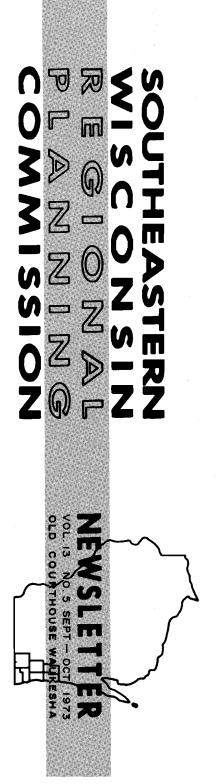
NEW POPULATION FORECASTS PREPARED BY COMMISSION

A slowing in the rate of population growth and a continuation of urban decentralization are among the findings of a new report on the population of southeastern Wisconsin, to be published soon by the Regional Planning Commission. The report notes that the continued movement of people out of the central cities to suburban and rural-urban fringe areas in the face of a declining rate of population growth could have important implications for the future demand for community facilities and services in both central city and outlying areas of the Region. The Commission is carefully studying the findings of the report as part of its current reevaluation of the regional land use and transportation plans which it adopted in 1966.

The population report updates a similar report prepared by SEWRPC a decade ago when the Region was experiencing rapid population growth. At that time, the Commission forecast that, if then existing trends continued, the Region could reach a population of 2.7 million persons by 1990. The new forecast indicates that this level will probably not be reached until about the year 2000, or about a decade later than originally forecast.

The downward revision is a result of the sharp decline in the birthrate during the late 1960s, as well as a reversal of migration patterns to a slight net out-migration. The new 2000 population forecast of 2,590,000 persons is 834,000 higher than the actual 1970 level of 1,756,086. To reach the expected year 2000 population level would mean adding an average of nearly 28,000 persons, or 1.6 percent, per year to the Region's 1970 population over the 30-year period. This average rate of increase, however, does not preclude periods of lower and higher than average annual population growth. Such variation in the rates of population forecast is a long-range forecast and as such cannot account for variations in the annual rates of growth due to short-term fluctuations in



			1990 Popula	2000 Po	pulation	Difference Between					
	tnit	tial	Rev	ised	Diffe	rence	Fore		Initial 1990 and		
		Percent		Percent				Percent	2000 Forecasts		
County	Number	of Total	Number	of Total	Number	Percent	Number	of Total	Number	Percent	
Kenosha	202,000	7.5	152,400	6.7	- 49,600	-24.6	168,400	6.5	- 33,600	-16.6	
Milwaukee	1,446,000	54.0	1,122,200	49.6	323,800	-22.4	1,147,500	44.3	298,500	-20.6	
Ozaukee	106,000	4.0	100,400	4.5	- 5,600	- 5.3	136,600	5.3	30,600	28.9	
Racine	283,000	10.6	233,100	10.3	49,900	-17.6	270,600	10.4	- 12,400	- 4.4	
Walworth	87,000	3.2	92,100	4.1	5,100	5.9	107,000	4.1	20,000	23.0	
Washington	96,000	3.6	108,500	4.8	12,500	13.0	138,900	5.4	42,900	44.7	
Waukesha	458,000	17.1	452,400	20.0	- 5,600	- 1.2	621,100	24.0	163,100	35.6	
Region	2,678,000	100.0	2,261,100	100.0	-416,900	-15.6	2,590,100	100.0	- 88,000	- 3.3	

POPULATION FORECASTS FOR THE REGION BY COUNTY: 1990 AND 2000

Source: SEWRPC.

the regional and national economies. It should be particularly noted in this respect that the post World War II "baby boom" has produced an abnormal distribution in the age structure of the regional as well as national populations. As a result, birthrates during the 1970s will be an important determinant of future population growth rates in the Region. It should also be noted that the general climate for economic development within Wisconsin has recently been greatly improved by certain revisions in the tax structure, and this may affect migration rates, another important determinant of future population growth rates in the Region.

In its population study, the Commission staff prepared 12 different population projections to the year 2000 based on various assumptions concerning birth, death, and migration rates. From these, three projections which appeared most likely to occur-a low, intermediate, and high projection-were chosen.

The low projection of 2.38 million persons was based on the assumptions that the birthrate would drop to replacement level by 1985, that the death rate would remain at the current level, and that there would be no change in the rates of migration. The high projection of 2.70 million persons was based on the assumption that the birthrate would drop to the replacement level by 1980, that the death rate would remain at the current level, and that migration would increase to a level equal to the average rate of migration which occurred from 1950 to 1970.

The intermediate projection of 2.59 million persons, which was chosen as the forecast level on the recommendation of the Socioeconomic Subcommittee of the Technical Coordinating and Advisory Committee on Regional Land Use-Transportation Planning, was based on the assumptions that the birthrate would drop to replacement by 1985, that the death rate would remain at the current level, and that the migration rate would also remain at the current level, a level which resulted in a small net out-migration during the 1960s.

It should be noted that the accuracy of the forecast will depend entirely on whether the assumptions on which it is based are fulfilled. The assumptions reflect recent trends in natural increase and migration, and cannot take into account unforeseen changes in the national economy, in international affairs, or the occurrence of a natural disaster. The rapid social and economic change which society is presently undergoing makes forecasting difficult. Growing concern about continued population growth and its effect on the quality of life could affect birthrates and therefore future population levels. Concern about increasing energy demands in the face of a diminishing energy supply could have far-reaching economic effects which may severely limit the mobility of the population and thereby affect future population levels. Similarly, concern over the provision of jobs and the maintenance of income levels could lead to more aggressive and successful economic development policies, thereby halting or reversing current migration trends and greatly affecting future population levels.

Importance of Economic Trends to Future Population Levels

It appears almost certain that the fertility rate will not remain at its present level. The current trend is strongly toward replacement fertility levels which will probably be reached and maintained by 1980 or 1985. It also appears almost certain that the death rate will not change significantly from the present level. Consequently, migration becomes the key determinant of the Region's future population level.

As noted in the report, the national rural to urban migration can no longer be the substantial factor in regional growth that it once was, since the rural population is now very small. Current national patterns of migration indicate that metropolitan to metropolitan movement has replaced the rural to urban movement, such migration being based to a large extent on the mobility of the working age population. These migration patterns indicate that national migratory moves are closely tied to economic conditions in the various areas of the United States. Thus, the economic prospects of the Region will bear heavily on the future population level.

Rate of Population Growth Slowing

Although the Region's population has increased at a faster rate than that of the state or nation in past years, it has recently fallen behind state and national rates of growth. From 1950 to 1960 the population in southeastern Wisconsin increased by about 33,000 persons per year, or 26.8 percent, ahead of the rate for the state (15.1 percent) and nation (18.5 percent). Between 1960 and 1970, however, the Region's population increased by about 18,000 persons per year, or 11.6 percent, slightly behind the rate of growth for the state (11.8 percent) and nation (13.3 percent).

The rate of growth for the seven counties from 1960 to 1970 has varied, ranging from less than 2 percent in Milwaukee County to 46 percent in Waukesha County. The City of Milwaukee has actually lost population since 1960, with nearly 24,000 persons, or 3 percent of the city's population, moving elsewhere. In 1960, 60 percent of the Region's population lived in Milwaukee County. By 2000, it is expected that only 44 percent will live there.

Move to the Suburbs Continues

The overall population increase in the Region has been accompanied by a rapid increase in urbanization. In 1850, 75 percent of the people in the Region lived on farms. By 1970, less than 2 percent did. The number of persons living on farms declined from 37,375 in 1960 to 27,420 in 1970, a level that was nearly 57,000 less than the total number 120 years ago.

The proportion of persons in the Kenosha, Milwaukee, and Racine urbanized areas who live in the three central cities has continued to decline, dropping from 78 percent in 1950 to 61 percent in 1970. The total central city land area in the urbanized areas increased 105 percent from 1950 to 1970, while the urban fringe increased 600 percent.

POPULATION FORECASTS—continued

Since 1960, the outlying areas have grown at faster rates than the central cities. Kenosha, Milwaukee, and Racine Counties had the smallest rates of population increase (17.2, 1.7, and 20.5 percent, respectively), compared to increases of 41.6 percent in Ozaukee County and 46.2 percent in Waukesha County. In addition to the City of Milwaukee's 3 percent population decline from 1960 to 1970, several first-ring suburbs in Milwaukee County also lost population, including the Villages of Shorewood (2.6 percent), West Milwaukee (12.7 percent), and Whitefish Bay (5.4 percent). The population remained relatively stable in the Cities of St. Francis, Wauwatosa, and West Allis, with increases ranging from 3 to 5 percent.

The population density of the urbanized areas has declined, from 7,962 persons per square mile in 1950 to 2,896 in 1970. Within the central cities, the density declined from nearly 12,000 persons per square mile in 1950 to 7,300 in 1970, while in the urban fringe it declined from 1950 to 1960 but increased from 1960 to 1970.

Among other findings of the report were the following:

- The number of children aged five and under declined 19 percent, or by 36,954 persons, from 1960 to 1970, the largest decline among all age groups during that period. This same age group increased 50 percent between 1950 and 1960.
- The number of children five and six years of age enrolled in school declined slightly since 1960, the only age group among persons 5 to 24 years of age enrolled in school to decline.
- The proportion of persons 65 and older has increased steadily since 1950.
- The educational level of the population has been increasing in the past 20 years. In 1950, only 6 percent of the population 25 and older had completed four or more years of college. By 1970, nearly 11 percent completed this level of schooling. The percentage of persons with no schooling has remained at about 1 percent since 1950.
- The number of households in the Region increased from 465,913 to 536,485 between 1960 and 1970. The average number of persons per household declined, however, from 3.30 to 3.27.
- The percentage of single males and females aged 14 and older increased from 1960 to 1970. In 1960, 24 percent of the males and 20 percent of the females were single, compared to 29 percent of the males and nearly 25 per-

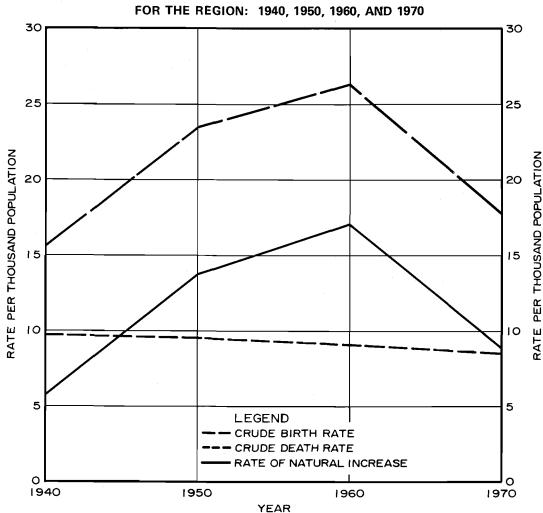
cent of the females in 1970. There were corresponding declines in the percentage of married males and females.

▶ The Region's population was more mobile between 1955 and 1960 than between 1965 and 1970. Of the 1.4 million persons aged five and older in 1960, nearly half lived in the same house that they had lived in in 1955; about one-third lived in a different house but in the same county; nearly 15 percent lived in a different county; and 1 percent had lived in a foreign country five years earlier. Less than 2 percent moved without reporting their 1955 place of residence. Of the 1.6 million persons aged five and older in 1970, 56 percent lived in the same house that they had lived in in 1965; 25 percent lived in a different house but in the same county; 13 percent lived in a different county; less than 1 percent had lived in a foreign country five years earlier; and nearly 6 percent moved but did not report their 1965 place of residence.

Between 1960 and 1970 the population of the Region increased by 11.6 percent, due entirely to natural increase, or an excess of births over deaths. For the first time since 1940, more people moved out of the Region than moved in. A total of 20,000 persons, or 1.3 percent of the population, moved out. The only county in which a net out-migration occurred between 1960 and 1970 was Milwaukee County, where 10 percent of the population, or 104,000 persons, moved out.

- Although net in-migration occurred in the other six counties, the rate of net migration was substantially lower between 1960 and 1970 in Kenosha, Ozaukee, and Waukesha Counties than between 1950 and 1960. Only Washington County had a significant increase in the migration rate over the 10-year period.
- Between 1960 and 1970 the crude birthrate for the Region (the number of births per 1,000 population) declined from 26.2 to 17.7. While the Region's crude birthrate was higher than the national average of 23.7 in 1960, it fell below the national average of 18.2 in 1970.

Copies of the report are available from the Commission offices at \$2.50 inside the Region and \$5.00 outside the Region.



CRUDE BIRTH AND DEATH RATES AND RATE OF NATURAL INCREASE

Source: United States Vital Statistics 1960, Wisconsin State Board of Health, U. S. Bureau of Census, and SEWRPC.

SEWRPC AMENDS FOX RIVER WATERSHED PLAN

The Regional Planning Commission at its quarterly meeting on September 13, 1973, acted to amend the adopted Fox River watershed plan to substitute a two-plant for a one-plant sanitary sewerage system for the upper Fox River watershed. The Commission also expanded the plan to include a specific implementation schedule for meeting water quality objectives and waste treatment requirements.

The plan as initially adopted by SEWRPC in 1970 recommended that one major centralized sewage treatment plant be located downstream from the City of Waukesha, with a system of trunk sewers to convey wastes from the upper watershed to the new site. The plan as amended recommends the establishment of two major sewage treatment facilities to serve urban development in the upper watershed, with one plant located at Waukesha to serve Waukesha and adjacent urban development in the Towns of Pewaukee and Waukesha, and the other located in the City of Brookfield to serve all remaining urban development in the upper watershed.

The revised plan was requested by local public officials from the communities in the upper watershed following an informational meeting called by the Wisconsin Department of Natural Resources (DNR) in January 1973, at which an implementation schedule was discussed. Following that meeting, the public officials formed an ad hoc committee to study the schedule, and subsequently recommended that SEWRPC amend the plan to include the establishment of two areawide sewage treatment plants, which was not only one of the original alternatives presented in the plan, but the most cost effective of those alternatives.

At an interagency meeting in July 1973, attended by representatives of the U.S. Environmental Protection Agency, DNR, and SEWRPC, it was indicated that amendment of the plan was acceptable to the state and federal agencies involved, provided that it was accompanied by an acceptable implementation schedule. Subsequently, a revised implementation schedule was prepared by DNR and made a part of the amendment to the plan.

The adoption of the amendment clearly illustrates that the plans prepared and adopted by the Commission can be revised if changing developments within the Region indicate the desirability of such revision. Alternatives to the recommended plan elements are always described in the published plan reports, along with the recommended plan elements, to facilitate the reconsideration of the recommendations by elected officials and concerned citizens as plan implementation proceeds. The adopted plans are intended to provide a point of departure against which development proposals can be evaluated by public officials and concerned citizens as such proposals arise on a day-to-day basis.

TWO NEW COMMITTEES FORMED TO ASSIST IN WATERSHED, JURISDICTIONAL HIGHWAY STUDIES

Two new committees have been formed to assist SEWRPC in its work on a comprehensive plan for the Kinnickinnic River watershed and on a jurisdictional highway system plan for Washington County.

Formation of the committees is a first step toward preparation of the comprehensive plans. The watershed study is the fifth watershed planning program undertaken by the Commission, and was begun at the request of the City of Milwaukee, in which roughly 75 percent of the Kinnickinnic River watershed lies. Primary problems to be dealt with in the study include the serious flooding, sewer backup, and water pollution problems of the watershed. The newly formed committee, which has scheduled its organizational meeting for November 27, 1973, has 11 members:

William H. Claflin.											.D	Deputy Commissioner, Department
												of City Development, Milwaukee
Raymond T. Dwyer	• .							•		•	. •	City Engineer, City of Greenfield
Roger Harris									D	ire	cto	or of Public Works, City of Cudahy
												Director, Wisconsin Department of
												Natural Resources, Milwaukee
Edwin J. Laszewski,	Jr.							•				City Engineer, City of Milwaukee
												ief Engineer and General Manager,
												etropolitan Sewerage Commissions
Robert J. Mikula .					Ge	ner	al	Ma	nag	jer,	Mi	ilwaukee County Park Commission
Stanley Polewski .					•					St	tanl	ley Polewski Pharmacy, Milwaukee
John E. Schumacher					•							City Engineer, City of West Allis
Frank J. Wabiszewsk	i	•		.\	/ice	Pre	esi	den	it, I	May	yna	rd Electric Steel Casting Company
Henry B. Wildschut		•							Mi	lwa	auk	ee County Highway Commissioner
												and Director of Public Works

The other committee which has been formed is the 30-member Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Washington County, which includes representatives of the county's two cities, four villages, and 13 towns, as well as the Federal Highway Administration, State Department of

SEWRPC NOTES—continued

Transportation, and SEWRPC. The study for which the committee was named will attempt to review and realign the system of state, county, and local trunk highways and streets required to serve the growing needs of Washington County. The study will also include the first total review of state and county highway systems in the county since 1925. The committee, which held its organizational meeting on September 20, 1973, has the following membership:

Lloyd Jacklin Chairman	•	•	•	•	•	•	•	•		•	•	•	Trustee, Village of Jackson
Albert A. McClurg Secretary	•	•	•	•	•	•	•	•		•	•	•	City Employee, City of West Bend
Majed Abu-Lughod										•			City Engineer, City of Hartford
													Executive Director, SEWRPC
													County Supervisor, Washington County
													Chairman, Town of Barton
													Town Supervisor, Town of Farmington
													City Clerk, City of West Bend
													gineer, District 2, Division of Highways,
													Visconsin Department of Transportation
Walter L. Kletti .									1	Me	mb		, City of Hartford Planning Commission
													. Town Supervisor, Town of West Bend
													Chairman, Town of Polk
													. Town Supervisor, Town of Hartford
													Village Trustee, Village of Germantown
													, Town of Richfield; County Supervisor,
• •													ber, County Board Highway Committee
Charles F. Miller													Village President, Village of Kewaskum;
													County Supervisor, Washington County
Thomas A. Muth .		-							D	ireo	cto		of Public Works, Village of Germantown
John A. Oelhafen.													Chairman, Town of Wayne;
													County Supervisor, Washington County
Alois Okruhlica .								-					
Robert H. Paddock				•			Div	isid	on	Er	ngi	ne	er, U. S. Department of Transportation,
													deral Highway Administration, Madison
John M. Pick													Alderman, City of West Bend
Helmuth F. Prahl .													County Supervisor, Washington County;
													ber, County Board Highway Committee
Albert P. Rettler .													hington County Highway Commissioner

Carl W. Schneiss	•	•	•	•	•	•		•			unty Supervisor, Washington County; r, County Board Highway Committee
Ralph P. Schnorenberg .	•										Alderman, City of Hartford
Hugo Schwulst				•	•						Chairman, Town of Erin;
										Со	unty 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

NEW COMMISSION REPORTS AVAILABLE

Two new reports outlining steps to be taken in separate programs dealing with water resources in the Region, as well as a third volume of the SEWRPC land use plan design model, have been published by the Commission.

The first report, a <u>Deep Sandstone Aquifer Simulation Modeling Program Prospectus</u>, outlines the need for development of a mathematical model to simulate the behavior of the deep sandstone aquifer underlying the Region under various conditions of use and recharge. Such a model is important because of the growing demand for water within the Region, and the dependence of a large part of the Region on the deep sandstone aquifer as the main source of municipal and industrial water supply.

Such a model would be invaluable in achieving a better understanding of the performance of the complex system of groundwater aquifers, and could be used to plan the location and spacing of future wells to determine the effects of unplanned wells.

The estimated cost of the proposed two-year program is \$70,000, with the U. S. Geological Survey and the Wisconsin Geological and Natural History Survey together providing 75 percent of the cost, and the local water utilities concerned providing the remaining 25 percent. Of the 17 local water utilities requested to participate in the program, 12 have indicated a willingness to participate to date.

The second report, entitled <u>Prospectus—Preliminary Engineering Study for the</u> <u>Abatement of Pollution From Combined Sewer Overflow in the Milwaukee Metro-</u> <u>politan Area, outlines the scope of a preliminary engineering study to determine the</u> <u>most feasible method of abating pollution from combined sewer overflows in the</u> <u>Milwaukee metropolitan area.</u> The prospectus was prepared by the Commission at the request of the Sewerage Commission of the City of Milwaukee and the Metropolitan Sewerage Commission of the County of Milwaukee. The estimated cost of \$2.3 million for the three-year engineering study is recommended to be shared by the U. S. Environmental Protection Agency (75 percent), the Wisconsin Department of Natural Resources (12.5 percent), and the Metropolitan Sewerage District of the County of Milwaukee (12.5 percent).

Copies of this prospectus are not available from the Regional Planning Commission, since the prospectus was prepared for and delivered to the joint Milwaukee-Metropolitan Sewerage Commissions.

The third report, <u>A Land Use Plan Design Model</u>, Volume Three, reports on the findings of the third and final phase of the development of a land use plan design model by SEWRPC. This third and final phase involved testing and further development of the model, improvement and refinement of the data reduction and model computer programs, and preparation of the report.

The report describes in practical terms the background of, and procedures for application of, the land use plan design model, in an attempt to show planners how mathematics and the computer can be used to assist in the complex task of land use plan design. The report also provides a list of possible refinements to the model to make it a more useful operational tool, noting that while the model as developed is conceptually sound and internally consistent, further refinements are needed before it can be widely used in land use planning.

AROUND THE REGION

UWM COMMUTERS PROVE POPULARITY OF EXPERIMENTAL FREE BUS SERVICE

An experimental program to provide free crosstown bus service to University of Wisconsin-Milwaukee students, faculty, and staff has proved so successful that sponsors of the project are applying for state funds to expand it. The program began September 4, 1973, as an experiment to reduce parking congestion on residential

streets near the UWM campus. It has become so popular with university commuters that ridership is double what was anticipated, and parking problems in the UWM area seem to have stabilized despite an increased enrollment of 1,600 students this semester.

The cost of the program is also higher than expected, running at an annual rate of about \$85,000 instead of the anticipated \$42,000 per year. Funds for the program were approved earlier this year by the Wisconsin State Legislature, which appropriated \$300,000 through the 1974-75 school year.

SEWRPC assisted project officials in locating areas with high concentrations of potential bus users, and in selecting the best potential bus routings. As a result of data analyses, a route along North Avenue was chosen as a test route.

The North Avenue route starts at 76th Street and North Avenue, runs north to Center Street, west to 92nd Street, north to Burleigh Street, east to 76th Street, south to North Avenue, and then east to the campus. The buses, which run from 6 a.m. to 6 p.m. Monday through Friday, carry an average of 1,500 to 1,600 UWM commuters to and from the campus each day. An average of four buses run each hour, ranging from two during off-peak hours to five or six during peak hours. When the project began, there was one bus running regularly and one bus on call. Ridership has approached as high as 1,900 passengers per day.

According to James A. Marsho, transportation specialist for UWM, application is being made for state funds to add two more routes to the service next semester. Under consideration are routes along Silver Spring Drive and Oklahoma Avenue.

Emblems calling attention to the UBUS service have been placed in the Milwaukee and Suburban Transport Corporation buses which are being used in the program, as well as on signs at various stops along the route.

A survey of riders in September showed that of 792 persons who returned questionnaires, 356, or nearly 45 percent, would have driven a car to the campus if the bus service were not available. Of these 356 potential car drivers, 216 said they would be willing to pay a 25 cent fare to ride the buses if necessary, 123 said they would not, and 17 said they were undecided. Of all those who returned questionnaires, 536 said they would continue to use the service if a 25 cent fare were charged, 226 said they would not, and 30 said they were undecided. A combination of state

AROUND THE REGION—continued



Photo courtesy of UWM

Special UBUS emblems have been placed in buses used in the new UWM commuter service, as well as at bus stops along the route. The service began last September.

funds and a modest fare may be the answer to paying for additional routes, according to Marsho.

He said that several students have asked whether the bus service will be available next fall because they are considering moving out of the immediate UWM area to locations along the bus route. Marsho said the students indicated they were moving to areas west of the campus where they felt student housing was more suitable, rents were lower, and students were more welcome by landlords. The availability of the bus service may be opening up a new housing market area for students, he added.

NEW COMMUTER LOT AT GOERKE'S CORNERS OFFICIALLY OPENED

A new park-and-ride commuter lot which provides free parking for persons who leave their cars to take car pools or buses has been opened at Goerke's Corners northeast of Waukesha. The transit station will provide full intercity bus service as well as express buses to and from downtown Milwaukee, and serves to implement the adopted regional transportation plan as amended by the Milwaukee Area Transit Plan.

Norman M. Clapp, Secretary of the Wisconsin Department of Transportation, said at the October 29th dedication of the facility that it is typical of the kind of answers being sought to the demands on highways and the congestion resulting from the use of more and more cars. The commuter lot was built to encourage motorists to travel on buses and in car pools, according to Clapp, who called the lot a test of "public acceptance and cooperation." He estimated that a Milwaukee commuter could save \$650 a year by using the new facility.

The commuter lot is located on six acres of land at the interchange of IH 94, Blue Mound Road, and Barker Road. It has space for 100 cars, and can be expanded to accommodate 500 cars. The lot also has a full-time ticket sales office.

In the last 10 years, the number of vehicles using the Blue Mound Road—IH 94 travel corridor in the area of the commuter lot has tripled, increasing from about 20,000 vehicles per average weekday in 1963 to about 63,000 vehicles in 1973.

The \$90,000 lot was built using 90 percent federal funds, and 10 percent state funds obtained through Waukesha County's share of state trunk allotments. It is the first fringe area park-and-ride lot built by the Division of Highways to serve both commuter and intercity bus passengers, as well as private car pools. The lot is served by Wisconsin Coach Lines, Peoria-Rockford Bus Co., and Greyhound Lines. An application by Badger Coaches is pending.

NEWBURG BECOMES AN INCORPORATED VILLAGE

Residents of the newly incorporated Village of Newburg will vote in a special election on December 19 for 11 village officials, including six trustees as well as a village president, clerk, treasurer, assessor, and constable. The vote for incorporation passed by a 160 to 66 vote margin in an October 24 referendum, and a certificate of incorporation was subsequently obtained. Until the new village officers are installed, members of the Town Board of the Town of Trenton will serve as interim officers.

The village, which covers a three-quarter square mile area, follows the geographic limits of the Newburg Sanitary District and has a population of about 630 persons. It is located on the eastern edge of Washington County in the Town of Trenton, with a small portion located in the Town of Saukville in Ozaukee County.

Incorporation of the village brings to 154 the number of general-purpose local units of government in the Region, including seven counties, 28 cities, 54 villages, and 65 towns. All but two of these local units of government—the Village of West Milwaukee in Milwaukee County and the Town of Vernon in Waukesha County—are participating in the work of the Commission.

AROUND THE REGION—continued

MILLER BREWING DONATES 59.4 ACRES IN TAMARACK SWAMP TO MENOMONEE FALLS

A 59.4 acre parcel of land in the Tamarack Swamp has been donated to the Village of Menomonee Falls by the Miller Brewing Company. The parcel is the first in the 1,200 acre wetland to be donated to the village, which is attempting to preserve this large wetland area as an environmental and recreational area.

The donated parcel is located west of Pilgrim Road and north of the North Western Railroad tracks in the village. In accepting the deed to the 59.4 acres from Miller Brewing officials, village officials said they were optimistic that owners of the other parcels in the Tamarack Swamp would follow Miller's lead.

The action serves to implement recommendations by SEWRPC in its Fox River watershed plan that primary environmental corridor lands in urban areas be publicly acquired. The Tamarack Swamp was designated as such by SEWRPC.

24-HOUR WEATHER REPORTS NOW AVAILABLE FOR REGION

A continuous weather reporting service was recently introduced into southeastern Wisconsin which provides complete weather information 24 hours a day, seven days a week, on a high frequency FM radio channel. The information is provided as a public service of the National Weather Service, and is broadcast on radio station KEC-60, a high frequency FM radio station which broadcasts at 162.40 on the radio dial.

The weather reports are recorded by meteorologists at the Weather Service Office at General Mitchell Field, and include the latest forecasts, weather summaries, temperatures, severe weather data, and Lake Michigan weather reports and forecasts during the boating season.

AROUND THE REGION—continued



The blue shaded area shows the approximate location of the parcel in the Tamarack Swamp donated to the Village of Menomonee Falls by Miller Brewing Company.

The material is updated routinely and as conditions change. When severe weather occurs, special watches or warnings, radar statements, and safety rules are broadcast. The special station transmitter is equipped to broadcast a special alert signal during critical weather developments. The station's 300-watt transmitter is located atop an apartment building in the City of Milwaukee.

The continuous service is provided to individuals as well as schools, hospitals, law enforcement agencies, and others. Municipal officials or builders could find the information especially useful in planning outside construction or operation and maintenance work.

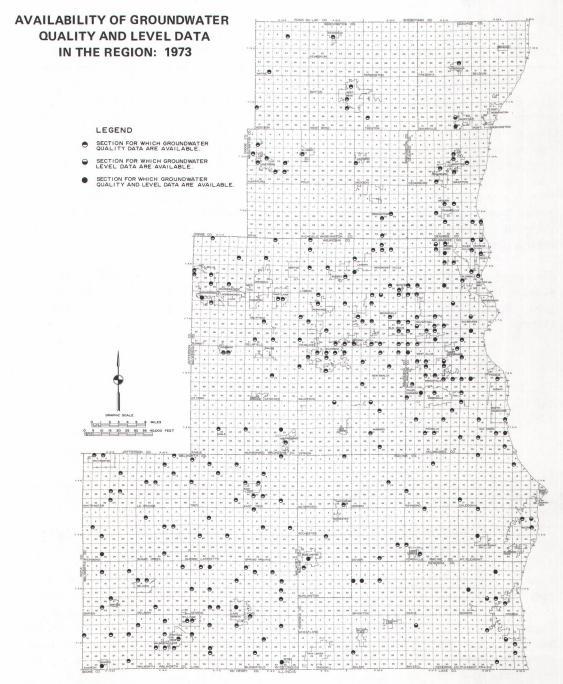
Receivers to pick up the high frequency station, as well as radios which have the special frequency in addition to regular frequencies, are available in the Milwaukee area. Most radios that receive police messages will also receive the special weather station.

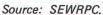
DATA AVAILABLE ON QUALITY, LEVEL OF GROUNDWATER IN WELLS

Three information circulars on the quality and level of groundwater in wells in the Region as well as throughout Wisconsin are available at a nominal cost from the U. S. Geological Survey (USGS) offices in Madison. The circulars were published by the USGS in cooperation with the Wisconsin Geological and Natural History Survey.

The U. S. Public Land Survey sections in the Region for which one or both types of information are available are indicated on the accompanying map.

Circular No. 22, "Groundwater Quality in Wisconsin Through 1972," summarizes and interprets available information on groundwater quality in the state. It includes data on the township, range, section, and county in which the well is located, together with the well number, depth of the well, and the principal aquifer which yields water to the well. Data are also available on the sum of iron and manganese concentrations in the water sample, expressed in milligrams per liter; and on the milligrams per liter of calcium magnesium, sodium, potassium, bicarbonate, carbonate, sulfate, chloride, fluoride, nitrate, and dissolved solids in the sample.





Trends in groundwater levels are discussed in Circular No. 9, "Trends in Groundwater Levels in Wisconsin Through 1966," and the newer Circular No. 21, "Trends in Groundwater Levels in Wisconsin, 1967-71." The latter circular includes all current observation wells with more than three years of record. The data were collected to determine short-range changes and long-range trends in groundwater levels in wells, and to relate the data to changes in storage in the groundwater reservoir.

The circulars are available from USGS, Water Resources Division, 1815 University Avenue, Madison, Wisconsin, Telephone 1-608-262-2488. Additional unpublished information may also be obtained from USGS personnel at the Madison office.

QUESTION BOX

WHAT IS MEANT BY THE TERM "REPLACEMENT FERTILITY?"

Demographers use six basic measures of the fertility, or rate of childbearing, in a population: 1) crude birthrate, 2) general fertility rate, 3) age-specific fertility rate, 4) total fertility rate, 5) cumulative fertility rate, and 6) standardized fertility rate. Each of these is useful in expressing some aspect of the dynamics of population change. An understanding of the first four of these measures is useful to a full understanding of the term "replacement fertility."

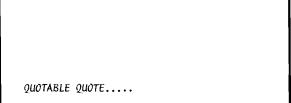
The crude birthrate, which is defined as the number of annual births per 1,000 population, is useful in expressing fertility in a form that readily indicates its effect on population growth. When the crude death rate is subtracted from the crude birthrate, the net residual is the current annual rate of growth, exclusive of migration. Currently the crude birthrate within the Region is 14.2 per 1,000 population, and the crude death rate is 8.8 per 1,000 population. The annual rate of natural increase is thus 5.4 per 1,000 population.

The general fertility rate is defined as the number of births that occur annually per 1,000 women of childbearing age (ages 15 through 44). The age-specific fertility rate is defined as the number of births that occur annually per 1,000 women of a particular age or age group. The age-specific fertility rate is thus the general fertility rate for a particular age or age group. The age-specific fertility rate permits determination of the effect of changing fertility rates throughout the reproductive life span of a group of women.

The total fertility rate is an estimate of the number of children which 1,000 women could be expected to bear if they all went through their reproductive age span exposed to the age-specific fertility rate in effect at a particular time. It should be noted that the total fertility rate differs from the other rates defined heretofore in that it is not an annual rate, but a rate over the total reproductive life span. It is computed by summing the age-specific fertility rates for all ages or age groups and multiplying the sum by the interval in which the ages are grouped. This rate is generally regarded as the best single measure of fertility because its measure is restricted to the childbearing population and because it is not influenced by differences in the age composition of the childbearing population nor by mortality.

Replacement fertility may be defined as the total fertility rate at which parents are replacing themselves but are not contributing to population growth. Allowing for differential male and female birth ratios and for differential death rates, each female of childbearing age in the United States would presently have to produce 2.1 children over her reproductive years to achieve replacement fertility. The total fertility rate in the United States at present is 2.04.

The inevitable result of replacement fertility, if maintained over time, is "zero population growth," that is, the stabilization of the population size at some level. The level at which the population will stabilize is determined by the age and sex structure of the population at the time replacement fertility is reached. With the present size and age and sex structure of the U. S. population, it has been estimated that it would take roughly 80 years to achieve "zero population growth." It has been further estimated that, given replacement fertility, the population of the United States would reach a stabilization level of about 280 million persons by the year 2050. This population level represents a rate of growth of approximately 37 percent over an 80-year period, approximately the same as the rate of population growth over the 20-year period from 1950 to 1970 in the United States. The fertility rate could, of course, fluctuate above and below replacement rates, causing an increase or decrease in the time necessary to achieve "zero population growth." It should also be noted that, given sufficient time, replacement fertility would result not only in a stable population size, but also in a stable population structure with respect to age and sex composition.



"Of all the difficult and demanding functions of management, perhaps the most artful is that of anticipating tomorrow. with all the computers and modern methods of extrapolation, business managers still must admit that nobody knows with certainty what the future will bring. Vet people must prognosticate if planning is to be realistic.... In dealing with the future the researcher's only possible source of information is opinion. Such opinions should not be treated as statements of hard facts. Only a 1970 image of 1985 reality is presented here....In short, the following caveats should be kept in mind:

- . No single estimate should be fully believed.
- . The overall trend of the data should not be disregarded.

"A Long Look Ahead" Bell Telephone Magazine January-February 1972

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