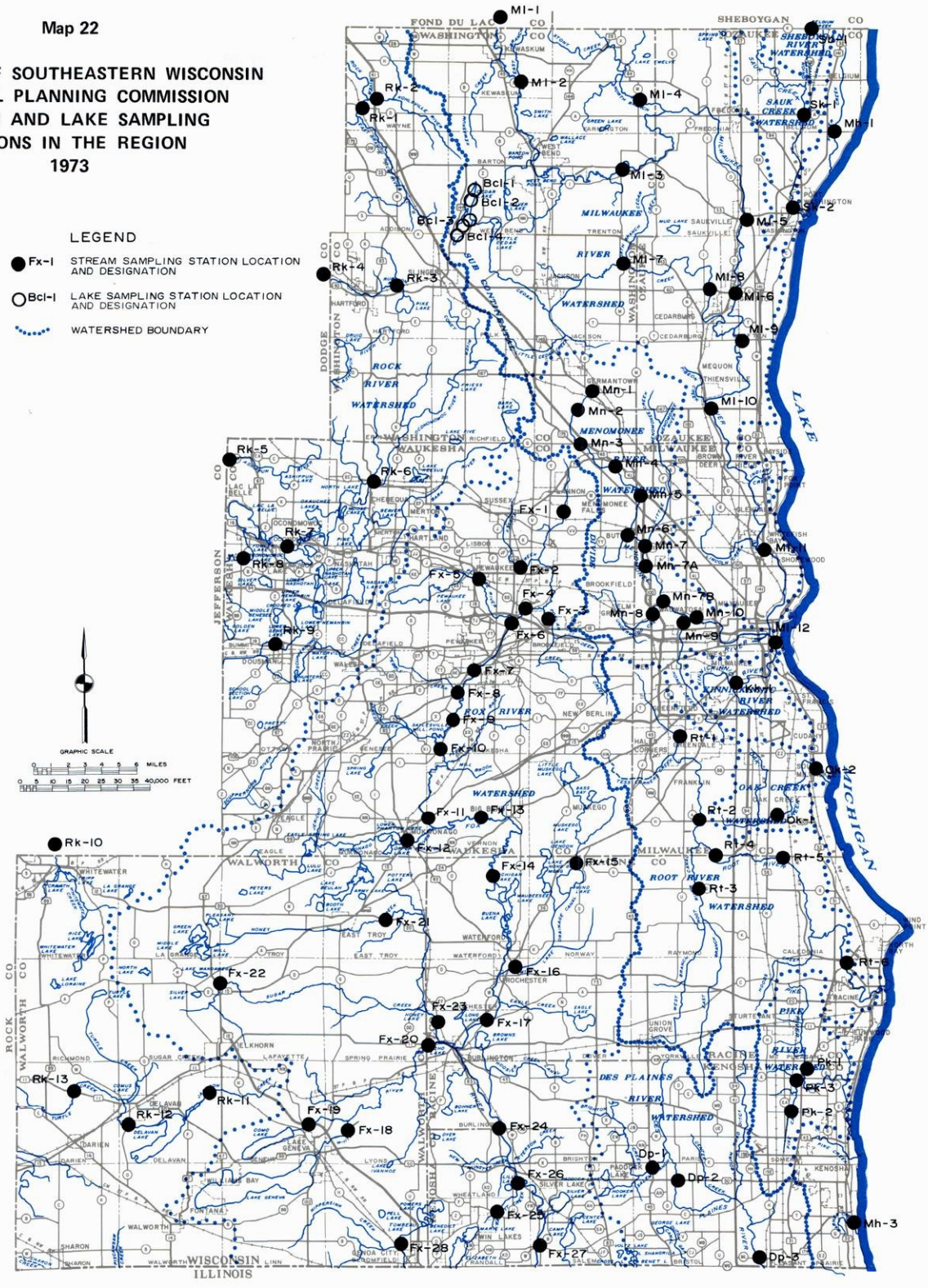
To provide additional information on the diurnal fluctuations of stream water quality in the Region, the monitoring program was revised in 1970 to provide for the collection of six stream water samples over a 24-hour period once yearly during the period of low streamflow at each sampling station, with each sample being analyzed for the following five parameters: dissolved oxygen, temperature, pH, chloride, and specific conductance. In addition, once during the 24-hour period the following four parameters would be analyzed: fecal coliform, nitrate nitrogen, nitrite nitrogen, and dissolved phosphorus.

In order to obtain regional information on additional water quality indicators, the Commission and the DNR agreed to a further modification of the program beginning with the 1972 survey. The overall continuity of the sampling program was maintained by continuing to monitor those parameters included in previous surveys with the following changes: a decrease from six to four per day in the frequency of dissolved oxygen, temperature, and specific conductance measurements; a decrease from six to two per day in the frequency of chloride determinations; an increase from one to two per day in the frequency of fecal coliform, nitrate nitrogen, nitrite nitrogen, and dissolved phosphorus measurements; and the addition of two determinations per day of organic nitrogen, ammonia nitrogen, and total phosphorus. The addition of these latter three parameters was prompted by the need for more regional information on nutrients and increased interest in both oxygen demand exerted by ammonia nitrogen and the toxic effect of ammonia nitrogen.

Thus, the stream water quality monitoring program, as revised in 1972 and as continued throughout 1973, pro-

Map 22

LOCATION OF SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION STREAM AND LAKE SAMPLING STATIONS IN THE REGION 1973



Continuing water quality information is needed in order to assess long-term trends in stream and lake water quality and to gage the effectiveness of watershed plan implementation efforts in improving and restoring high levels of water quality to the surface waters of the Region. For this Region the Commission, in cooperation with the Wisconsin Department of Natural Resources, maintains a continuing stream and lake water quality monitoring program designed to build upon the bench mark stream water quality data base established by the Commission in 1964.

Source: SEWRPC.

vides for four measurements over a 24-hour period once yearly. These are made during the period of low flow at each of the 87 stations for each of the following three parameters: dissolved oxygen, temperature, and specific conductance. Two determinations are made at each station over the same 24-hour period of each of the following nine parameters: pH, chloride, fecal coliform, nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, organic nitrogen, dissolved phosphorus, and total phosphorus.

During 1973, work continued on the Big Cedar Lake pilot sampling project, which was begun in 1971 when the Commission and the Wisconsin Department of Natural Resources agreed to expand the stream water quality sampling program on a pilot basis to include continuing lake water quality sampling. Big Cedar Lake in Washington County was selected for the program because it is representative of the larger lakes in the Region and includes a tributary area experiencing urbanization. In addition, the lake is experiencing increasing recreational use. Under this pilot program, water samples are taken four times each year—in late winter, early spring, midsummer, and late fall—and a total of 18 lake water quality parameters are determined.

STREAM GAGING PROGRAM

Continuous recorder gages, daily gages, and partial record stream gaging stations that monitor river flows at points strategically located in and near the Region provide important data required for the rational management of the water resources of southeastern Wisconsin. Such data are important for the following reasons:

1. Streamflow data constitutes an invaluable input to the floodland management portions of the Commission's comprehensive watershed studies and to the implementation and refinement of the floodland management elements of the completed watershed plans. Discharge-frequency relationships, supplemented with other available historical hydrological-hydraulic data, are used to develop, calibrate, and validate digital computer models which generate flood discharges and stages throughout the watershed stream system and which provide the means whereby floodlands may be identified and definitively mapped.

2. Streamflow data constitute an invaluable input to state and local drainage and flood control, recreational development, and bridge design projects.

3. Streamflow data, particularly during low-flow conditions, comprise a key input to water quality analysis and modeling as completed under Commission comprehensive watershed studies and in the regional sanitary sewerage system planning program to assess the impact of various types of wastewater discharge on the streams. Continued and expanding monitoring of low flows is needed to produce essential data for the Commission's comprehensive watershed studies and for implementation and refinement of the water quality management elements of completed watershed plans, as well as the regional sanitary sewerage system plan.

4. Continuous recording gages, daily gages, and partial record crest stage gaging stations located in headwater areas of the 12 watersheds of the Region may eventually be integrated into a flood warning system for downstream urbanized portions of southeastern Wisconsin.

5. Streamflow data obtained from continuous recording or daily gages will serve to indicate long-term trends in, or alterations to, the streamflow regimen. Such changes in streamflow regimen at a gaging station site may, for example, consist of increased annual flood discharges and stages resulting from extensive urbanization of previously rural lands upstream of the gaging station. The early detection of changes in the volume and timing of surface runoffs may provide an opportunity to take the action necessary to avert future flood problems.

In order to develop a large, reliable file of historical flood data, local units of government are urged to make flood stage observations during major flood events and to transmit such data to the Regional Planning Commission. Such information is a valuable supplement to the streamflow data generated at established gaging stations.

When the Commission began its regional planning program in 1960, only two continuous recorder stream gages were operative on the entire stream network of the Region. These gages were located in Estabrook Park on the Milwaukee River at Milwaukee, and at Wilmot on the Fox River in Kenosha County. Since then, the Commission has been instrumental in establishing, through cooperative, voluntary, intergovernmental action, 13 additional gaging stations throughout the Region in an effort to provide the basis for establishment of long-term records of streamflow. These additional gages have been established as part of cooperative programs arranged by the Commission between the U. S. Geological Survey; the Wisconsin Department of Natural Resources; the Metropolitan Sewerage Commission of the County of Milwaukee; the Fond du Lac, Ozaukee, Racine, Washington, and Waukesha County Boards of Supervisors; and the University of Wisconsin-Parkside. Of the 13 new continuous recorder stream gages, five are located in the Milwaukee River watershed, three in the Root River watershed, three in the Fox River watershed, one in the Oak Creek watershed, and one in the Pike Creek watershed. All 15 continuous recorder stream flow gages in the Region are maintained under a contract with the Commission by the U. S. Geological Survey, which publishes the data obtained.

The U. S. Geological Survey also maintains 27 additional gaging stations throughout the Region, including one combination wire-weight and crest gage, six crest stage gages, 13 low-flow gages, and seven combination crest stage and low-flow gages, all in cooperation with the

Wisconsin Departments of Natural Resources and Transportation. The location of all 42 stream gaging stations is shown on Map 23, together with their periods of record.

During 1973, several steps toward implementation of the stream gaging recommendations contained in the watershed plan were taken:

- A continuous stage recorder gage was installed and placed into operation on the Mukwonago River in the Village of Mukwonago, Waukesha County, as recommended in the comprehensive plan for the Fox River watershed, with the Waukesha County Board providing the local funds necessary to install and operate the gaging station.

- A continuous stage recorder gage was installed and placed into operation on the White River near the City of Burlington, Racine County, as recommended in the comprehensive plan for the Fox River watershed, with the Racine County Board providing the local funds necessary to install and operate the gaging station.

- A continuous stage recorder gage was established at a previously abandoned gaging station located on Cedar Creek near the City of Cedarburg, Ozaukee County, as recommended in the comprehensive plan for the Milwaukee River watershed, with the Ozaukee County Board providing the local funds necessary to install and operate the gaging station.

- The local funds necessary to provide for the continued operation of the continuous stage recorder gage at Waubeka on the Milwaukee River was provided by the Ozaukee County Board, as recommended in the comprehensive plan for the Milwaukee River watershed.

- The local funds necessary to continue operation of the continuous stage recorder gage at Filmore on the North Branch of the Milwaukee River were provided by the Washington County Board, as recommended in the comprehensive plan for the Milwaukee River watershed.

- An existing combination staff and crest stage gage on the Milwaukee River in the Village of Kewaskum, Washington County, was converted to a continuous stage recorder gage, as recommended in the comprehensive plan for the Milwaukee River watershed, with the Washington County Board providing the local funds necessary to convert and operate the gaging station.

- The local funds necessary to provide for the continued operation of the continuous stage recorder gage at New Fane on the East Branch of the Milwaukee River were provided by the Fond du Lac County Board, as recommended in the comprehensive plan for the Milwaukee River watershed.

As of the end of 1973, all of the stream gaging station recommendations contained within the three comprehensive watershed plans completed and adopted by the Commission—the Root, Fox, and Milwaukee River watershed plans—had been implemented. It is anticipated that similar recommendations will emanate from the Menomonee River watershed comprehensive planning program currently being conducted by the Commission.

FLOODLANDS IN THE REGION

Delineation of the floodlands of southeastern Wisconsin is extremely important for sound local, as well as regional, planning and development. Because of flood hazards, high water tables, and inadequate soils, floodland areas are generally not well suited to urban development. These floodland areas, however, are generally prime locations for much needed park and open space areas, and contain many of the best remaining woodland, wetland, and wildlife habitat areas of the Region. The floodlands also have important flood water conveyance and storage functions. Therefore, within the context of regional land use and watershed planning, public utility and service development policies and practices as effected through land use controls should generally discourage intensive urban development on floodlands while encouraging essentially natural, open space land uses. Because of the increasing frequency of requests for and use of information about floodlands in the Region, a summary of available floodland information is presented herein.

In planning for the proper use of floodlands, it is useful to subdivide the total floodland area on the basis of the hydraulic function which the various subareas are to perform as well as on the basis of the differing degrees of flood hazard that may be present (see Figure 20). Under natural conditions, the floodlands may be considered as consisting of two components, the channel of the river, or stream itself, and the adjacent natural floodplains. The channel may be defined as the continuous linear area occupied by the river or stream in times of normal flow. The natural floodplain may be defined as the wide, flat-to-gently sloping area contiguous with and lying adjacent to the channel, usually on both sides. The floodplain is normally bounded on its outer edges by higher topography. A river may be expected to overflow its channel banks and occupy some portion of its floodplains on the average of once every two years. How much of the natural floodplain will be occupied by any given flood will depend upon the severity of that flood and, more particularly, upon its elevation or stage. Thus, an infinite number of outer limits of the natural floodplain may be delineated, each related to a corresponding specified flood recurrence interval. The Commission has, therefore, recommended that the natural floodplains of a river or stream be specifically defined as those corresponding to a flood having a recurrence interval of 100 years; that is, a flood having a 1 percent chance of occurring in any given year.

Under ideal regulatory conditions, the entire natural floodlands as defined above would be maintained in an open, essentially natural state and, therefore, would not

Map 23

LOCATION OF U. S. GEOLOGICAL SURVEY STREAM GAGING STATIONS IN THE REGION: 1973

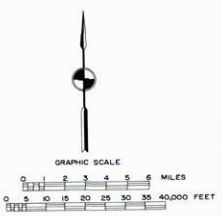
LEGEND

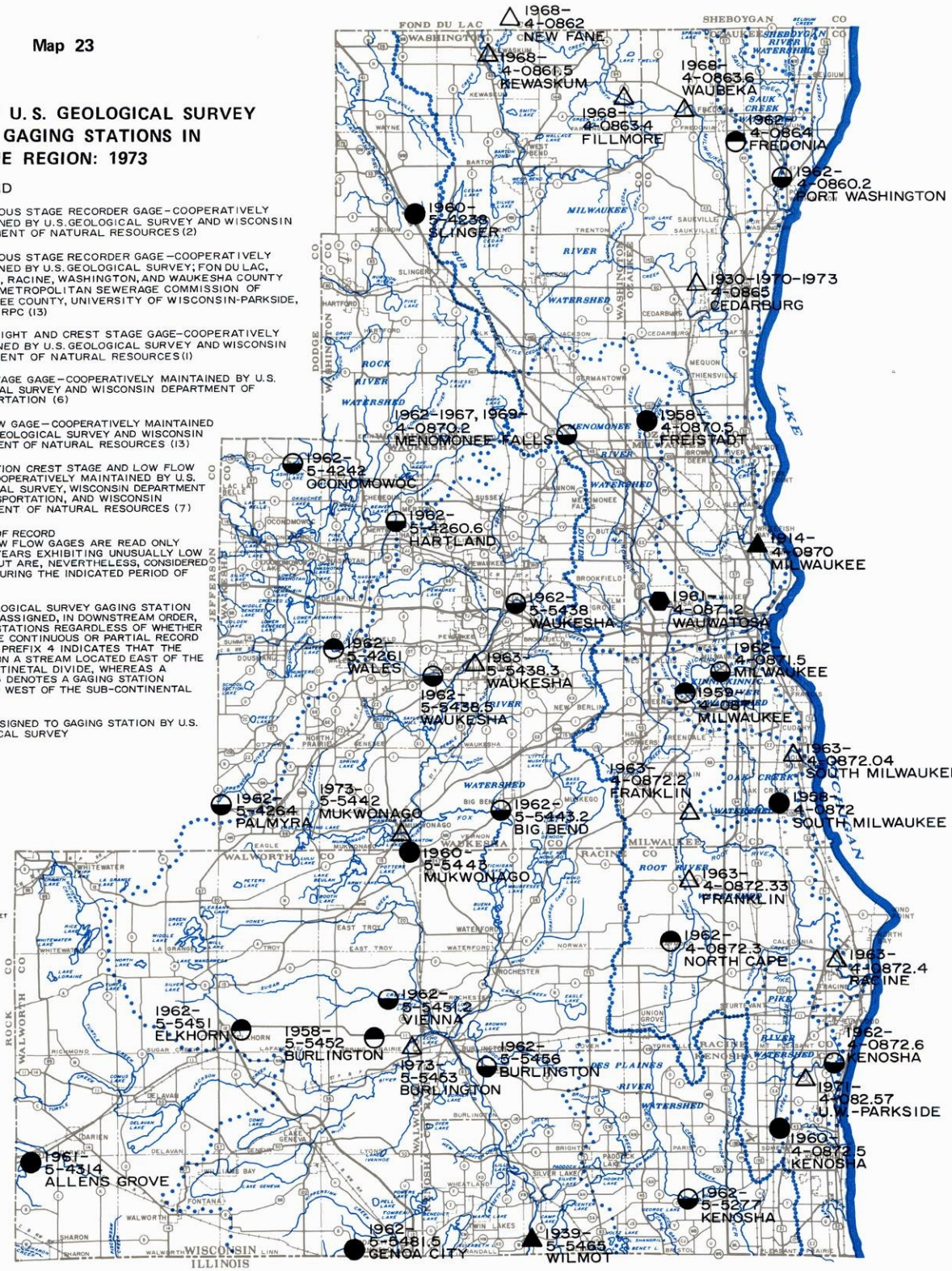
- ▲ CONTINUOUS STAGE RECORDER GAGE – COOPERATIVELY MAINTAINED BY U.S. GEOLOGICAL SURVEY AND WISCONSIN DEPARTMENT OF NATURAL RESOURCES (2)
- △ CONTINUOUS STAGE RECORDER GAGE – COOPERATIVELY MAINTAINED BY U.S. GEOLOGICAL SURVEY; FOND DU LAC, OZAUKEE, RACINE, WASHINGTON, AND WAUKESHA COUNTY BOARDS, METROPOLITAN SEWERAGE COMMISSION OF MILWAUKEE COUNTY, UNIVERSITY OF WISCONSIN-PARKSIDE, AND SEWRPC (13)
- ⬢ WIRE-WEIGHT AND CREST STAGE GAGE – COOPERATIVELY MAINTAINED BY U.S. GEOLOGICAL SURVEY AND WISCONSIN DEPARTMENT OF NATURAL RESOURCES (1)
- ◓ CREST STAGE GAGE – COOPERATIVELY MAINTAINED BY U.S. GEOLOGICAL SURVEY AND WISCONSIN DEPARTMENT OF TRANSPORTATION (6)
- ◒ LOW FLOW GAGE – COOPERATIVELY MAINTAINED BY U. S. GEOLOGICAL SURVEY AND WISCONSIN DEPARTMENT OF NATURAL RESOURCES (13)
- ● COMBINATION CREST STAGE AND LOW FLOW GAGE – COOPERATIVELY MAINTAINED BY U.S. GEOLOGICAL SURVEY, WISCONSIN DEPARTMENT OF TRANSPORTATION, AND WISCONSIN DEPARTMENT OF NATURAL RESOURCES (7)

1914– PERIOD OF RECORD
NOTE: LOW FLOW GAGES ARE READ ONLY DURING YEARS EXHIBITING UNUSUALLY LOW FLOWS BUT ARE, NEVERTHELESS, CONSIDERED ACTIVE DURING THE INDICATED PERIOD OF RECORD.

4-0870 U.S. GEOLOGICAL SURVEY GAGING STATION NUMBER ASSIGNED, IN DOWNSTREAM ORDER, TO ALL STATIONS REGARDLESS OF WHETHER THEY ARE CONTINUOUS OR PARTIAL RECORD GAGES. A PREFIX 4 INDICATES THAT THE GAGE IS ON A STREAM LOCATED EAST OF THE SUB-CONTINETAL DIVIDE, WHEREAS A PREFIX 5 DENOTES A GAGING STATION LOCATED WEST OF THE SUB-CONTINENTAL DIVIDE

MILWAUKEE NAME ASSIGNED TO GAGING STATION BY U.S. GEOLOGICAL SURVEY



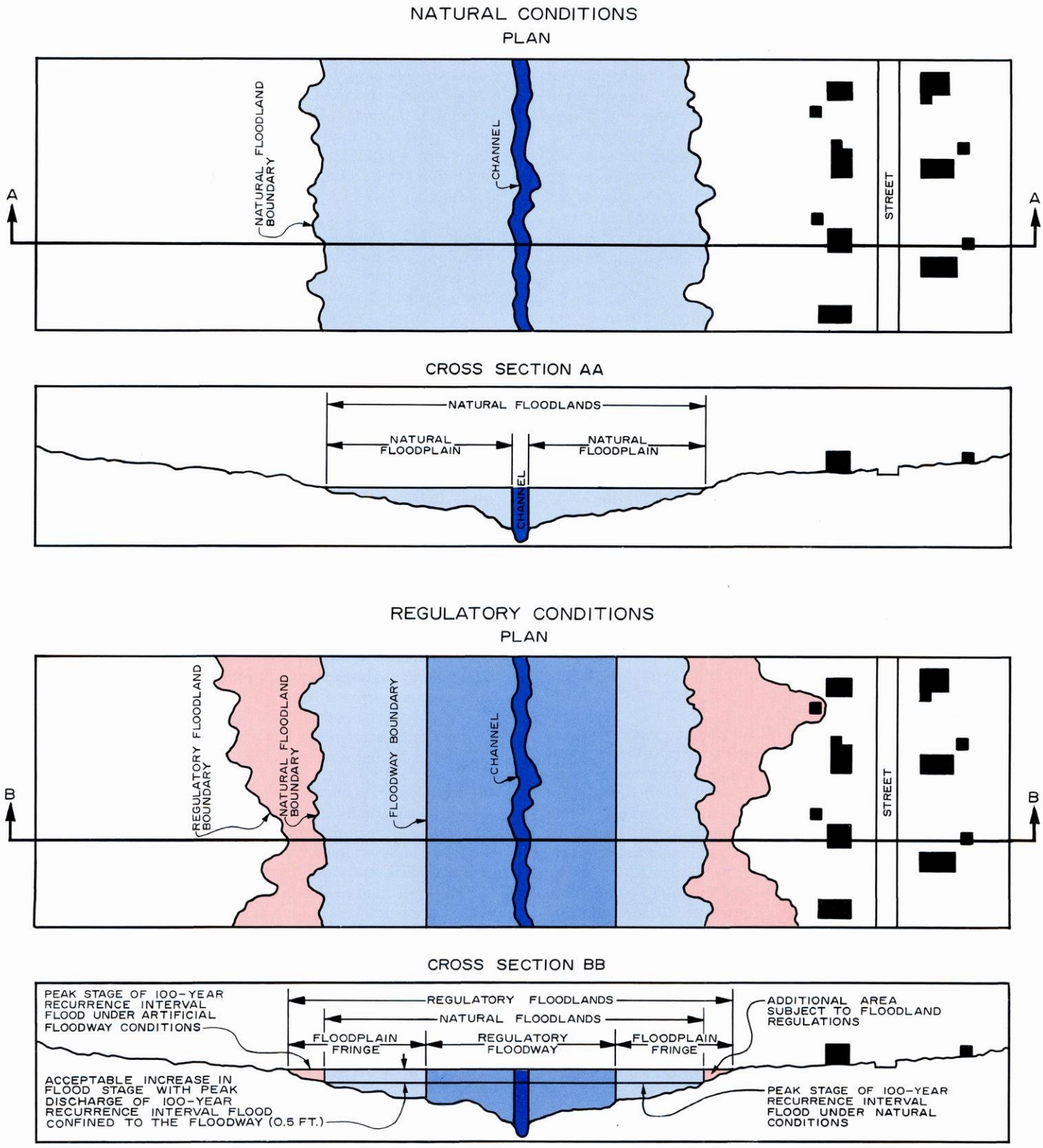


Continuing information on streamflow is essential to sound water resources planning and management within the Region. A total of 42 stream gaging stations are maintained throughout the Region by the U. S. Geological Survey, of which 15 are continuous flow recording gages. The maintenance of these stations is cooperatively financed by the U. S. Geological Survey; the Metropolitan Sewerage Commission of the County of Milwaukee; the Fond du Lac, Ozaukee, Racine, Washington, and Waukesha County Boards of Supervisors; the Wisconsin Departments of Natural Resources and Transportation; the University of Wisconsin-Parkside; and the Commission. The data collected at each of the 42 gaging stations are analyzed and published annually by the U. S. Geological Survey.

Source: SEWRPC.

Figure 20

FLOODLAND COMPONENTS UNDER NATURAL AND REGULATORY CONDITIONS



Source: SEWRPC.

be filled and utilized for incompatible, intensive urban land uses. Conditions permitting an ideal approach to floodland regulation, however, generally occur only in rural areas. In areas which have already been developed for intensive urban use without proper recognition of the flood hazard, a practical regulatory approach must embrace the concept of a floodway. The floodway may be defined as a designated portion of the floodlands that will safely convey the 100-year recurrence interval flood discharge, with small, acceptable upstream and downstream stage increases, generally limited in Wisconsin to 0.5 foot. The regulatory floodway includes the channel. Land use controls applied to the regulatory floodway should recognize that the designated floodway area is not suited for human habitation and should essentially prohibit all fill, structures, and other development that would impair floodwater conveyance by adversely increasing flood stages or velocities.

The floodplain fringe is that remaining portion of the floodlands lying outside of or beyond the floodway. Because the use of a regulatory floodway may result in increases in the stage of a flood of a specified occurrence interval that would occur under natural conditions, the floodplain fringe may include at its very edges areas that would not be subject to inundation under natural conditions, but would be subject to inundation under regulatory floodway conditions and, therefore, come within the scope of necessary floodplain fringe regulation. Normally, flood water depths and velocities are low in the floodplain fringe and, accordingly, filling and urban development may be permitted although regulated so as to minimize flood damages. Under "real world" conditions, the floodplain fringe usually includes many existing buildings constructed in natural floodlands prior to the advent of sound floodland regulations.

Flood hazard data for the numerous streams of the Region—and particularly data on the limits of the natural floodplains of the streams for a flood of a specified recurrence interval—are increasingly being made available for public use by various agencies. The SEWRPC itself provides, as an integral part of its comprehensive watershed studies, definitive data—including the delineation of the limits of the floodplains—on the 10- and 100-year recurrence interval floods for most of the perennial streams in each watershed. The Commission believes that such data are most appropriately developed for an urbanizing Region within the context of an overall comprehensive watershed study, wherein appropriate consideration may be given to the potential effects of changing land use patterns on flood flows and flood hazards, as well as to alternative methods for abating flood damages in those flood-prone areas already committed to urban development. Each Commission comprehensive watershed study, therefore, includes the hydrologic and hydraulic engineering studies necessary for a proper delineation of floodland boundaries for land use regulation and floodland management purposes.

The status of existing flood hazard data in the Region is summarized on Map 24. The Commission has completed comprehensive watershed studies for the Root, Fox, and Milwaukee River watersheds resulting in the delineation of floodlands for about 458 miles of major stream channel, not including stream channels in the Milwaukee River watershed lying outside of the Region in Sheboygan and Fond du Lac Counties. Both 10- and 100-year recurrence interval floodplains have been established for the indicated stream reaches in these watersheds by the Commission. It is important that a flood used to delineate floodlands for land use regulation purposes have a specified recurrence interval so that a sound economic analysis of the benefits and costs and of the advantages and disadvantages of various combinations of land use regulation, public acquisition, and public construction for flood damage abatement and prevention can be fully analyzed.

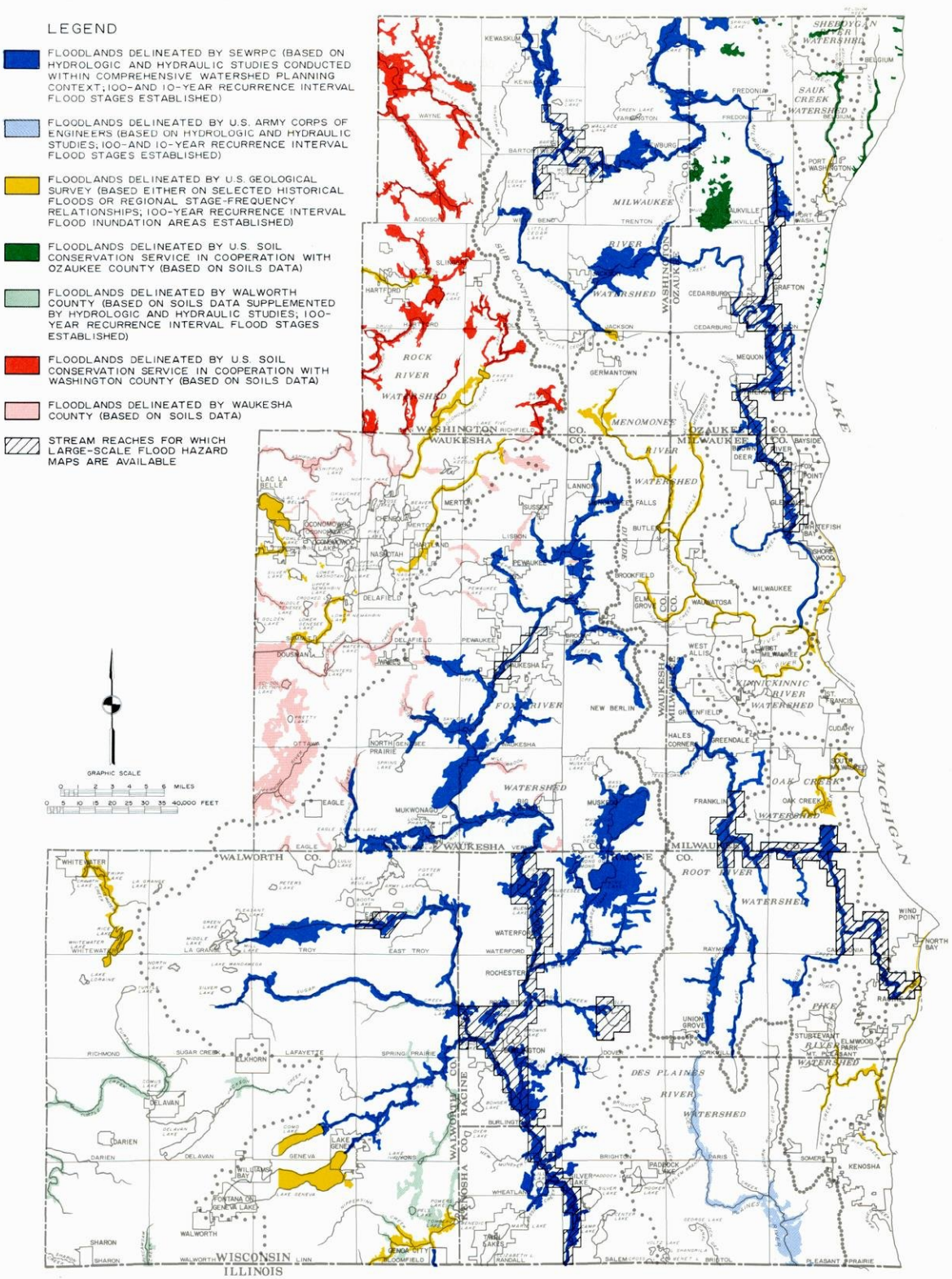
While the Commission is the only agency which has developed flood hazard data for the Region on the basis of comprehensive watershed studies, other federal and local agencies have developed flood hazard data for additional stream reaches within the Region. At the request of the Commission, the U. S. Army Corps of Engineers has developed flood hazard data for about 20 miles of stream channel in the Des Plaines River watershed. The Corps identified the "greater probable" and "intermediate" floods for the Des Plaines River, which approximate the 100-year and 10-year recurrence interval floods, respectively, recommended by the Commission for floodland management purposes. The floodland delineation in the Des Plaines River watershed did not, however, explicitly consider the possible effects of any changes in flood flows due to urbanization or water control facility construction.

The U. S. Geological Survey (USGS) is also authorized to prepare and publish flood inundation maps. The flood inundation lines shown on USGS maps are constructed from selected historic floods and from regional stage frequency analyses, and approximate the limits of the 100-year recurrence interval floodlands. To date, the USGS has developed and published flood hazard data for a number of stream reaches in the Region, totaling about 122 miles of major stream channel.

Several county agencies in the Region have also developed flood hazard data to supplement the data available from federal and regional sources. In Ozaukee County, the county staff and local staff of the U. S. Soil Conservation Service have established regulatory floodplains for about 28 miles of major stream channel, with such delineations based upon interpretations of soil survey data. Similarly, the Washington County staff, also in cooperation with the local staff of the U. S. Soil Conservation Service, has delineated floodplains for about 81 miles of major stream channel based upon soil survey interpretations. In Waukesha County, the county staff has utilized soil interpretations and historical flood data to determine regulatory floodplains for about 93 miles of major stream channel. Finally, in Walworth County, the county staff has used both soil survey data and hydrologic and hydraulic studies, including the establishment of 100-year recurrence interval flood stages, to delineate floodlands along nearly 50 miles of major stream channel. If carefully interpreted and utilized, soil survey data can provide an acceptable approximation of historic floods of record.

Map 24

FLOODLANDS IN THE REGION



Delineation of the floodlands of southeastern Wisconsin is extremely important for sound local, as well as regional, planning and development. The above map summarizes the status of floodland data in the Region as of the end of 1973. The Regional Planning Commission itself provides, as an integral part of its comprehensive watershed studies, definitive data on the 10- and 100-year recurrence interval floods for most of the perennial streams in each watershed. Other agencies which have to date made flood hazard data available for various stream reaches in the Region are the U. S. Army Corps of Engineers; the U. S. Geological Survey; the U. S. Soil Conservation Service; and county zoning and planning staffs in Ozaukee, Washington, Waukesha, and Walworth Counties. In addition to identifying the stream reaches for which existing flood hazard data in the Region are available, and in further identifying the agency from which the data are available, the above map also shows those stream reaches for which detailed, large-scale flood hazard maps are available from the Commission. These maps are available at scales of either 1"= 100' with 2' contour intervals, or 1"= 200' with 2'- 4' contour intervals, and enable substantially more precise delineations of the floodplains to be accomplished.

Source: SEWRPC.

Various studies began in 1973 to develop additional flood hazard data for stream reaches in the Region. As noted above, the Commission is currently conducting a comprehensive watershed study for the Menomonee River watershed which will provide flood hazard data for about 70 additional miles of major stream channel. In addition, the Commission is developing detailed flood hazard data outside the context of a comprehensive watershed study for about 3.5 miles of major stream channel along the Rubicon River at the request of the City of Hartford. The U. S. Army Corps of Engineers is currently undertaking detailed floodplain information studies along Whitewater Creek and along the Oconomowoc River at the requests of the City of Whitewater and the City of Oconomowoc, respectively. Finally, the U. S. Soil Conservation Service is conducting detailed floodplain information studies in the Pike River watershed, at the request of Racine and Kenosha Counties, and along the Bark River at the request of the Village of Dousman.

In addition to identifying the stream reaches for which existing flood hazard data in the Region is available, Map 24 also shows those stream reaches for which detailed, large-scale flood hazard maps are available. Those maps are available at scales of either 1" = 100' with 2' contour intervals, or 1" = 200' with 2'-4' contour intervals, and enable substantially more precise delineations of the floodplains to be accomplished.

SANDSTONE AQUIFER SIMULATION MODEL

Work began during 1973 on the conduct of a program designed to develop a digital computer model of the deep sandstone aquifer underlying southeastern Wisconsin. This aquifer is the water source for most high capacity industrial and municipal wells in the Region. The program is being conducted cooperatively by the Commission, the Wisconsin and U. S. Geological Surveys, and the major public water utilities in the Region.

It is important to note that the sandstone aquifer simulation modeling program does not constitute a water supply planning program for the Region. Rather, the model will provide an invaluable planning tool which can be used in regional and local water supply planning. By simulating the hydraulic behavior of the deep sandstone aquifer, the model will permit forecasts of future regional declines in the aquifer potentiometric surface, as well as the identification of potential future interference between existing regional pumping centers. The model can also be used to simulate the effects of new wells that might be proposed, and thereby assist in the planning of the location and spacing of such wells, as can be used to evaluate the effect of unplanned wells.

During 1973 a Technical Advisory Committee was formed consisting of representatives of the U. S. and Wisconsin Geological Surveys, the major water utilities in the Region, and the Commission staff. The USGS has primary responsibility for collecting necessary data and developing the computer program. It is anticipated that the program will be completed early in 1975.

The sandstone aquifer simulation efforts will culminate in the preparation of a mathematical model in the form of a computer program and attendant data input. A report will be submitted to the study cooperators and to other interested units and agencies of government documenting the fundings of the study and discussing desirable future well locations and spacings, as well as the effects of the various centers of major groundwater pumpage within the Region.

COMMUNITY ASSISTANCE PLANNING

EDUCATIONAL, ADVISORY, AND REVIEW SERVICES

A large part of the Commission's work effort in community assistance planning in 1973 was directed at the provision of educational, advisory, and review services at no cost to local units of government in the Region and to state and federal agencies. Such services were provided through innumerable telephone contacts, informal "walk-in" requests, and formal written requests. Educational services were provided to local units of government as well as interested citizen groups, and were directed at explaining the need for and purposes of continuing local, regional, and state planning programs and the relationships which should exist between these different levels of planning; and at encouraging the creation, organization, staffing, and financing of local planning programs.

Advisory services consisted mainly of the extension of basic planning and engineering data available in Commission files and the technical assistance available from the Commission staff to local communities. Advisory services also include such services as the preparation of contracts and specifications for local mapping and planning programs.

The Commission since its inception has believed that a strong community assistance program is essential, not only to ensure wide dissemination of the data assembled under the regional planning program, but also to further understanding and implementation of adopted regional and subregional plan elements. Toward this end the Commission has carried on a community assistance program that has included the preparation of local planning guides and model land use control ordinances, sponsorship of planning conferences and workshops, publication of a bimonthly newsletter, the extension of functional guidance and advice to local units of government upon request, and the provision of project planning services and resident staff services at cost to local units of government, also upon request.

The Commission has participated in work programs which are intended to result in the preparation of community development plans for subareas of the Region. Thus, the Commission's community assistance planning efforts not only provide guidance and advice to local units of government in strictly local planning matters, but these efforts may also result in the preparation of subregional plan elements that can be cooperatively adopted by the local units of government concerned and by the Commission. All of the Commission's community assistance planning efforts are carried out under a policy statement adopted in 1962 and amended in 1968.

Review services are designed to encourage the incorporation of regional studies and plans into local planning programs, plans, and plan implementation devices; to assist state agencies in achieving state development objectives; to avoid duplication of planning efforts; and to coordinate and encourage plan implementation. Reviews were performed at the request of state and local governments concerned.

The following is a portion of the community assistance services provided during the year:

- Preparation of a land use and zoning study for a two-mile corridor along STH 33 in the City of West Bend and in the Towns of West Bend and Barton, Washington County.
- Preparation of special flood hazard maps to be used by Kenosha County in gaining eligibility for federal flood insurance.
- Preparation of suggested floodland zoning regulations and flood hazard maps for the City of Cedarburg and Village of Saukville, Ozaukee County; the City of West Bend and Village of Jackson, Washington County; the Village of Brown Deer, Milwaukee County; the Villages of Waterford and Rochester, Racine County; the Village of Silver Lake, Kenosha County; and the Village of East Troy, Walworth County.
- Preparation of a special flood hazard map for the Village of Pewaukee, Waukesha County.
- Preparation of draft zoning ordinance amendments relating to housing for the elderly in the City of Cudahy, Milwaukee County.
- Preparation of suggested town base mapping, land use planning, and zoning programs for the Towns of Erin and Richfield, Washington County, and the Town of Fredonia, Ozaukee County.
- Preparation of a special large-scale topographic base map for a portion of the Village of Paddock Lake, Kenosha County.
- Preparation of a suggested ordinance designed to create a Board of Park Commissioners for the Village of East Troy, Walworth County.
- Preparation of a recommended subdivision control ordinance for the Village of Belgium, Ozaukee County.

- Preparation of special-purpose flood hazard maps and review of floodland zoning ordinances for the Villages of Grafton and Thiensville, Ozaukee County.

- Preparation of suggested zoning ordinance amendments to regulate signs for the Town of Polk, Washington County.

- Preparation of suggested zoning ordinance amendments dealing with residential development, floodland regulation, and sign regulation for the Village of Kewaskum, Washington County.

- Preparation of a framework for a recommended street and house numbering system for the Towns of Burlington and Rochester, Racine County.

- Preparation of a series of base maps for the Mukwonago area schools, including maps at scales of 1" = 1000', 1" = 2000', and 1" = 4000'.

- Completion of a cadastral (property boundary line) mapping program for the City of Franklin, comprised of 97 U. S. Public Land Survey quarter section maps at a scale of 1" = 100'.

- Preparation of zoning ordinance amendments dealing with residential development for the Village of Williams Bay, Walworth County.

- Preparation of contracts and specifications for a large-scale mapping program in Racine County.

- Review of a mineral extraction and related residential development proposal in the Town of Pleasant Prairie, Kenosha County.

- Review of recreation plans for the Village of Kewaskum in Washington County and the Village of Hales Corners in Milwaukee County.

- Review of a proposed large-scale annexation and land development proposal in the City of Burlington, Racine County.

- Review of a resolution relating to the establishment of a Lake Front Bill of Rights for Milwaukee County.

- Review of a preliminary engineering report relating to the establishment of a sanitary sewerage system for the Village of Nashotah, Waukesha County.

- Preparation of a display utilized in an "Ecology Fair" at the Brookfield Square Shopping Center, City of Brookfield, Waukesha County.

- Discussion of water-related resource development problems with students in classes at Marquette University.

- Conduct of a tour of the Milwaukee River watershed for the Environmental Education Council of Greater Milwaukee.

- Preparation of a tour guide of the Menomonee River watershed for use by interested, concerned citizens.

- Preparation of suggested letters of notification for violators of land division and sign ordinances in the City of Cedarburg, Ozaukee County.

- Preparation of a recommended draft of a new Walworth County zoning ordinance.

- Preparation of a zoning district map for the Town of Norway, Racine County.

PROJECT AND RESIDENT PLANNING SERVICES

As noted above, the Commission provides, at cost, both project planning services and part-time resident staff services to local units of government upon request. In 1973 the Commission continued to provide resident staff services to the City of West Bend in Washington County and the City of Cedarburg in Ozaukee County, and began resident staff services to the Village of Sussex in Waukesha County. In addition, the Commission continued preparation of precise neighborhood unit development plans for neighborhoods in the City of West Bend and the Village of Germantown, Washington County; and the City of Franklin, Milwaukee County. Preliminary neighborhood development plans were completed in 1973 for the Decorah Hills Neighborhood in the City of West Bend and the Whitnall Park Southeast Neighborhood in the City of Franklin. Such project and resident staff planning services also included the preparation of innumerable reports on proposed rezoning actions, subdivision plat reviews, and planned unit development reviews.

Also during 1973, the Commission agreed to provide neighborhood planning services as time permits in future years to the City of Burlington, Racine County; the City of Delavan, Walworth County; and the City of Hartford, Washington County. In each case, the communities involved were advised to begin preparation for neighborhood unit planning by obtaining the necessary topographic and property boundary line base maps.

DATA PROCESSING SERVICES

The Commission continued to provide data processing services at cost to numerous local units and agencies of government during 1973, processing payrolls for 19 school districts in the Region and property assessment rolls and tax bills for 41 communities. The Commission also provided special data processing services to the Waukesha County Health Department, the Waukesha County Treasurer's office, the Racine County Treasurer's office, the Racine County Welfare Department, the City of Waukesha, and the University of Wisconsin-Milwaukee.

SCHOOL CENSUS SERVICES

During 1973 the Commission assisted the Mequon-Thiensville Joint School District No. 2, the New Berlin School District No. 3, the Waukesha Joint School District No. 1, the West Bend Joint School District No. 1, and the Mukwonago Joint School District No. 10 in conducting annual school censuses. The assistance included preparation of a list of the addresses of all households within the school districts; provision of preprinted school census forms which were mailed to district residents, keypunching of the pertinent completed data; editing and contingency checks of the data, and preparation of a series of reports. Such data are essential not only to the local school districts in making decisions relating to building development and school service areas, but are also invaluable to the Commission staff in providing other local planning services to the municipalities served by the various school districts.

DISTRICT PLANNING

To date the Commission has established comprehensive community planning programs for two urban development oriented districts in the Region—the Kenosha Planning District, consisting of the City of Kenosha and the adjacent towns of Pleasant Prairie and Somers, and the Racine Urban Planning District, consisting of the City of Racine, the Villages of Elmwood Park, North Bay, Sturtevant, and Wind Point, and the Towns of Caledonia and Mt. Pleasant. The comprehensive plan for the Kenosha Planning District was formally adopted by the Commission as a subregional plan element in 1972, and continued to be used during 1973 in local development decision-making by the communities involved.

The comprehensive plan for the Racine Urban Planning District was completed late in 1972. Four public informational meetings on the plan were subsequently held throughout the District during January 1973, and a formal public hearing was held on March 28, 1973. In general, citizen and public official interest in the plan as reflected at these sessions centered around two plan proposals; a recommendation to provide a single, centralized sanitary sewerage system plan for the entire district, and a recommendation to construct the Racine Loop Freeway in substantially the same manner as proposed in the adopted regional transportation plan.

After carefully considering public reaction to the plan, the Racine Urban Planning District Citizens Advisory Committee, which is comprised of governmental and citizen leaders from throughout the District, adopted the entire comprehensive plan as presented at the informational meetings and public hearing and as set forth in a three-volume report entitled SEWRPC Planning Report No. 14, A Comprehensive Plan for the Racine Urban Planning District, provided that the local communities in the District immediately take steps to negotiate contracts for the future extension of sanitary sewer service as recommended in the plan, that an interim expansion of the North Park sewage treatment facility be accommodated, and that the approval of the Racine Loop Freeway be considered conceptual in nature with further study recommended to determine the precise location. Prior to forwarding its recommendations to the Racine County Board of Supervisors and the Regional Planning Commission, the Committee determined that it would monitor progress toward the establishment of new intergovernmental sewer service contracts in the District. The remainder of 1973 was spent in developing such contracts, and at year's end the parties reported that they were nearing the end of negotiations and would soon be able to report to the Committee that full agreement on new sewer service contracts had been obtained.

OTHER ACTIVITIES

The Commission undertakes many activities on a continuing basis each year which generally relate to all of the specific functional planning areas previously discussed in this report. These activities include review of federal and state grant applications and other federally related actions under the U. S. Office of Management and Budget Circular A-95, the carrying on of an extensive program of public information, the conduct of Commission and advisory committee meetings, and the conduct of many hundreds of staff technical meetings on both an intra- and interagency basis. Because these activities very often relate to more than one specific functional planning area, they are reported here in total and represent a summary of such activities for 1973. In addition, the Commission staff organization and financing for 1973 are described.

CLEARINGHOUSE REVIEW ACTIVITIES

During 1973 the Commission, as the Metropolitan Clearinghouse for the review of applications for federal loans and grants emanating within the Region, reviewed grant requests for nearly $79 million in federal funds. This function has been assigned to the Commission by the U. S. Office of Management and Budget pursuant to a U. S. Congressional mandate contained in the Intergovernmental Cooperation Act of 1968, and builds on earlier federal legislation dealing with areawide planning agency review of federally assisted local and state development projects.

This function began in 1964, and has been expanded several times to reflect increasing federal government concern that federal loan, grant, and mortgage insurance programs in large metropolitan regions be used effectively on an areawide basis. In addition, the Commission reviews applications for state grants-in-aid for pollution prevention and abatement facilities and for local park land acquisition and facility construction under the ORAP 200 State Aid Programs, and during 1973 reviewed nearly $2.5 million in grant requests for such state funds.

The Commission reviews all applications for federal loans, grants, or mortgage guarantees in partial support of programs or projects in the functional areas of parks and open space, hospitals and related health care facilities, airports, libraries, water supply and distribution, highways, mass transportation, land and water conservation, law enforcement, economic development, erosion and flood control, higher education academic facilities, housing and land development, historical preservation, manpower development, and community action, as well as planning programs in conjunction with these subject areas.

In accordance with a policy statement adopted by the Commission on October 9, 1967, the applications are reviewed to determine whether the proposed project is in conformance with and serves to implement regional, watershed, and district plans or plan elements prepared or adopted by the Commission; is not in conflict with such plans or plan elements prepared and adopted or under preparation by the Commission; or is in conflict with such plans or plan elements prepared and adopted or under preparation by the Commission, or is in conflict with or duplicates other proposed projects.

In addition to determining a project's relationship to adopted regional plan elements, the Commission also seeks review comments, as appropriate, from other agencies conducting planning programs more directly related to a particular functional area, as required by the broader clearinghouse function. Thus, for example, the Comprehensive Health Planning Agency of Southeastern Wisconsin, Inc., as the officially recognized areawide health planning agency, is offered the opportunity to comment on applications for federal aid in support of the construction of health and health related facilities and the provision of health related services.

The following are the major functional areas in which the Commission reviewed grant requests during 1973.

Parks and Open Space

As shown in Tables 31 and 32, the Commission reviewed 41 applications involving requests for $2,045,648 in federal and state funds in partial support of park and open space land acquisition and development under the following four aid programs:

- The Outdoor Recreation—Acquisition and Development (LAWCON) program, which provides for federal assistance of up to 50 percent of the acquisition and development costs of outdoor recreation areas and facilities for the general public. Funds allocated to the state may be transferred to local units of government for approved projects.

- The Neighborhood Facilities program, which provides grants to aid in the construction and/or rehabilitation of multiservice neighborhood centers which offer a wide range of community services. Grants generally cover two-thirds of the development cost but may cover up to 75 percent in designated areas.

- The Open Space Land Program, which provides for federal assistance of up to 50 percent of the acquisition and development costs of park and open space land in urban areas, as well as the acquisition of historically significant structures listed on the National Register of Historic Places.

Table 31

PARK AND OPEN SPACE FEDERAL GRANT APPLICATIONS REVIEWED DURING 1973 BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Applicant	Proposed Site of Project	Approximate Acreage	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Neighborhood Facilities[b]					
Milwaukee County Park Commission	Dr. Martin Luther King, Jr., Park Community Building Construction	--	$672,400	67	2
Total	--	--	$672,400	--	--
Open Space Land Program[c]					
Waukesha County Park and Planning Commission	Menomonee Park Recreation Building Construction	--	$ 87,500	50	1
	Waukesha County Exposition Building Site Development	--	37,500	50	2
Total	--	--	$125,000	--	--
Outdoor Recreation-Acquisition and Development[d]					
City of Cedarburg	Cedaqua Park Development	--	$ 28,550	50	1
Village of Fontana-on-Geneva Lake	Public Park Development	--	46,000	50	1
Town of Genesee	Community Park Site Acquisition	27.3	39,926	75	2
City of Kenosha	Public Outdoor Recreation Area, Storm Water Retention Basin	70.0	80,250	75	1
Village of Kewaskum	Village Park	40.0	33,000	50	2
Milwaukee County Park Commission	Lincoln Park Acquisition	13.5	60,000	50	1
	Metropolitan Park Acquisition	14.5	107,500	50	1
Muskego-Norway Consolidated Schools	Tennis Court Construction	--	16,000	50	2
City of Racine	Colonial Park Acquisition	1.9	5,000	50	1
Village of Slinger	Firemen's Community Park Expansion	1.4	8,000	50	2
The State Historical Society of Wisconsin	Koepsel House Reconstruction	--	41,250	50	2
	Turck House Reconstruction	--	15,000	50	2
Washington County	Proposed Park Acquisition	245.0	55,000	50	1
City of Waukesha	Lowell Hill Acquisition	40.5	156,222	75	2
Waukesha County Park and Planning Commission	Monches Park—Bockl Property	68.0	50,250	50	1
	Monches Park—Guilfoile Property	40.0	27,500	50	1
	Naga-Waukee Park Beach House Replacement	--	39,000	50	1
City of West Bend	Riverside Park Acquisition, Phase I	17.6	51,950	50	1
City of Whitewater	Six Lighted Tennis Courts	--	25,000	50	2
Wisconsin Department of Natural Resources	Kettle Moraine State Forest (Bowey Site)	40.0	7,000	50	1
	Kettle Moraine State Forest (McMiller Sportsmen's Center Development)	--	26,500	50	2
	Kettle Moraine State Forest (Southern Unit Acquisition)	17.0	6,000	50	1
	Pike Lake State Park Addition	25.1	16,500	50	1
Total	--	--	$941,398	--	--

[a] *SEWRPC action codes are: (1) Project is in conformance with and serves to implement the regional plan. (2) Project is not in conflict with the regional plan. (3) Project is in conflict with the regional plan.*

[b] *Administered by the U. S. Department of Housing and Urban Development pursuant to the Housing and Urban Development Act of 1965.*

[c] *Administered by the U. S. Department of Housing and Urban Development pursuant to the Housing and Urban Development Act of 1970.*

[d] *Administered within Wisconsin by the Wisconsin Department of Natural Resources pursuant to the Federal Land and Water Conservation Fund Act of 1965 (LAWCON). The program is administered nationally by the U. S. Department of the Interior, Bureau of Outdoor Recreation.*

Source: SEWRPC.

Table 32

ORAP POLLUTION PREVENTION AND ABATEMENT AND LOCAL PARK FACILITY STATE GRANT APPLICATIONS REVIEWED DURING 1973 BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Applicant	Proposed Facility	Amount of State Grant Request	Percent of Total Cost	SEWRPC Action[a]
Pollution Prevention and Abatement Program[b]				
Village of Greendale	Sanitary Sewer System Construction	$ 94,536	25	1
Kenosha Water Utility	Parkside Interceptor Sewer	291,116	5	1
City of Milwaukee	24 Sanitary Sewer Projects	1,285,606	25	1
City of Oak Creek	Sanitary Sewer Construction	97,700	25	1
City of Oconomowoc	Sanitary Sewers to Serve Leidgen's Point and Riverview Lane Area	22,758	25	1
	Sanitary Sewers to Serve Wren Crest Subdivision	82,500	75	1
Western Racine County Sanitary District	Wastewater Treatment Plant Addition	28,500	5	1
South Milwaukee Water Utility	Sludge Project	10,000	25	2
Town of Waterford Sanitary District No. 1	Sanitary Sewer Construction	275,000	5	1
Total	--	$2,187,716	--	--
Local Park Aids Program[c]				
Village of Fontana-on-Geneva Lake	Public Park Development	$ 23,000	25	1
Village of Kewaskum	Village Park	16,500	25	2
Milwaukee County Park Commission	Lincoln Park Acquisition	30,000	25	1
	Metropolitan Park Acquisition	53,750	25	1
City of Racine	Colonial Park Acquisition	2,500	25	1
Village of Slinger	Firemen's Community Park Expansion	4,000	25	2
The State Historical Society of Wisconsin	Koepsel House Reconstruction	41,250	50	2
	Turck House Reconstruction	15,000	50	2
Waukesha County Park and Planning Commission	Monches Park-Bockl Property	25,125	25	1
	Monches Park-Guilfoile Property	13,750	25	1
City of West Bend	Riverside Park Acquisition, Phase I	25,975	25	1
Wisconsin Department of Natural Resources	Kettle Moraine State Forest (Bowey Site)	7,000	50	1
	Kettle Moraine State Forest (McMiller Sportsmen's Center Development)	26,500	50	2
	Kettle Moraine State Forest (Southern Unit Acquisition)	6,000	50	1
	Pike Lake State Park Addition	16,500	50	1
Total	--	$ 306,850	--	--

[a] *SEWRPC action codes are: (1) Project is in conformance with and serves to implement the regional plan.*
(2) Project is not in conflict with the regional plan.
(3) Project is in conflict with the regional plan.

[b] *Administered by the Wisconsin Department of Natural Resources pursuant to Section 144.21 of the Wisconsin Statutes.*

[c] *Administered by the Wisconsin Department of Natural Resources pursuant to Section 23.09 of the Wisconsin Statutes.*

Source: SEWRPC.

- The ORAP Local Park Aids Program, which provides for state local park assistance grants to be matched by local contributions. Such state funds may also be used to partially match federal funds under the open space and LAWCON programs described above.

The total funding requests under each of these programs is shown in Table 33.

Sewerage and Water Supply Facilities

As shown in Table 34, the Commission reviewed a total of 10 grant or loan applications for federal aid in partial support of the construction of municipal sewerage and water supply and water storage facilities. The Commission also reviewed nine applications for state aid in partial support of municipal sewerage facility projects, as shown in Table 32. Together, the applications totaled $17,460,591 in aid requests, submitted under the following programs:

- The Construction Grants for Wastewater Treatment Works program, which provides assistance for the construction of municipal wastewater treatment works of 75 percent of the project cost. The program is administered by the U. S. Environmental Protection Agency, Office of Air and Water Programs, through the Wisconsin Department of Natural Resources.

- The Basic Water and Sewer Facilities Grants program, which provides for federal grants of up to 50 percent of the eligible land and construction costs for new water and sewer facilities.

- The Resource Conservation and Development Loans program, which makes loans available to public agencies and local nonprofit corporations in designated resource conservation and development areas. Loan assistance may equal the project cost in certain instances.

- The ORAP Pollution Prevention and Abatement program, which provides for state grants of up to 25 percent of the project costs for sewage treatment plants, intercepting sewers, outfall sewers, combined sewer separation programs, and sanitary sewer collection systems to serve areas utilizing onsite soil absorption sewage disposal systems prior to January 1970. When used as local matching funds for federal water pollution abatement grants, such state grants are now limited to 5 percent of the project costs.

The total funding requested under the sewerage and water supply facility programs is shown in Table 35.

Solid Waste Planning

As shown in Table 36, the Commission reviewed one application for a federal solid waste planning grant totaling $93,750. The request was submitted under the Solid Waste Research Grants program, which makes grants available to support and promote the coordination of research and development in the area of collection, storage, utilization, salvage, or final disposal of solid waste. The program requires a minimum of 5 percent cost sharing.

Table 33

APPLICATIONS FOR FEDERAL AND STATE GRANTS-IN-AID FOR THE ACQUISITION AND DEVELOPMENT OF PARK AND OPEN SPACE LAND IN THE REGION: 1964-1973

Year	Park and Open Space Acquisition and Development Aid Requests					
	Federal Aid Programs				State Aid Program	
	Open Space Land (HUD)	LAWCON (BOR)	Neighborhood Facilities (HUD)	Subtotal	ORAP Local Park Aid (DNR)	Total
1964	$ 767,911	$ --	$ --	$ 767,911	$ --	$ 767,911
1965	540,863	--	--	540,863	--	540,863
1966	1,760,146	536,980	--	2,297,126	--	2,297,126
1967	543,539	508,268	--	1,051,807	--	1,051,807
1968	1,077,256	134,900	--	1,212,156	--	1,212,156
1969	426,019	57,000	--	483,019	--	483,019
1970	551,355	761,845	--	1,313,200	95,305	1,408,505
1971	165,000	1,461,004	--	1,626,004	1,113,380	2,739,384
1972	3,623,531	1,392,477	--	5,016,008	276,718	5,292,726
1973	125,000	941,398	672,400	1,738,798	306,850	2,045,648
Total	$9,580,620	$5,793,872	$672,400	$16,046,892	$1,792,253	$17,839,145

Source: SEWRPC.

Table 34

SEWERAGE AND WATER SUPPLY FACILITY FEDERAL GRANT/LOAN APPLICATIONS REVIEWED DURING 1973 BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Applicant	Proposed Facility	Amount of Federal Grant/Loan Request	Percent of Total Cost	SEWRPC Action[a]
Construction Grants for Wastewater Treatment Works[b]				
Town of East Troy Sanitary District No. 2	Potter Lake Sanitary Sewerage System	$ 310,000	25	1
Kenosha Water Utility	Parkside Interceptor Sewer	4,366,750	75	1
City of Milwaukee	Infiltration/Inflow Evaluation Survey of the City's Sanitary Sewerage System	2,500,000	75	1
	Linnwood Purification Plant Wash Water Reclamation and Sludge Disposal System	1,047,025	75	2
Sewerage Commission of the City of Milwaukee	Preliminary Engineering Study for the Abatement of Pollution from Combined Sewer Overflow in the Milwaukee Metropolitan Area	1,725,000	75	1
Western Racine County Metropolitan Sanitary District	Wastewater Treatment Plant Addition	427,500	75	1
South Milwaukee Water Utility	Sludge Project	20,000	50	2
Town of Waterford Sanitary District No. 1	Sanitary Sewer Construction	4,125,000	75	1
Total	--	$14,521,275	--	--
Basic Water and Sewer Facilities—Grants[c]				
Village of Sussex	New Water System for the Village	$ 613,600	46	1
Total	--	$ 613,600	--	--
Resource Conservation and Development Loans[d]				
Village of Slinger	Water Storage Tank Construction	$ 138,000	100	2
Total	--	$ 138,000	--	--

[a] *SEWRPC action codes are: (1) Project is in conformance with and serves to implement the regional plan. (2) Project is not in conflict with the regional plan. (3) Project is in conflict with the regional plan.*

[b] *Administered by the Environmental Protection Agency, pursuant to the Federal Water Pollution Control Act, as amended.*

[c] *Administered by the U. S. Department of Housing and Urban Development, pursuant to the Housing and Urban Development Act of 1965.*

[d] *Administered by the U. S. Department of Agriculture, Farmer's Home Administration, pursuant to the Food and Agriculture Act of 1963.*

Source: SEWRPC.

Table 35

HISTORIC TREND IN APPLICATIONS FOR FEDERAL AND STATE GRANTS-IN-AID FOR SEWERAGE AND WATER SUPPLY FACILITIES IN THE REGION: 1964-1973

Year	Sewerage and Water Supply Facility Aid Requests					
	Federal Aid Programs				State Aid Program	
	Waste Treatment Works (EPA)	Basic Water and Sewer (HUD)	Rural Water Waste Disposal (FMHA)	Subtotal	ORAP Water Pollution Prevention and Abatement (DNR)	Total
1964	$ 2,066,507	$ --	$ --	$ 2,066,507	$ --	$ 2,066,507
1965	2,631,718	--	--	2,631,718	--	2,631,718
1966	3,382,242	803,839	400,000	4,586,081	--	4,586,081
1967	9,046,087	2,464,166	69,450	11,579,703	--	11,579,703
1968	15,605,749	3,320,100	195,666	19,121,515	--	19,121,515
1969	1,826,868	11,928,313	132,550	13,887,731	--	13,887,731
1970	31,197,846	4,989,252	97,250	36,284,348	12,014,687	48,299,035
1971	11,266,406	4,232,025	155,000	15,653,431	8,967,751	24,621,182
1972	21,967,850	1,935,500	--	23,903,350	10,673,351	34,576,701
1973	14,521,275	613,600	--	15,134,875	2,187,716	17,322,591
Total	$113,512,548	$30,286,795	$1,049,916	$144,849,259	$33,843,505	$178,692,764

Source: SEWRPC.

Table 36

SOLID WASTE PLANNING FEDERAL GRANT APPLICATION REVIEWED DURING 1973 BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Applicant	Program Description	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Solid Waste Research Grants[b]				
Racine County . . .	Solid Waste Planning Grant	$93,750	75	2
Total	--	$93,750	--	--

[a] *SEWRPC action codes are: (1) Project is in conformance with and serves to implement the regional plan.*
(2) Project is not in conflict with the regional plan.
(3) Project is in conflict with the regional plan.

[b] *Administered by the Environmental Protection Agency, pursuant to Solid Waste Disposal Act, Sections 204 and 205, as amended.*

Source: SEWRPC.

Transportation Planning and Facilities

As shown in Table 37, the Commission reviewed a total of 36 applications for federal aid in partial support of the construction and planning of transportation facilities, including highways, transit parking facilities, and airports; in partial support of mass transit property acquisition; and in partial support of a mass transit technical study. The aid requests, totaling more than $45 million, were submitted under the following five programs:

- The Highway Research, Planning, and Construction program, which provides up to 90 percent funding for interstate highway projects and 50 percent for all other projects. The 50 percent share will change to 70 percent in 1974. The program is administered nationally by the U. S. Department of Transportation, Federal Highway Administration, and in Wisconsin through the Wisconsin Department of Transportation.

Table 37

TRANSPORTATION FACILITY FEDERAL GRANT APPLICATIONS REVIEWED DURING 1973 BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Applicant	Project and Location	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Highway Research, Planning, and Construction[b]				
Wisconsin Department of Transportation . .	E. Ramsey Avenue Reconstruction, City of Cudahy	$ 115,000	46	1
	Urban Improvement on Sheridan Road (STH 32), City of Kenosha	469,000	70	2
	Construction of a Bus-Only Entrance Ramp to the East-West Freeway, City of Milwaukee	16,200	90	1
	W. Grange Avenue Reconstruction, City of Milwaukee	803,000	54	1
	E. Locust Street Reconstruction, City of Milwaukee	770,000	49	1
	W. Wisconsin Avenue Reconstruction, City of Milwaukee	110,000	48	1
	N. Water Street Reconstruction, City of Milwaukee	466,000	47	1
	W. Howard Avenue Improvement, City of Milwaukee	321,000	43	1
	Fringe Parking Facility Construction, College Avenue Interchange, City of Milwaukee	166,095	90	1
	Fringe Parking Facility Construction, W. Holt Avenue Interchange, City of Milwaukee	193,905	90	1
	W. Schlinger Avenue Reconstruction, Cities of West Allis and Milwaukee	110,000	46	1
	Rapids Drive Improvement, City of Racine	253,000	50	1
	CTH F Construction, Racine County	560,000	70	1
	Northwestern Avenue Improvement, Racine County	231,000	70	1
	Lake Freeway Construction, Milwaukee, Kenosha, and Racine Counties	--[c]	--	1
	IH 94 Improvements, Kenosha, Racine, and Waukesha Counties	495,000	90	2
	STH 33 Reconstruction, West Bend East City Limits to Ozaukee County Line	135,000	50	1
	Belt Freeway Construction, Milwaukee, Waukesha, and Washington Counties	--[c]	--	1
	STH 67 Reconstruction, Walworth County	525,000	70	1
	STH 15 Reconstruction, Walworth County	16,800,000	70	1
	USH 45 Reconstruction, Washington County	10,500,000	63	1
	CTH NN Reconstruction, Washington County	280,000	70	1
	Richfield Interchange Reconstruction Washington County	2,800,000	70	1

Table 37 (continued)

Applicant	Project and Location	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Wisconsin Department of Transportation . . (continued)	Transit Parking Station, IH 94-USH 18 Junction, Waukesha County	$ 65,000	90	1
	IH 94 Improvements, Waukesha County	792,000	90	2
	CTH P Reconstruction, Waukesha County	525,000	70	1
	USH 16 Reconstruction, Waukesha County	2,380,000	70	1
	STH 67 Improvement, Waukesha County	1,000,000	77	1
	STH 33 Reconstruction, City of West Bend	230,000	50	2
	N. Santa Monica Boulevard Reconstruction, Village of Whitefish Bay	178,500	62	2
Total	--	$41,289,700	--	--
Airport Development Aid Program[d]				
Wisconsin Department of Transportation . .	Security Fencing Installation, General Mitchell Field, Milwaukee County	$ 37,500	75	2
	Purchase of Crash-Fire-Rescue Vehicle, General Mitchell Field, Milwaukee County	131,200	82	2
Total	--	$ 168,700	--	--
Federal Aid Highways—Special Bridge Replacement[e]				
Wisconsin Department of Transportation . .	Bridge Replacement on CTH D over the Fox River, Village of Rochester	$ 50,000	50	2
	Replacement of 68th Street Bridge over the Menomonee River, City of Wauwatosa	105,000	62	1
Total	--	$ 155,000	--	--
Urban Mass Transportation Capital Improvement Grants[f]				
Milwaukee County	Purchase of 100 Buses for Lease to Milwaukee and Suburban Transport Corporation	$ 3,413,333	67	1
Total	--	$ 3,413,333	--	--
Urban Mass Transportation Technical Studies Grants[f]				
Milwaukee County	Milwaukee County Mass Transit Technical Study	$ 113,334	67	1
Total	--	$ 113,334	--	--

[a] *SEWRPC action codes are: (1) Project is in conformance with and serves to implement the regional plan. (2) Project is not in conflict with the regional plan. (3) Project is in conflict with the regional plan.*

[b] *Administered by the U. S. Department of Transportation, Federal Highway Administration, pursuant to the Federal Aid Highway Act.*

[c] *Amount of grant request not available.*

[d] *Administered by the U. S. Department of Transportation, Federal Aviation Administration, pursuant to the Airport and Airway Development Act of 1970.*

[e] *Administered by the U. S. Department of Transportation, Federal Highway Administration, pursuant to the Federal Aid Highway Act of 1970.*

[f] *Administered by the U. S. Department of Transportation, Urban Mass Transportation Administration, pursuant to the Urban Mass Transportation Act of 1964, as amended.*

Source: SEWRPC.

- The Airport Development Aid Program, which provides grants of generally 50 percent of the allowable costs of the project, with up to 75 percent assistance for certain items. Grants may be requested for such things as land acquisition; site preparation; construction and installation of lighting utilities, navigational aids, and certain offsite work; and safety equipment required for certification of the airport facility.
- The Federal Aid Highways—Special Bridge Replacement program, which provides funds for repair or replacement of unsafe federal aid highway bridges. The normal federal share provided under this program is up to 75 percent of the total project cost.
- The Urban Mass Transportation Capital Improvement Grants program, which assists in financing the acquisition, construction, reconstruction, and improvement of facilities and equipment for use in mass transit service in urban areas. A grant may be made under this program for up to 80 percent of the net project cost.
- The Urban Mass Transportation Technical Studies Grant program, which is designed to assist in the planning, engineering, and designing of urban mass transportation projects, and other technical studies, in a program for a unified or officially coordinated urban transportation system. Federal funding may be provided for up to 80 percent of the project cost.

Table 38 includes the total funding requests under these programs in 1973.

Community Facilities

The Commission also reviews applications for federal aid in support of community facilities such as hospitals and health-related facilities and educational facilities. Five applications were received in 1973 for funding, including a request from St. Mary's Hospital in the City of Racine for a federal grant in partial support of construction of a new facility, as well as a request from the Milwaukee Area Technical College for funding for remodeling of two campus facilities and construction of two other campus facilities (see Table 39).

Health, Social Services, and Comprehensive Planning

A total of 26 applications for federal grants in support of a variety of programs relating to the provision of health and social services were reviewed during 1973. Federal aid requests under the various programs exceed $9 million, as shown in Table 40.

Land Development and Housing

During 1973, a total of 10 applications seeking federal grants, loans, or mortgage insurance from various programs administered by the U. S. Department of Housing and Urban Development (HUD) were reviewed. Eight of the applications were made for mortgage insurance for rental housing for low and moderate income families, and two applications totaling nearly $4 million were made under other HUD programs, as shown in Table 41.

Conservation

One application requesting the designation of a resource conservation and development project in the Southeastern Wisconsin Region was reviewed by the Commission, which noted in its review that the project could serve as an important means for implementation of the regional and subregional plans prepared or under preparation by SEWRPC. No funding request was made at the time of the application (see Table 42).

Law Enforcement Assistance

The largest number of grant reviews (64) in a single program area were received in the area of law enforcement assistance. The applications totaled $3,538,456 in funding requests under a variety of programs administered by the U. S. Department of Justice, Law Enforcement Assistance Administration (see Table 43). No grant applications in this category were received by SEWRPC in 1972.

Table 38

APPLICATIONS FOR FEDERAL AND STATE GRANTS-IN-AID FOR TRANSPORTATION FACILITIES IN THE REGION: 1967-1973

Year	Transportation Facility Aid Requests												
	Federal Aid Programs											State Aid Program	
						Urban Mass Transportation (UMTA)							
	Highway Planning and Development (FHWA)	TOPICS (FHWA)	Highway Beautification (FHWA)	Urban Corridor Demonstration (US DOT)	Special Bridge Replacement (US DOT)	Mass Transit Technical Studies	Mass Transit Capital Improvement	University Research, Training	Airport Planning (FAA)	Airport Development (FAA)	Subtotal	Highway Improvement Planning Program (Wis DOT)	Total
1967	$ 7,866,667	$ --	$ --	$ --	$ --	$366,667	$ --	$ --	$ --	$ --	$ 8,233,334	$ --	$ 8,233,334
1968	116,970,000	--	--	--	--	--	--	--	--	250,500	117,220,500	--	117,220,500
1969	6,931,000	--	--	--	--	12,000	--	--	--	480,600	7,423,600	--	7,423,600
1970	8,070,000	2,251,300	77,400	200,000	--	--	--	--	--	200,000	10,798,700	5,420,300	16,219,000
1971	21,803,000	2,239,325	--	--	--	--	--	--	20,000	1,227,750	25,290,075	--	25,290,075
1972	5,171,600	--	--	--	--	--	8,592,086	149,989	123,827	813,350	14,850,852	--	14,850,852
1973	41,289,700	--	--	--	155,000	113,334	3,413,333	--	--	168,700	45,140,067	--	45,140,067
Total	$208,101,967	$4,490,625	$77,400	$200,000	$155,000	$492,001	$12,005,419	$149,989	$143,827	$3,140,900	$228,957,128	$5,420,300	$234,377,428

Source: SEWRPC.

Table 39

COMMUNITY FACILITY FEDERAL GRANT APPLICATIONS REVIEWED DURING 1973
BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Applicant	Proposed Facility	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Health Facilities Construction Grants[b]				
St. Mary's Hospital	Construction of New Hospital Facility, City of Racine	$--[c]	--	2
Total	--	$--	--	--
Vocational Education—Basic Grants to States[d]				
Milwaukee Area Technical College	Remodeling, Construction of Addition to Milwaukee Campus Facilities	$--[c]	--	2
	Remodeling, Construction of Addition to West Allis Campus	--[c]	--	2
	North Region Campus Facility Construction	--[c]	--	2
	South Region Campus Facility Construction	--[c]	--	2
Total	--	$--	--	--

[a]*SEWRPC action codes are: (1) Project is in conformance with and serves to implement the regional plan.*
(2) Project is not in conflict with the regional plan.
(3) Project is in conflict with the regional plan.

[b]*Administered by the U. S. Department of Health, Education, and Welfare, Health Services and Mental Health Administration, pursuant to the Public Health Service Act as amended.*

[c]*Amount of grant request not available.*

[d]*Administered by the U. S. Department of Health, Education, and Welfare, Office of Education, pursuant to the Vocational Education Amendments of 1968.*

Source: SEWRPC.

Table 40

HEALTH, SOCIAL SERVICES, AND COMPREHENSIVE PLANNING FEDERAL GRANT APPLICATIONS REVIEWED
DURING 1973 BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Applicant	Program Description	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Child Development—Head Start[b]				
Community Relations—Social Development Commission in Milwaukee County	Summer Head Start Proposal—1973	$ 60,110	71	2
Total	--	$ 60,110	--	--
Community Action Program[c]				
Community Relations—Social Development Commission in Milwaukee County	Federation of Independent Community Schools	$ 50,000	17	2
	Indian Urban Affairs Council Refunding Request, 1972-1973	100,000	100	2
	Public Service Careers	40,000	100	2
	Recreation Support Program for Summer, 1973	199,683	100	2
Total	--	$ 389,683	--	--

Table 40 (continued)

Applicant	Program Description	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Community Alcoholism Services—Poverty Demonstration Program[d]				
Community Relations—Social Development Commission in Milwaukee County	Inner City Council on Alcoholism	$ 171,000	100	2
Total	--	$ 171,000	--	--
Comprehensive Health Planning—Areawide Grants[e]				
Comprehensive Health Planning Agency of Southeastern Wisconsin, Inc.	Areawide Planning Program, June 1973-May 1974	$ 185,000	--[m]	2
Total	--	$ 185,000	--	--
Comprehensive Planning Assistance[f]				
City of Kenosha	Comprehensive Planning Program—1973	$ 20,000	67	1
City of Milwaukee	Comprehensive Planning Assistance Program—1973-1974	210,000	67	2
	Model Cities' Third Year Action Plan	1,200,000	--[m]	2
City of Racine	Comprehensive Planning Program—1973	60,000	67	1
Wisconsin Department of Administration and Local Affairs and Development	Comprehensive Planning Program—1973	703,875	67	2
Total	--	$2,193,875	--	--
Emergency Food and Medical Services[g]				
Community Relations—Social Development Commission in Milwaukee County	Emergency Food and Medical Program	$ 101,560	100	2
Total	--	$ 101,560	--	--
Federal Regional Council Program				
City of Milwaukee	Special Impact Area Designation	$ NA	--	2
Total	--	$ --	--	--
Integrated Grant Administration Program				
City of Milwaukee	Comprehensive Economic Redevelopment	$1,240,784	100	2
Community Relations—Social Development Commission in Milwaukee County	Youth Service System Development	1,600,000	100	2
Total	--	$2,840,784	--	--
Manpower Revenue Sharing[h]				
Community Relations—Social Development Commission in Milwaukee County	Concentrated Employment Program through March 1974	$1,481,852	100	2
City of Milwaukee	Operational Planning Grant	29,827	100	2
Racine County	Manpower Planning and Development Program	25,000	100	2
Waukesha County	Manpower Planning and Development Program	25,000	100	2
Total	--	$1,561,679	--	--

Table 40 (continued)

Applicant	Program Description	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Mental Health—Community Assistance Grants for Narcotic Addiction and Drug Abuse[i]				
Community Relations—Social Development Commission in Milwaukee County	Multi-Modal Drug Abuse Treatment Service System, Milwaukee County	$1,104,125	89	2
Total	--	$1,104,125	--	--
Migrant and Seasonal Farm Workers Assistance[j]				
University of Wisconsin-Milwaukee	High School Equivalency Program	$ 266,907	98	2
	Proposed Health Education Program	3,624	100	2
	Proposed Midwest III-B Coordinator	14,085	100	2
Total	--	$ 284,616	--	--
Talent Search[k]				
Community Relations—Social Development Commission in Milwaukee County	Inner City Talent Search Program	$ 138,267	100	2
Total	--	$ 138,267	--	--
Youth Development and Delinquency Prevention[l]				
Community Relations—Social Development Commission in Milwaukee County	Juvenile Delinquency Diversion Program	$ 100,000	73	2
Total	--	$ 100,000	--	--

[a] *SEWRPC action codes are: (1) Project is in conformance with and serves to implement the regional plan. (2) Project is not in conflict with the regional plan. (3) Project is in conflict with the regional plan.*

[b] *Administered by the U. S. Department of Health, Education, and Welfare, pursuant to the Economic Opportunity Act of 1964, as amended.*

[c] *Administered by the U. S. Office of Economic Opportunity, pursuant to the Economic Opportunity Act of 1964, as amended.*

[d] *Administered by the Institute on Alcohol Abuse and Alcoholism, pursuant to the Economic Opportunity Act of 1964, as amended.*

[e] *Administered by the U. S. Department of Health, Education, and Welfare, Health Services and Mental Health Administration, pursuant to the Public Health Service Act, as amended.*

[f] *Administered by the U. S. Department of Housing and Urban Development, Community Planning and Development, pursuant to the Housing Act of 1954, Section 701, as amended.*

[g] *Administered by the U. S. Office of Economic Opportunity, pursuant to the Economic Opportunity Act of 1964, as amended.*

[h] *Administered by the U. S. Department of Labor, Manpower Administration, pursuant to the Manpower Development and Training Act of 1962, as amended.*

[i] *Administered by the U. S. Department of Health, Education, and Welfare, Health Services and Mental Health Administration, pursuant to the Alcoholic and Narcotic Addict Rehabilitation Amendments of 1968.*

[j] *Administered by the U. S. Office of Economic Opportunity, pursuant to Public Law 90-222, Title III.*

[k] *Administered by the U. S. Department of Health, Education, and Welfare, Office of Education, pursuant to the Higher Education Act of 1965.*

[l] *Administered by the U. S. Department of Health, Education, and Welfare, Social and Rehabilitation Service.*

[m] *Percent of total cost not available.*

Source: SEWRPC.

Table 41

LAND DEVELOPMENT AND HOUSING PROGRAM GRANT/LOAN/MORTGAGE INSURANCE APPLICATIONS REVIEWED DURING 1973 BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Applicant	Proposed Project	Amount of Federal Grant/Loan/Mortgage Insurance Request	SEWRPC Action[a]
Mortgage Insurance—Rental Housing for Low- and Moderate-Income Families, Market Interest Rate[b]			
Reilly-Joseph Company	Lexington Village (Phase 1)	$ --[c]	1
Total	--	$ --	--
Mortgage Insurance—Rental Housing for Moderate-Income Families[d]			
Inland Development Corporation	Mill Pond Apartments	$ --[c]	1
Henry Nagy, Robert Nagy, John Pankratz, Milo Nimmer, Donald J. Tikalsky, Ray M. Stanley, and Howard A. Lorenz	River Park Apartments (Part 2)	--[c]	1
Jack R. Styza, Morton Harris, Raymond P. Harris, and Morton Luck	Waterford Square, Phase III	--[c]	1
Northridge Lakes Development Company	Northridge Lakes, Phase IV	--[c]	2
	Northridge Lakes, Phase V	--[c]	2
Total	--	$ --	--
Interest Reduction Payments—Rental and Cooperative Housing for Lower Income Families[e]			
Henry Nagy, Robert Nagy, John Pankratz, Milo Nimmer, Donald J. Tikalsky, Ray M. Stanley, and Howard A. Lorenz	River Park Apartments (Part 1)	$ --[c]	1
Reilly-Joseph Company	Lexington Village (Phase II)	--[c]	1
Total	--	$ --	--
Urban Renewal Projects[f]			
City of Milwaukee	City of Milwaukee Neighborhood Development Program Second Year Funding	$3,779,624	2
Total	--	$3,779,624	--
Low to Moderate Income Housing Loans[g]			
Southeastern Wisconsin Housing Corporation	Self-Help Housing for Migrant and Former Migrant Seasonal Farm Workers	$ 91,200	2
Total	--	$ 91,200	--

[a] *SEWRPC action codes are: (1) Project is in conformance with and serves to implement the regional plan. (2) Project is not in conflict with the regional plan. (3) Project is in conflict with the regional plan.*

[b] *Administered by the U. S. Department of Housing and Urban Development, Housing Production and Mortgage Credit/FHA, pursuant to Section 221(d)(3) of the National Housing Act, as amended.*

[c] *Application for mortgage insurance only; no grant requested.*

[d] *Administered by the U. S. Department of Housing and Urban Development, Housing Production and Mortgage Credit/FHA, pursuant to Section 221(d)(4) of the National Housing Act, as amended.*

[e] *Administered by the U. S. Department of Housing and Urban Development, Housing Production and Mortgage Credit/FHA, pursuant to Section 236 of the National Housing Act, as amended.*

[f] *Administered by the U. S. Department of Housing and Urban Development, Community Development, pursuant to the Housing Act of 1949.*

[g] *Administered by the U. S. Department of Agriculture, Farmers Home Administration, pursuant to the Housing Act of 1949, as amended.*

Source: SEWRPC.

Table 42

CONSERVATION PROGRAM FEDERAL GRANT APPLICATIONS REVIEWED DURING 1973
BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Unit of Government	Proposed Program	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Resource Conservation and Development[b]				
Soil and Water Conservation Districts of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha Counties	Resource Conservation and Development Project for Southeastern Wisconsin	$--[c]	--	1
Total	--	$--	--	--

[a]*SEWRPC action codes are: (1) Project is in conformance with and serves to implement the regional plan.*
(2) Project is not in conflict with the regional plan.
(3) Project is in conflict with the regional plan.

[b]*Administered by the U. S. Department of Agriculture, pursuant to the Food and Agriculture Act of 1962.*

[c]*Funding request not made at time of review.*

Source: SEWRPC.

Table 43

LAW ENFORCEMENT ASSISTANCE PROGRAM FEDERAL GRANT APPLICATIONS REVIEWED
DURING 1973 BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Applicant	Program Description	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Alternatives to the Formal Criminal Justice Process[b]				
Racine County Community Action Program Committee, Inc.	Racine County Community Action Diversionary Program	$ 71,960	75	2
Total	--	$ 71,960	--	--
Community Alternatives to Incarceration[b]				
Milwaukee Restitution Center. . . .	Restitution Center Program	$ 180,000	90	2
Total	--	$ 180,000	--	--
Community Education[b]				
NAACP "Project Rebound," Inc. . .	Rehabilitation Program	$ 196,000	81	2
Total	--	$ 196,000	--	--
Community Services to County Jails[b]				
Ozaukee County Sheriff's Department .	Jail Services Coordinator Prisoner Exercise Equipment	$ 13,221 2,100	75 75	2 2
Total	--	$ 15,321	--	--

Table 43 (continued)

Applicant	Program Description	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Defender Services[b]				
Legal Aid Society of Milwaukee	Racine County Defender Project	$ 81,405	78	2
Racine County	Racine County Legal Services Project	129,225	75	2
Total	--	$ 210,630	--	--
Drug Abuse Prevention in the Community[b]				
Racine County	Addiction Research and Treatment Program	$ 145,200	100	2
Washington County Drug Information Center, Inc.	Drug Abuse Prevention Program	19,500	75	2
Total	--	$ 164,700	--	--
Human Relations Training and Education[b]				
Innovative Youth Services of Racine, Inc.	Drug Abuse Training: Awareness House	$ 3,350	74	2
Washington County Drug Information Center, Inc.	Training Program to Curtail Drug Abuse	533	75	2
Total	--	$ 3,883	--	--
Law Enforcement Equipment and Technology[b]				
Greenfield Police Department	Photo Equipment and Technology Update	$ 6,000	94	2
Kenosha Health Department Laboratory	Infrared Analysis of Controlled Substances	9,900	90	2
Milwaukee Area Technical College	Training of Minorities for Police Recruitment	47,844	90	2
Muskego Police Department	Inservice Training for Sworn Officers	1,140	95	2
Ozaukee County Sheriff's Department	Purchase of Recording and Transcribing Equipment	1,125	75	2
Port Washington Police Department	Equipment Purchase	437	75	2
Racine Police Department	Electronic Detection Device	26,127	90	2
	Operation R.O.C.K. (Reduce Organized Crime Kit)	18,183	72	2
Racine County Sheriff's Department	Purchase of Camera Equipment	487	75	2
Thiensville Police Department	Law Enforcement Equipment	674	71	2
Waukesha Police Department	Purchase of Investigative and Surveillance Equipment	765	75	2
Total	--	$ 112,682	--	--
Legal Assistance to Police[b]				
Racine Police Department	Legal Advisory	$ 22,958	75	2
Total	--	$ 22,958	--	--
Police Communications Improvement[b]				
Greenfield Police Department	Modernization of Police Radio Communication System	$ 50,000	91	2
Town of Linn Police Department	Upgrading of Communications System	911	75	2
Milwaukee Police Department	Police UHF Radio Conversion Project	662,040	90	2
Milwaukee County Sheriff's Department	Expanded and Corrected Countywide Communications System	306,900	90	2

Table 43 (continued)

Applicant	Program Description	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Ozaukee County Sheriff's Department	Independent Engineering Study of Communications	1,500	75	2
New Berlin Police Department	Communications Renovation	41,250	75	2
Ozaukee County Sheriff's Department	Ozaukee-Washington County Combined Radio Equipment	201,641	75	2
Racine County	Law Enforcement Radio Communications Improvement	393,750	75	2
	Communications Consultant	15,000	75	2
Waukesha Police Department	Communication Equipment Purchase	28,812	75	2
Wauwatosa Police Department	Purchase of Portable Radios	3,875	90	2
Total	--	$1,705,679	--	--
Police Community Services[b]				
Milwaukee Police Department	Police Community Relations Mobile Unit	$ 6,300	90	2
Muskego Police Department	Development of Police Personnel Teams	52,871	90	2
Racine Spanish Center	Latino Community Criminal Justice Advocate	24,693	95	2
Total	--	$ 83,864	--	--
Police Specialized Training[b]				
Brookfield Police Department	Law Enforcement Executive Development Seminar	$ 612	75	2
Kenosha Police Department	National District Attorneys Association 5th National Institute	238	75	2
Milwaukee Police Department	Training of Polygraph Examiner	2,260	80	2
Racine Police Department	National Association of Police Community Relations Officers Workshop	1,080	75	2
	1973 Conference of Wisconsin Association for Identification	247	48	2
Racine County Sheriff's Department	Homicide Investigation Seminar	525	75	2
Washington County Sheriff's Department	National Conference on Juvenile Justice	612	90	2
Waukesha County Technical Institute	Police Artist/Perspective Crime Scene Drawing	1,200	80	2
Total	--	$ 6,774	--	--
Prosecutorial Administration and Support[b]				
Ozaukee County	Specialized Staff Assistance	$ 10,687	75	2
Racine County	Specialized Staff Assistance	20,268	75	2
Total	--	$ 30,955	--	--
Reintegration of the Offender Into the Community[b]				
Goodwill Industries, Milwaukee Area, Inc.	Job Preparation/Placement for Adult Offenders	$ 226,168	100	2
Urban League of Racine, Inc.	Project Re-entry	54,876	90	2
Total	--	$ 281,044	--	--

Table 43 (continued)

Applicant	Program Description	Amount of Federal Grant Request	Percent of Total Cost	SEWRPC Action[a]
Supplemental Funds for Coordinated Planning[b]				
Milwaukee Fire and Police Commission	Office of Criminal Justice Planning	$ 59,400	90	2
Waukesha County	Planner/Coordinator for Waukesha County Criminal Justice System	19,000	75	2
Total	--	$ 78,400	--	--
Treatment Alternatives[b]				
Lakeland Counseling Center of Walworth County	Drug Abuse Treatment Improvement Project	$ 32,433	75	2
The Wisconsin Family, Inc.	Therapeutic Community for Drug Addicts, Abusers	52,031	60	2
Total	--	$ 84,464	--	--
Youth Service Systems[b]				
Carroll College	Youth Needs Planning Survey for Waukesha County	$ 23,818	75	2
Community Rehabilitation Agreement	Community Rehabilitation Agreement Program	49,741	75	2
Kenosha County Association for Mental Health	Crisis Intervention Center for Kenosha County	90,000	75	2
Kenosha Youth Foundation	Outpost Youth Counselor	20,252	75	2
	Youth Service Bureau Feasibility Study and Planning Grant	13,406	90	2
City of Milwaukee	West Side Youth Development—Activity Program	25,000	74	2
New Berlin Police Department	Police Social Worker	13,176	75	2
Ozaukee County Sheriff's Department	Youth Recovery Program	15,000	75	2
Racine County Planning Council	Youth Services	4,800	75	2
Washington County Department of Social Services	Youth Service Bureau Feasibility Study	18,000	90	2
Waukesha County	Juvenile Court Work Program	15,949	75	2
Total	--	$ 289,142	--	--

[a] *SEWRPC action codes are: (1) Project is in conformance with and serves to implement the regional plan, (2) Project is not in conflict with the regional plan. (3) Project is in conflict with the regional plan.*

[b] *Administered by the Wisconsin Council on Criminal Justice, pursuant to the Omnibus Crime Control and Safe Streets Act of 1968 as amended in 1970.*

Source: SEWRPC.

Environmental Impact Statements

Since 1971 the Commission has reviewed and commented on environmental impact statements for various federally aided projects. The statements are prepared to fulfill requirements of the National Environmental Policy Act of 1969 and the regulations promulgated pursuant to the Act by the U. S. Council on Environmental Quality. The environmental impact statements are on file in the Commission offices and are available to the public for review and use. Copies of the statements are provided at reproduction cost when requested. As the Metropolitan

Clearinghouse, the Commission has the responsibility of assuring that all of the state, areawide, or local units and agencies of government which may have interest in a proposed project receive an opportunity to review the environmental impact statement. In 1973 the Commission reviewed 13 such statements, as shown in Table 44.

PUBLIC INFORMATION ACTIVITIES

During 1973 the Commission continued its public information activities through the issuance of 10 press releases distributed to the media in the Region; publication of six newsletters which were mailed to a list of about 2,500 recipients; reproduction at cost of a wide variety of maps, aerial photographic prints, and planning and engineering data; sale at less than production cost of various planning reports and other technical and informational documents published by SEWRPC; and speaking engagements before local governmental, civic, and professional groups.

The following is a brief summary of the Commission staff speaking engagements involving presentation of the various Commission work program elements and implementation activities:

Executive Director	104
Assistant Directors	47
Cartographic and Graphic Arts Division	5
Community Assistance Planning Division	18
Environmental Planning Division	60
Land Use Planning Division	39
Planning Research Division	29
Transportation Planning Division	9

As part of its documentation of ongoing work programs, the Commission issued several publications as well as staff memoranda during 1973, including:

PROSPECTUSES

- Deep Sandstone Aquifer Simulation Modeling Program Prospectus, October 1972, 20 pages
- Regional Park, Outdoor Recreation, and Related Open Space Planning Program Prospectus, March 1973, 52 pages
- Prospectus—Preliminary Engineering Study for the Abatement of Pollution from Combined Sewer Overflow in the Milwaukee Metropolitan Area, July 1973, 36 pages

PLANNING REPORTS

- No. 17—A Jurisdictional Highway System Plan for Ozaukee County, December 1973

ANNUAL REPORTS

- 1972 Annual Report, June 1973, 163 pages

TECHNICAL REPORTS

- No. 8—A Land Use Plan Design Model, Volume 3—Final Report, April 1973, 102 pages

TECHNICAL RECORDS

- Volume 3, No. 5, March 1973, 51 pages

Table 44

ENVIRONMENTAL IMPACT STATEMENTS REVIEWED DURING 1973 BY THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Agency Requesting Review	Project
City of Milwaukee	Reconstruction of Portions of N. Water Street and E. Juneau Avenue, City of Milwaukee
Robinson, Welch & Associates, Inc.	Whitewater Interceptor Sewer and Waste Water Treatment Plant
U. S. Department of the Army	Maintenance Dredging, City of Port Washington
The State Historical Society of Wisconsin	Old World Wisconsin Project, Waukesha County
Wisconsin Department of Natural Resources	Natural Resources Board Wild Resources Policy
	Revisions to State of Wisconsin Financial Assistance Rules for Water Pollution and Abatement
	Material Removal from Bed of Lilly Lake, Kenosha County
	Lac LaBelle Metropolitan Sewerage District, Waukesha and Jefferson Counties
Wisconsin Department of Transportation	Harrington Beach State Park Development, Ozaukee County
	Park Freeway and Spur, Milwaukee County
	Airport Spur from IH 94 to General Mitchell Field, Milwaukee County
	STHs 74 and 100, Milwaukee and Waukesha Counties
	USH 18 Improvement, Waukesha County

Source: SEWRPC.

COMMUNITY ASSISTANCE PLANNING REPORTS

- No. 1—Residential, Commercial, and Industrial Neighborhoods, City of Burlington and Environs, February 1973, 96 pages

STAFF MEMORANDA

Regional Inventory of Travel Study Design Memoranda

- Benchmark Report No. 1, Staff Memorandum No. 11—Goods Movement Survey, January 29, 1973, 15 pages
- Benchmark Report No. 2, Procedures for Summarizing, Adjusting, and Using Basic Travel Inventory Data, March 27, 1973, 32 pages

Regional Park, Outdoor Recreation, and Related Open Space Planning Program Study Design Memoranda

- No. C-1—Mapping, September 25, 1973, 4 pages
- No. C-2—Population and Economic Activity, September 25, 1973, 5 pages
- No. C-4—Existing Land Use, September 25, 1973, 5 pages
- No. C-5—Natural Resource Base, September 25, 1973, 7 pages
- No. C-6—Existing Park, Outdoor Recreation, and Related Open Space Facilities, September 25, 1973, 20 pages
- No. C-7—Existing Recreation Use, September 25, 1973, 9 pages
- No. C-8—Potential Park, Outdoor Recreation, and Related Open Space Areas, September 25, 1973, 8 pages

A total of 4,725 copies of Commission prospectuses, planning reports, planning guides, technical reports, technical records, lake use reports, annual reports, and conference proceedings were distributed on request during the year. In addition, nearly 900 copies of community profiles were distributed. The majority of these requests came from local governments, universities and public libraries, and from private firms and individuals. Requests were also made during 1973 for more than 5,067 prints of aerial photographs of the Region, primarily from local units of government, public utilities, realtors, wholesale and retail grocery chains, and major oil companies operating in the Region. Approximately 300 soil prints and 1,200 other map prints were also distributed.

Commission publications and materials and their general distribution to date are shown in Table 45.

Table 45

PUBLICATIONS AND RELATED MATERIALS OF THE SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION 1962-1973

Publication	Distribution	
	During 1973	To Date
Prospectuses		
Regional Planning Program, April 1962	0[a]	1,000
Root River Watershed Planning Program, March 1963	0[a]	500
Fox River Watershed Planning Program, October 1964	0[a]	500
Continuing Land Use-Transportation Study, October 1965	0[a]	50
Milwaukee River Watershed Planning Program, September 1966	0[a]	250
Comprehensive Library Planning Program, April 1968	7	657
Community Shelter Planning Program, August 1968	2	348
Racine Urban Planning District Comprehensive Planning Program, November 1968	2	214
Regional Sanitary Sewerage System Planning Program, December 1968	2	415
Menomonee River Watershed Planning Program, November 1969	14	447
Comprehensive Regional Airport Planning Program, December 1969	2	488
Regional Housing Study, December 1969	13	538
Deep Sandstone Aquifer Simulation Modeling Program, October 1972	96	96
Regional Park, Outdoor Recreation, and Related Open Space Planning Program, March 1973	348	348
Preliminary Engineering Study for the Abatement of Pollution from Combined Sewer Overflow in the Milwaukee Metropolitan Area, July 1973	189	189
Study Designs		
Study Design for the Continuing Regional Land Use-Transportation Study, 1970-1974	1	99
Study Design for the Continuing Land Use-Transportation Study, 1972-1976	11	83

Table 45 (continued)

Publication	Distribution	
	During 1973	To Date
Planning Reports		
No. 1 - Regional Planning Systems Study, December 1962	0[a]	250
No. 2 - Regional Base Mapping Program, July 1963	0[a]	500
No. 3 - The Economy of Southeastern Wisconsin, June 1963	0[a]	500
No. 4 - The Population of Southeastern Wisconsin, June 1963	0[a]	500
No. 5 - The Natural Resources of Southeastern Wisconsin, June 1963	14	1,471
No. 6 - The Public Utilities of Southeastern Wisconsin, July 1963	0[a]	500
No. 7 - The Land Use-Transportation Study		
Volume 1 - Inventory Findings—1963, May 1965	0[a]	2,000
Volume 2 - Forecasts and Alternative Plans—1990, June 1966	0[a]	1,939
Volume 3 - Recommended Regional Land Use and Transportation Plans—1990, November 1966	0[a]	1,000
No. 8 - Soils of Southeastern Wisconsin, June 1966	0[a]	1,500
No. 9 - A Comprehensive Plan for the Root River Watershed, July 1966	0[a]	500
No. 10 - A Comprehensive Plan for the Kenosha Planning District		
Volume 1 - Inventory Findings, Forecasts, and Recommended Plans, February 1967	0[a]	500
Volume 2 - Implementation Devices, February 1967	0[a]	500
No. 11 - A Jurisdictional Highway System Plan for Milwaukee County, March 1969	10	195
No. 12 - A Comprehensive Plan for the Fox River Watershed		
Volume 1 - Inventory Findings and Forecasts, April 1969	26	682
Volume 2 - Alternative Plans and Recommended Plan, February 1970	25	626
No. 13 - A Comprehensive Plan for the Milwaukee River Watershed		
Volume 1 - Inventory Findings and Forecasts, December 1970	71	533
Volume 2 - Alternative Plans and Recommended Plan, October 1971	91	524
No. 14 - A Comprehensive Plan for the Racine Urban Planning District		
Volume 1 - Inventory Findings and Forecasts, December 1970	0[a]	500
Volume 2 - The Recommended Comprehensive Plan, October 1972	0[b]	0[b]
Volume 3 - Model Plan Implementation Ordinances, September 1972	0[b]	0[b]
No. 15 - A Jurisdictional Highway System Plan for Walworth County, October 1972	213	213
Planning Guides		
No. 1 - Land Development, November 1963	0[a]	750
No. 2 - Official Mapping, February 1964	8	819
No. 3 - Zoning, April 1964	0[a]	500
No. 4 - Organization of Planning Agencies, June 1964	0[a]	750
No. 5 - Floodland and Shoreland Development, November 1968	31	973
No. 6 - Soils Development, August 1969	67	944
Technical Reports		
No. 1 - Potential Parks and Related Open Spaces, September 1965	0[a]	510
No. 2 - Water Law in Southeastern Wisconsin, January 1966	0[a]	500
No. 3 - A Mathematical Approach to Urban Design, January 1966	0[a]	225
No. 4 - Water Quality and Flow of Streams in Southeastern Wisconsin, November 1966	7	471
No. 5 - Regional Economic Simulation Model, October 1966	0[a]	500
No. 6 - Planning Law in Southeastern Wisconsin, October 1966	13	494
No. 7 - Horizontal and Vertical Survey Control in Southeastern Wisconsin, July 1968	10	479
No. 8 - A Land Use Design Model		
Volume 1 - Model Development, January 1968	42	997
Volume 2 - Model Test, October 1969	0[a]	1,014
Volume 3 - Final Report, April 1973	963	963
No. 9 - Residential Land Subdivision in Southeastern Wisconsin, September 1971	17	385
No. 10 - The Economy of Southeastern Wisconsin, December 1972	399	399
No. 11 - The Population of Southeastern Wisconsin, December 1972	0[c]	0[c]
No. 12 - A Short-Range Action Housing Program for Southeastern Wisconsin-1972 and 1973, June 1972	298	721
Technical Records		
Volume 1 - Numbers 1-6	26	3,616
Volume 2 - Numbers 1-6	15	4,417
Volume 3 - Numbers 1, 2	14	1,171
Volume 3 - Number 3	17	516
Volume 3 - Number 4	14	345
Volume 3 - Number 5	280	280

Table 45 (continued)

Publication	Distribution	
	During 1973	To Date
Lake Use Reports	365	1,704
Annual Reports		
1961	0[a]	1,500
1962	0[a]	1,500
1963	0[a]	1,500
1964	2	1,260
1965	2	1,259
1966	0[a]	1,500
1967	2	1,186
1968	0[a]	2,119
1969	2	1,966
1970	45	1,093
1971	263	910
1972	684	684
Conference Proceedings		
1st Regional Planning Conference, December 6, 1961	0[a]	300
2nd Regional Planning Conference, November 14, 1962	0[a]	300
3rd Regional Planning Conference, November 20, 1963	0[a]	300
4th Regional Planning Conference, May 12, 1965	0[a]	423
5th Regional Planning Conference, October 26, 1965	0[a]	425
6th Regional Planning Conference, May 6, 1969	0	355
7th Regional Planning Conference, January 19, 1972	2	327
Community Profiles		
Volume 1	25	295
Volume 2	35	212
Volume 3	835	835
Aerial Photographs		
1963 High-Flight	0	107
1963 Low-Flight	4	13,330
1967 Low-Flight	6	22,962
1970 High-Flight	329	1,728
1970 Low-Flight	4,728	22,042
Maps and Related Materials		
1963 Land Use	26	1,524
1990 Proposed Land Use and Freeway System	85	1,319
Regional and County Base Maps	260	1,981
SEWRPC Topographic Maps	124	1,085
Traffic Analysis Zone Maps	11	187
Soil Maps	292	9,051
School District Maps	2	19
Sanitary Sewerage System Maps	0	47
Regional Census Tract Maps	23	144
Street Index Maps	180	50
Control Survey Summary Diagrams	183	462
Metropolitan Map Series Maps	127	555
1990 Proposed Jurisdictional Highway System Plan for Milwaukee County	14	19
1990 Fox and Milwaukee River Watershed Plan Maps	0	19
Miscellaneous Maps	336	336

[a] *Supply exhausted.*

[b] *No copies were distributed during 1973 because the Racine Urban Planning District Citizens Advisory Committee had not yet completed its evaluation of the plan alternatives.*

[c] *No copies were distributed during 1973 because the report was not received from the printer in time for distribution before January 1, 1974.*

Source: SEWRPC.

COMMISSION AND ADVISORY COMMITTEE MEETINGS

The following meetings of the full Commission, its committees, and its advisory committees were held in 1973:

Full Commission	4
Executive Committee	9
Administrative Committee	8
Planning and Research Committee	10
Technical Coordinating and Advisory Committee on Regional Land Use-Transportation Planning	2
Technical Advisory Committee on Natural Resources and Environmental Design	0
Technical Advisory Committee on the Abatement of Pollution from Combined Sewer Overflow in the Milwaukee Metropolitan Area	1
Technical Advisory Committee on the Deep Sandstone Aquifer Simulation Modeling Program	1
Root River Watershed Committee	2
Fox River Watershed Committee	1
Kinnickinnic River Watershed Committee	1
Milwaukee River Watershed Committee	2
Menomonee River Watershed Committee	2
Technical Coordinating and Advisory Committee on Regional Sanitary Sewerage System Planning	7
Technical Coordinating and Advisory Committee on Regional Airport Planning	3
Technical Advisory Committee on Library Planning	1
Racine Urban Planning District Citizens Advisory Committee	6
Technical and Citizen Advisory Committee on Regional Housing Studies	7
Technical and Citizen Advisory Committee on Regional Park, Outdoor Recreation, and Related Open Space Planning	2
Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Kenosha County	1
Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Milwaukee County	1
Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Ozaukee County	3
Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Racine County	4
Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Walworth County	1
Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Washington County	4
Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Waukesha County	3
Racine Mass Transit Development Program Technical Coordinating and Advisory Committee	1

STAFF TECHNICAL MEETINGS

The Commission staff frequently meets with local, state, and federal public agency personnel, planning and engineering consultants, and others in carrying out is planning programs and plan implementation activities. The following such meetings were held in 1973, exclusive of community assistance and public information efforts:

Executive Director	.238
Assistant Directors	.182
Cartographic and Graphic Arts Division	44
Community Assistance Planning Division	.294
Data Collection Division	20
Environmental Planning Division	71
Land Use Planning Division	.321
Planning Research Division	62
Transportation Planning Division	.107

STAFF ORGANIZATION

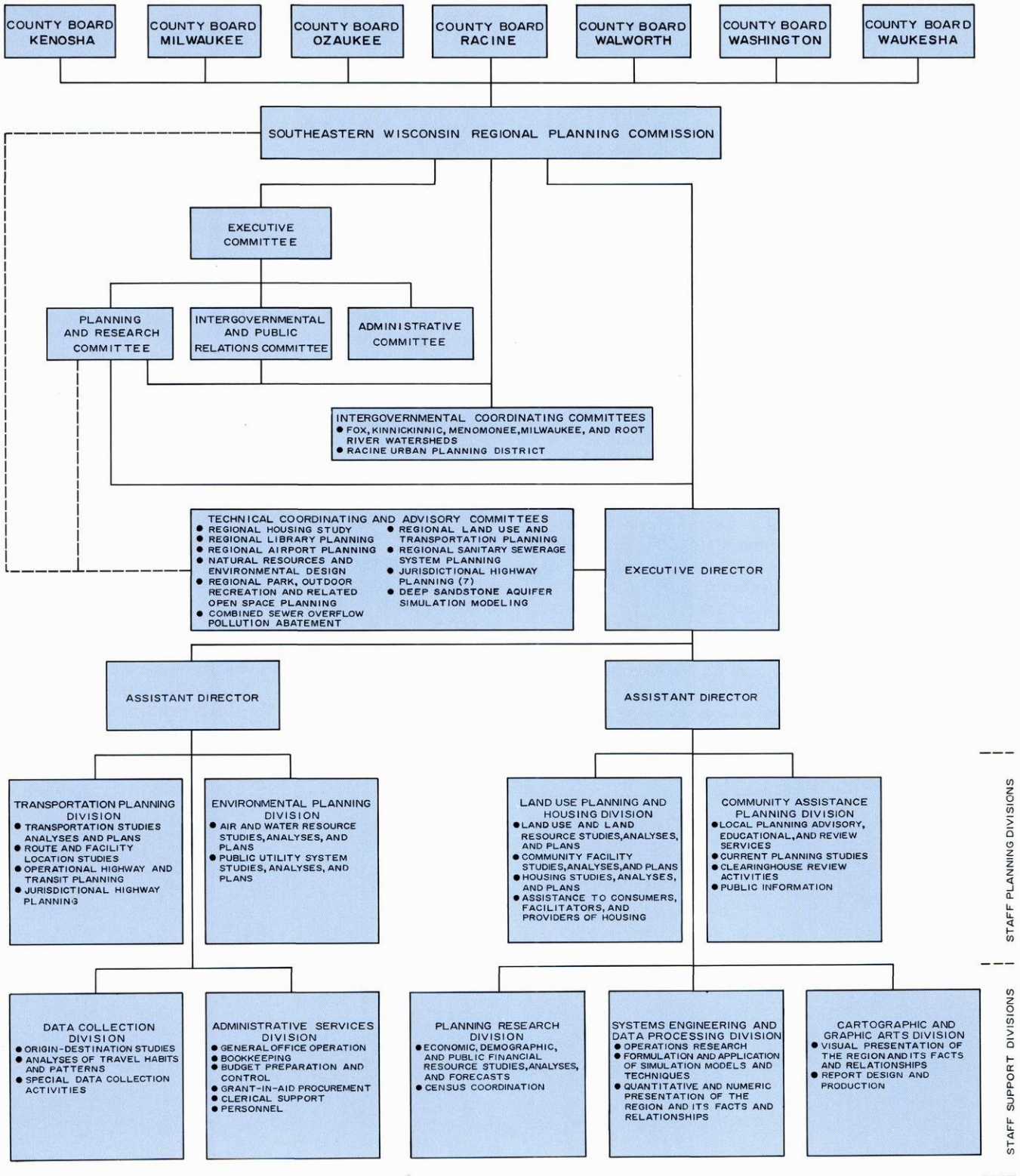
The Commission planning programs are carried out by a core staff of full-time professional, technical, administrative, and clerical personnel, supplemented by additional temporary full- and part-time staff as required by the various work programs underway. In 1973 the staff totaled 87, including 66 permanent full-time and 21 temporary full- or part-time employees. Of this total, 21 were classified as administrative or clerical personnel; 24 were classified as technical personnel; and 42 were classified as professional personnel. In addition, the Commission employed a total of 77 persons in temporary full- or part-time positions during 1973 in order to complete the major inventory of travel habits and patterns begun in 1972; to conduct an exterior housing survey under the regional housing study; and to initiate field operations for the regional park, outdoor recreation, and open space planning program.

As in past years, several governmental agencies assigned personnel to work directly with the Commission staff for all or part of the 1973 calendar year. Such interagency staff assignments are extremely valuable, providing not only supplemental support to the normal Commission staff but also a foundation for a full and complete understanding of the Commission's planning programs by the personnel of the various plan implementation agencies throughout the Region. During 1973, interagency staff assignments were carried out by planning engineers representing the Wisconsin Department of Transportation, Divisions of Highways and Planning, and the City of Milwaukee Department of Public Works, Bureau of Engineering.

The Commission staff is organized into four staff planning and five staff support divisions, as shown in Figure 21, reporting to the Executive Director.

Figure 21

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
EXISTING STAFF AND COMMITTEE STRUCTURE



Source: SEWRPC.

FINANCING

The basic financial support for the Commission's varied work programs is provided by county contributions apportioned among the member counties on the basis of equalized assessed valuation. These basic funds are heavily supplemented by local, state, and federal funds for specific work projects (see Figure 22). Revenue received by the Commission during 1973 totaled nearly $1.4 million, of which about $602,000, or about 43 percent, was received from federal grants-in-aid; about $235,000, or nearly 17 percent, was received from state grants-in-aid; about $408,000, or about 29 percent, was received by member counties under provisions of the state regional planning enabling legislation; about $48,000, or about 4 percent, was received from member counties for the conduct by contract of special regional or subregional planning programs; and about $75,000, or about 5 percent, was received from member cities, villages, towns, and school districts under contracts for special services. The remaining $22,000, or about 2 percent, was derived through the sale of publications, maps, and aerial photographs and from interest received on time deposits.

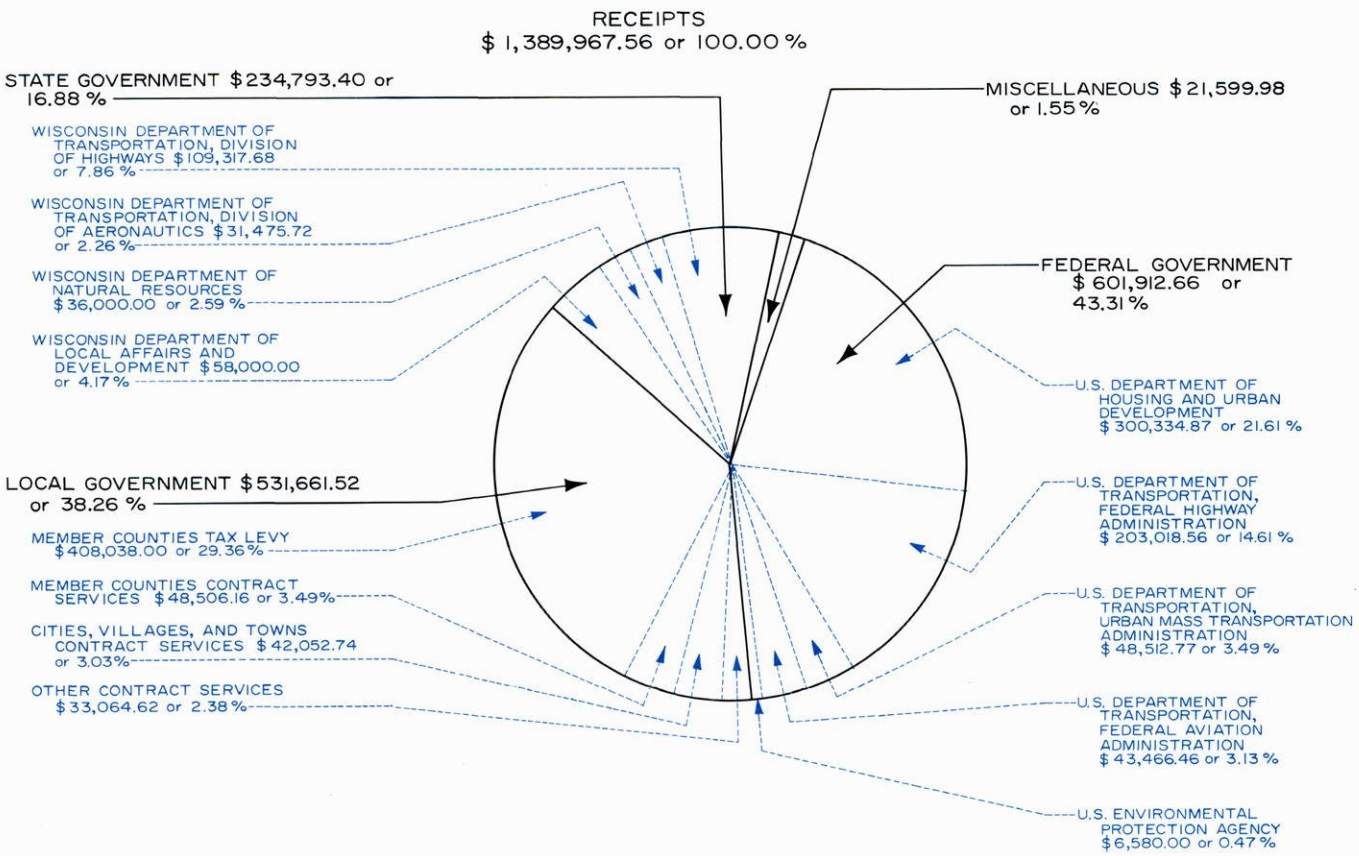
Expenditures during 1973 totaled about $1.4 million, of which about $825,000, or 58 percent, was expended for Commission work efforts relating to land use and transportation planning; about $161,000, or about 11 percent, was expended for Commission work efforts relating to environmental planning; about $138,000, or nearly 10 percent, was expended for Commission work efforts relating to housing planning; about $25,000, or nearly 2 percent, was expended for Commission work efforts relating to community facility planning; about $89,000, or about 6 percent, was expended for Commission work efforts relating directly to planning for local community development; and about $188,000, or about 13 percent, was expended for administrative salaries and general overhead. The detailed expenditures for individual projects within each of the major Commission work program areas are shown in Figure 22.

It should be recognized in reviewing the foregoing broad categorical breakdown of Commission expenditures during 1973 that a substantial interdependence exists between the various projects included in the major Commission work categories. For example, much of the Commission effort directed at guiding local community development could not be accomplished in a sound manner without the substantial data base and the plan elements established under the other regional planning programs. In addition, it should be recognized that a project within one of the broad program areas often contains specific work elements directed at achieving objectives in other program areas. The land use planning effort, for example, is directed as much toward environmental protection as it is toward ensuring a compatible arrangement of land uses. Similarly, the major Commission work effort consisting of the inventory of travel habits and patterns begun in 1972 and completed in 1973 provides input to land use planning, housing planning, and environmental protection planning, as well as serving as a major input for transportation planning. Finally, nearly all Commission work projects contain elements directed at providing guidance and advice in matters of local community development, ranging from the provision of travel demand data to a local engineer for use in the design of transportation facility improvement to the provision of specific land use and housing site data to a local housing authority.

The Commission, as a matter of policy, has a complete financial audit performed each year by a certified public accountant. The report of this audit for 1973 is set forth in full in Appendix D of this annual report. In addition to the Commission's own audit, the U. S. Department of Housing and Urban Development; the U. S. Department of Transportation, Federal Highway Administration; the U. S. Environmental Protection Agency; and the State Highway Commission of Wisconsin perform periodic independent audits of all projects to which they contribute financial support. These independent audits, while not reproduced herein, have in every case reflected full compliance by the Commission with all pertinent state and federal regulations and procedures.

Figure 22

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
1973 RECEIPTS AND EXPENDITURES



Source: SEWRPC.

PROSPECTIVE COMMISSION WORK PROGRAMS A FORWARD GLANCE

Since its creation in 1960, the Commission has been actively performing its three assigned functions of inventory, plan design, and plan implementation. Initial emphasis in the Commission's work program was on the inventory function, with increasing attention paid in recent years to plan design and more recently to plan implementation. A well-prepared, technically sound comprehensive plan for the development of the Region is considered essential by the Commission if land-use development is to be coordinated on an areawide basis with the development of supporting transportation, utility, and community facilities systems, and if these individual functional systems are to be coordinated on an areawide basis with each other. Such a plan is also essential if land use development is to be adjusted to the ability of the underlying and supporting natural resource base to sustain such development; if serious environmental and developmental problems are to be avoided; if excessive and unnecessary expenditures of tax money are to be avoided; and if a more healthful, attractive, and efficient regional settlement pattern is to be evolved. Moreover, proper performance of other assigned Commission functions, such as the areawide review responsibility for most federal grant-in-aid programs, depends upon the existence of a comprehensive and fully coordinated physical development plan.

Pursuant to its statutory charge to prepare such a plan for the Region, the Commission has since 1960, in a methodical and orderly way, completed and adopted nine major components of such a comprehensive plan: a regional surface transportation (highway and mass transit) plan; a regional land use plan; comprehensive water-related community facility plans for the Root, Fox, and Milwaukee River watersheds; jurisdictional highway system plans for Milwaukee and Walworth Counties; a Milwaukee area transit plan; and a comprehensive development plan for the Kenosha Urban Planning District. As noted earlier in this report, the Commission during 1973 also completed all technical work on jurisdictional highway system plans for Ozaukee and Waukesha Counties, on a regional sanitary sewerage system plan, and on a comprehensive urban development plan for the Racine Urban Planning District. The Commission also had programs underway designed to result in a regional airport system plan; a regional library facilities and services plan; a regional housing plan; a Menomonee River watershed plan; a regional park, outdoor recreation, and related open space plan; jurisdictional highway system plans for Kenosha, Racine, and Washington Counties; and transit development programs for the Kenosha, Milwaukee, and Racine urban areas, all of which are intended to produce additional elements of the evolving comprehensive plan for the physical development of the Region.

COMMISSION POLICY ON ADDITIONAL REGIONAL PLAN ELEMENTS

In considering new work programs designed to provide additional elements of the required comprehensive plan for the physical development of the Region, the Commission has developed the following basic policy:

1. Because of the direct relationship to implementation of already completed and adopted regional land use and surface transportation plans, and because of the pressing need to more fully coordinate major public works facility development with land use development on an areawide basis, priority would be given to the following planning programs:

   a. The continuing regional land use-transportation study, including subregional and regional highway, transit, and airport planning and programming efforts. This study would be directed not only at maintaining current the regional land use and surface transportation plans and the supporting data base prepared and assembled under the initial regional land use-transportation study, but would also be directed at securing implementation of such plans and at the reappraisal of such plans at appropriate points in time.

   b. A regional sanitary sewerage system planning program (completed in 1973).

   c. A regional park, outdoor recreation, and related open space planning program (mounted in 1973).

   d. A regional water supply system planning program.

   e. A regional air quality maintenance planning program.

   These programs will also substantially fulfill the Commission's obligations to its constituent state and local units and agencies of government with regard to assisting them in meeting the areawide planning prerequisites set forth in the 1962 Federal Aid Highway Act, the 1964 Federal Urban Mass Transportation Act, the 1965 Federal Housing and Urban Development Act, the 1970 Airport and Airway Development Act, and the 1967 Clean Air Act; as well as the areawide grant review requirements set forth in Section 204 of the

1966 Federal Demonstration Cities and Metropolitan Act, the 1968 Intergovernmental Cooperation Act, and U. S. Office of Management and Budget Circular A-95. The preparation of such plan elements will continue to qualify state and local units of government concerned with federal loans and grants under these important programs.

2. Because of the need to recognize the serious water resource related problems existing within the Region, including water pollution, flooding and flood damages, deteriorating fish and wildlife habitat, and groundwater supply, comprehensive watershed planning programs would be conducted serially upon receipt of specific requests for such studies from local units of government and upon securing of necessary funding. Comprehensive watershed planning programs are intended to provide, within the limits of each watershed in the Region, one of the key elements of a comprehensive plan for the physical development of the Region—a long-range plan for the staged development of water-related community facilities. Watershed plans are intended to form the basic regional storm water drainage and flood control plan element, as well as a major portion of the basic regional water pollution abatement plan element, and to provide important inputs to the regional sanitary sewerage system, regional water supply, and regional park and related open space system plan elements. By the end of 1973, the Commission had completed and adopted comprehensive watershed plans for the Root, Fox, and Milwaukee River watersheds, which together comprise about 58 percent of the area of the Region; had underway a comprehensive watershed planning program for the Menomonee River watershed, covering an additional 5 percent of the Region; and had begun preparation of a prospectus for a comprehensive watershed planning program for the Kinnickinnic River watershed, covering an additional 1 percent of the Region.

3. Because of the need to overcome limitations imposed upon sound areawide land use and supporting public works facility development by the complex pattern of local governmental boundary lines within the Region, and because of the need to encourage intergovernmental cooperation at the local level, comprehensive district planning programs would be conducted upon specific request from groups of contiguous local units of government whose combined jurisdictional boundaries comprise a rational rural or urban planning district within the Region, and within which an urgent need exists to prepare cooperative plans which can be jointly implemented and which are in greater detail than the regional plans. By the end of 1973 the Commission had completed and adopted a comprehensive plan for the Kenosha Urban Planning District, and had completed all the technical work on a comprehensive plan for the Racine Urban Planning District.

4. Because of the need to maintain flexibility with respect to rapidly changing environmental and developmental problems, and because of the need to remain responsive to the express needs and desires of the constituent local units of government and of the state and federal governments, additional regional planning programs not specifically listed above would be undertaken. This would be done, however, only upon a showing of significant and urgent need; receipt of expressed approval from the constituent county boards; and upon availability of sufficient federal, state, and local funding. Included in this category are such programs as a regional airport system planning program; regional housing, solid waste disposal, and mineral resource conservation studies; a Milwaukee harbor estuary study; and a comprehensive Lake Michigan shoreline erosion study. By the end of 1973 the Commission had received formal requests to conduct all of the foregoing studies, and had underway regional airport and housing studies.

5. Because of the need to service the plans prepared under Commission watershed and regional utility system planning programs; to refine and detail the plans and to maintain current the data base established under such programs and thereby monitor progress toward plan implementation; and to promote federal, state, and local government implementation of the plans prepared under such programs, a continuing environmental engineering planning program would be undertaken in lieu of the establishment of separate continuing studies for each of the individual plan elements which relate to the natural resource base and utility system development.

6. Because of the need to maintain current the data base established under the regional housing study, including the establishment and maintenance of a regional housing market information file; to disseminate data collected in the regional housing study to local units of government as well as to those in the private sector of the economy associated with the housing industry; and to promote implementation of the regional housing plan element in both the public and private sectors, a continuing regional housing study would be undertaken upon completion of the initial regional housing study.

In undertaking the preparation of regional and subregional plan elements, it is the Commission's practice, as an initial step, to prepare a prospectus for each of the necessary planning programs and studies. The purpose of the prospectus is to explore and recommend the means by which a feasible planning program can be established for a given plan element, and to provide the affected federal, state, and local governmental units and agencies with sufficient information to consider the benefits and costs of the proposed program and to determine the desirability of its execution. Specifically, the prospectus

establishes the need for the planning program or study; specifies the main divisions of the work 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; and provides sufficient cost data to permit the development of an initial budget and suggests possible allocation of costs among the various levels or units of government concerned.

PROGRESS DURING 1973 IN ESTABLISHING ADDITIONAL REGIONAL PLANNING PROGRAMS

During 1973, one prospectus was prepared and adopted to establish an additional major work program—the regional park, outdoor recreation, and related open space planning program. The completion of this prospectus and the mounting of the program were discussed earlier in this report. A prospectus for the preliminary engineering study for the abatement of pollution from combined sewer overflow in the Milwaukee metropolitan area was also prepared in 1973 at the request of the Milwaukee-Metropolitan Sewerage Commissions, as noted earlier. As such, it will not result in the preparation of an additional regional plan element, but rather will be used by the joint Sewerage Commissions in the conduct of the necessary engineering study to implement a major recommendation of the adopted Milwaukee River watershed plan.

During 1973 the Commission received requests to conduct comprehensive planning programs pertaining to the Kinnickinnic River watershed, the Milwaukee Harbor estuary, and Lake Michigan shoreline erosion problems. In addition, the Commission received a request to assist the City of Racine in preparing a Racine area transit development program. The Commission also received requests to cooperate in two important research projects, one proposed to be conducted by the International Joint Commission to investigate sources of pollution of the Great Lakes, and the other proposed to be conducted by the State Board of Soil and Water Conservation Districts and dealing with research concerning sediment and erosion control problems in Washington County. The Commission response to each of these requests is discussed in the following paragraphs.

Kinnickinnic River Watershed Study

Early in 1973 the Commission received a formal request from the Common Council of the City of Milwaukee to undertake a comprehensive study of the Kinnickinnic River watershed. This request followed serious flooding along the Kinnickinnic River during 1972, resulting in substantial flood damages. Subsequently, the Commission's Executive Committee on April 16, 1973, authorized the Commission staff to respond favorably to the request, and authorized the creation of the Kinnickinnic River Watershed Committee to assist in preparing a prospectus for the study. On October 15, 1973, the Commission formally established the Committee, and at year's end the Commission staff and the Committee began work on the prospectus, anticipating its completion and publication during 1974.

Milwaukee Harbor Estuary Study

By letter dated April 13, 1973, the Commission received a request from the Citizens for Menomonee River Restoration, Inc., to undertake a comprehensive study of the Milwaukee Harbor estuary which exists where the Milwaukee, Menomonee, and Kinnickinnic Rivers discharge their waters into Lake Michigan. This request was considered by the Executive Committee of the Commission on April 16, 1973. In response to this request, the Commission noted that the conduct of a Milwaukee Harbor estuary study should properly await completion of comprehensive planning programs for the Menomonee and Kinnickinnic River watersheds, and that from a practical standpoint, a Milwaukee Harbor estuary study could not be mounted until at least 1976. In addition, the Executive Committee noted that the Commission has a long-standing policy of undertaking major planning programs only at the specific request of a state agency or concerned local unit of government, and informed the citizens group that it would be necessary to obtain a formal request for the study from either the City or County of Milwaukee or an appropriate state agency.

On July 24, 1973, the City of Milwaukee Common Council formally requested the Commission to conduct a comprehensive study of the Milwaukee Harbor estuary, and to include in that study consideration of the problems of the outer harbor area. This request was considered by the Executive Committee on September 13, 1973. The Commission determined that it would respond favorably to the city's request, but directed that creation of the necessary advisory committee and preparation of a prospectus be postponed at least until the proposed Kinnickinnic River watershed study is funded and mounted. Since it is likely that funding arrangements will not be completed to permit initiation of the proposed watershed study before January 1976, and since conduct of the estuary study should logically follow completion of the Kinnickinnic study, the authorized estuary study has not been included in the proposed five-year work program.

Lake Michigan Shoreline Erosion Study

The Commission received formal requests to undertake a comprehensive study of Lake Michigan shoreline erosion early in 1973 from Kenosha, Ozaukee, and Racine Counties. In discussing these requests at a meeting on April 16, 1973, the Executive Committee of the Commission noted that while the shoreline erosion problem is regional in that it is of concern to four of the seven counties, it is also an interstate and international problem, and before considering the requests, the Commission should arrange an appropriate meeting at which all units and agencies of government concerned, and in particular the U. S. Army Corps of Engineers, would be present. Accordingly, the Commission on June 1, 1973, held an intergovernmental meeting to discuss the study, which was attended by representatives of the four counties, the Wisconsin Department of Natural Resources, the U. S. Soil Conservation Service, the U. S. Army Corps of Engineers, the University of Wisconsin-Milwaukee, and the Commission.

The consensus of those attending was that two actions should be taken. The first was the preparation by the University of Wisconsin-Extension, in cooperation with the State Board of Soil and Water Conservation Districts, of a handbook which would discuss, in layman's language, the nature of the shoreline erosion problem, potential short-term and long-term solutions, and a description of the steps which a private landowner could take for short-term protection. The second action, designed to result in a long-term solution to the problem, consisted of the Regional Planning Commission and the four county boards concerned petitioning the Wisconsin Congressional delegation representing the Region to obtain congressional authorization and funding for a comprehensive study of the Lake Michigan shoreline in Kenosha, Milwaukee, Ozaukee, and Racine Counties in order to precisely define the nature and extent of the erosion problems and to prepare a comprehensive plan for their abatement. Such a study would be conducted by the U. S. Army Corps of Engineers in accordance with Section 110 of the Federal Rivers and Harbor Act of 1962.

At year's end, the Commission had received appropriate resolutions pertaining to the proposed long-range study from the Kenosha, Ozaukee, and Racine County Boards, and members of the Wisconsin Congressional delegation representing the Region had been contacted.

In a related matter, the State Interagency Planning Council requested the Commission to participate in the preparation of an application by the state for federal funds to conduct studies relating to land use and water quality management under the recently enacted Federal Coastal Zone Management Act. At year's end, the Commission had agreed to serve on the state committee to provide leadership in the preparation of Wisconsin's application, and to provide staff support in directing the preparation of the technical aspects of the application.

Racine Area Transit Development Program

By letter dated April 15, 1973, the Mayor of the City of Racine formally requested the Commission to assist the city in preparing a transit development program for the Racine metropolitan area. Such programs provide short-range recommendations for capital and operating improvements in transit systems, and are a prerequisite for federal grants from the U. S. Department of Transportation, Federal Urban Mass Transportation Administration. At a meeting on September 13, 1973, the Executive Committee directed the Commission staff to respond favorably to the City of Racine's request, and authorized necessary staff work to be conducted as part of the continuing land use-transportation study. In addition, the Commission noted that such transit development programs would also have to be developed for the Kenosha and Milwaukee metropolitan areas.

International Joint Commission (IJC) Water Pollution Research Study

By letter dated June 12, 1973, the Commission was requested by the Wisconsin Department of Natural Resources to consider cooperating in a research program to be conducted by the International Joint Commission (IJC) and pertaining to basic research in water pollution and water quality management. The IJC was established in 1912 under the provisions of a boundary waters treaty between the United States and Canada, and is the legal entity authorized to deal with all matters involving boundary waters, including navigation, diversion, lake levels, and water pollution. The IJC research effort would be directed in part at predicting the effect of urban land uses on the Great Lakes' water quality. It was proposed that the 137 square mile Menomonee River watershed located within the Region would be a logical unit of intensive investigation concerning relationships between urban land use development and water quality because of its heavily urban character. Although the proposed IJC study would not be intended to result in a plan, the results of the research efforts could be extremely useful to the Commission in its land use and water quality management planning efforts throughout the Region. Accordingly, the Commission during 1973 authorized the staff to pursue participation, as appropriate, in the proposed research effort.

Washington County Sediment and Erosion Control Study

During 1973 the Commission was also approached by the State Board of Soil and Water Conservation Districts concerning Commission participation in a proposed research study directed at sediment and erosion control. The State Board had selected Washington County as a study area and had proposed certain studies designed, in part, to demonstrate water quality improvement as a result of implementation of soil conservation practices. The study would also be directed at the development of alternative methods of sediment and erosion control, including the development of areawide regulatory mechanisms. Because of the importance of sediment and erosion control to implementation of the already completed and adopted Commission plan elements, and because the basic research to be conducted in the proposed Washington County study could be valuable to the Commission in its areawide planning efforts, the Commission during 1973 authorized the staff to investigate participation in the proposed study. At year's end, the Commission staff had contributed toward the development of the study design and toward the preparation of a formal federal grant application to be submitted to the U. S. Environmental Protection Agency in 1974.

COMMISSION WORK PROGRAMS: 1974-1978

Based upon current committed Commission work programs, upon established Commission policy for mounting additional work programs as set forth above, and upon existing federal, state, and local governmental requests for the preparation and maintenance of regional and subregional plan elements, the Commission has prepared a schedule of major work programs for the five-year period of 1974-1978. This five-year work program is summarized in Table 46 and is set forth in graphic form in Figure 23. The program has been prepared in part to meet the U. S. Department of Housing and Urban Development's metropolitan planning assistance requirements as set forth in that agency's Handbook CPM 6041.1A.

Table 46

PROPOSED REGIONAL PLANNING WORK PROGRAM FOR SOUTHEASTERN WISCONSIN: 1974-1978

Programs Designed to Prepare Additional Plan Elements

Program Name	Actual or Anticipated Starting Date	Anticipated Completion Date
Regional Library System Planning Program	July 1968	July 1974
Regional Sanitary Sewerage System Planning Program	July 1968	March 1974
Regional Airport System Planning Program	December 1970	December 1974
Regional Housing Study	July 1970	December 1974
Menomonee River Watershed Study	April 1972	March 1975
Regional Park, Outdoor Recreation, and Related Open Space Planning Program	July 1973	June 1976
Kinnickinnic River Watershed Study	January 1976	December 1978
Regional Air Quality Maintenance Planning Program	July 1974	June 1975
Regional Water Supply System Planning Program	January 1976	December 1978

Programs Designed to Reappraise Existing Plan Elements

Program Name	Actual or Anticipated Starting Date	Anticipated Completion Date
Continuing Regional Land Use-Transportation Study	July 1966	December 1978
Continuing Housing Study	July 1973	December 1978
Continuing Environmental Engineering Planning Program	January 1974	December 1978

Other Major Work Programs

Program Name	Actual or Anticipated Starting Date	Anticipated Completion Date
Continuing Community Assistance Program	July 1968	December 1978
Preparation of Local Planning Guides		
Storm Water Management	January 1975	December 1976
Costs and Revenues Associated with Residential Development	January 1976	December 1976
Environmental Corridor Preservation	January 1977	December 1977
Agricultural Land Preservation	January 1978	December 1978
Sandstone Aquifer Simulation Modeling Program	January 1973	July 1975
International Joint Commission (IJC) Water Pollution Research Study	July 1974	December 1977
Washington County Sediment and Erosion Control Programs	July 1974	June 1978

Source: SEWRPC.

Programs Designed to Prepare Additional Plan Elements

During the next five years, it is anticipated that the Commission will conduct nine major work programs directly aimed at the preparation of additional regional and subregional plan elements. These include completion of the following programs currently underway: regional library system planning program; regional sanitary sewerage system planning program; regional airport planning program; regional housing study; regional park, outdoor recreation, and related open space planning program; and the Menomonee River watershed study. The following three new programs are proposed to be mounted and completed during the five-year program: regional air quality maintenance program, Kinnickinnic River watershed study, and regional water supply system planning program.

Programs Designed to Reappraise Existing Plan Elements

During the next five years, it is anticipated that the Commission will conduct three major continuing work programs directly aimed at the maintenance and reappraisal of already completed and adopted regional and subregional plan elements. These are the continuing regional land use-transportation study, the continuing

Figure 23

TIMING OF MAJOR WORK PROGRAM ELEMENTS
SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
1961-1978

MAJOR WORK PROGRAM ELEMENT	WORK PROGRAM OBJECTIVE	1961	1962	1963	1964	1965
INITIAL WORK PROGRAM[1] (WIS P-6) REGIONAL PLANNING SYSTEMS STUDY REGIONAL BASE MAPPING PROGRAM ECONOMIC BASE STUDY AND STRUCTURE POPULATION STUDY NATURAL RESOURCES INVENTORY PUBLIC UTILITIES INVENTORY	ESTABLISH DATA BASE					
INITIAL REGIONAL LAND USE-TRANSPORTATION PLANNING PROGRAM[2] (WIS P-23)	PREPARE REGIONAL LAND USE PLAN AND REGIONAL TRANSPORTATION PLAN (HIGHWAY AND TRANSIT)					
PREPARATION OF LOCAL PLANNING GUIDES[1] (WIS P-32, WIS P-77) LAND DEVELOPMENT GUIDE OFFICIAL MAPPING GUIDE ZONING GUIDE ORGANIZATION OF PLANNING AGENCIES FLOODLAND AND SHORELAND DEVELOPMENT GUIDE SOILS DEVELOPMENT GUIDE STORM WATER MANAGEMENT MANUAL COSTS AND REVENUES ASSOCIATED WITH RESIDENTIAL DEVELOPMENT ENVIRONMENTAL CORRIDOR PRESERVATION PRESERVATION OF AGRICULTURAL LANDS IN AN URBANIZING AREA	PREPARE LOCAL PLANNING MANUALS AND MODEL LAND USE CONTROL ORDINANCES					
ROOT RIVER WATERSHED PLANNING PROGRAM[1] (WIS P-40)	PREPARE REFINED LAND USE, NATURAL RESOURCE PROTECTION, DRAINAGE AND FLOOD CONTROL, AND WATER POLLUTION ABATEMENT PLANS FOR WATERSHED					
KENOSHA PLANNING DISTRICT PLANNING PROGRAM[1] (WIS P-42)	PREPARE DETAILED COMPREHENSIVE DEVELOPMENT PLAN FOR DISTRICT					
INITIAL COMMUNITY ASSISTANCE PROGRAM[1] (WIS P-53)	PROVIDE PLANNING ASSISTANCE TO LOCAL UNITS OF GOVERNMENT UPON REQUEST					
FOX RIVER WATERSHED PLANNING PROGRAM[2] (WIS P-59)	PREPARE REFINED LAND USE, NATURAL RESOURCE PROTECTION, DRAINAGE AND FLOOD CONTROL, AND WATER POLLUTION ABATEMENT PLANS FOR WATERSHED					
CONTINUING REGIONAL LAND USE-TRANSPORTATION PLANNING PROGRAM[2] (WIS P-70, WIS P-130, WIS P-137) CONTINUING FUNCTIONS JURISDICTIONAL HIGHWAY SYSTEM PLANS MILWAUKEE COUNTY RACINE COUNTY OZAUKEE COUNTY WALWORTH COUNTY WAUKESHA COUNTY WASHINGTON COUNTY KENOSHA COUNTY MILWAUKEE COUNTY MASS TRANSIT STUDY NEW REGIONAL ORIGIN-DESTINATION STUDY TRANSIT DEVELOPMENT PROGRAMS RACINE URBANIZED AREA KENOSHA URBANIZED AREA MILWAUKEE URBANIZED AREA	CONDUCT CONTINUING PLANNING ACTIVITIES RELATING TO SURVEILLANCE, REAPPRAISAL, SERVICE AND IMPLEMENTATION, PROCEDURAL DEVELOPMENT, AND DOCUMENTATION					
LAND USE PLAN DESIGN MODEL[3] (WIS PD-1)	PREPARE MATHEMATICAL MODEL FOR DESIGN OF LAND USE PLANS					
COMMUNITY SHELTER PLANNING RECONNAISSANCE STUDY[3]	PREPARE PROSPECTUS FOR REGIONAL COMMUNITY SHELTER PLAN					
MILWAUKEE RIVER WATERSHED PLANNING PROGRAM[2] (WIS P-89)	PREPARE REFINED LAND USE, NATURAL RESOURCE PROTECTION, DRAINAGE AND FLOOD CONTROL, AND WATER POLLUTION ABATEMENT PLANS FOR WATERSHED					
1970 CENSUS COORDINATION PROJECT[1] AND DUAL INDEPENDENT MAP ENCODING PROGRAM[1] (WIS P-90, WIS P-130)	PREPARE ADDRESS CODING GUIDE AND GEOGRAPHIC BASE FILE					
REGIONAL LIBRARY PLANNING PROGRAM[4] (LP-1)	PREPARE REGIONAL LIBRARY FACILITIES AND SERVICES PLAN					
REGIONAL SANITARY SEWERAGE SYSTEM PLANNING PROGRAM[1] (WIS P-110, WIS P-130)	PREPARE REGIONAL SANITARY SEWERAGE SYSTEM PLAN					
RACINE URBAN PLANNING DISTRICT PLANNING PROGRAM[5]	PREPARE DETAILED COMPREHENSIVE DEVELOPMENT PLAN FOR DISTRICT					
CONTINUING COMMUNITY ASSISTANCE PROGRAM[2] (WIS P-115)	PROVIDE PLANNING ASSISTANCE TO LOCAL UNITS OF GOVERNMENT UPON REQUEST					
REGIONAL HOUSING STUDY PROSPECTUS[1] (WIS P-116)	PREPARE PROSPECTUS FOR REGIONAL HOUSING STUDY					
REGIONAL HOUSING STUDY[1] (WIS P-130, WIS P-137)	PREPARE REGIONAL HOUSING PLAN INCLUDING SHORT RANGE HOUSING ACTION PROGRAM					
REGIONAL AIRPORT SYSTEM PLANNING PROGRAM[2] (WIS P-130, WIS P-137)	PREPARE REGIONAL AIRPORT SYSTEM PLAN					
MENOMONEE RIVER WATERSHED PLANNING PROGRAM[2] (WIS P-137)	PREPARE REFINED LAND USE, NATURAL RESOURCE PROTECTION, DRAINAGE AND FLOOD CONTROL, AND WATER POLLUTION ABATEMENT PLANS FOR WATERSHED					
REGIONAL PARK, OUTDOOR RECREATION, AND RELATED OPEN SPACE PLANNING PROGRAM[2]	PREPARE REGIONAL PARK AND RELATED OPEN-SPACE PLAN					
REGIONAL WATER SUPPLY SYSTEM PLANNING PROGRAM[1]	PREPARE REGIONAL WATER SUPPLY SYSTEM PLAN					
CONTINUING REGIONAL HOUSING STUDY[2]	CONDUCT CONTINUING PLANNING ACTIVITIES RELATING TO MAINTENANCE OF A REGIONAL HOUSING MARKET INFORMATION FILE AND SERVICE AND IMPLEMENTATION OF REGIONAL HOUSING PLAN ELEMENT					
CONTINUING ENVIRONMENTAL ENGINEERING PLANNING PROGRAM[2]	CONDUCT CONTINUING PLANNING ACTIVITIES RELATING TO SERVICE AND IMPLEMENTATION OF WATERSHED AND UTILITY PLAN ELEMENTS					
KINNICKINNIC RIVER WATERSHED STUDY[2]	PREPARE REFINED LAND USE, NATURAL RESOURCE PROTECTION, DRAINAGE AND FLOOD CONTROL, AND WATER POLLUTION ABATEMENT PLANS FOR WATERSHED					
REGIONAL AIR QUALITY MAINTENANCE PLANNING PROGRAM[2]	PREPARE REGIONAL AIR QUALITY MAINTENANCE PLAN					
SANDSTONE AQUIFER SIMULATION MODELING PROGRAM[1]	DEVELOP MATHEMATICAL MODEL TO SIMULATE PERFORMANCE OF THE DEEP SANDSTONE AQUIFER					
INTERNATIONAL JOINT COMMISSION (IJC) WATER POLLUTION RESEARCH STUDY[1]	CONDUCT RESEARCH ON WATER QUALITY AND URBAN LAND USE RELATIONSHIPS IN THE MENOMONEE RIVER WATERSHED					
WASHINGTON COUNTY SEDIMENT AND EROSION CONTROL PROGRAM[2]	CONDUCT RESEARCH TO DEMONSTRATE THE EFFECT OF EROSION CONTROL PRACTICES ON WATER QUALITY					
MAJOR WORK PROGRAM ELEMENT	WORK PROGRAM OBJECTIVE	1961	1962	1963	1964	1965

[1] *PARTIALLY SUPPORTED BY FEDERAL GRANTS.*

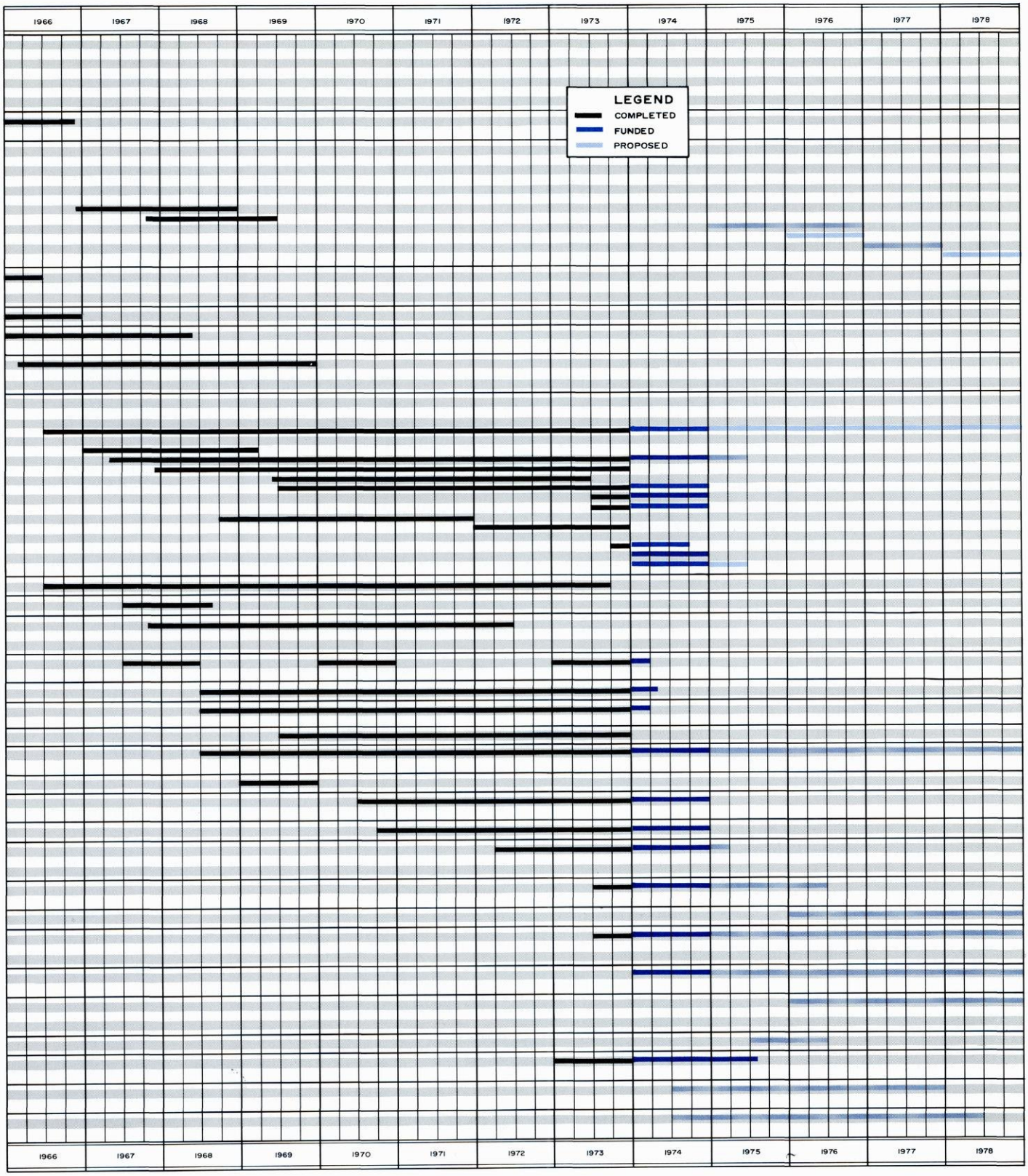
[2] *PARTIALLY SUPPORTED BY STATE AND/OR FEDERAL GRANTS.*

[3] *WHOLLY SUPPORTED BY FEDERAL GRANTS.*

[4] *WHOLLY SUPPORTED BY STATE GRANTS.*

[5] *WHOLLY SUPPORTED BY LOCAL FUNDS.*

Source: SEWRPC.


1966
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
LEGEND
COMPLETED
FUNDED
PROPOSED

housing study, and the continuing environmental engineering planning program. Of particular importance under the continuing regional land use-transportation study will be the completion during 1974 of major regional land use-transportation plan reappraisal efforts and the preparation and adoption in 1975 of new regional land use and transportation plans.

Other Major Work Programs

During the next five years, it is anticipated that the Commission will also conduct or participate in five major work programs which, although not directly aimed at the preparation or reappraisal of regional or subregional plan elements, will materially advance the objectives and functions of the regional planning program in southeastern Wisconsin. These programs are the continuing community assistance program; the preparation of additional local planning guides relating to storm water management, environmental corridor preservation, and agricultural land preservation; the sandstone aquifer simulation modeling program; the International Joint Commission water pollution research study; and the Washington County sediment and erosion control program.

Anticipated Funding Requirements and Allocations

Based upon the above described major work programs for the next five years, a forecast has been prepared of anticipated funding requirements by general government level—federal, state, and county—for the same five-year period. Federal and state funding by appropriate agency has been suggested. This suggestion implies no commitment on the part of any of the named agencies. Such commitment can only be made on the basis of an approved prospectus and formal grant application for each proposed program. This funding forecast, like the preceding work schedule, is provided in part to meet U. S. Department of Housing and Urban Development metropolitan planning assistance requirements. It should be stressed that the cost estimates presented for major work programs are tentative and are subject to change upon completion of prospectuses governing the program. In the case of continuing planning programs, it is anticipated that detailed study designs would serve as the basis for specific funding requirements.

In the absence of such prospectuses and study designs, only very approximate and tentative cost estimates can be made. Program cost estimates for all major work programs proposed to be initiated during the 1974-1978 period and for those major work programs for which additional funding will be required for the 1974-1978 period are set forth in Table 47. Those major work programs which were fully funded and initiated prior to January 1, 1974, and which are scheduled to carry over into the 1974-1978 work period, such as the regional library system planning program, the regional sanitary sewerage system planning program, the regional airport system planning program, and the regional housing study, have not been included in Table 47. The twelve programs included represent an annual average funding requirement of about $1.2 million, of which about $606,100, or about 50 percent, would be allocated annually for the major continuing regional land use-transportation study. Approximately 66 percent, or nearly $4.0 million, of the total estimated funding requirement for new work programs over the five-year period has been allocated to the federal government. Various federal agencies would be involved in this allocation, including the U. S. Department of Transportation, Federal Highway Administration, Urban Mass Transportation Administration, and Federal Aviation Administration; the U. S. Department of Housing and Urban Development; and the U. S. Environmental Protection Agency. The State of Wisconsin would be expected to provide about 16 percent, or about $1.0 million, of the total funding requirements for new and continued programs during the next five years. Various state agencies would be involved, including the Wisconsin Departments of Transportation, Natural Resources, and Local Affairs and Development. The remaining 18 percent, or about $1.1 million, would be provided by the constituent local and county units of government.

Based upon anticipated funding requirements for proposed programs, and upon already approved and funded programs that will be completed during the next five years, Table 48 presents a forecast of the total anticipated annual revenue allocations for Commission programs by general governmental level and agency for 1974-1978, as well as the actual revenue allocations for 1961-1973. These anticipated funding requirements, together with the historical funding experience, are also shown in Figure 24. Because of the number of additional work programs proposed to be undertaken and because of the need to service and reappraise the substantial number of plan elements already completed and adopted by the Commission, the Commission budget may be expected to increase slightly to a peak in 1976, and then decrease slightly during the latter part of the five-year period. The relative federal share may be expected to peak at about 54 percent in 1974, and to level off at about 50 percent thereafter. The state's relative share is expected to peak at about 20 percent in 1975, and then decrease to about 15 percent thereafter. The county relative share is expected to remain relatively constant at its current level of about 33 percent.

It should be stressed that the foregoing forecasts are based upon the proposed work programs as set forth above and represent the best funding estimates that can be made at this time. These forecasts, therefore, must be regarded as highly tentative.

ANNUAL WORK PROGRAM: 1974

Within the framework of the Commission five-year work program set forth above, the following specific projects are scheduled for calendar year 1974:

1. Regional library system planning program.
2. Regional sanitary sewerage system planning program.
3. Regional airport planning program.

Table 47

ANTICIPATED FUNDING ALLOCATIONS FOR PROPOSED MAJOR REGIONAL PLANNING PROGRAMS IN THE REGION BY GOVERNMENTAL LEVEL AND AGENCY: 1974-1978

Proposed Major Planning Program	Program Funding Period[b]	Total Funds Anticipated	Federal								State								County[a]	
			Department of Transportation		Department of Housing and Urban Development		Environmental Protection Agency		Subtotal		Department of Transportation		Department of Natural Resources		Department of Local Affairs and Development		Subtotal			
			Funds	Percent of Program Total	Funds	Percent of Program Total	Funds	Percent of Program Total	Funds	Percent of Program Total	Funds	Percent of Program Total	Funds	Percent of Program Total	Funds	Percent of Program Total	Funds	Percent of Program Total	Funds	Percent of Program Total
Programs Designed to Prepare Additional Plan Elements																				
Menomonee River Watershed Study[c]	1 1/4 Years 1/74-3/75	$ 181,251	$ --	--	$ 36,149	20.0	$ 63,519	35.0	$ 99,668	55.0	$ --	--	$ 59,889	33.0	$ --	--	$ 59,889	33.0	$ 21,694	12.0
Regional Park, Outdoor Recreation, and Open Space Planning Program[c]	2 1/2 Years 1/74-6/76	156,688	--	--	104,458	66.6	--	--	104,458	66.6	--	--	26,115	16.7	--	--	26,115	16.7	26,115	16.7
Regional Air Quality Maintenance Planning Program	1 Year 7/74-6/75	222,000	--	--	--	--	$166,500	75.0	166,500	75.0	27,750	12.5	27,750	12.5	--	--	55,500	25.0	--	--
Kinnickinnic River Watershed Study	3 Years 1/76-12/78	330,000	--	--	66,000	20.0	115,500	35.0	181,500	55.0	--	--	108,900	33.0	--	--	108,900	33.0	39,600	12.0
Regional Water Supply System Planning Program	3 Years 1/76-12/78	343,200	--	--	228,800	66.7	--	--	228,800	66.7	--	--	--	--	--	--	--	--	114,400	33.3
Programs Designed to Reappraise Existing Plan Elements																				
Continuing Regional Land Use-Transportation Study	5 Years 1/74-12/78	$3,030,500	$1,363,725	45.0	$ 757,625	25.0	$ --	--	$2,121,350	70.0	$303,050	10.0	$ --	--	$ --	--	$303,050	10.0	$606,100	20.0
Continuing Regional Housing Study	5 Years 1/74-12/78	503,166	--	--	335,444	66.7	--	--	335,444	66.7	--	--	--	--	167,722	33.3	167,722	33.3	--	--
Continuing Environmental Engineering Planning Program	5 Years 1/74-12/78	308,550	--	--	103,063	33.4	102,749	33.3	205,812	66.7	--	--	51,526	16.7	--	--	51,526	16.7	51,212	16.6
Other Major Work Programs																				
Continuing Community Assistance Program	5 Years 1/74-12/78	$511,500	$ --	--	$ 127,875	25.0	$ --	--	$ 127,875	25.0	$ --	--	$ --	--	$214,830	42.0	$214,830	42.0	$ 168,795	33.0
Preparation of Local Planning Guides	5 Years 1/74-12/78	165,000	--	--	110,055	66.7	--	--	110,055	66.7	--	--	--	--	--	--	--	--	54,945	33.3
IJC Water Pollution Research Study	3 1/2 Years 6/74-12/77	248,220	--	--	--	--	248,220	100.0	248,220	100.0	--	--	--	--	--	--	--	--	--	--
Washington County Sediment and Erosion Control Program	4 Years 7/74-6/78	49,850	--	--	--	--	37,388	75.0	37,388	75.0	--	--	12,462	25.0	--	--	12,462	25.0	--	--
Total	5 Years	$6,049,925	$1,363,725	22.5	$1,869,469	30.9	$733,876	12.1	$3,967,070	65.6	$330,800	5.5	$286,642	4.7	$382,552	6.3	$999,994	16.5	$1,082,861	17.9

[a] *The county share of the cost of the regional planning program is apportioned, pursuant to Section 66.945(14) of the Wisconsin Statutes, among the several counties on the basis of relative equalized valuation.*

[b] *The period indicated represents only the proposed funding period. The actual work period for each project may begin and end six to twelve months after the beginning and end of the funding period, due to delays encountered in the preparation, negotiation, and execution of contracts and in the assembly of the staff needed to conduct the work program.*

[c] *These studies partially funded in prior years.*

Source: SEWRPC.

Table 48

ACTUAL AND ANTICIPATED ANNUAL REVENUE ALLOCATIONS FOR REGIONAL PLANNING PROGRAMS IN THE REGION BY GOVERNMENTAL LEVEL AND AGENCY: 1961-1978

Governmental Level and Agency	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Federal										
Department of Transportation										
Funds	$ --	$ --	$281,325	$161,171	$181,141	$233,416	$ 85,573	$101,581	$ 68,752	$136,892
Percent	--	--	32.2	24.1	29.1	34.1	10.8	13.2	9.8	15.7
Department of Housing and Urban Development										
Funds	--	37,680	310,140	220,040	154,923	233,816	389,856	175,084	247,660	298,565
Percent	--	33.4	35.5	32.9	24.9	34.1	49.1	22.7	35.1	34.2
Environmental Protection Agency										
Funds	--	--	--	--	--	--	--	30,000	32,500	27,500
Percent	--	--	--	--	--	--	--	3.9	4.6	3.2
Department of the Navy										
Funds	--	--	--	--	--	--	652	5,155	2,813	--
Percent	--	--	--	--	--	--	0.1	0.7	0.4	--
Subtotal—Federal										
Funds	$ --	$ 37,680	$591,465	$381,211	$336,064	$467,232	$476,081	$311,820	$351,725	$462,957
Percent	--	33.4	67.7	57.0	54.0	68.2	60.0	40.5	49.9	53.1
State										
Department of Transportation										
Funds	$ --	$ --	$ 49,645	$ 28,441	$ 31,965	$ 41,190	$ 15,100	$ 17,926	$ 49,378	$ 98,317
Percent	--	--	5.7	4.2	5.1	6.0	1.9	2.3	7.0	11.3
Department of Natural Resources										
Funds	--	--	--	--	--	--	89,000	50,000	50,000	--
Percent	--	--	--	--	--	--	11.2	6.5	7.1	--
Department of Local Affairs and Development										
Funds	--	--	--	--	--	--	--	--	2,400	9,000
Percent	--	--	--	--	--	--	--	--	0.3	1.0
Department of Public Instruction										
Funds	--	--	--	--	--	--	--	131,583	10,592	--
Percent	--	--	--	--	--	--	--	17.1	1.5	--
Subtotal—State										
Funds	$ --	$ --	$ 49,645	$ 28,441	$ 31,965	$ 41,190	$104,100	$199,509	$112,370	$107,317
Percent	--	--	5.7	4.2	5.1	6.0	13.1	25.9	15.9	12.3
County[a]										
Funds	$75,000	$ 75,000	$231,400	$259,915	$255,191	$176,379	$213,515	$258,730	$241,289	$301,591
Percent	100.0	66.6	26.6	38.8	40.9	25.8	26.9	33.6	34.2	34.6
Total										
Funds	$75,000[b]	$112,680[b]	$872,510[b]	$669,567[b]	$623,220[b]	$684,801[b]	$793,696[b]	$770,059[b]	$705,384[b]	$871,865[b]
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 48 (continued)

Governmental Level and Agency	1971	1972	1973	1974	1975	1976	1977	1978
Federal								
Department of Transportation								
Funds	$ 158,140	$ 444,462	$ 294,998	$ 350,713	$ 248,765	$ 254,745	$ 252,745	$ 256,745
Percent	14.8	31.3	22.8	26.8	14.6	14.9	16.5	18.4
Department of Housing and Urban Development								
Funds	369,700	294,472	300,335	318,197	331,791	450,091	413,019	356,371
Percent	34.7	20.7	23.2	24.3	19.5	26.3	27.0	25.5
Environmental Protection Agency								
Funds	--	6,793	6,580	27,171	252,039	219,408	151,208	84,050
Percent	--	0.5	0.5	2.2	14.9	12.8	9.8	6.1
Department of the Navy								
Funds	--	--	--	--	--	--	--	--
Percent	--	--	--	--	--	--	--	--
Subtotal—Federal								
Funds	$ 527,840	$ 745,727	$ 601,913	$ 696,081	$ 832,595	$ 924,244	$ 816,972	$ 697,166
Percent	49.5	52.5	46.5	53.3	49.0	54.0	53.3	50.0
State								
Department of Transportation								
Funds	$ 113,924	$ 221,736	$ 140,793	$ 53,354	$ 79,927	$ 69,686	$ 63,924	$ 63,924
Percent	10.7	15.6	10.9	4.1	4.7	4.1	4.2	4.6
Department of Natural Resources								
Funds	--	26,000	36,000	71,823	186,179	96,110	74,753	57,463
Percent	--	1.8	2.8	5.5	10.9	5.6	4.8	4.2
Department of Local Affairs and Development								
Funds	15,000	11,000	58,000	62,423	80,032	80,032	80,032	80,032
Percent	1.4	0.8	4.5	4.7	4.7	4.7	5.2	5.7
Department of Public Instruction								
Funds	3,780	--	--	--	--	--	--	--
Percent	0.4	--	--	--	--	--	--	--
Subtotal—State								
Funds	$ 132,704	$ 258,736	$ 234,793	$ 187,600	$ 346,138	$ 245,828	$ 218,709	$ 201,419
Percent	12.5	18.2	18.2	14.3	20.3	14.4	14.2	14.5
County[a]								
Funds	$ 404,166	$ 415,225	$ 456,544	$ 423,359	$ 519,447	$ 542,373	$ 499,826	$ 494,664
Percent	38.0	29.3	35.3	32.4	30.7	31.6	32.5	35.5
Total								
Funds	$1,064,710[b]	$1,419,688[b]	$1,293,250[b]	$1,307,040[c]	$1,698,180[d]	$1,712,445[d]	$1,535,507[d]	$1,393,249[d]
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] *Includes actual and anticipated tax levies and contracts for major Commission programs but does not include contracts for special planning services.*

[b] *As reported in the financial statements reproduced in this and previous Commission Annual Reports.*

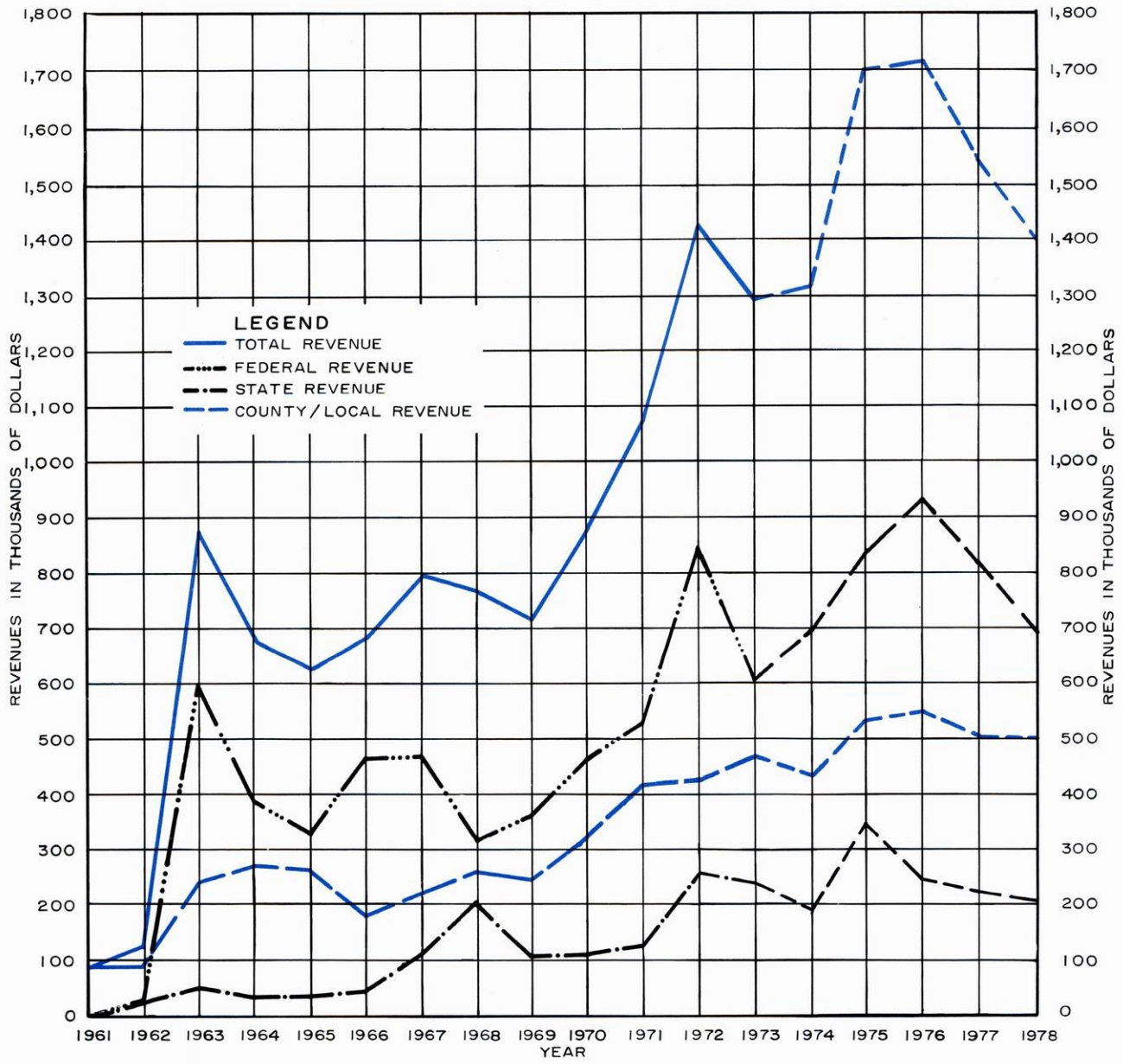
[c] *Commission 1974 budget.*

[d] *Based on existing and committed program funds, as well as proposed programs. These figures are highly tentative and may increase or decrease as prospectuses containing more detailed cost estimates are prepared for each program.*

Source: SEWRPC.

Figure 24

ACTUAL AND ANTICIPATED ANNUAL REVENUE ALLOCATIONS FOR MAJOR COMMISSION PLANNING PROGRAMS BY GOVERNMENTAL LEVEL 1961-1978



Source: SEWRPC.

4. Regional housing study.
5. Menomonee River watershed study.
6. Regional park, outdoor recreation, and related open space planning program.
7. Regional air quality maintenance program.
8. Continuing regional land use-transportation study.
9. Continuing housing study.
10. Continuing environmental engineering planning program.
11. Continuing community assistance program.
12. Sandstone aquifer simulation modeling program.
13. International Joint Commission water pollution research study.
14. Washington County sediment and erosion control program.

Of these 14, four—the regional library, sanitary sewerage system, airport system, and housing programs—are scheduled for completion during 1974 and will result in the preparation of additional regional plan elements. The remaining 10 projects include additional efforts aimed at expanding and maintaining current the Commission's data base for the Region, at reappraising already adopted regional and subregional plan elements, at preparing additional regional and subregional plan elements, and at providing expanded community assistance services, thus enhancing regional plan implementation.

APPENDICES

Appendix A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
COMMISSIONERS AND COMMITTEES
1973

COMMISSIONERS

	Term Expires
KENOSHA COUNTY	
Donald L. Klapper	1976
Donald E. Mayew	1974
*Francis J. Pitts	1974
MILWAUKEE COUNTY	
Richard W. Cutler, Secretary	1978
*Emil M. Stanislawski	1978
Norman C. Storck, P.E.	1974
OZAUKEE COUNTY	
Thomas H. Buestrin	1976
*John P. Dries	1978
James F. Egan, Vice-Chairman	1978
RACINE COUNTY	
George C. Berteau, Chairman	1974
*John Margis, Jr.	1978
Leonard C. Rauen	1976
WALWORTH COUNTY	
Anthony F. Balestrieri	1976
John B. Christians	1978
*Eugene A. Hollister	1976
WASHINGTON COUNTY	
Lawrence W. Hillman	1976
Paul F. Quick	1974
*Joseph A. Schmitz, Treasurer	1978
WAUKESHA COUNTY	
Charles J. Davis	1974
Lyle L. Link	1974
*Theodore F. Matt	1976

*County Board Appointed Commissioners

COMMITTEES

EXECUTIVE COMMITTEE
George C. Berteau, Chairman
James F. Egan, Vice-Chairman
Richard W. Cutler
Eugene A. Hollister
Donald L. Klapper
John Margis, Jr.
Theodore F. Matt
Joseph A. Schmitz
Norman C. Storck

ADMINISTRATIVE COMMITTEE
Donald L. Klapper, Chairman
Leonard C. Rauen, Vice-Chairman
John B. Christians
Lyle L. Link
Joseph A. Schmitz

INTERGOVERNMENTAL AND PUBLIC RELATIONS COMMITTEE
Theodore F. Matt, Chairman
Emil M. Stanislawski, Vice-Chairman
George C. Berteau
John P. Dries
Eugene A. Hollister
John Margis, Jr.
Francis J. Pitts
Joseph A. Schmitz

PLANNING AND RESEARCH COMMITTEE
Norman C. Storck, Chairman
Lawrence W. Hillman, Vice-Chairman
Anthony F. Balestrieri
George C. Berteau
Thomas H. Buestrin
Charles J. Davis
James F. Egan
Lyle L. Link
John Margis, Jr.
Theodore F. Matt
Donald E. Mayew
Paul F. Quick

Appendix B

COMMISSION ADVISORY COMMITTEES

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

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

Stanley E. Altenbern (5) . . . . . President, Wisconsin Coach Lines, Inc., Waukesha

John M. Bennett (1,4) . . . . . City Engineer, City of Franklin

Richard Brandt (1) . . . . . Manager, Markets and Sales Program, Wisconsin Gas Company, Milwaukee

Robert W. Brannan (2,5,7) . . . . . Transportation Director, Milwaukee County Expressway and Transportation Commission

Donald M. Cammack (7) . . . . . Chief Planning Engineer, Division of Aeronautics, Wisconsin Department of Transportation

David M. Carpenter (3) . . . . . Project Director, Comprehensive Health Planning Agency of Southeastern Wisconsin, Inc. Milwaukee

Thomas R. Clark (2,5,7) . . . . . Chief Planning Engineer, District 2, Division of Highways, Wisconsin Department of Transportation

Arnold L. Clement (1,2) . . . . . Planning Director and Zoning Administrator, Racine County

Eugene M. Cox (3) . . . . . Executive Director, Comprehensive Health Planning Agency of Southeastern Wisconsin, Inc., Milwaukee

Vencil F. Demshar (2) . . . . . County Highway Commissioner, Waukesha County

Elton G. Diehl (5,7) . . . . . Traffic Engineer, Bureau of Traffic Engineering and Electrical Services, City of Milwaukee

Russell A. Dimick (2) . . . . . City Engineer, City of Cedarburg

Arthur D. Doll (1,4) . . . . . Director, Bureau of Planning, Wisconsin Department of Natural Resources

John L. Doyne (1,5) . . . . . County Executive, Milwaukee County

Stanley Feinsod (5,7) . . . . . Urban Transportation Planner, Urban Mass Transportation Administration, U. S. Department of Transportation, Washington, D. C.

Donald J. Finch (2) . . . . . Director of Public Works, City of New Berlin

James Foley (7) . . . . . Airport Engineer, General Mitchell Field

Thomas G. Frangos (1) . . . . . Administrator, Division of Environmental Protection, Wisconsin Department of Natural Resources

John M. Fredrickson (1) . . . . . Village Manager, Village of River Hills

Thomas J. Gaffney (2) . . . . . Traffic Engineer, City of Kenosha

Arne L. Gausmann (1,2,5,7) . . . Director, Bureau of Systems Planning, Division of Planning, Wisconsin Department of Transportation

Norman N. Gill (1,3) . . . . . Executive Director, Citizens Governmental Research Bureau, Milwaukee

Herbert A. Goetsch (2,4,6) . . . . . Commissioner of Public Works, City of Milwaukee

George Gunderson (2) . . . . . Chief of Statewide Planning Section, Division of Planning, Wisconsin Department of Transportation

Douglas F. Haist . . . . . Director of Policy Planning, (1,2,3,4,5,7) Division of Planning, Wisconsin Department of Transportation

Joseph Hamelink (5) . . . . . Transit Coordinator, Kenosha Transit Commission

Roger A. Harris (1,2,6) . . . . Director of Public Works, City of Cudahy

Edward J. Hayes (3) . . . . . Commissioner, Department of City Development, City of Milwaukee

Herbert Heavenrich (1,2) . . . . . Director, Division of Planning and Programming, Department of City Development, City of Milwaukee

Frank M. Hedgecock (7) . . . . . City Planner, City of Waukesha

Sebastian J. Helfer (3) . . . . . Director, Campus Planning and Construction, Marquette University, Milwaukee

Bill R. Hippenmeyer. . . . . Director of Planning, (1,2,3,5) City of Oak Creek

Lester O. Hoganson (2,6) . . . . . City Engineer, City of Racine

Donald K. Holland (2,6) . . . . . Director of Public Works, City of Kenosha

Karl B. Holzwarth (2,4) . . . . . Park Director, Racine County

Maurice J. Hovland (4) . . . . . County Agricultural Agent, Washington County

Stanley Ihlenfeldt (1,4) . . . . . County Agri-Business Agent, Walworth County

Paul G. Jaeger (1,2,4) . . . . . County Agricultural Agent, Kenosha County

George A. James (1,2) . . . . . Director, Bureau of Local and Regional Planning, Wisconsin Department of Local Affairs and Development

Paul Juhnke (3) . . . . . Manager, Urban Research and Development, Metropolitan Milwaukee Association of Commerce

John E. Kane (1,3) . . . . . Director, Milwaukee Area Office, U. S. Department of Housing and Urban Development

Thomas R. Kinsey (2) . . . . . District Engineer, District 2, Division of Highways, Wisconsin Department of Transportation

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

Frederick F. Klotz (2) . . . . Engineer in Charge of the Public Ways, Engineering Division, Bureau of Engineers, City of Milwaukee

Robert F. Kolstad (1,2,4,5) . . . . . City Planner, City of Kenosha

Thomas A. Kroehn (1) . . . . . District Director, Southeast District, Wisconsin Department of Natural Resources

D. A. Kuemmel (5,7) . . . . . Superintendent of Electrical Services, Bureau of Traffic Engineering and Electrical Services, City of Milwaukee

James La Bril (5). . . . . Planner, Department of City Development, City of Milwaukee

Edwin Laszewski (2) . . . . . City Engineer, City of Milwaukee

Wilmer Lean (2,7) . . . . . County Highway Commissioner, Walworth County

Ray D. Leary (3,6) . . . . . Chief Engineer and General Manager, Milwaukee-Metropolitan Sewerage Commissions

Elwin G. Leet (1,3,4) . . . County Agricultural Agent, Racine County

Russell Leitch (3) . . . . . Trade Specialist, Field Services, U. S. Department of Commerce, Milwaukee

J. William Little (2,6) . . . . City Administrator, City of Wauwatosa

William L. Marvin (2,7) . . . Director, Traffic Engineering Department, American Automobile Association, Madison

Henry M. Mayer (5) . . . . General Manager, Milwaukee and Suburban Transport Corporation, Milwaukee

N. H. McKegney (5) . . . . . Terminal Superintendent, The Milwaukee Road, Milwaukee

George Mead (3) . . . . . Marketing Research Manager, The Milwaukee Journal

Robert J. Mikula (2,4) . . . . . General Manager, Milwaukee County Park Commission

William Muth (2). . . . . Director of Public Works, City of Brookfield

Melvin Noth (2,6) . . . . . Director of Public Works, Village of Menomonee Falls

Robert H. Paddock (2,5,7) . . . . . Division Engineer, U. S. Department of Transportation, Federal Highway Administration, Madison

John W. Peters (1,2,3,4,5,6) . . . . . Assistant Director, Planning and Relocation Branch, U. S. Department of Housing and Urban Development, Milwaukee

Allan P. Pleyte (5,7). . . . . Traffic Engineer and Superintendent, Bureau of Traffic Engineering and Electrical Services, City of Milwaukee

James F. Popp (2,5,7) . . . . . Chief of Planning, U. S. Department of Transportation, Federal Aviation Administration, Great Lakes Region, Chicago

John B. Prince (3,6) . . . . . Director of Corporate Planning, Wisconsin Electric Power Company, Milwaukee

Richard A. Rechlicz (5). . . . Executive Secretary, Wisconsin School Bus Contractors Association

Richard Repert (3) . . . . . Associate for United Community Services Planning, United Community Services of Greater Milwaukee

Albert P. Rettler (2,7) . . . . . County Highway Commissioner, Washington County

Donald V. Revello (7) . . . . . Chief of Traffic Planning, Division of Planning, Wisconsin Department of Transportation

Donald A. Roensch (1,6) . . . . . Director of Public Works, City of Mequon

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

William D. Rogan (1,4) . . . . . County Agri-Business Agent, Waukesha County

Gordon Rozmus (1,3) . . . . . Associate Planner, City of Wauwatosa

Dr. Eric Schenker (3,5,7) . . . . . Professor, Department of Economics, University of Wisconsin-Milwaukee

Roger L. Schrantz (3) . . . . . Deputy Director, Bureau of Planning and Budget, Wisconsin Department of Administration

John E. Schumacher (2,7) . . . . . City Engineer, City of West Allis

Donald H. Schwenk (2) . . . . . City Manager, Central Greyhound Lines, Milwaukee

Harvey Shebesta (2,3,5,7) . . . . . District Engineer, District 9, Division of Highways, Wisconsin Department of Transportation

Earl G. Skagen (2,4,7) . . . . . County Highway Commissioner, Racine County

Leland C. Smith (4) . . . . . County Horticultural Agent, Kenosha County

Philip A. Sundal (3) . . . . . Research Director, Wisconsin Department of Business Development

G. D. Tang (1,3) . . . . . District Business Research Manager, Wisconsin Telephone Company

Walter J. Tarmann (1,4). . . . . Executive Director, Waukesha County Park and Planning Commission

Jack Taylor (5) . . . . . President, Flash City Transit, Racine

Jay Trevadia (2) . . . . . City Engineer, City of Burlington

Floyd Usher (2) . . . . . City Engineer, City of Oconomowoc

Rodney M. VandenNoven (6) . . . . . Director of Public Works, City of Waukesha

John P. Varda (7) . . . . . General Manager, Wisconsin Motor Carriers Association, Madison

Ernest Vogel (2,7) . . . . . Traffic and Transit Engineer, Milwaukee County Expressway and Transportation Commission

Lloyd O. Wadleigh (3) . . . . . Chairman, Department of Economics, Carroll College, Waukesha

Leo Wagner (1,2). . . . . County Highway Commissioner, Kenosha County

Thomas M. Wahtola (2,5,7). . . . . Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration, Madison

Hampton Waring (1,3) . . . . . Engineer of Plant Extensions, Wisconsin Telephone Company, Milwaukee

Frank A. Wellstein (1,2,4,5,6,7) . . . . . City Engineer, City of Oak Creek

Sylvester N. Weyker (2). . . . . County Highway Commissioner, Ozaukee County

Henry B. Wildschut (2,7) . . . . County Highway Commissioner and Director of Public Works, Milwaukee County

Thomas N. Wright (1,3,5,7) . . . . . Director of Planning, City of Racine

SEWRPC Staff:

Kurt W. Bauer . . . . . Executive Director

Keith W. Graham (2,5,6,7) . . . . . Assistant Director

Mark P. Green (2,5,7) . . . . . Chief Transportation Planner

Michael J. Keidel (3). . . . . Chief of Planning Research

Bruce P. Rubin (1,4). . . . . Chief Land Use Planner

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

Henry B. Wildschut, Chairman and Secretary	County Highway Commissioner and Director of Public Works, Milwaukee County
Kurt W. Bauer	Executive Director, SEWRPC
Roger A. Harris	Director of Public Works, City of Cudahy
Edwin J. Laszewski, Jr.	City Engineer, City of Milwaukee
J. William Little	City Administrator, City of Wauwatosa
Robert H. Paddock	Division Engineer, U. S. Department of Transportation, Federal Highway Administration, Madison
Nick T. Paulos	Village Engineer, Village of Greendale
John E. Schumacher	City Engineer, City of West Allis
Gerald Schwerm	Village Manager, Village of Brown Deer
Harvey Shebesta	District Engineer, District 9, Division of Highways, Wisconsin Department of Transportation

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

Sylvester N. Weyker, Chairman	County Highway Commissioner, Ozaukee County
Kurt W. Bauer, Secretary	Executive Secretary, SEWRPC
Russell A. Dimick	City Engineer, City of Cedarburg
Arne L. Gausmann	Director, Bureau of Systems Planning, Division of Planning, Wisconsin Department of Transportation
Thomas R. Kinsey	District Engineer, District 2, Division of Highways, Wisconsin Department of Transportation
Martin J. Monahan	Assistant Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration, Madison
Herbert H. Peters	Consulting Engineer, Ozaukee County Highway Department
Kenneth A. Roell	Manager, Town of Cedarburg
Donald A. Roensch	Director of Public Works, City of Mequon
John H. Sigwart	Director of Public Works, City of Port Washington

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

Earl G. Skagen, Chairman	County Highway Commissioner, Racine County
Donald Zenz, Secretary	County Highway Engineer, Racine County
Kurt W. Bauer	Executive Director, SEWRPC
Thomas R. Clark	Chief Planning Engineer, District 2, Division of Highways, Wisconsin Department of Transportation
Arnold L. Clement	Planning Director and Zoning Administrator, Racine County
George Gunderson	Chief of Statewide Planning Section, Division of Planning, Wisconsin Department of Transportation

TECHNICAL AND INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR RACINE COUNTY (Continued)

Chester Harrison	Town Engineer, Town of Caledonia
Thomas R. Kinsey	District Engineer, District 2, Division of Highways, Wisconsin Department of Transportation
Fred H. Larson	Commissioner of Public Works, City of Racine
Martin J. Monahan	Assistant Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration, Madison
Jay Trevadia	City Engineer, City of Burlington

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

Milton R. Reik, Chairman	Citizen Member, City of Lake Geneva
Wilmer W. Lean, Secretary	County Highway Commissioner, Walworth County
Anthony F. Balestrieri	Consulting Engineer, Elkhorn; Commissioner, SEWRPC
William E. Barth	Citizen Member, Town of Walworth
Kurt W. Bauer	Executive Director, SEWRPC
Schuyler W. Case	Citizen Member, Town of Sharon
Theodore Casper	President, Village of Williams Bay
Werner Christen	Chairman, Town of Whitewater
Frank Cline	Chairman, Town of East Troy
Oliver W. Fleming	Alderman, City of Delavan
George Gunderson	Chief of Statewide Planning Section, Division of Planning, Wisconsin Department of Transportation
G. F. Hill	City Manager, City of Whitewater
Emil Johnejack	Mayor, City of Lake Geneva
Herbert E. Johnson	Consulting Engineer, City of Elkhorn
Thomas R. Kinsey	District Engineer, District 2, Division of Highways, Wisconsin Department of Transportation
Martin J. Monahan	Assistant Planning and Research Engineer, U. S. Department of Transportation, Federal Highway Administration, Madison

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

Vencil F. Demshar, Chairman and Secretary	County Highway Commissioner, Waukesha County
Kurt W. Bauer	Executive Director, SEWRPC
Donald J. Finch	Director of Public Works, City of New Berlin
Arne L. Gausmann	Director, Bureau of Systems Planning, Division of Planning, Wisconsin Department of Transportation
Richard M. Jung, Sr.	Supervisor, Town of Lisbon
Thomas R. Kinsey	District Engineer, District 2, Division of Highways, Wisconsin Department of Transportation

TECHNICAL AND INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR WAUKESHA COUNTY (Continued)

Gerald Lee	Building Inspector, City of Muskego
William Muth	Director of Public Works, City of Brookfield
Robert H. Paddock	Division Engineer, U. S. Department of Transportation, Federal Highway Administration, Madison
Wilbur G. Perren	Supervisor, Town of Genesee
Floyd Usher	City Engineer, City of Oconomowoc
Rodney M. VandenNoven	Director of Public Works, City of Waukesha
Max A. Vogt	Village Engineer, Village of Menomonee Falls

TECHNICAL AND INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR KENOSHA COUNTY

Earl W. Hollister, Chairman	Chairman, Town of Bristol; County Supervisor, Kenosha County
Robert F. Kolstad, Secretary	City Planner, City of Kenosha
Kurt W. Bauer	Executive Director, SEWRPC
Howard Blackmon	Chairman, Town of Somers
George E. Bovee	Chairman, Town of Randall
Wallace E. Burkee	Mayor, City of Kenosha
Phillip Dunek	President, Village of Paddock Lake
Thomas Grady	Chairman, Town of Wheatland
Thomas J. Haley	Citizen Member, City of Kenosha
Richard Harrison	President, Village of Silver Lake
Donald K. Holland	Director of Public Works, City of Kenosha
Merlin Jahns	Trustee, Village of Twin Lakes
Thomas R. Kinsey	District Engineer, District 2, Division of Highways, Wisconsin Department of Transportation
Maurice Lake	Chairman, Town of Salem
John J. Maurer	Chairman, Town of Pleasant Prairie
Glenn L. Miller	Chairman, Town of Brighton
Howard R. Storer	Federal Secondary Road Engineer, District 2, Division of Highways, Wisconsin Department of Transportation
Virginia Taylor	Citizen Member, City of Kenosha
Leo Wagner	County Highway Commissioner, Kenosha County
August Zirbel, Jr.	Chairman, Town of Paris

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

Lloyd Jacklin, Chairman	Trustee, Village of Jackson
Albert E. McClurg, Secretary	Engineering Aide, City of West Bend
Majed Abu-Lughod	City Engineer, City of Hartford
Kurt W. Bauer	Executive Director, SEWRPC
Frederick H. Chlupp	Land Use and Park Administrator, Washington County
Jerome P. Faust	County Supervisor, Washington County
Peter Gonnering	Chairman, Town of Barton
Carl Hauch	Supervisor, Town of Farmington
Alfred Hemauer	City Clerk, City of West Bend

TECHNICAL AND INTERGOVERNMENTAL COORDINATING AND ADVISORY COMMITTEE ON JURISDICTIONAL HIGHWAY PLANNING FOR WASHINGTON COUNTY (Continued)

Thomas R. Kinsey	District Engineer, District 2, Division of Highways, Wisconsin Department of Transportation
Walter L. Kletti	Member, City of Hartford Planning Commission
Reuben Koch	Supervisor, Town of West Bend
Howard J. Kruepke	Chairman, Town of Polk
Arnold J. Lepien	Supervisor, Town of Hartford
John W. Lietzau	Trustee, Village of Germantown
Adolph Lofy	Chairman, Town of Richfield; County Supervisor, Washington County; Member, County Board Highway Committee
Charles F. Miller	President, Village of Kewaskum; County Supervisor, Washington County
Thomas J. Muth	Director of Public Works, Village of Germantown
John A. Oelhafen	Chairman, Town of Wayne; County Supervisor, Washington County
Alois Okruhlica	Supervisor, Town of Jackson
Robert H. Paddock	Division Engineer, U. S. Department of Transportation, Federal Highway Administration, Madison
John M. Pick	Alderman, City of West Bend
Helmuth F. Prahl	County Supervisor, Washington County; Member, County Board Highway Committee
Albert P. Rettler	County Highway Commissioner, Washington County
Carl W. Schneiss	County Supervisor, Washington County; Member, County Board Highway Committee
Ralph P. Schnorenberg	Alderman, City of Hartford
Hugo Schwulst	Chairman, Town of Erin; County Supervisor, Washington County
Roland S. Senner	Chairman, Town of Trenton
Mervin C. Thompson	Chairman, Town of Kewaskum
Carl Vogt	Town Clerk, Town of Addison
Harley Wachs	Town Clerk, Town of Germantown

TECHNICAL ADVISORY COMMITTEE ON NATURAL RESOURCES AND ENVIRONMENTAL DESIGN

Richard W. Akeley, Chairman	State Conservationist, U. S. Soil Conservation Service
Kurt W. Bauer	Executive Director, SEWRPC
Edward Brick	Chief, Water Regulation Section, Bureau of Water and Shoreland Management, Wisconsin Department of Natural Resources
Thomas A. Calabresa	Chief, Private Water Supply Section, Bureau of Water and Shoreland Management, Wisconsin Department of Natural Resources
Arthur D. Doll	Director, Bureau of Planning, Wisconsin Department of Natural Resources
William E. Frantz	Public Hearing Engineer, Division of Highways, Wisconsin Department of Transportation
William B. Gannon	Assistant District Chief, Water Resources Division, U. S. Geological Survey, Madison
Harlan D. Hirt	Chief, Planning Branch, Region V, Federal Water Quality Administration, U. S. Environmental Protection Agency
Charles L. R. Holt, Jr.	District Chief, Water Resources Division, U. S. Geological Survey, Madison
George A. James	Director, Bureau of Local and Regional Planning, Wisconsin Department of Local Affairs and Development

TECHNICAL ADVISORY COMMITTEE ON NATURAL RESOURCES AND ENVIRONMENTAL DESIGN (Continued)

James M. Maas . . . . . Chief, Planning Division, U. S. Army Corps of Engineers, Chicago

Jerome McKersie . . . . . Chief, Water Quality Evaluation, Wisconsin Department of Natural Resources

Donald W. Niendorf . . . . . Conservation Education Specialist, Soil Conservation Board of the University of Wisconsin

Meredith E. Ostrom . . . . . Director and State Geologist, Geological and Natural History Survey, University of Wisconsin—Extension

Walter J. Tarmann . . . . . Executive Director, Waukesha County Park and Planning Commission

Raymond R. Waldman . . . . . Meteorologist in Charge, National Weather Service Forecast Office, Milwaukee

George B. Wesler . . . . . Chief, Planning and Reports Branch, U. S. Army Corps of Engineers, Chicago

Donald G. Wieland . . . . . Division Engineer, Sewer Design, Sewerage Commission of the City of Milwaukee

Harvey E. Wirth . . . . . State Sanitary Engineer, Division of Health, Wisconsin Department of Health and Social Services

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL SANITARY SEWERAGE SYSTEM PLANNING

Ray D. Leary . . . . . Chief Engineer and General Manager, Milwaukee-Metropolitan Sewerage Commissions
Chairman

Lester O. Hoganson . . . . . City Engineer, City of Racine
Vice-Chairman

William D. McElwee . . . . . Chief Environmental Planner, SEWRPC
Secretary

Vinton W. Bacon . . . . . Professor, College of Applied Science and Engineering, University of Wisconsin-Milwaukee

Anthony F. Balestrieri . . . . . Consulting Engineer, Elkhorn; Commissioner, SEWRPC

Kurt W. Bauer . . . . . Executive Director, SEWRPC

Richard C. Dess . . . . . Engineering Administrator, City of Wauwatosa

Herbert A. Goetsch . . . . . Commissioner of Public Works, City of Milwaukee

Harlan D. Hirt . . . . . Chief, Planning Branch, Region V, U. S. Environmental Protection Agency

Donald K. Holland . . . . . Director of Public Works, City of Kenosha

George A. James . . . . . Director, Bureau of Local and Regional Planning, Wisconsin Department of Local Affairs and Development

Raymond J. Kipp . . . . . Dean, College of Engineering, Marquette University

Robert M. Krill . . . . . Chief, Municipal Wastewater Section, Bureau of Water Quality, Wisconsin Department of Natural Resources

Theodore W. Meilahn . . . . . County Surveyor, Washington County

Melvin Noth . . . . . Director of Public Works, Village of Menomonee Falls

John W. Peters . . . . . Assistant Director, Planning and Relocation Branch, U. S. Department of Housing and Urban Development, Milwaukee

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL SANITARY SEWERAGE SYSTEM PLANNING (Continued)

Herbert E. Ripley . . . . . Acting Director, Waukesha County Department of Health

Donald A. Roensch . . . . . Director of Public Works, City of Mequon

Bernard G. Schultz . . . . . Assistant District Director, Southeast District, Wisconsin Department of Natural Resources

Rodney M. VandenNoven . . . . . Director of Public Works, City of Waukesha

Frank A. Wellstein . . . . . City Engineer, City of Oak Creek

Henry B. Wildschut . . . . . County Highway Commissioner and Director of Public Works, Milwaukee County

James F. Wilson . . . . . District Supervisor, Farmers Home Administration, U. S. Department of Agriculture

Harvey E. Wirth . . . . . State Sanitary Engineer, Division of Health, Wisconsin Department of Health and Social Services

TECHNICAL ADVISORY COMMITTEE ON THE ABATEMENT OF POLLUTION FROM COMBINED SEWER OVERFLOW IN THE MILWAUKEE METROPOLITAN AREA

Ray D. Leary . . . . . Chief Engineer and General Manager, Milwaukee-Metropolitan Sewerage Commissions
Chairman

Vinton W. Bacon . . . . . Professor, College of Applied Science and Engineering, University of Wisconsin-Milwaukee

Kurt W. Bauer . . . . . Executive Director, SEWRPC

W. J. Blong . . . . . Village Manager and Commissioner of Public Works, Village of Fox Point

Richard E. Carlson . . . . . Chief of Project Planning Branch, Chicago District Office, U. S. Army Corps of Engineers

Thomas G. Frangos . . . . . Administrator, Division of Environmental Protection, Wisconsin Department of Natural Resources

Herbert A. Goetsch . . . . . Commissioner of Public Works, City of Milwaukee

Raymond J. Kipp . . . . . Dean, College of Engineering, Marquette University

Eugene F. Wojcik . . . . . Water Resources Planner, Region V, U. S. Environmental Protection Agency

TECHNICAL ADVISORY COMMITTEE ON THE DEEP SANDSTONE AQUIFER SIMULATION MODELING PROGRAM

Joseph H. Kuranz . . . . . General Manager and Chief Engineer, City of Waukesha Water Utility
Chairman

Perry G. Olcott . . . . . Geologist, Water Resources Program, Wisconsin Geological and Natural History Survey
Vice-Chairman

William D. McElwee . . . . . Chief Environmental Planner, SEWRPC
Secretary

Kurt W. Bauer . . . . . Executive Director, SEWRPC

R. D. Cotter . . . . . Assistant District Chief, Water Resources Division, U. S. Geological Survey

TECHNICAL ADVISORY COMMITTEE ON THE DEEP SANDSTONE AQUIFER SIMULATION MODELING PROGRAM (Continued)

Glenn Frank	Manager, City of Cedarburg Light and Water Commission
Donald J. Finch	Director of Public Works, City of New Berlin
Jerome J. Gottfried	Mayor, City of Muskego
Charles L. R. Holt, Jr.	District Chief, Water Resources Division, U. S. Geological Survey, Madison
David L. Kluge	Administrative Engineer, Village of Pewaukee
Edmund P. Kreuger	Superintendent, Village of Grafton Sewer and Water Commission
Dr. Norman P. Lasca	Associate Professor, Department of Geological Sciences, University of Wisconsin-Milwaukee
Thomas J. Muth	Director of Public Works, Village of Germantown
Lawrence Nightingale	Director of Public Works, City of Hartford
Fred Struve	Superintendent, Village of Menomonee Falls Water Utility
Martin Valentine	Water Superintendent, City of Whitewater
Clark E. Wangerin	City Engineer, City of Brookfield
Jerome J. Winter	Superintendent, City of Oconomowoc Electric and Water Department

TECHNICAL COORDINATING AND ADVISORY COMMITTEE ON REGIONAL AIRPORT PLANNING

William D. Rogan Chairman	County Agri-Business Agent, Waukesha County
Kurt W. Bauer Secretary	Executive Director, SEWRPC
Colonel Thomas F. Bailey	Commander, 120th Air Refueling Group, Wisconsin Air National Guard, Milwaukee
John H. Batten	President, Twin Disc, Inc., Racine; Member, National Business Aircraft Association
Robert R. Brackett	Manager, Kenosha Municipal Airport; Member, Wisconsin Aviation Trades Association
Donald M. Cammack	Chief Planning Engineer, Division of Aeronautics, Wisconsin Department of Transportation
Arne L. Gausmann	Director, Bureau of Systems Planning, Division of Planning, Wisconsin Department of Transportation
Bill R. Hippenmeyer	Director of Planning, City of Oak Creek
Paul C. Leonard	Manager, Central Operations Regional Office, American Air Transport Association, Rosemount, Illinois
James F. Popp	Chief of Planning, U. S. Department of Transportation, Federal Aviation Administration, Great Lakes Region, Chicago
Joseph F. Sanek	Airport Director, Milwaukee County
Earl Stier	Manager, West Bend Airport
Henry B. Wildschut	County Highway Commissioner and Director of Public Works, Milwaukee County

TECHNICAL ADVISORY COMMITTEE ON REGIONAL LIBRARY PLANNING

Nolan Neds Chairman	Superintendent of Neighborhood Libraries and Extension Services, City of Milwaukee Public Library System
George E. Earley Vice-Chairman	Director, Gilbert M. Simmons Public Library, Kenosha
Richard Crane	Librarian, Maude Shunk Public Library, Menomonee Falls
Miss Sally Davis	Director, Oconomowoc School Libraries
Miss Fern Federman	Director, Shorewood Public Library
Miss Araxie Kalvonjian	Librarian, Kenosha Technical Institute
Miss Marion Langdell	Former Head Librarian, Cudahy Public Library
Mrs. Grace A. Lofgren	Director, Burlington Public Library
Edward W. Lynch	Librarian, Waukesha Public Library
Miss Josephine M. Machus	Director, Oconomowoc Public Library
Forrest L. Mills	City Librarian, Racine Public Library
Mrs. Marianne Molleson	Librarian, Cudahy Public Library
William Moritz	Associate Director, University of Wisconsin-Milwaukee Library
Miss Dorothy Naughton	Librarian, Walworth County Library Service
Miss Ione Nelson	Coordinator of Field Services, Wisconsin Division for Library Services, Madison
Mrs. Helen Pelzmann	Librarian, West Allis Public Library
Miss Esther Regli	City Librarian, Wauwatosa Public Library
John C. Reid	Librarian, West Bend Community Memorial Library
Ned Wetmore	Planning Analyst, Bureau of State Planning, Wisconsin Department of Administration, Madison

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON REGIONAL HOUSING STUDIES

*Richard W. Cutler Chairman	Attorney, Brady, Tyrrell, Cotter & Cutler, Milwaukee; Member, Village of Fox Point Plan Commission; Commissioner, SEWRPC
Robert B. Barrows Vice-Chairman	Vice-President, Mortgage Loan Department, Northwestern Mutual Life Insurance Company, Milwaukee
Kurt W. Bauer Secretary	Executive Director, SEWRPC
William B. Ardern	Past President, Society of Real Estate Appraisers, Milwaukee Chapter No. 64, Milwaukee
John Bach	Director, Southeastern Wisconsin Housing Corporation, Burlington
Richard Barry	Representative, Metropolitan Milwaukee Association of Commerce; Vice President-Treasurer, Bruce, Barry, & Gleysteen, Inc., Milwaukee
Richard P. Blake	Architect, Blake-Wirth & Associates, Inc., Milwaukee; Board Member, Wisconsin Chapter—Southeast Section, American Institute of Architects
Delbert Blasdel	Administrative Code Consultant, Division of Industrial Safety and Buildings, Wisconsin Department of Industry, Labor, and Human Relations

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON REGIONAL HOUSING STUDIES (Continued)

*Paul Borrmann	Advisor, Milwaukee Tenants Union; Coordinator, Metropolitan Housing Center, Milwaukee
Paul J. Cody	Urban Affairs Manager, S. C. Johnson & Son, Inc., Racine
Clarence Dittmar	President, Dittmar Realty, Inc., Menomonee Falls
The Rev. John D. Fischer	Executive Director, Greater Milwaukee Conference on Religion and Urban Affairs, Milwaukee
Leonard F. Forschner	Economist, U. S. Department of Housing and Urban Development, Milwaukee Area Office
Norman N. Gill	Executive Director, Citizens Governmental Research Bureau, Milwaukee
Jay Gilmer	Director, Bureau of Milwaukee Area Service, Department of Local Affairs and Development, Milwaukee
*Melvin Goldin	Secretary-Treasurer, Recht-Goldin-Siegel, Milwaukee
William Kelly	Director, Indian Urban Affairs Council, Milwaukee
*Mrs. James Mills	Legislative Chairman, League of Women Voters, Inter-League Council, Milwaukee
Bernard N. Nill	Assistant Planning Director, Department of City Development, City of Milwaukee
*Edward J. J. Olson	Director of Research and Planning, Community Relations-Social Development Commission, Milwaukee
William H. Orenstein	Project Director, Northridge Lakes, Milwaukee
*Kenneth Payne	Housing Coordinator, Milwaukee County
Glenn Peters	Secretary-Treasurer, Peters Development Corporation, West Bend
Clinton Rose	Supervisor, Milwaukee County; Chairman, Committee on Housing and Relocation, Milwaukee
*Gerald Schwerm	Village Manager, Village of Brown Deer
Wesley Scott	Executive Director, Milwaukee Urban League
Ronald P. Siepmann	President, Siepmann Realty Corporation, Brookfield
Jonathan Slesinger	Professor of Sociology, University of Wisconsin-Milwaukee

*Member of the Special Subcommittee on Housing Program Implementation

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON REGIONAL PARK, OUTDOOR RECREATION, AND RELATED OPEN SPACE PLANNING

Richard W. Cutler Chairman	Attorney, Brady, Tyrrell, Cotter & Cutler, Milwaukee; Member, Village of Fox Point Plan Commission; Commissioner, SEWRPC
Loren R. Anderson	President, Geneva Lake Development Corporation, Williams Bay
Anthony S. Bareta	County Planning Director, Milwaukee County Planning Commission
Donald B. Brick	Walworth County Recreation Agent
Frederick H. Chlupp	Land Use and Park Administrator, Washington County

TECHNICAL AND CITIZEN ADVISORY COMMITTEE ON REGIONAL PARK, OUTDOOR RECREATION, AND RELATED OPEN-SPACE PLANNING (Continued)

William H. Claflin	Deputy Commissioner, Department of City Development, City of Milwaukee
Delbert J. Cook	Chairman, Cedar Creek Restoration Council
Norbert Dettmann	Chairman, Town of Farmington; Supervisor, Washington County
Arthur D. Doll	Director, Bureau of Planning, Wisconsin Department of Natural Resources
Booker Hamilton	Member, Board of Directors, Neighborhood House of Milwaukee, Inc.
Karl B. Holzwarth	Park Director, Racine County
Charles Q. Kamps	Attorney, Quarles, Herriott, Clemons, Teschner, & Noelke, Milwaukee
Philip H. Lewis, Jr.	Professor, Department of Landscape Architecture, University of Wisconsin-Madison; Director, Environmental Awareness Center, Madison
Richard J. Lindl	Director of Parks, Kenosha County Park Commission
John Margis, Jr.	Supervisor, Racine County; Commissioner, SEWRPC
Robert J. Mikula	General Manager, Milwaukee County Park Commission
Clinton E. Rose	Supervisor, Milwaukee County
Robert D. Ross	General Manager, The Journal Times, Racine
Phil Sander	Executive Secretary, Southeastern Wisconsin Sportsmen's Federation
George L. Schlitz	Chairman, Kenosha County Park Commission
Frederick G. Schmidt	Member, Sierra Club
Mrs. John D. Squier	Member, Riveredge Nature Center, Inc.
Walter J. Tarmann	Executive Director, Waukesha County Park and Planning Commission
Edgar W. Trecker	Supervisor of Forestry, Wildlife, and Recreation; Southeast District, Wisconsin Department of Natural Resources
Joseph Waters	Proprietor, Lazy Day Campground, Town of Farmington
Dr. Harry J. Wilkins	Outdoor Sportsman, Wauwatosa
George T. Wilson	Assistant Superintendent of Schools, Division of Municipal Recreation and Adult Education, City of Milwaukee Public Schools
Thomas N. Wright	Director of Planning, City of Racine

FOX RIVER WATERSHED COMMITTEE

William D. Rogan Chairman	County Agri-Business Agent, Waukesha County
Paul G. Jaeger Secretary	County Agri-Business Agent, Kenosha County
Kurt W. Bauer	Executive Director, SEWRPC
Alexander H. Button	Inspector and Secretary, Linn Township Sanitary District
Arnold L. Clement	Planning Director and Zoning Administrator, Racine County
Willard R. Evans	County Supervisor, Waukesha County; Member, County Health Board; Chairman, Town of Pewaukee
Robert L. Frank	Citizen Member, Lake Geneva
Jerome Gottfried	Mayor, City of Muskego
H. Copeland Greene	Citizen Member, Genesee Depot

FOX RIVER WATERSHED COMMITTEE
(Continued)

Eugene A. Hollister . . . . . County Supervisor, Walworth County; Chairman, Walworth County Park and Planning Commission; Commissioner, SEWRPC
V. H. Holtdorf . . . . . Citizen Member, Silver Lake
Stanley W. Ihlenfeldt . . . . . County Agri-Business Agent, Walworth County
James A. Johnson . . . . . County Planner, Walworth County
John E. Jones . . . . . Citizen Member, Genesee
Elwin G. Leet . . . . . County Agricultural Agent, Racine County
Paul Lohaus . . . . . Chairman, Fox River Flood Control Committee, Burlington
John H. Mielke . . . . . Consulting Engineer, Waukesha
Bauer Mohr . . . . . Citizen Member, Rochester
Herbert E. Ripley . . . . . Director of Environmental Health Services, Waukesha County Health Department
Phil Sander . . . . . Executive Secretary, Southeastern Wisconsin Sportsmen's Federation
Dr. Bruno E. Schiffleger. . . . . Citizen Member, Elkhorn
George L. Schlitz. . . . . Citizen Member, Wheatland
Wilbert Schrank . . . . . Racine County Agricultural Stabilization and Conservation Committee
Bernard G. Schultz . . . . . Assistant District Director, Southeast District, Wisconsin Department of Natural Resources
Walter J. Tarmann . . . . . Executive Director, Waukesha County Park and Planning Commission
Rodney M. VandenNoven . . . . . Director of Public Works, City of Waukesha
Theodore Vogel . . . . . Citizen Member, Chenequa
Frank Walsh . . . . . Supervisor, Walworth County; Chairman, Town of Linn
Franklin Wirth . . . . . Mayor, City of Brookfield
John R. Zillmer . . . . . Secretary, Ice Age Park and Trail Foundation, Milwaukee

MENOMONEE RIVER WATERSHED COMMITTEE

Herbert A. Goetsch . . . . . Commissioner of Public Works, City of Milwaukee
Chairman
J. William Little . . . . . City Administrator, City of Wauwatosa
Vice-Chairman
Kurt W. Bauer . . . . . Executive Director, SEWRPC
Secretary
Arthur D. Doll . . . . . Director, Bureau of Planning, Wisconsin Department of Natural Resources
Glenn H. Evans . . . . . Member, Citizens for Menomonee River Restoration, Inc.
Louis W. Falk . . . . . Chairman of the Board, The Falk Corporation, Milwaukee
Thomas G. Frangos . . . . . Administrator, Division of Environmental Protection, Wisconsin Department of Natural Resources
Frederick E. Gottlieb . . . . . Village Manager, Village of Menomonee Falls
George C. Keller . . . . . President, Wauwatosa State Bank
Raymond J. Kipp . . . . . Dean, College of Engineering, Marquette University
Ray D. Leary. . . . . Chief Engineer and General Manager, Milwaukee-Metropolitan Sewerage Commissions
Thomas M. Lee . . . . . Chief, Flood Plain-Shoreland Management Section, Wisconsin Department of Natural Resources
Thomas P. Leisle . . . . . Mayor, City of Mequon; Supervisor, Ozaukee County

MENOMONEE RIVER WATERSHED COMMITTEE
(Continued)

Robert J. Mikula . . . . . General Manager, Milwaukee County Park Commission
Frank Munsey . . . . . District Engineer, Wisconsin Department of Natural Resources
Thomas J. Muth . . . . . Director of Public Works, Village of Germantown
Richard G. Reinders. . . . . Trustee, Village of Elm Grove
John E. Schumacher. . . . . City Engineer, City of West Allis
Walter J. Tarmann . . . . . Executive Director, Waukesha County Park and Planning Commission
Clark E. Wangerin . . . . . City Engineer, City of Brookfield

MILWAUKEE RIVER WATERSHED COMMITTEE

Richard W. Cutler . . . . . Attorney, Brady, Tyrrell, Cotter & Cutler, Milwaukee; Member, Village of Fox Point Plan Commission; Commissioner, SEWRPC
Chairman
Kurt W. Bauer . . . . . Executive Director, SEWRPC
Secretary
Vaughn H. Brown . . . . . Vice-President, Tri-County Civic Association
Frederick H. Chlupp. . . . . Land Use and Park Administrator, Washington County
Delbert J. Cook . . . . . Chairman, Cedar Creek Restoration Council
Arthur G. Degnitz . . . . . Supervisor, Washington County
Nick R. Didier . . . . . Realtor, Port Washington
Arthur D. Doll . . . . . Director, Bureau of Planning, Wisconsin Department of Natural Resources
Edward Frauenheim. . . . . Supervisor, Sheboygan County
Herbert A. Goetsch . . . . . Commissioner of Public Works, City of Milwaukee
Lawrence W. Hillman . . . . . Director of Industrial and Plant Engineering, The West Bend Company, West Bend; Commissioner, SEWRPC
Mrs. Robert Jaskulski . . . . . Treasurer, Milwaukee River Restoration Council, Inc.
Ben E. Johnson . . . . . Alderman, City of Milwaukee
John J. Juntunen. . . . . County Planner, Sheboygan County
John T. Justen . . . . . President, Pfister & Vogel Tanning Company, Milwaukee
Dorothy Klein . . . . . President, Village of Saukville
Robert L. Konik. . . . . County Planner, Fond du Lac County
Adolph Laubenstein. . . . . President, Laubenstein Roofing Company, Saukville
Ray D. Leary. . . . . Chief Engineer and General Manager, Milwaukee-Metropolitan Sewerage Commissions
Thomas P. Leisle . . . . . Mayor, City of Mequon; Supervisor, Ozaukee County
Dr. Darrell M. Martin . . . . . Research Engineer, Envirex, Inc., Milwaukee
Robert J. Mikula. . . . . General Manager, Milwaukee County Park Commission
Rudolph Mikulich . . . . . Business Administrator, Clerk-Treasurer, City of Glendale
Dennis E. Nulph . . . . . District Engineer, Southeast District, Wisconsin Department of Natural Resources
Timeon L. Richter . . . . . Director, Ozaukee County Department of Environmental Health
Albert Schroeder. . . . . Former Chairman, Town of Trenton
Emil M. Stanislawski . . . . . Supervisor, Milwaukee County; Commissioner, SEWRPC
George Watts. . . . . President, George Watts & Son, Inc., Milwaukee
Donald W. Webster . . . . . Consulting Civil Engineer, Milwaukee
Richard E. Zarling . . . . . Director of Elementary Education, Kewaskum Community Schools

ROOT RIVER WATERSHED COMMITTEE

Robert J. Mikula Chairman	General Manager, Milwaukee County Park Commission
Thomas N. Wright Vice-Chairman	Director of Planning, City of Racine
Kurt W. Bauer Secretary	Executive Director, SEWRPC
John M. Bennett	City Engineer, City of Franklin
George C. Berteau	Commissioner, SEWRPC
Raymond T. Dwyer	City Engineer, City of Greenfield
Alvin Erdman	Soil and Water Conservation District Supervisor, Kenosha County
Jerome J. Gottfried	Mayor, City of Muskego
Howard C. Graves	President, Village of Hales Corners
Kenneth E. Henrics	District Engineer, Southeast District, Wisconsin Department of Natural Resources
Lester O. Hoganson	City Engineer, City of Racine
Elroy C. Honadel	Mayor, City of Oak Creek
Ray D. Leary	Chief Engineer and General Manager, Milwaukee-Metropolitan Sewerage Commissions
Elwin G. Leet	County Agricultural Agent, Racine County
John Margis, Jr.	Supervisor, Racine County; Commissioner, SEWRPC
Stephen F. Olsen	Mayor, City of Racine
Nick T. Paulos	Village Engineer, Village of Greendale
John E. Schumacher	City Engineer, City of West Allis
Robert A. Tardiff	Mayor, City of Greenfield
Frank A. Wellstein	City Engineer, City of Oak Creek

KINNICKINNIC RIVER WATERSHED COMMITTEE

Robert J. Mikula Chairman	General Manager, Milwaukee County Park Commission
Edwin J. Laszewski, Jr. Vice-Chairman	City Engineer, City of Milwaukee
Kurt W. Bauer Secretary	Executive Director, SEWRPC
William H. Claflin	Deputy Commissioner, Department of City Development, Milwaukee
Raymond T. Dwyer	City Engineer, City of Greenfield
Gary A. Gagnon	District Engineer, Southeast District, Wisconsin Department of Natural Resources
Roger A. Harris	Director of Public Works, City of Cudahy

KINNICKINNIC RIVER WATERSHED COMMITTEE (Continued)

Thomas A. Kroehn	District Director, Southeast District, Wisconsin Department of Natural Resources
Ray D. Leary	Chief Engineer and General Manager, Milwaukee-Metropolitan Sewerage Commissions
Stanley Polewski	Owner, Polewski Pharmacy, Milwaukee
John E. Schumacher	City Engineer, City of West Allis
Frank J. Wabiszewski	Vice President, Maynard Electric Steel Casting Company
Henry B. Wildschut	County Highway Commissioner and Director of Public Works, Milwaukee County

RACINE URBAN PLANNING DISTRICT CITIZENS ADVISORY COMMITTEE

David Rowland Chairman	President, Carpenter-Rowland-Batenburg Insurance Company, Racine
Eric Schroder Vice-Chairman	Former Board Member, Racine Unified School District
Marshall Lee, Jr. Secretary	Marshall E. Lee Agency, Inc., Racine
*Gilbert Berthelsen	Racine County Administrator
*Arnold L. Clement	Planning Director and Zoning Administrator, Racine County
Paul Cody	Urban Affairs Manager, S. C. Johnson and Son, Inc., Racine
Wesley Hansche	Chairman, Town of Mt. Pleasant Plan Commission
Jack Harvey	City Attorney, City of Racine
*Lester O. Hoganson	City Engineer, City of Racine
*Karl B. Holzwarth	Park Director, Racine County
Steven R. Horvath	Chairman, Town of Caledonia
LeRoy H. Jerstad, Jr.	President, Village of North Bay
Richard E. LaFave	Chairman, Racine County Board of Supervisors
John Margis, Jr.	Supervisor, Racine County; Commissioner, SEWRPC
Edward Mickelson, Jr.	President, Village of Sturtevant
Leo F. Mutchler	Alderman, City of Racine
Stephen F. Olsen	Mayor, City of Racine
Henry J. Olson	President, Village of Wind Point
Henry Rohner	Chairman, Town of Mt. Pleasant
Virgil Schulz	Trustee, Village of Sturtevant
Mrs. Beryl Streiff	President, Village of Elmwood Park
Carl E. Thomsen	Alderman, City of Racine
Willard Walker	Executive Vice-President, Walker Forge, Inc.
*Thomas N. Wright	Director of Planning, City of Racine
*Donald Zenz	County Highway Engineer, Racine County

Appendix C

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION STAFF
1973

EXECUTIVE DIVISION

Kurt W. Bauer, P.E.
Executive Director

Harlan E. Clinkenbeard
Assistant Director

Keith W. Graham, P.E.
Assistant Director

Margaret M. Shanley
Executive Secretary

Linda S. Hubbard
Secretary

PLANNING RESEARCH DIVISION

Michael J. Keidel
Chief Planner

Hazel H. Reinhardt
Demographer

Edward J. Semrad
Phillip W. Uekert
Planners

William E. Preboski
Research Analyst

Linda M. Pohl
Librarian

TRANSPORTATION PLANNING DIVISION

Mark P. Green, P.E.
Chief Engineer

Donald R. Martinson
Senior Engineer

Peter L. Benwitz
Neal E. Manske
Associate Engineers

Robert A. Ristow
Engineering Aide

William M. Hendricks
Robert C. Johnson
Research Analysts

James F. Graham
Research Aide

Marie S. Wessa
Clerk-Stenographer

DATA COLLECTION DIVISION

Sheldon W. Sullivan
Chief of Data Collection

John L. Zastrow
Planner

Jean M. Lusk
Research Analyst

COMMUNITY ASSISTANCE PLANNING DIVISION

Philip C. Evenson
Chief Planner

Norbert R. Schappe
Senior Planner

Ronald R. Knippel
Planner

George E. Melcher
Research Analyst

Nancy F. Warner
Editor

Elaine I. Andersen
Secretary

ENVIRONMENTAL PLANNING DIVISION

William D. McElwee, P.E.
Chief Engineer

Stuart G. Walesh, P.E.
Water Resources Engineer

Jerome S. Chudzik, P.E.
Randolph M. Videkovich
Senior Engineers

Curtis W. Goff
Associate Engineer

Donald M. Reed
Planner

Irene A. Brown
Clerk-Typist

CARTOGRAPHIC AND GRAPHIC ARTS DIVISION

Dallas R. Behnke
Chief Planning Illustrator

Ronald H. Heinen
Leland H. Kreblin
Jack H. Wendorf
Planning Illustrators

Thomas R. Houston
B. Lynn Richardson
Planning Draftsmen

SYSTEMS ENGINEERING AND DATA PROCESSING DIVISION

John W. Ernst
Data Processing Manager

Kumares C. Sinha
Systems Engineering Consultant

Robert J. Baier
Operations Supervisor

Richard A. Runte
Systems Analyst

Paul A. Clavette
John D. Harasha
Kenneth R. Knaack
Computer Programmers

Richard L. Henley
John C. Stelpflug
Computer Operators

Kristine M. Engelhardt
Lead Keypunch Operator

L. Diane Fraley
Sharon L. Manicke
Patricia A. Massino
Kary E. Olson
Ella M. Vatne
Keypunch Operators

LAND USE PLANNING AND HOUSING DIVISION

Bruce P. Rubin
Chief Planner

Wayne H. Faust
Robert F. Hamilton
Emile A. Jarreau
William J. Stauber
Senior Planners

Mark A. Becker
Carol A. Brown
Joseph P. Ruys
Thomas F. Todd
Research Analysts

Kristine L. Kingstad
Research Aide

Linda S. Sorensen
Clerk-Stenographer

ADMINISTRATIVE SERVICES DIVISION

Donald N. Drews
Administrative Officer

Clifford A. Serowski
Administrative Assistant

Patricia J. Danielson
Bookkeeper

Luella M. Fredrickson
Secretary

Lena P. Caracci
Julianne K. Comstock
Betty Gargan
Bergetta J. Ruehmer
Clerk-Typists

INTERAGENCY STAFF ASSIGNMENTS

Robert G. Anderson
Planning Analyst
District 2
Division of Highways
Wisconsin Department of Transportation

David W. Dettmann
Civil Engineer IV
District 9
Division of Highways
Wisconsin Department of Transportation

Donald A. Hoeppner
Special Project Engineer
Bureau of Engineering
Department of Public Works
City of Milwaukee

James H. Kasdorf
Civil Engineer IV
District 9
Division of Highways
Wisconsin Department of Transportation

Vernon A. Reding
Civil Engineer III
Central Office
Division of Planning
Wisconsin Department of Transportation

Wayne C. Steffen
Technician IV
District 9
Division of Highways
Wisconsin Department of Transportation

NORMAN E. SCHLEY
CERTIFIED PUBLIC ACCOUNTANT
P. O. BOX 985
WAUKESHA, WISCONSIN 53186

TELEPHONE (414) 542-6695

MEMBER
WISCONSIN SOCIETY C.P.A.'S.
AMERICAN INSTITUTE OF
CERTIFIED PUBLIC ACCOUNTANTS
NAT'L ASS'N ACCOUNTANTS

May 31, 1974

To the Commissioners of
Southeastern Wisconsin Regional Planning Commission
Waukesha, Wisconsin 53186

Gentlemen:

We have examined the accompanying statements of financial position, statements of revenues and expenditures and changes in fund balances for the year 1973 of the following funds of the Southeastern Wisconsin Regional Planning Commission: General Fund, Continuing Regional Land Use - Transportation Study, Regional Airport System Planning Program, Regional Housing Study, Menomonee River Watershed Planning Program, Regional Park, Outdoor Recreation, and Related Open Space Planning Program, Origin and Destination Study, Regional Library Planning Program, Racine Urban Planning District Planning Program, Regional Sanitary Sewerage System Planning Program, Land Use Plan Design Model, and Trust Funds for Special Projects, Kenosha County Photogrametric and Base Mapping Program, and Sandstone Aquifer Simulation Program. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. However, our examination did not include tests of compliance with policies, rules and regulations of the grantor agencies.

In our opinion these statements fairly present the financial position of the above funds at December 31, 1973 and the results of their financial operations during 1973, subject to adjustments that may be imposed by grantor agencies because of lack of compliance with agencies' policies, rules and regulations.

Respectfully submitted,

Norman E. Schley

Certified Public Accountant

NES/ggs
Wis. '74 - Cert. 642
Ill. '72-'74 - Cert. 65-4351

EXHIBIT A-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

General Fund

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Fund Balance - January 1, 1973	$	$	$ 17,705.69
Revenues			
Tax Levies			
Kenosha County	16,633.00		
Milwaukee County	156,523.00		
Ozaukee County	10,850.00		
Racine County	24,436.00		
Walworth County	13,322.00		
Washington County	11,439.00		
Waukesha County	41,723.00		
Total Received from Counties	274,926.00		
Federal Grants			
Clearing House Review (A95-HUD 1972)	3,225.95		
Clearing House Review (A95-HUD 1973)	5,004.61		
Sanitation Sewerage System - Reimbursement (HUD)	27,624.67		
Total Federal Grants	35,855.23		
Non-Federal Grants			
Community Assistance Billings	9,030.11		
State of Wisconsin Department of Local Affairs and Development	30,000.00		
Total Non-Federal Grants	39,030.11		
Other Revenues			
Sale of Aerial Maps	11,856.12		
Sale of Publications	4,276.14		
Income on Invested Funds	2,919.49		
Miscellaneous Receipts	.36		
Total Other Revenues	19,052.11		
Total Revenues		368,863.45	
Totals Carried Forward		368,863.45	17,705.69

EXHIBIT A-A
(Continued)

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

General Fund

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Totals Brought Forward	$	$368,863.45	$ 17,705.69
Expenditures			
Grants to Projects			
Land Use Plan Design Model (PD-1)	1,376.35		
Regional Sanitary Sewerage System Planning Program	12,139.74		
	13,516.09		
Operations			
Salaries	263,480.10		
Office Supplies and Expense	2,049.52		
Office Furniture and Equipment	14,618.21		
Library Acquisition	1,343.94		
Travel Expense	7,376.70		
Reproduction and Publication	17,735.92		
Rent	17,181.17		
Telephone	3,816.20		
Postage	2,384.55		
Insurance Expense	961.00		
Legal and Audit Expense	3,250.00		
Newsletter Costs	3,003.40		
Annual Report	2,292.72		
Inspection Fees	563.00		
Other Operating Expense	4,189.44		
	344,245.87		
Total Expenditures		357,761.96	
Excess Revenues over Expenditures			11,101.49
Fund Balance - December 31, 1973			$ 28,807.18

* * * * *

EXHIBIT A-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

General Fund

Statement of Financial Position

As at December 31, 1973

Assets		
Cash on Hand and in Bank	$	$ 2,088.79
Accounts Receivable		
Projects		
Continuing Land Use - Transportation Study	149,581.30	
Regional Housing Planning Program	19,160.09	
Land Use Plan Design Model	8,830.33	
Racine Urban Planning District Program	278.54	
Regional Park, Outdoor Recreation and Related Open Space Planning Program	2,175.94	180,026.20
Others		
Community Assistance		8,975.11
U. S. Housing and Urban Development	43,597.89	
Less: Unearned Housing and Urban Development Grant	14,995.39	28,602.50
Racine Jurisdictional Phase		132.25
Office Furniture, Equipment and Leasehold Improvements at Nominal Value		1.00
Total Assets		$219,825.85
Liabilities		
Accounts Payable	42,299.08	
Due - Continuing Land Use - Transportation Study	585.10	
- Regional Housing Planning Program	9,626.94	
- Regional Airport Planning Program	21,200.00	73,641.02
Advances to be Repaid		
Regional Airport Planning Program	36,932.70	
Library Planning Program	6,688.87	
Menomonee River Watershed Study	47,736.77	
Community Relations - Social Development in Milwaukee County	14,665.68	
Payroll Tax Liability	3,232.78	
Regional Park, Outdoor Recreation and Related Open Space Planning Program	6,510.85	
Continuing Land Use - Transportation Study	1,610.00	
Total Liabilities		117,377.65
Unexpended Fund Balance (Exhibit A-A)		28,807.18
Total Liabilities and Unexpended Fund Balance		$219,825.85

* * * * *

EXHIBIT B-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Second Continuing Land Use - Transportation Study (TRA)

Statement of Revenues and Expenditures

As at December 31, 1973

Fund Balance - January 1, 1973	$	$ (1,189.81)
Revenues		
Federal Grants - U. S. Dept. of Housing and Urban Development	186,097.90	
Other Non-Federal Grants - U. S. Dept. of Transportation and Wis. Dept. of Transportation	251,232.16	
Grants of Counties	122,824.61	
Service Agreements	129,350.10	
Income on Invested Funds	1,063.49	
Total Revenues	690,568.26	
Expenditures		
Salaries and Wages	494,210.37	
Study Costs - Project	102,585.47	
Administrative Costs	65,375.85	
Travel	3,856.67	
Reproduction and Publication	21,186.98	
Inspection Fees	1,491.95	
Total Expenditures	688,707.29	
Excess Revenues over Expenditures		1,860.97
Fund Balance - December 31, 1973		$ 671.16

The remaining Grants due from Kenosha County, Milwaukee County, Ozaukee County, Racine County, Walworth County, Washington County and Waukesha County in the amount of $585.10 as at December 31, 1973 were held in the General Funds of the Commission.

* * * * *

EXHIBIT B-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Second Continuing Land Use - Transportation Study (TRA)

Statement of Financial Position

As at December 31, 1973

Assets		
Cash in Bank	$	$ 565.37
Accounts Receivable		
Federal Grants - HUD	117,140.02	
Less: Unearned Grants - HUD	51,247.85	65,892.17
Other Non-Federal Grants - WISDOT-USDOT	84,990.45	
Less: Unearned Other Non-Federal Grants - WISDOT-USDOT	587.84	84,402.61
Grants from Counties	34,237.65	
Less: Unearned Grants from Counties	33,939.94	297.71
Other		28,141.25
Office Furniture and Equipment at Nominal Value		1.00
Total Assets		$179,300.11
Liabilities		
Accounts Payable	29,047.65	
Due to General Fund	149,581.30	
Total Liabilities		178,628.95
Unexpended Fund Balance (Exhibit B-A)		671.16
Total Liabilities and Unexpended Fund Balance		$179,300.11

* * * * *

EXHIBIT C-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Regional Airport Planning Program (AIR)

Statement of Financial Position

As at December 31, 1973

Assets		
Cash in Bank	$	$ 1,120.80
Accounts Receivable		
Grants from Counties	21,200.00	
Wis. Dept. of Transportation		
Division of Aeronautics	48,738.82	
General Fund	36,932.70	106,871.52
Total Assets		$107,992.32
Liabilities		
Unearned Grants	107,947.70	
Due to - Continuing Land Use - Transportation Study	44.62	
Total Liabilities		107,992.32
Unexpended Fund Balance (Exhibit C-A)		-
Total Liabilities and Unexpended Fund Balance		$107,992.32

* * * * *

EXHIBIT C-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Regional Airport Planning Program (AIR)

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Fund Balance - January 1, 1973	$	$
Revenues		
Other Non-Federal Grants - Wis. Dept. of Transportation Division of Aeronautics	51,247.15	
Income on Invested Funds	586.40	
Total Revenues	51,833.55	
Expenditures		
Salaries and Wages - Including Employee Benefits	23,048.75	
Contract Services with Technical Consultants	26,550.00	
Travel	348.39	
Data Processing	1,491.26	
Supplies and Other Expense	395.15	
Total Expenditures	51,833.55	
Excess Expenditures over Revenues		-
Fund Balance - December 31, 1973 (Exhibit C-B)		$ -

The Grants from Kenosha County, Milwaukee County, Ozaukee County, Racine County, Walworth County, Washington County and Waukesha County in the amount of $21,200.00 as at December 31, 1973 were held in the General Funds of the Commission.

* * * * *

EXHIBIT D-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Regional Housing Planning Program (HSG)

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Fund Balance - January 1, 1973	$	$ 34,366.62
Revenues		
Federal Grants - U. S. Dept. of Housing and Urban Development	100,851.81	
Other Non-Federal Grants - Wis. Dept. of Local Affairs and Development	3,333.00	
Income on Invested Funds	126.97	
Total Revenues	104,311.78	
Expenditures		
Salaries and Wages - Including Employee Benefits	113,654.47	
Travel	1,121.57	
Reproduction and Publication	1,444.08	
Supplies and Other Expense	21,944.06	
Inspection Fees	337.80	
Total Expenditures	138,501.98	
Excess Expenditures over Revenues		(34,190.20)
Fund Balance - December 31, 1973		$ 176.42

Grants from counties, which include Kenosha County, Milwaukee County, Ozaukee County, Racine County, Walworth County, Washington County, and Waukesha County in the amount of $9,626.94 as at December 31, 1973, were held in the General Funds of the Commission.

* * * * *

EXHIBIT D-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Regional Housing Planning Program (HSG)

Statement of Financial Position

As at December 31, 1973

Assets		
Cash in Bank	$	$ 885.03
Accounts Receivable		
Federal Grants - U. S. Dept. of Housing and Urban Development	89,685.35	
Less: Unearned HUD Grant	49,914.43	39,770.92
Grants from Counties	9,626.94	
Less: Unearned Grants from Counties	9,626.94	-
Other Non-Federal Grants - Wis. Dept. of Local Affairs and Development	3,333.00	
Less: Unearned Wis. Dept. of Local Affairs and Development	50.41	3,282.59
Total Assets		$ 43,938.54
Liabilities		
Due - General Fund	19,160.09	
- Continuing Land Use - Transportation Study	3,002.03	
- University of Wisconsin - Milwaukee	21,600.00	
Total Liabilities		43,762.12
Unexpended Fund Balance (Exhibit D-A)		176.42
Total Liabilities and Unexpended Fund Balance		$ 43,938.54

* * * * *

EXHIBIT E-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Menomonee River Watershed Study

Statement of Financial Position

As at December 31, 1973

Assets		
Cash in Bank	$	$ 4,605.71
Accounts Receivable		
Grants from Applicant	21,694.06	
Less: Unearned Grant from Applicant	21,694.06	-
Grant - Wis. Dept. of Natural Resources	59,889.35	
Less: Unearned Grant - Wis. Dept. of Natural Resources	59,889.35	-
Federal Grant - Housing and Urban Development (H.U.D.)	27,936.68	
Less: Unearned Grant - H.U.D.	23,463.45	4,473.23
Federal Grant - Dept. of Interior - E.P.A.	68,142.00	
Less: Unearned Grant - Dept. of Interior - E.P.A.	63,518.99	4,623.01
General Fund		47,736.77
Total Assets		$ 61,438.72
Liabilities		
Advances - U. S. Dept. of Interior - E.P.A.		35,032.35
- from Applicants		21,694.06
Due to - Continuing Land Use - Transportation Study		924.15
- Regional Park - Outdoor Recreation and Related Open Space Planning Program		748.49
Total Liabilities		58,399.05
Unexpended Fund Balance (Exhibit E-A)		3,039.67
Total Liabilities and Unexpended Fund Balance		$ 61,438.72

* * * * *

EXHIBIT E-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Menomonee River Watershed Study

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Fund Balance - January 1, 1973	$	$ 1,164.17
Revenues		
Federal Grants - U. S. Dept. of Housing and Urban Development	7,519.88	
- U. S. Dept. of Interior (Environmental Protection Agency)	12,890.65	
Grants from Counties	6,253.94	
Other Non-Federal Grants - Wis. Dept. of Natural Resources	12,154.03	
Income on Invested Funds	656.39	
Total Revenues	39,474.89	
Expenditures		
Salaries and Wages - Including Employee Benefits	27,126.80	
Contract Services with Technical Consultants	8,750.00	
Travel	413.38	
Reproduction and Publication	531.73	
Supplies and Other Expense	664.88	
Inspection Fees	112.60	
Total Expenditures	37,599.39	
Excess Revenues over Expenditures		1,875.50
Fund Balance - December 31, 1973		$ 3,039.67

* * * * *

EXHIBIT F-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Regional Park, Outdoor Recreation and Related Open Space Planning Program (PRK)

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Fund Balance - January 1, 1973	$	$ -
Revenues		
Federal Grants - Housing and Urban Development	15,851.73	
Grants from Counties	3,885.52	
Grants from State of Wisconsin Department of Natural Resources	3,885.52	
Income on Invested Funds	238.72	
Total Revenues	23,861.49	
Expenditures		
Salaries and Wages	21,354.98	
Reproduction and Publication	308.31	
Travel	920.45	
Inspection Fees	309.65	
Supplies and Other Expenses	658.46	
Total Expenditures	23,551.85	
Excess Revenues over Expenditures		309.64
Fund Balance - December 31, 1973		$ 309.64

* * * * *

EXHIBIT F-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Regional Park, Outdoor Recreation and Related Open Space Planning Program (PRK)

Statement of Financial Position

As at December 31, 1973

Assets		
Cash in Bank	$	$ 206.76
Accounts Receivable		
Federal Grant - Housing and Urban Development (HUD)	31,738.11	
Less: Unearned Grant - Housing and Urban Development	24,243.92	7,494.19
Menomonee River Watershed Planning Program		748.49
Total Assets		$ 8,449.44
Liabilities		
Unearned Grant - Wis. Dept. of Natural Resources		6,114.48
Accounts Payable - Suppliers	245.75	
Due to General Fund	1,779.57	2,025.32
Total Liabilities		8,139.80
Unexpended Fund Balance (Exhibit F-A)		309.64
Total Liabilities and Unexpended Fund Balance		$ 8,449.44

* * * * *

EXHIBIT G-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Origin and Destination Travel Survey (ODS)

Statement of Financial Position

As at December 31, 1973

Assets	
Cash in Bank	$ 563.64
Total Assets	$ 563.64
Liabilities	
Due to - Continuing Land Use - Transportation Study	563.64
Total Liabilities	563.64
Unexpended Fund Balance (Exhibit G-A)	-
Total Liabilities and Unexpended Fund Balance	$ 563.64

* * * * *

EXHIBIT G-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Origin and Destination Travel Survey (ODS)

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Fund Balance - January 1, 1973	$	$ -
Revenues		
Non-Federal Grants - Wisconsin Dept. of Transportation	58,012.13	
Federal Grant - U.M.T.A.	29,006.06	
Income on Invested Fund	285.97	
Total Revenues	87,304.16	
Expenditures		
Salaries and Wages - Including Employee Benefits	75,160.42	
Contract Outside Services	800.70	
Study Costs - Project	3,906.86	
Administrative Costs	4,811.20	
Travel	2,624.98	
Total Expenditures	87,304.16	
Excess Expenditures over Revenues		-
Fund Balance - December 31, 1973		$ -

* * * * *

EXHIBIT H-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Library Planning Program (LP-1)

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Fund Balance - January 1, 1973	$	$
Revenues		
Non-Federal Grants - Wis. Dept. of Public Instruction	1,337.05	
Total Revenues	1,337.05	
Expenditures		
Salaries and Wages - Including Employee Benefits	1,270.58	
Reproduction and Publication	56.60	
Supplies and Other Expense	9.87	
Total Expenditures	1,337.05	
Excess Expenditures over Revenues		-
Fund Balance - December 31, 1973		$ -

The Non-Federal grant from the State Department of Public Instruction in the amount of $6,688.87 as at December 31, 1973 was held in the General Funds of the Commission.

* * * * *

EXHIBIT H-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Library Planning Program (LP-1)

Statement of Financial Position

As at December 31, 1973

Assets	
Cash in Bank	$ 2.84
Accounts Receivable	
General Fund	6,688.87
Total Assets	$ 6,691.71
Liabilities	
Unearned Grants - Wis. Dept. of Public Instruction	6,691.71
Accounts Payable - None Reported	-
Total Liabilities	6,691.71
Unexpended Fund Balance (Exhibit H-A)	-
Total Liabilities and Unexpended Fund Balance	$ 6,691.71

* * * * *

EXHIBIT I-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Racine Urban Planning District Program (RDP)

Statement of Financial Position

As at December 31, 1973

Assets	
Cash in Bank	$ 278.54
Total Assets	$ 278.54
Liabilities	
Due to General Fund	278.54
Total Liabilities	278.54
Unexpended Fund Balance (Exhibit I-A)	-
Total Liabilities and Unexpended Fund Balance	$ 278.54

* * * * *

EXHIBIT I-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Racine Urban Planning District Program (RDP)

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Fund Balance - January 1, 1973	$	$ 201.14
Revenues		
Grants of Applicants - Racine County	1,000.00	
Income on Invested Funds	25.36	
Total Revenues	1,025.36	
Expenditures		
Salaries and Wages - Including Employee Benefits	226.50	
Contract Services with Technical Consultants	1,000.00	
Total Expenditures	1,226.50	
Excess Expenditures over Revenues		(201.14)
Fund Balance - December 31, 1973		$ -

* * * * *

EXHIBIT J-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Regional Sanitary Sewer Study (P-110)

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Fund Balance - January 1, 1973	$	$
Revenues		
Federal Grant - U. S. Dept. of Housing and Urban Development	15,009.97	
Grants of Applicants	7,504.98	
Income on Invested Funds	34.17	
Total Revenues	22,549.12	
Expenditures		
Salaries and Wages	8,525.00	
Contract Services with Technical Consultants	14,000.00	
Total Expenditures	22,525.00	
Excess Revenues over Expenditures		24.12
Fund Balance - December 31, 1973		$ 24.12

* * * * *

EXHIBIT J-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Regional Sanitary Sewer Study (P-110)

Statement of Financial Position

As at December 31, 1973

Assets	
Cash in Bank	$ 24.12
Total Assets	$ 24.12
Liabilities	
Accounts Payable - None Reported	-
Total Liabilities	-
Unexpended Fund Balance (Exhibit J-A)	24.12
Total Liabilities and Unexpended Fund Balance	$ 24.12

* * * * *

EXHIBIT K-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Land Use Plan Design Model (PD-1)

Statement of Financial Position

As at December 31, 1973

Assets	
Cash in Bank	$ 16.25
Accounts Receivable	
Federal Grants - HUD	15,100.00
Total Assets	$ 15,116.25
Liabilities	
Due to - General Fund	8,830.33
- Continuing Land Use - Transportation Study	6,285.92
Total Liabilities	15,116.25
Unexpended Fund Balance (Exhibit K-A)	-
Total Liabilities and Unexpended Fund Balance	$ 15,116.25

Additional project costs in excess of budget estimates totaling $1,376.35 were charged to grants from General Fund.

* * * * *

EXHIBIT K-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Land Use Plan Design Model (PD-1)

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Fund Balance - January 1, 1973	$	$ -
Revenues		
Federal Grants - U. S. Dept. of Housing and Urban Development	6,756.62	
Grant - General Fund	1,376.35	
Income on Invested Funds	33.82	
Total Revenues	8,166.79	
Expenditures		
Salaries and Wages - Applicants Technical Personnel	2,298.38	
Contract Services with Technical Consultants	2,630.00	
Reproduction and Publication	2,469.37	
Supplies and Other Expenses	769.04	
Total Expenditures	8,166.79	
Excess Expenditures over Revenues		-
Fund Balance - December 31, 1973		$ -

* * * * *

EXHIBIT L-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Trust Fund - Special Projects

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Trust Fund Balance - January 1, 1973	$	$ 2,400.00
Revenues		
Stream Gaging Projects		
Metropolitan Sewerage Commission - City of Milwaukee	7,425.00	
University of Wisconsin - Parkside (Kenosha)	2,475.00	
Racine County	3,750.00	
Waukesha County	4,950.00	
Ozaukee County	3,700.00	
Washington County	3,700.00	
Total Revenues	26,000.00	
Expenditures		
Stream Gaging Projects		
U. S. Dept. of Interior - Geological Survey	12,100.00	
Total Expenditures	12,100.00	
Excess Revenues over Expenditures		13,900.00
Trust Fund Balance - December 31, 1973		$ 16,300.00

* * * * *

EXHIBIT L-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Trust Fund - Special Projects

Statement of Financial Position

As at December 31, 1973

Assets	
Cash in Bank	$ 13,900.00
Accounts Receivable	2,400.00
Total Assets	$ 16,300.00
Liabilities	
Accounts Payable - None Reported	-
Trust Fund Balance - Stream Gaging Projects (Exhibit L-A)	16,300.00
Total Liabilities and Trust Fund Balance	$ 16,300.00

* * * * *

EXHIBIT M-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Trust Fund - Kenosha County Photogrametric and Base Mapping Program (KCM)

Statement of Financial Position

As at December 31, 1973

Assets	
Cash in Bank	$ 15,134.48
Total Assets	$ 15,134.48
Liabilities	
Accounts Payable - None Reported	-
Trust Fund Balance - Photogrametric and Base Mapping Programs (Exhibit M-A)	15,134.48
Total Liabilities and Trust Fund Balance	$ 15,134.48

* * * * *

EXHIBIT M-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Trust Fund - Kenosha County Photogrametric and Base Mapping Program (KCM)

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Trust Fund Balance - January 1, 1973	$	$ 14,442.17
Revenues		
Income on Invested Funds	692.31	
Total Revenues	692.31	
Expenditures - None	-	
Total Expenditures	-	
Excess Revenues over Expenditures		692.31
Trust Fund Balance - December 31, 1973		$ 15,134.48

* * * * *

EXHIBIT N-A

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Trust Fund - Sandstone Aquifer Simulation Model Program (SAS)

Statement of Revenues and Expenditures

For the Year Ended December 31, 1973

Trust Fund Balance - January 1, 1973	$	$ 17,500.00
Revenues		
Income on Investments	191.76	
Total Revenues	191.76	
Expenditures		
University of Wisconsin Geological and National History Survey	8,500.00	
Total Expenditures	8,500.00	
Excess Revenues over Expenditures		8,308.24
Trust Fund Balance - December 31, 1973		$ 9,191.76

* * * * *

EXHIBIT N-B

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

Trust Fund - Sandstone Aquifer Simulation Model Program (SAS)

Statement of Financial Position

As at December 31, 1973

Assets	
Cash in Bank	$ 6,499.76
Accounts Receivable	
Municipal Water Utilities	2,692.00
Total Assets	$ 9,191.76
Liabilities	
Accounts Payable - None Reported	-
Trust Fund Balance - Municipal Water Utilities (Exhibit N-A)	9,191.76
Total Liabilities and Trust Fund Balance	$ 9,191.76

Grants funded for this program but not held in trust by Southeastern Wisconsin Regional Planning Commission are:

(1) Federal grant of $35,000 from U. S. Dept. of Interior - Geological Survey.
(2) Wisconsin Geological and Natural History Survey grant of $17,500.

* * * * *

KURT W. BAUER
EXECUTIVE DIRECTOR

OLD COURTHOUSE
P. O. BOX 769
916 N. EAST AVE.
WAUKESHA, WISCONSIN
53186
PHONE(414)547-6721