

PRELIMINARY DRAFT CHAPTER

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VISION 2050: A REGIONAL LAND USE AND
TRANSPORTATION SYSTEM PLAN
FOR SOUTHEASTERN WISCONSIN

Volume I, Chapter V

TRAVEL HABITS AND PATTERNS

(Tables, figures, and maps are at end of Chapter)

INTRODUCTION

This chapter describes existing travel behavior and patterns within the seven-county southeastern Wisconsin Region, as determined by travel inventories conducted by the Commission in 2011. The forces shaping regional travel habits and patterns are also described, and the findings of the 2011¹ regional travel inventory are compared with those of the previous 2001, 1991, 1972, and 1963 regional travel inventories.

THE 2011 REGIONAL INVENTORY OF TRAVEL: MAJOR ELEMENTS

Findings of the 1963, 1972, 1991, and 2001 regional inventories of travel were described in SEWRPC Planning Report No. 7, Volume One, *The Land Use-Transportation Study: Inventory Findings: 1963*, May 1965; SEWRPC Planning Report No. 25, *A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000*, Volume One, *Inventory Findings*, April 1975, SEWRPC Planning Report No. 41, *A Regional Transportation Plan for Southeastern Wisconsin: 2010*, December, 1994, and SEWRPC Planning Report No. 49, *A Regional Transportation System Plan for Southeastern Wisconsin: 2035*, June 2006, respectively.

¹Although the most recent regional travel inventory was conducted from 2011 to 2012, this inventory has been designated the “2011” inventory for purposes of reference and of comparison to the 1963, 1972, 1991, and 2001 inventories.

The 2011 survey of resident households was based on a sample of 15,400 households, or approximately 2 percent of the estimated total of 800,100 households in the Region. This large scale sample provides a rich set of data, permitting the description and analysis of resident household travel both by subarea and between subareas of the Region. Information obtained from each sampled household included detailed data concerning: specific household characteristics, including the number of household members, number of vehicles available, structure type of residence, and household income range; specific data for each household member, such as relationship to head of household, age, license-to-drive status, race/ethnicity, gender, and employment status; and, for each trip made by persons over the age of five on the assigned travel day, the origin and destination of trip, trip purpose, time of day, mode of travel, blocks walked at origin of trip and destination of trip, and, for drivers of personal vehicles—automobiles, vans, sport utility vehicles, or pickup trucks—the number of passengers in the vehicle, parking location, type of parking, duration of parking, and cost of parking.

In addition, 900 samples, representing approximately 2 percent of the 45,400 residents of the Region living in group quarters, such as Huber law jail facilities, shelters, and schools and other institutions, were surveyed. The sample was drawn from a list of such facilities compiled by the Commission using telephone directories and consultations with various agencies of government. Residents who were group-quartered but who were severely restricted in their ability to travel were not surveyed. This group included residents of mental hospitals, prisons, and nursing homes.

The five major public transit systems operating in the Region in 2011 were also surveyed. Each of the five systems was sampled at rates designed to permit analysis of the characteristics of existing transit system ridership. For the Kenosha area transit system, 390 samples were obtained, an 11 percent sample of its estimated 3,600 average weekday boarding passengers. For the Milwaukee area transit system, 6,400 samples were obtained, representing a 4 percent sample of its estimated 157,500 average weekday boarding passengers. For the Racine area transit system, 290 samples were obtained, representing a 6 percent sample of its estimated 4,600 average weekday boarding passengers. For the City of Waukesha transit system, 180 samples were obtained, representing a 7 percent sample of its estimated 2,600 average weekday boarding passengers. For the Waukesha County transit system, 210 samples were obtained, representing a 31 percent sample of its estimated 670 average weekday boarding passengers. Information obtained through mail-back survey forms included detailed data concerning specific household characteristics, including the location of each tripmaker's home, the number of household members, number of vehicles available, and household income range; specific data regarding each tripmaker, such as age, sex, license-to-drive status, and race/ethnicity; and for each trip, the origin and destination of the trip, trip purpose, time of day, transfer information, mode of travel to the bus stop, fares, round-trip frequency, and length of time using transit.

The 2011 regional travel inventory also included a commercial truck survey. The truck survey was intended to provide information regarding the movement of freight and the delivery of services within the Region by commercial trucks registered and garaged within the Region. The survey of commercial truck travel was based on a sample of about 640 commercial trucks, or approximately 0.5 percent of the estimated 121,600 commercial trucks registered in the Region. Information obtained through a mail survey for each sampled truck included detailed data concerning: the business or industry of the truck owner; the truck garaging location, carrier type, odometer reading at the beginning and end of the travel day, and vehicle type; and for each trip made using the truck on the assigned travel survey day, the origin and destination of the trip, trip purpose, and time of day.

The 2011 survey also included an external cordon survey of interregional vehicle traffic. Interregional or external travel is travel where one or both ends of the trip are located outside of Southeastern Wisconsin. In the external cordon survey, roadside interview stations were established on 38 major streets and highways crossing the boundaries of the Region. At these stations, mail-back survey forms were distributed to 161,900 motorists crossing these stations during the hours of 8:00 a.m. to 6:00 p.m. in the spring of 2011 and spring of 2012. Approximately 20,100 usable survey forms were returned, representing more than 6 percent of the 363,800 regional boundary crossings by vehicles estimated to occur at the interview stations during an average weekday. Information obtained through the mail-back survey included: the vehicle used in making the trip, the garaging address of the vehicle, type of vehicle, and number of passengers carried; and, for trucks, the carrier type. For trips crossing the cordon line, data regarding the origin, destination, and purpose of each trip were also obtained.

The external cordon survey also included a survey of interregional personal travel by other modes to provide information regarding the movement of individuals not using a personal vehicle to enter or exit the Region. The 2011 interregional travel survey captured travel by airplane, intercity rail, intercity bus, and the Lake Express Ferry. The survey of airport travel sampled approximately 1,100 deplaning weekday passengers at General Mitchell International Airport Tuesday, September 27 through Thursday, September 29 for 12 hours each day (7:00 AM – 7:00 PM on Tuesday, 9:00 AM – 9:00 PM on Wednesday, 11:00 AM – 11:00 PM on Thursday). This sample represents approximately 6 percent of the estimated 18,800 average weekday passengers utilizing the General Mitchell International Airport in 2011. The intercity rail survey, which was conducted on September 13 and 22, 2011, captured travel on Amtrak and Metra intercity rail services operating within the Region. The sample of 150 boarding Amtrak passengers and 80 boarding Metra passengers represents an approximately 8 percent sample of the estimated 2,800 average weekday intercity rail passengers in 2011. The survey of intercity bus travel, which was conducted on September 14, 15, 20, and 22, 2011, captured travel on routes operated by: Greyhound, Megabus, Badger Bus, Coach USA, Lamers, Indian Trails, and Jefferson Bus Lines. The sample of

170 boarding intercity bus passengers represents an approximately 11 percent sample of the estimated 1,600 average weekday intercity bus passengers in 2011. The survey of the Lake Express Ferry, which was conducted on September 15, 2011, elicited a sample of 100 boarding passengers representing approximately 33 percent of the estimated 300 average weekday passengers. Information on interregional travel was obtained through a handout/mail-back survey for each individual boarding the Amtrak, Metra, interregional bus, and the Lake Express Ferry and approximately 20 percent of the deplaning passengers exiting a concourse at the General Mitchell International Airport. The interregional travel surveys included detailed data concerning: origin, destination and purpose of each trip, information about transport to and from the terminal end of the interregional mode surveyed, and the gender, age, and household income of the individual completing the survey.

The expanded data obtained in these surveys and estimates provided a representation of the total travel occurring within the Region on an average weekday in 2011. In each survey, careful attention was given to data collection scheduling to prevent any day-related or seasonal bias in the information. Travel surveys are usually conducted by the Commission in either the spring (March through May), or in the fall (September through November), in order to obtain travel data which is representative of average weekday conditions. Traffic volume counts collected by the Wisconsin Department of Transportation in southeastern Wisconsin indicate that traffic volumes on Tuesdays, Wednesdays, and Thursdays most closely approximate average weekday traffic volumes, while those on Fridays are slightly higher, and on Mondays are slightly lower, than the average weekday (see Figure V-1). Traffic volumes on Saturdays and Sundays are substantially lower than the average weekday. With respect to monthly variations, traffic volumes in the spring, represented by the months of March through May, and the fall, represented by the months of September through November, generally approximate average weekday traffic volumes (see Figure V-2). Traffic volumes in the summer months of June, July, and August are generally higher than average, and traffic volumes in the winter months of January and February are lower than average.

Two distinct sets of accuracy checks were employed to determine the degree of accuracy and completeness of data obtained in the major travel surveys. In one set, data on socio-economic characteristics obtained from the major surveys were compared with data from the 2010 Census, and 2006-2010 Federal Census American Community Survey, and other independent sources. In the other set of accuracy checks, vehicle trip volumes derived from travel surveys were compared to vehicle trip volumes obtained by classification counts made at screenlines and cordon lines². The level of vehicle-miles of travel derived from travel surveys was also compared

² A screenline is an imaginary line extending through a selected portion of a geographic area along natural or built barriers providing a limited number of crossing points established for the purpose of comparing and analyzing travel data as estimated from traffic counts with data derived from travel surveys. A cordon line is an imaginary line extending around a selected geographic area for the purpose of comparing and analyzing external travel data as estimated from traffic counts with data derived from travel surveys.

to actual vehicle-miles of travel estimated from traffic counts. The results of the accuracy checks are documented in Appendix B of this report.

[Appendix B to be provided]

INVENTORY FINDINGS

Quantity of Total Travel

An estimated 6.65 million person trips³ were made within the Region on an average weekday in 2011, as shown in Table V-1. This represents an increase of about 2.49 million person trips per weekday, or an increase of about 60 percent, since 1963; an increase of 1.52 million person trips per weekday, or 30 percent, since 1972; an increase of 0.49 million person trips per weekday, or 8 percent, since 1991; and a decrease of 0.10 million person trips per weekday, or 2 percent, since 2001. Of these 6.65 million person trips, about 6.24 million, or 94 percent, were internal person trips. Internal trips have both trip origin and trip destination within the Region. The 6.24 million internal person trips in 2011 represent an increase of 2.28 million trips, or 57 percent, since 1963; an increase of 1.30 million trips, or 26 percent, since 1972; an increase of 0.41 million trips, or 7 percent, since 1991; and a decrease of 0.11 million trips, or 2 percent, since 2001.

In 2011, an estimated 5.24 million vehicle trips, consisting of personal vehicle and commercial truck trips, were made within the Region on an average weekday. This represents an increase of 2.67 million vehicle trips, or 104 percent, since 1963, an increase of 1.84 million vehicle trips, or 54 percent, since 1972, an increase of 0.36 million trips or 8 percent since 1991, and a decrease of 0.23 million trips or 4.2 percent since 2001. Of the 5.24 million vehicle trips, about 4.87 million, or 93 percent, were internal vehicle trips. Internal vehicle trips increased by 2.41 million, or 98 percent, since 1963, by 1.60 million, or 49 percent, since 1972, by 0.27 million trips or 6 percent since 1991, and decreased by 0.24 million trips or 5 percent since 2001. Between 1963 and 2001, vehicle trips made within the Region increased faster than person trips, particularly between 1972 and 1991, principally as a result of a decline in automobile occupancy and carpooling. The percentage increase in vehicle trips between 1972 and 1991 was 44 percent, compared with 20 percent for person trips. Between 2001 and 2011 vehicle trips within the Region decreased faster than person trips, 5 percent versus 2 percent respectively, principally as a result of a modest increase in vehicle occupancy.

³ A person trip is defined as a one way journey between a point of origin and a point of destination by a person five years of age or older traveling by public transit, school bus, bicycle, or walking or as a driver or as a passenger in a personal vehicle--automobile, van, pickup truck, sport utility vehicle--or taxi or motorcycle. To be considered, the trip must have been at least the equivalent of one full city block in length. The 1963, 1972, and 1991 surveys did not inventory walk and bicycle trips for non-work purposes. The 2001 and 2011 surveys did inventory walk and bicycle trips for all purposes, both work and non-work.

Table V-1 also shows that an estimated 403,500 external person trips and 363,800 external vehicle trips were made in 2011. External trips have one end or both ends located outside of the Region. From 1963 to 2011, external travel increased by 212,100 person trips, or by about 111 percent; and by 262,200 vehicle trips, or by about 258 percent.

Over the past 50 years internal person trips have increased at pace with in the number of households and jobs within the Region. Also affecting the level of internal person trips is household income, personal vehicle availability, age, and lifestyles. As shown in Table V-2, between 1963 and 2011 internal person tripmaking increased by 56 percent, households increased by 67 percent, and employment increased by 68 percent. Between 2001 and 2011 employment declined 1.0 percent and internal person trips declined 2.8 percent. This reduction in person trips occurred even though the number of households and population each increased by 6 percent. Through 2001, the number of internal person trips per household in the Region had remained relatively constant at about 8 trips per household. Between 2001 and 2011, the number of trips per household declined to about 7 trips per household. The decline in employment and in median family income likely contributed to this reduction.

Overall, the increase in person trips far exceeded the 23 percent increase in population between 1963 and 2011. The number of internal trips per person in the Region increased from 2.4 trips per person in 1963 to 3.1 trips per person in 2011. The Region's population has changed over the past 50 years, including the substantial increase in the proportion of the Region's population in the labor force--principally due to the increase of women in the labor force--and the significant changes which occurred in household formation and composition.

Internal Person Travel

The number of internal person trips made on an average weekday by the resident households of the Region may be correlated with household vehicle availability, size, and income.

Relationship of Vehicle Availability

A strong correlation exists between person trip production and the number of vehicles available to households. The 2011 survey findings indicated that about 1,371,900 vehicles were available in the Region. This represents an average of 1.71 vehicles per household, as compared to 1.07 vehicles per household in 1963, 1.24 vehicles per household, in 1972, 1.60 vehicles per household in 1991, and 1.73 vehicles per household in 2001.

Table V-3 shows the relationship of vehicle availability to person trip production in the Region. Household person trip production increases sharply in relation to increased vehicle availability. From 1963 to 1991, household

vehicle availability increased substantially. From 1963 to 1991, the percentage of households with two or more automobiles increased from 24 percent to 56 percent of all households, the percentage of households with zero automobiles declined from 17 percent to 9 percent of all households, and the percentage with one automobile declined from 59 percent to 35 percent of all households. From 1991 to 2011, the percentage of households with 0, 1, or 2 or more vehicles available experienced minimal change. The increase in household vehicle availability from 1963 to 2011 likely contributed to the increase in person trips generated within the Region since 1963.

Relationship of Household Size

Person trip production within the Region is also strongly related to the number of persons comprising the household. Table V-4 indicates that in 2011 one-person households averaged about three weekday internal person trips per household, two-person households averaged about six such trips per household, three-person households averaged about nine such trips per household, four-person households averaged about 11 such trips per household, and five-or-more-person households averaged about 14 such trips per household. The distribution of the number of households by household size changed markedly from 1963 to 1991 with one-person households increasing from 11 percent of all households in 1963 to 25 percent in 1991, and five-or-more-person households decreasing from 25 percent to 11 percent of all households during the same period. The distribution of the number of households by household size changed minimally between 1991 and 2011, with continuing small increases in the percentages of one and two person households and small decreases in the percentages of households with three or more persons. The decline in household size from 1963 to 2011 likely contributed to the increase in internal person trips in the Region over the same period, as the attendant increase in households outweighed the decline in the number of households of larger sizes.

Mode of Internal Person Trips

The year 2011 survey findings as shown in Table V-5 indicate that internal travel within Southeastern Wisconsin by resident households on an average weekday in 2011 is predominately by personal vehicle, representing 86 percent of weekday travel. Walk and bicycle travel represent the next largest percentage of internal weekday travel by resident households of the Region at about 8 percent, followed by travel by school bus of about 3 percent, public transit of about 2 percent, and other travel modes including taxi and motorcycle of less than one percent.

The proportion of travel by mode changed significantly between 1963 and 2011. The most significant change in personal vehicle travel occurred between 1963 and 1991, as personal vehicle travel increased from 80 to 89 percent of all travel, and travel by personal vehicle drivers increased from 55 to 71 percent of all travel. Also,

travel by walking and bicycle declined from 9 percent of all travel in 1972 to 4 percent of all travel in 1991. Travel by walking and bicycling showed an increase in 2001 to 5 percent of all travel, and increased again by 2011 to 8 percent of all travel.

The largest change in public transit travel occurred between 1963 and 1972, as public transit travel declined from 8 percent to 4 percent of total weekday internal travel by resident households. Since 1972 travel by transit continued to decline modestly, representing 2 percent of personal travel in 2011.

The proportion of total weekday internal travel by the Region's households by school bus has remained relatively constant from 1963 to 2011 at 3 to 4 percent, and also for other modes including taxi and motorcycle at less than one percent.

Public Transit Trip Production

The relationships of public transit trip-making to vehicle ownership and household size, are shown in Tables V-6 and V-7. In 1963, 1972, 1991, and 2001 households without a personal vehicle for travel accounted for 39 to 44 percent of all trips made on public transit on an average weekday. In 2011 households without a personal vehicle for travel accounted for over 64 percent of weekday transit travel. Households owning one or two personal vehicles accounted for 47 to 60 percent of total weekday transit trips from 1963 to 2001, but only 29 percent in 2011.

Household size is not nearly as strongly correlated with transit trip-making as household vehicle ownership. The average number of transit trips per household generally increase with household size, but the average number of transit trips per person generally is greater for smaller household sizes.

Purposes of Internal Trips

Table V-8 displays by trip purpose the current and historic internal trips made by resident households of the Region on an average weekday. Most trips made on an average weekday are home-based trips, with home being either the origin or destination of the trips.

The percentage distributions of the purposes of weekday internal person trips have remained stable from 1963 to 2011. During this period, home-based work trips comprised between 22 and 25 percent of all such trips; home-based shopping trips, between 11 and 15 percent; home-based trips in other categories, between 30 and 34 percent; non-home-based trips, between 18 and 23 percent; and school trips, between 9 and 13 percent. These percentage distributions remained stable over five decades despite substantial increases in the absolute numbers of

trips in all categories. Home-based trips, typically used for work, shopping and other purposes, declined between 11 and 15 percent between 2001 and 2011; however, nonhome-based and school trip making (including nonhome-based school) increased between 8 and 15 percent. The decreases in home-based trip making are likely attributed to the loss in employment and household income, and increased trip chaining, as indicated by increases in nonhome-based travel including non-home-based school trips.

Trip Length

As shown in Table V-9, the average trip length of trips made within the Region on an average weekday by the Region's resident households measured in terms of distance increased between 2001 and 2011 by about 4 percent. Between 1963 and 1972—a period of just less than ten years—the increase in average trip length was about 15 percent and between 1972 and 2001 average trip length increased by about 8 percent per decade. From 2001 to 2011 the increase in trip length was almost entirely due to the increase in the length of work trips of 12 percent.

With respect to trip length measured in terms of travel time, a decline of about 9 percent was estimated to have occurred between 1963 and 1972, followed by a modest decline of 2 percent between 1972 and 1991, an increase of 11 percent between 1991 and 2001 and a modest decline of 3 percent between 2001 and 2011. The reduction in travel time may be attributed to capacity improvements which have been implemented since 2001 as well as modest decline in congestion due to the decline in internal personal travel.

Average Personal Vehicle Occupancy by Selected Trip Purpose

Average personal vehicle occupancy represents the number of persons per vehicle for vehicle trips, or carpooling. Declines in vehicle occupancy represent corresponding increases in vehicle trips. The overall average number of persons per vehicle, including the driver, declined slightly from 1963 to 1972, from 1.42 to 1.39, as shown in Table V-10. From 1972 to 1991, however, the overall occupancy rate decreased substantially by 12 percent, from 1.39 to 1.22 persons per vehicle with significant declines in every trip purpose. From 1991 to 2001 average personal vehicle occupancy experienced another slight decline of about 3 percent from 1.22 to 1.19 persons per vehicle. From 2001 to 2011 average personal vehicle occupancy experienced a modest increase of approximately 1 percent from 1.19 to 1.20 persons per vehicle.

Hourly Patterns of Internal Person Travel

The hourly distributional patterns of internal person trips indicated that although total person trip volumes increased substantially on an average weekday from 1963 to 2011, the regular ebb and flow of travel remained very similar both in the proportion of trips by trip purpose and in the proportion and times of peak periods (see Figures V-3, V-4, V-5, V-6, and V-7). Approximately 35 percent of daily travel within the Region occurred in the

two morning and two afternoon peak hours of the day in each survey year. Of these peak-hour movements, trips to and from work comprised 47 percent of the total in 1963, 44 percent in 1972, and 41 percent in 1991, 39 percent in 2001 and 39 percent in 2011. These findings continue to indicate that one of the primary transportation problems within the Region continues to be meeting the peak demand of the journeys to and from work.

County-to-County Trip Patterns

Map V-1 and Table V-11 show the magnitude of intra- and inter-county travel within the Region, excluding school trips, on an average weekday in 1963, 1972, 1991, 2001, and 2011. Trips are shown in produced-attracted format – that is, from area of production to area of attraction. The production county for a trip having one end at “home”, that is either beginning at or ending at home, is the county location of the “home” and the attraction county is the “non-home” end county location for that trip. The production county for trips having neither end at “home” is the county location of the trip origin and the attraction county is the county location of the trip destination. Thus, the trips shown on Map V-1 and in Table V-11 largely indicate the trips made by residents of each county of the Region on an average weekday to and from each other county. Several important conclusions can be drawn from these data. First, travel internal to counties dominates total travel within the Region. However, there has been a small shift over time away from intra-county travel toward increased inter-county travel. In 1963, 91 percent of trips, excluding school trips, were intra-county, that is, they had both origin and destination within the same county, while 9 percent of trips were inter-county. In 1972, 88 percent of trips were intra-county, while 12 percent were inter-county. In 1991, 85 percent of the trips were intra-county, while 15 percent were inter-county. In 2001, 82 percent of the trips were intra-county, while 18 percent were inter-county. In 2011, 81 percent of the trips were intra-county, while 19 percent were inter-county. Second, the proportion of travel internal to the three urbanized counties, Kenosha, Milwaukee, and Racine, to total regional travel has decreased. As shown in Table V-11, travel internal to the urbanized counties has decreased from 80 percent of all travel in 1963, to 70 percent in 1972, to 60 percent in 1991, 56 percent in 2001 and 52 percent in 2011. Third, the number of trips to and within Milwaukee County decreased from 67 percent of all trips in 1963 to 59 percent in 1972, to 52 percent in 1991, to 49 percent in 2001, but increased to 51 percent in 2011. Historically, a majority of the travel between Milwaukee and Waukesha Counties has been to Milwaukee County. In 2001 travel between the two counties was fairly balanced, and in 2011 the majority of travel between Milwaukee and Waukesha Counties was to Waukesha County.

Generational Differences in Internal Personal Travel

Tables V-12 through V-15 compare generational differences in trip making between the 1991, 2001, and 2011 household travel inventories with regard to vehicle availability, household size, mode of travel, and trip purpose. Household data were quantified based on the age of the head of household. Each age grouping was selected to

best represent each generation at the time of the 2011 household inventory; Millennials (ages 16 through 26), Generation X (ages 27 through 46), Baby Boomers (ages 47 through 66), and the Greatest Generation (ages 67 and older). The generations in 2011 were compared to similar age brackets in the 2001 and 1991 household inventory in an attempt to determine whether the current generations are behaving differently than in the past.

Table V-12 shows the distribution of households and person trips by vehicle availability and age category. This comparison shows that across age categories there is a strong correlation between vehicle availability and person trips per household, with the number of trips per household increasing with the number of vehicles available. Household trip making peaks in the 27 to 46 age category and trip making decreases as households age.

Table V-13 shows the distribution of households and person trips by household size and age group. This comparison shows that across age categories there is a strong correlation between household size and person trips per household with the number of trips per household increasing with household size.

Table V-14 shows the distribution of trips by mode of travel in 2001 and 2011. Travel in 1991 was excluded from this table since walk and bike trips were not collected for non-work travel. Auto trips are significantly lower, and bicycle and walking and public transit trips are significantly higher as a proportion of all trips for households with head of household of ages 16 to 26. Between 2001 and 2011 bicycle and walking trips increased for all households regardless of age.

Table V-15 shows the distribution of trips by purpose by age category. As was indicated by Table V-8, Table V-15 shows travel by purpose to be down since 2001 across all age categories with the exception of non-home-based and school travel, which showed a slight increase from 2001 to 2011.

Overall, this analysis indicates since 1991, there has been a general decrease in household trip making which is occurring across all age groups. This analysis indicates that household trip making peaks in the 27 to 46 age category and average household trip rates decline as households age. In general, the changes seen in the data are present across all age groups, and the trends associated with a particular age group relative to another age group are very similar from 1991 to 2011. While the number of trips generated by household do change as a household ages, this analysis does not indicate that generations, like the Millennials, are behaving significantly differently than their predecessors in similar age categories in 1991 and 2001. This analysis of travel behavior by different generations does indicate that there has been a general decrease household travel since 1991, but it does not indicate that one generation is significantly driving the change as compared to other generations.

Internal Commercial Truck Travel

The number of trucks available within the Region increased from 58,500 in 1963 to 77,250 in 1972, to 87,500 in 1991, to 129,500 in 2001, and declined to 121,600 in 2011 as shown in Table V-16. Because of the substantial increase in the use of light trucks as personal vehicles rather than as commercial vehicles, the 1991, 2001 and 2011 commercial truck totals exclude trucks employed primarily for personal use. Such personal-use trucks were included in 1991, 2001 and 2011 with automobiles as personal-use vehicles. In 1963, personal-use trucks represented 5,100, or only about 9 percent, of the total 58,500 trucks available; in 1972 they represented 18,100, or about 23 percent, of the total 77,250 trucks available. By 1991, personal use trucks were estimated to total about 80,600 trucks, or about 48 percent of the total 168,100 trucks available. This trend continued in 2001 and 2011. In 2001, personal use trucks were estimated to total 132,900 trucks, or about 51 percent of the total 261,000 trucks available; in 2011, personal use trucks were estimated to total 114,500 trucks, or about 48 percent of the 236,100 trucks available. Most of the reduction in the total trucks available between 2001 and 2011 is associated with a change in preference away from personal use trucks toward more fuel efficient passenger cars. This coincides with the increase in fuel price experienced over the last decade.

Together, the 121,600 light, medium, heavy, and municipal trucks in commercial use in 2011 made an estimated total of 614,500 trips on an average weekday in 2011, representing an increase of 32,000 trips, or 5.5 percent, from 2001; an increase of 62,400 trips, or 12 percent, from 1991; an increase of 211,500 trips or 57 percent since 1972; and, an increase of 289,100 trips or 99 percent since 1963. The average number of trips per weekday for all trucks in commercial use has been fairly stable over the last five decades and was an estimated 5.1 trips per truck in 2011, 4.5 trips per truck in 2001, 5.9 trips per truck in 1991, 4.8 trips per truck in 1972 and 5.0 in 1963. As shown in Table V-17 the average miles traveled per truck trip increased from 4.9 miles per trip in 1963, to 7.3 miles per trip in 1972, to 8.4 miles per trip in 1991, and to 8.7 miles per trip in 2001, and then declined to 7.8 miles per trip in 2011.

External Trip Production

In addition to the 6.24 million internal person trips and 4.87 million internal vehicle trips made within the Region on an average weekday in 2011, there were 403,800 personal vehicle person trips and 363,800 total vehicle trips—including personal vehicle and commercial truck trips—entering, leaving, or passing through the Region. In each of the survey years, as indicated in Table V-18, the numbers of external personal vehicle person and total vehicle trips entering the Region were very similar to the respective numbers of such trips leaving the Region, ranging from 47 to 48 percent in the case of total external personal vehicle person trips and from 46 to 47 percent of total external vehicle trips. External personal vehicle person and total vehicle trips which passed through the

Region, which remained at about 8 percent of all external trips between 1963 and 1972, decreased to about 5 percent of all external trips in 1991 and 2001, and increased to about 6 percent of all external personal vehicle person trips and 8 percent of total vehicle trips in 2011.

External personal vehicle person trips decreased from 191,700 in 1963 to 176,900 in 1972, a decrease of 8 percent. External personal vehicle person trips then increased to 317,400 in 1991, an increase of 79 percent, increased to 394,900 trips in 2001, an increase of 24 percent, increased to 403,800 trips in 2011, an increase of 2 percent. External personal vehicle trips, however, exhibited uniform increases, from 85,600 in 1963 to 100,800 in 1972, or by 18 percent, from 100,800 in 1972 to 229,000 in 1991, an increase of 127 percent, from 229,200 in 1991 to 290,900 in 2001, or by 27 percent, and from 290,900 in 2001 to 298,000 in 2011, an increase of 2 percent. As shown in Table V-19, the vehicle occupancy of external personal vehicle person trips has declined from 2.24 persons per vehicle in 1963, to 1.75 in 1972, to 1.38 in 1991, and to 1.36 in 2001. Vehicle occupancy of external personal vehicle trips remained unchanged between 2001 and 2011 at 1.36.

Through 2001, growth in external person trips occurred across all trip purposes, with the greatest growth in external person trips has occurring with respect to work and school trips. The 2011 inventory while showing an overall increase in total person trips showed a 10 percent decline in home-based work and a 13 percent decline in nonhome-based trips. The volume of external commercial truck trips, as shown in Table V-20, increased from 15,300 trips per day in 1963 to 22,500 trips per day in 1972, an increase of 47 percent. From 1972 to 1991, such trips increased from 22,500 trips per day to 44,100 trips per day, an increase of 96 percent. From 1991 to 2001, such trips increased from 44,100 trips per day to 66,600 trips per day, and increase of 51 percent. From 2001 to 2011, trips modestly decreased from 66,600 trips per day 65,800 trips per day, a decrease of 1 percent since 2001. This decline in commercial external travel is likely related to the economic downturn which occurred between 2001 and 2011.

Mass Transit User Survey

The Commission conducted special surveys of transit passengers on the public transit systems operated by the Cities of Kenosha, Racine, and Waukesha, and Counties of Milwaukee, Ozaukee, Washington, and Waukesha. Transit passengers on the express transit route between the Cities of Milwaukee, Racine, and Kenosha were also surveyed. The principal purpose of these surveys was to obtain descriptions of the socioeconomic and travel characteristics of the ridership of the overall regional mass transit system.

As Table V-21 shows, overall, home-based work and school trips constituted the major portion of bus passenger travel on the transit systems in 2011, similar to 2001, 1991, and 1972. Between 2001 and 2011, school trips as a

proportion of total transit passenger trips declined in each of the transit systems while the proportion of home-based work trips increased.

Table V-22 presents the distribution of bus passenger travel on the transit systems as reported in the 1972, 1991, 2001 and 2011 surveys by sex, age, annual household income, and race.

- Female passengers made the majority of trips on all systems in all years with the exception of the Milwaukee-Racine-Kenosha transit service in 2001 and 2011, the Ozaukee County transit system in 2001 and 2011, and the Washington County transit system in 2001. From 1972 to 2011, the percentage of male passengers has generally been increasing and approaching 50 percent.
- The largest portion of 2011 bus passenger trips consisted of passengers 25 through 54 years of age on all transit systems, with the exception of the City of Kenosha transit system. On the Kenosha system, the largest portion of bus passenger trips in 2011 was made by passengers 16 to 24 years of age. This year 2011 survey finding was similar to that of the 2001, 1991, and 1972 surveys, except for the Kenosha transit system where the largest portion of passengers were aged one to 15 in 2001. This change is likely attributed to school “tripper” routes not being surveyed in 2011.
- With respect to household income, in each of the surveys – 1972, 1991, 2001, 2011 – the largest portion of public transit passengers are in the lowest range of income, with the exception the Waukesha, Ozaukee, and Washington County transit systems.
- With respect to race, public transit passengers in 2011 were about 60 percent minority on the transit systems of the City of Kenosha, Milwaukee County, City of Racine, and Milwaukee-Racine-Kenosha. The percentage of minority passengers on the City of Waukesha, Ozaukee County, Washington County, and Waukesha County transit systems were 32, 13, 7, and 13 percent, respectively. The proportion of public transit passengers that are minorities has increased since 1991, and particularly since 1972 when less than 5 to 15 percent of transit passengers were minorities.

Interregional Passenger Travel

Table V-23 displays an estimate of existing and historic interregional person trips, including personal vehicle travel as presented earlier in this chapter and travel on other modes including intercity rail and bus, commercial air carrier, and car ferry. Interregional travel by personal vehicle has consistently accounted for about 95 percent of total interregional travel within southeastern Wisconsin over the past 50 years.

SUMMARY AND CONCLUSIONS

The Commission's comprehensive inventories of travel conducted in 1963, 1972, 1991, 2001 and 2011 describe in detail the total travel pattern of the Region and each of its component parts. This chapter has presented, in summary form, the basic findings of the 2011 Commission inventory of travel within the Region. In order to assess any changes occurring in travel habits and patterns within the Region over time, comparisons have been made between the findings of the 2011 inventory with those of earlier Commission travel inventories of 1963, 1972, 1991 and 2001. The Commission travel surveys conducted for 1963, 1972, 1991, 2001, and 2011 demonstrate that travel is an orderly, regular, and measurable occurrence, with recognizable travel patterns.

- On an average weekday in 2011, about 6.7 million person trips were made within the Region. This represents an increase from 1963 of 2.5 million person trips, or 60 percent. The increase in regional tripmaking reflects the increases in the number of households within the Region of 67 percent from 1963 to 2011, as well as the increases in employment of 69 percent from 1963 to 2011. The increases in person trips in the region were substantially greater than the increase in the resident population of the Region, of 23 percent from 1963 to 2011. Future levels of households and employment, rather than of resident population, should be considered indicators of potential future travel growth.
- The number of internal person trips per resident household of the Region has remained stable, at about 7 to 8 trips per household. The level of average weekday internal person trips per capita, however, has increased from slightly greater than 2 trips per capita in 1963 to slightly greater than 3 trips per capita in 2011. The stability in the household trip rate occurred even with the substantial socio-economic, land use, and transportation changes that have occurred within the Region over the last 50 years, including the change from a manufacturing to a service economy, the increase in labor force participation among women, the change in age composition of the Region, the change in average household size in the Region, the increase in vehicle ownership, and the change in land use density of the Region.
- On an average weekday in 2011, nearly 5.2 million vehicle trips were made within the Region. This represents an increase of about 2.7 million vehicle trips, or 104 percent from 1963. The increase in vehicle trips from 1963 to 2011 is more substantial than the increase in person trips, specifically, an increase of 2.7 million vehicle trips and of 2.5 million person trips over the 48 year period. The principal factor contributing to the more rapid increase in vehicle trips is the decline in average vehicle occupancy or carpooling observed in the surveys, from 1.42 persons per vehicle in 1963 to 1.20 persons per vehicle in 2011 with respect to all trips and from 1.21 persons per vehicle in 1963 to 1.06 persons per vehicle in

2011 for work trips. Vehicle tripmaking may not be expected to increase significantly faster than person tripmaking in the future, as a result of declining vehicle occupancy because vehicle occupancy can no longer experience declines of the magnitude exhibited historically.

- While there has been a general modest decrease in household trip rates since 1991 and a significant increase in pedestrian and bicycling trips since 2001, these changes were experienced across all age categories. Survey data indicates that the behavioral difference in travel between generations appears to be relatively stable over time. As such, there does not appear to be one generation that is significantly driving the changes in travel as compared to other generations. As households age they have exhibited similar travel behaviors as their predecessors.
- On an average weekday in 2011, 40.9 million vehicle-miles of travel occurred within the Region as a result of the 5.2 million vehicle trips. The historic increases in vehicle-miles of travel from 13.1 million in 1963, to 20.1 million in 1972, to 33.1 million in 1991, to 39.7million in 2001, and to 40.9 million in 2011 – a total of 212 percent – have been more rapid than the corresponding historic increases in total person tripmaking and vehicle tripmaking. A contributing factor to the more substantial increase in vehicle-miles of travel has been an increase in the average length of internal person trips from 4.7 miles in 1963, to 5.4 miles in 1972, to 6.8 miles in 1991, to 6.8 miles in 2001, to 7.1 miles in 2011, for an increase of about 52 percent from 1963 to 2011. Thus, the 212 percent increase in highway traffic in the Region from 1963 to 2011 has been the result only in part of demographic and economic growth and change and related person tripmaking. Only about 50 percent of the growth in highway traffic over the past 50 years may be attributed to increased tripmaking as a result of demographic and economic growth and change. The remaining 50 percent may be attributed to the decline in vehicle occupancy and carpooling and the increase in trip length.
- About 93 percent in 2011 and in each survey year of the person and vehicle trips made within the Region on an average weekday were made by residents of the Region. Therefore, the location and capacity of future transportation facilities will largely be based upon the patterns of travel of the regional residents.
- The number of personal vehicles – automobiles, vans, sport utility vehicles, and pickup trucks – available to residents of Region increased from about 527,000 in 1963 to 705,00 in 1972, to 1,142,500 in 1991 to 1,313,900 in 2001, and to 1,371,900 in 2011, an increase of 160 percent from 1963 to 2011. The percentage of total households in the Region having two or more personal vehicles available increased from 24 percent in 1963 to 34 in 1972, to 56 percent in 1991, 2001, and 2011, while the percentage of

total households having no personal vehicle available decreased from 17 percent in 1963 to 16 percent in 1972 to 9 percent in 1991, 2001, and 2011. In addition, while automobile travel increased from about 80 percent of all internal person travel in the Region in 1963 to 84 percent in 1972, to 89 percent in 1991 and 2001, and then decreased to 86 percent in 2011, public transit travel decreased from 8 percent of total internal person travel in 1963 to 4 percent in 1972, to 3 percent in 1991, to 2 percent in 2001 and 2011. Average weekday public transit travel decreased sharply within the Region, from 320,500 trips in 1963, to 184,200 trips in 1972, to 172,200 trips in 1991, to 142,200 trips in 2001, and to 129,100 trips in 2011.

- In each of the survey years, approximately 87 to 89 percent of total internal vehicle trips were made by personal vehicle and about 11 to 13 percent were made by commercial truck. These findings indicate that with respect to highway facilities, the principal contributor to the transportation problem within the Region is the movement of people rather than goods, particularly since personal vehicle trips display sharp concentrations during peak traffic periods, while commercial truck trips do not.
- Approximately 75 to 80 percent of total internal person trips within the Region on an average weekday in 1963, 1972, 1991, 2001 and 2011 consisted of trips made to or from places of residence. The amount and location of future residential development will affect future travel demands.
- The percentage distributions of internal person trips by trip purpose have remained very stable over the past 50 years with trips between home and work accounting for 22 to 25 percent of all internal person trips, trips between home and shopping accounting for 11 to 15 percent of trips, school trips for 9 to 13 percent of all trips, trips between home and other destinations for social, recreation, and personal business purposes for 30 to 34 percent of all trips, and trips between non-home origins and destinations for about 18 to 23 percent of all trips.

* * *

Table V-1

AVERAGE WEEKDAY PERSON AND VEHICLE TRIPS BY TRIP TYPE: 1963, 1972, 1991, 2001, and 2011^a

Trip Types	Person Trips									
	1963		1972		1991		2001		2011	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Region Resident Internal Person Trips	3,969,700	95.4	4,947,500	96.5	5,839,100	94.8	6,355,200	94.1	6,244,800	93.9
External Person Trips	191,700	4.6	176,900	3.5	317,400	5.2	394,900	5.9	403,800	6.1
Total	4,161,400	100.0	5,124,400	100.0	6,156,500	100.0	6,750,100	100.0	6,648,600	100.0

Trip Types	Vehicle Trips									
	1963		1972		1991		2001		2011	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Region Resident Personal Vehicle and Commercial Truck Trips	2,459,400	96.0	3,268,000	96.3	4,597,600	94.4	5,109,200	93.5	4,871,500	93.1
External Personal Vehicle and Commercial Truck Trips	101,600	4.0	125,700	3.7	273,300	5.6	357,500	6.5	363,800	6.9
Total	2,561,000	100.0	3,393,700	100.0	4,870,900	100.0	5,466,700	100.0	5,235,300	100.0

Trip Type	Person Trips							
	Change: 1963-2011		Change: 1972-2011		Change: 1991-2011		Change: 2001-2011	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Region Resident Internal Person Trips	2,275,100	57.3	1,297,300	26.2	405,700	6.9	-110,400	-1.7
External Personal Trips	212,100	110.6	226,900	128.3	86,400	27.2	8,900	2.3
Total	2,487,200	59.8	1,524,200	29.7	492,100	8.0	-101,500	-1.5

Trip Type	Vehicle Trips							
	Change: 1963-2011		Change: 1972-2011		Change: 1991-2011		Change: 2001-2011	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Region Resident Personal Vehicle and Commercial Truck Trips	2,412,100	98.1	1,603,500	49.1	273,900	6.0	-237,700	-4.7
External Personal Vehicle and Commercial Truck Trips	262,200	258.1	238,100	189.4	90,500	33.1	6,300	1.8
Total	2,674,300	104.4	1,841,600	54.3	364,400	7.5	-231,400	-4.2

^a Internal person trips as shown in this table include trips made internal to the Region on an average weekday by the resident households and group-quartered persons of the Region. They include trips made by personal vehicle—automobile, van, truck, or sport utility vehicle—either as a driver or passenger, public transit, school bus, motorcycle, taxi, bicycle, and walking. All trips shown in this table were estimated from Commission travel surveys with the exception of trips by bicycle and walking for other than work purposes for the years 1963, 1972, and 1991. Only the 2001 and 2011 survey gathered data on all bicycle and walking trips, with previous surveys in 1963, 1972, and 1991 gathering this data only for work trips. In 2011, the estimated number of region resident internal person trips made by bicycle or walking on an average weekday within southeastern Wisconsin totaled 520,600 trips, including 72,100 trips to and from work. In 2001, the estimated number of region resident internal person trips made by bicycle or walking on an average weekday within southeastern Wisconsin totaled 297,300 trips, including 40,200 trips to and from work. Estimates of average weekday internal trips made by the Region's households by bicycle or walking for work trip purposes totaled 33,600 trips in 1991, 58,800 in 1972, and 47,000 in 1963. Bicycle and walking non-work trips were estimated for the years 1963, 1972, and 1991 assuming that non-work trips would represent 87 percent of all bicycle and walking trips, as estimated in the year 2001 survey.

The external person trips shown in this table only include trips made by personal vehicle, which have consistently represented 95 percent of estimated total external person trips within Southeastern Wisconsin on an average weekday. Estimated external person trips by other modes of intercity bus and rail, cross-lake ferry, and commercial air carrier totaled on an average weekday 9,800 trips in 1963, 9,100 trips in 1972, 15,700 trips in 1991, 19,500 trips in 2001, and 23,500 in 2011.

Source: SEWRPC.

Table V-2

COMPARISON OF HISTORIC REGIONAL INTERNAL PERSON TRIPS, HOUSEHOLDS,
 EMPLOYMENT, POPULATION, AND INCOME: 1963, 1972, 1991, 2001, AND 2011^a

Internal Person Trips	1963	1972	1991	2001	2011	Percent Change 1963-2011	Percent Change 1972-2011	Percent Change 1991-2011	Percent Change 2001-2011
Internal Person Trips	3,933,100	4,917,300	5,755,700	6,327,000	6,152,900	56.4	25.1	6.9	-2.8
Households	481,200	557,300	676,100	759,500	802,000	66.7	43.9	18.6	5.6
Employment (jobs)	706,600	802,500	1,058,200	1,197,000	1,184,500	67.6	47.6	11.9	-1.0
Population ^b	1,636,300	1,750,500	1,780,300	1,899,300	2,011,300	22.9	14.9	13	5.9
Median Family Income (2010 Dollars) ^c	--	66,100	66,800	73,500	65,400	--	-1.1	-2.1	-11.0

^a Internal person trips as shown in this table include trips made internal to the Region on an average weekday by the resident households of the Region. They include trips made by personal vehicle—automobile, van, truck, or sport utility vehicle—either as a driver or passenger, public transit, school bus, motorcycle, taxi, bicycle, and walking. All trips shown in this table were estimated from Commission travel surveys with the exception of trips by bicycle and walking for other than work purposes for the year 1963, 1972, and 1991. Only the 2001 and 2011 surveys gathered data on all bicycle and walking trips, with previous surveys in 1963, 1972, and 1991 gathering this data only for work trips. In 2011, the estimated number of resident household internal person trips made by bicycle or walking on an average weekday within southeastern Wisconsin totaled 463,500 trips, including 69,300 trips to and from work. In 2001, the estimated number of resident household internal person trips made by bicycle or walking on an average weekday within southeastern Wisconsin totaled 295,700 trips, including 40,000 trips to and from work. Estimates of average weekday internal trips made by the Region's households by bicycle or walking for work trip purposes totaled 33,600 trips in 1991, 58,800 in 1972, and 47,000 in 1963. Bicycle and walking non-work trips were estimated for the years 1963, 1972, and 1991 assuming that non-work trips would represent 87 percent of all bicycle and walking trips, as estimated in the year 2001 survey.

The internal person trips shown in this table also only include trips made by the Region's households, and not by group-quartered persons in the Region. Group-quartered person trips within the Region were estimated to total 36,600 trips in 1963, 30,200 trips in 1972, 83,400 trips in 1991, 28,200 trips in 2001, and 91,900 trips in 2011, or only about one percent or less of the total internal person trips made by the residents of the Region on an average weekday.

^b Does not include Regional group-quartered population.

^c Median family income estimate for the year 1969 applied to the year 1972, for the year 1989 applied to the year 1991, for the year 1999 applied to the year 2001, and the year 2010 applied to the year 2011.

Source: SEWRPC.

Table V-3

AVERAGE WEEKDAY INTERNAL PERSON TRIPS PER HOUSEHOLD IN THE REGION BY VEHICLE AVAILABILITY: 1963, 1972, 1991, 2001, AND 2011^a

Vehicle Available	1963				
	Households		Person Trips		Person Trips per Household
	Number	Percent of Total	Number	Percent of Total	
None	83,400	17.3	188,200	5.2	2.3
One	282,000	58.6	2,097,000	58.5	7.4
Two	102,700	21.4	1,120,800	31.3	10.9
Three or More	13,100	2.7	177,400	5.0	13.5
Total	481,400	100.0	3,583,400	100.0	7.4

Vehicle Available	1972				
	Households		Person Trips		Person Trips per Household
	Number	Percent of Total	Number	Percent of Total	
None	88,500	15.9	171,400	3.8	1.9
One	276,300	49.6	1,953,300	43.6	7.1
Two	160,900	28.9	1,848,700	41.3	11.5
Three or More	316,000	5.6	506,400	11.3	16.0
Total	557,300	100.0	4,479,800	100.0	8.0

Vehicle Available	1991				
	Households		Person Trips		Person Trips per Household
	Number	Percent of Total	Number	Percent of Total	
None	61,900	9.1	156,300	2.8	2.5
One	233,800	34.6	1,292,000	23.5	5.5
Two	281,200	41.6	2,801,800	50.9	10.0
Three or More	99,300	14.7	1,255,600	22.8	12.6
Total	676,100	100.0	5,505,600	100.0	8.1

Vehicle Available	2001				
	Households		Person Trips		Person Trips per Household
	Number	Percent of Total	Number	Percent of Total	
None	64,300	8.5	161,000	2.7	2.5
One	267,500	35.2	1,588,300	26.3	5.9
Two	294,200	38.7	2,787,000	46.2	9.5
Three or More	133,500	17.6	1,495,000	24.8	11.2
Total	759,500	100.0	6,031,300	100.0	7.9

Vehicle Available	2011				
	Households		Person Trips		Person Trips per Household
	Number	Percent of Total	Number	Percent of Total	
None	71,800	9.0	205,900	3.6	2.9
One	283,200	35.3	1,389,000	24.4	4.9
Two	313,700	39.1	2,670,700	46.9	8.5
Three or More	133,300	16.6	1,423,800	25.0	10.7
Total	802,000	100.0	5,689,400	100.0	7.1

^a Trips made by bicycle and walking are not included in this analysis, as they were not surveyed for non-work trip purposes in 1963, 1972, and 1991.

Table V-4

AVERAGE WEEKDAY INTERNAL PERSON TRIPS PER HOUSEHOLD IN THE REGION BY HOUSEHOLD SIZE: 1963, 1972, 1991, 2001, AND 2011^a

Household Size	1963				
	Households		Person Trips		Person Trips per Household
	Number	Percent of Total	Number	Percent of Total	
One	52,000	10.8	106,500	3.0	2.0
Two	135,100	28.1	681,400	19.0	5.0
Three	87,500	18.2	666,000	18.6	7.6
Four	83,700	17.4	805,900	22.5	9.6
Five or More	122,900	25.5	1,323,600	36.9	10.8
Total	481,200	100.0	3,583,400	100.0	7.4

Household Size	1972				
	Households		Person Trips		Person Trips per Household
	Number	Percent of Total	Number	Percent of Total	
One	93,800	16.8	223,500	5.0	2.4
Two	159,500	28.6	892,900	19.9	5.6
Three	91,900	16.5	760,200	17.0	8.3
Four	86,300	15.5	903,100	20.1	10.5
Five or More	125,800	22.6	1,700,100	38.0	13.5
Total	557,300	100.0	4,479,800	100.0	8.0

Household Size	1991				
	Households		Person Trips		Person Trips per Household
	Number	Percent of Total	Number	Percent of Total	
One	168,700	24.9	565,500	10.3	3.4
Two	214,100	31.7	1,526,100	27.7	7.1
Three	116,100	17.2	1,075,700	19.5	9.3
Four	104,300	15.4	1,282,900	23.3	12.3
Five or More	72,900	10.8	1,055,500	19.2	14.5
Total	676,100	100.0	5,505,700	100.0	8.1

Household Size	2001				
	Households		Person Trips		Person Trips per Household
	Number	Percent of Total	Number	Percent of Total	
One	211,100	27.8	810,100	13.4	3.8
Two	247,300	32.6	1,769,800	29.3	7.2
Three	118,900	15.7	1,104,600	18.3	9.3
Four	106,400	14.0	1,249,300	20.7	11.7
Five or More	75,800	10.0	1,097,500	18.2	14.5
Total	759,500	100.0	6,031,300	100.0	7.9

Household Size	2011				
	Households		Person Trips		Person Trips per Household
	Number	Percent of Total	Number	Percent of Total	
One	233,400	29.1	736,200	12.9	3.2
Two	265,900	33.2	1,623,600	28.5	6.1
Three	123,700	15.4	1,057,100	18.6	8.5
Four	102,900	12.8	1,173,300	20.6	11.4
Five or More	76,100	9.5	1,099,200	19.3	14.4
Total	802,000	100.0	5,689,400	100.0	7.1

^a Trips made by bicycle and walking are not included in this analysis, as they were not surveyed for non-work trip purposes in 1963, 1972, and 1991.

TABLE V-5

**DISTRIBUTION OF AVERAGE WEEKDAY INTERNAL PERSON TRIPS BY HOUSEHOLDS
 IN THE REGION BY MODE OF TRAVEL: 1963, 1972, 1991, 2001, AND 2011**

Mode of Travel	Person Trips									
	1963		1972		1991		2001		2011	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Auto Driver	2,156,700	54.8	2,884,900	58.7	4,060,800	70.6	4,507,400	71.2	4,153,300	67.5
Auto Passenger	978,100	24.9	1,217,100	24.8	1,029,800	17.9	1,130,800	17.9	1,160,200	18.9
Public Transit	320,500	8.1	184,200	3.7	172,200	3.0	142,200	2.2	129,100	2.1
School Bus	119,900	3.1	173,600	3.5	228,600	4.0	227,400	3.6	205,900	3.3
Walk and Bicycle	349,700	8.9	437,500	8.9	250,000	4.3	295,700	4.7	463,500	7.5
Other ^a	8,200	0.2	20,000	0.4	14,300	0.2	23,500	0.4	40,900	0.7
Total	3,933,100	100.0	4,917,300	100.0	5,755,700	100.0	6,327,000	100.0	6,152,900	100.0

Mode of Travel	Change: 1963-2011		Change: 1972-2011		Change: 1991-2011		Change: 2001-2011	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Auto Driver	1,996,600	92.6	1,268,400	44.0	92,500	2.3	-354,100	-7.9
Auto Passenger	182,100	18.6	-56,900	-4.7	130,400	12.7	29,400	2.6
Public Transit	-191,400	-59.7	-55,100	-29.9	-43,100	-25	-13,100	-9.2
School Bus	86,000	71.7	32,300	18.6	-22,700	-9.9	-21,500	-9.5
Walk and Bicycle	113,800	32.5	26,000	5.9	213,500	85.4	167,800	56.7
Other ^a	32,700	398.8	20,900	104.5	26,600	186	17,400	74.0
Total	2,219,800	56.4	1235600	25.1	397200	6.9	-174100	-2.8

^a Includes motorcycle and taxi.

Source: SEWRPC.

Table V-6

AVERAGE WEEKDAY INTERNAL TRANSIT TRIPS PER HOUSEHOLD IN THE REGION BY VEHICLE AVAILABILITY: 1963, 1972, 1991, 2001, AND 2011^a

Vehicle Available	1963					
	Households		Transit Trips		Transit Person Trips per Household	Percent of Total Trips Made on Public Transit
	Number	Percent of Total	Number	Percent of Total		
None	83,400	17.3	124,100	38.7	1.49	65.9
One	282,000	58.6	154,800	48.3	0.55	7.4
Two	102,700	21.4	37,600	11.7	0.37	3.4
Three or More	13,100	2.7	4,000	1.3	0.31	2.3
Total	481,200	100.0	320,500	100.0	0.67	8.9

Vehicle Available	1972					
	Households		Transit Trips		Transit Person Trips per Household	Percent of Total Trips Made on Public Transit
	Number	Percent of Total	Number	Percent of Total		
None	88,500	15.9	73,000	39.6	0.82	42.6
One	276,300	49.6	73,800	40.1	0.27	3.8
Two	160,900	28.9	30,600	16.6	0.19	1.7
Three or More	31,600	5.6	6,800	3.7	0.22	1.3
Total	557,300	100.0	184,200	100.0	0.27	4.1

Vehicle Available	1991					
	Households		Transit Trips		Transit Person Trips per Household	Percent of Total Trips Made on Public Transit
	Number	Percent of Total	Number	Percent of Total		
None	61,900	9.1	74,700	43.4	1.21	47.8
One	233,800	34.6	46,400	26.9	0.19	3.6
Two	281,100	41.6	36,100	21.0	0.13	1.3
Three or More	99,300	14.7	15,000	8.7	0.15	1.2
Total	676,100	100.0	172,200	100.0	0.25	3.1

Vehicle Available	2001					
	Households		Transit Trips		Transit Person Trips per Household	Percent of Total Trips Made on Public Transit
	Number	Percent of Total	Number	Percent of Total		
None	64,300	8.5	63,000	44.3	0.98	39.1
One	267,500	35.2	37,000	26.0	0.14	2.3
Two	294,200	38.7	29,300	20.6	0.10	1.1
Three or More	133,500	17.6	12,900	9.1	0.10	0.9
Total	759,500	100.0	142,200	100.0	0.19	2.4

Vehicle Available	2011					
	Households		Transit Trips		Transit Person Trips per Household	Percent of Total Trips Made on Public Transit
	Number	Percent of Total	Number	Percent of Total		
None	71,800	9.0	82,700	64.1	1.15	40.2
One	283,200	35.3	25,500	19.8	0.09	1.8
Two	313,700	39.1	12,400	9.6	0.04	0.5
Three or More	133,300	16.6	8,500	6.6	0.06	0.6
Total	802,000	100.0	129,100	100.0	0.16	2.3

^a Trips made by bicycle and walking are not included in this analysis, as they were not surveyed for non-work trip purposes in 1963, 1972, and 1991.

Table V-7

AVERAGE WEEKDAY INTERNAL TRANSIT PERSON TRIPS PER HOUSEHOLD IN THE REGION BY HOUSEHOLD SIZE: 1963, 1972, 1991, 2001, AND 2011^a

Household Size	1963						
	Households		Transit Trips		Transit Person Trips per Household	Average Transit Trips per Person	Percent of Total Trips Made on Public Transit
	Number	Percent of Total	Number	Percent of Total			
One	52,000	10.8	31,800	9.9	0.61	0.61	29.9
Two	135,100	28.1	77,900	24.3	0.58	0.29	11.4
Three	87,500	18.2	64,300	20.1	0.73	0.24	9.7
Four	83,700	17.4	51,700	16.1	0.62	0.15	6.4
Five or More	122,900	25.5	94,800	29.6	0.77	0.13	7.2
Total	481,200	100.0	320,500	100.0	0.67	0.09	8.9

Household Size	1972						
	Households		Transit Trips		Transit Person Trips per Household	Average Transit Trips per Person	Percent of Total Trips Made on Public Transit
	Number	Percent of Total	Number	Percent of Total			
One	93,800	16.8	27,300	14.8	0.29	0.29	12.2
Two	159,500	28.6	37,500	20.3	0.24	0.12	4.2
Three	91,900	16.5	27,200	14.8	0.30	0.15	3.6
Four	86,300	15.5	30,700	16.7	0.36	0.09	3.4
Five or More	125,800	22.6	61,500	33.4	0.49	0.08	3.6
Total	557,300	100.0	184,200	100.0	0.33	0.04	4.1

Household Size	1991						
	Households		Transit Trips		Transit Person Trips per Household	Average Transit Trips per Person	Percent of Total Trips Made on Public Transit
	Number	Percent of Total	Number	Percent of Total			
One	168,700	25.0	26,900	15.6	0.16	0.16	4.8
Two	214,100	31.7	26,700	15.5	0.12	0.06	1.7
Three	116,100	17.2	34,200	19.9	0.29	0.09	3.2
Four	104,300	15.4	36,100	21.0	0.35	0.09	2.8
Five or More	72,900	10.8	48,300	28.0	0.66	0.12	4.6
Total	676,100	100.0	172,200	100.0	0.25	0.03	3.1

Household Size	2001						
	Households		Transit Trips		Transit Person Trips per Household	Average Transit Trips per Person	Percent of Total Trips Made on Public Transit
	Number	Percent of Total	Number	Percent of Total			
One	211,100	27.8	36,200	25.4	0.17	0.17	4.5
Two	247,300	32.5	36,100	25.4	0.15	0.07	2.0
Three	118,900	15.7	25,400	17.9	0.21	0.07	2.3
Four	106,400	14.0	18,700	13.2	0.18	0.04	1.5
Five or More	75,800	10.0	25,800	18.1	0.34	0.06	2.3
Total	759,500	100.0	142,200	100.0	0.19	0.08	2.4

Household Size	2011						
	Households		Transit Trips		Transit Person Trips per Household	Average Transit Trips per Person	Percent of Total Trips Made on Public Transit
	Number	Percent of Total	Number	Percent of Total			
One	233,400	29.1	34,200	26.5	0.15	0.15	4.6
Two	265,900	33.2	28,700	22.2	0.11	0.06	1.8
Three	123,700	15.4	20,500	15.9	0.17	0.06	1.9
Four	102,900	12.8	21,000	16.3	0.20	0.05	1.8
Five or More	76,100	9.5	24,700	19.1	0.32	0.05	2.2
Total	802,000	100.0	129,100	100.0	0.16	0.06	2.3

^a Trips made by bicycle and walking are not included in this analysis, as they were not surveyed for non-work trip purposes in 1963, 1972, and 1991.

Table V-8

**DISTRIBUTION OF AVERAGE WEEKDAY INTERNAL HOUSEHOLD PERSON TRIPS IN THE
 REGION BY TRIP PURPOSE: 1963, 1972, 1991, 2001 AND 2011^a**

Trip Purpose ^b	Person Trips									
	1963		1972		1991		2001		2011	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Home-Based Work	890,700	24.9	1,062,600	23.7	1,269,100	23.1	1,435,300	23.8	1,273,600	22.4
Home-Based Shopping	543,800	15.2	675,000	15.1	798,000	14.5	761,600	12.6	651,100	11.4
Home-Based Other	1,188,600	33.1	1,541,200	34.4	1,687,300	30.6	1,962,500	32.5	1,701,300	29.9
Nonhome-Based	647,600	18.1	783,500	17.5	1,125,900	20.4	1,215,000	20.2	1,307,400	23.0
School	312,700	8.7	417,500	9.3	625,400	11.4	656,900	10.9	755,900	13.3
Total	3,583,400	100.0	4,479,800	100.0	5,505,700	100.0	6,031,300	100.0	5,689,300	100.0

Trip Purpose ^b	Person Trips							
	Changes: 1963-2011		Changes: 1972-2011		Changes: 1991-2011		Changes: 2001-2011 ^c	
	Number	Percentage	Number	Percent	Number	Percent	Number	Percent
Home-Based Work	382,900	43	211,000	19.9	4,500	0.4	-161,700	-11.3
Home-Based Shopping	107,300	19.7	-23,900	-3.5	-146,900	-18.4	-110,500	-14.5
Home-Based Other	512,700	43.1	160,100	10.4	14,000	0.8	-261,200	-13.3
Nonhome-Based	659,800	101.9	523,900	66.9	181,500	16.1	92,400	7.6
School	443,200	141.7	338,400	81.1	130,500	20.9	99,000	15.1
Total	2,105,900	58.8	1,209,500	27.0	183,600	3.3	-342,000	-5.7

^a Trips made by bicycle and walking are not included in this analysis, as they were not surveyed for non-work trip purposes in 1963, 1972, and 1991.

^b A home-based trip is a trip with either the origin or destination being the traveler's home. A non-home-based trip has neither the origin nor destination being the home. A school trip is any trip by a student for which the purpose of the trip at its origin or destination is to attend school.

^c The decline in tripmaking from 2001 to 2011 is overstated in this table as it does not include bicycle and walking trips which increased from an estimated 295,700 trips in 2001 to 463,500 trips in 2011.

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Table V-9

**AVERAGE TRIP LENGTHS AND TIMES FOR INTERNAL HOUSEHOLD PERSON TRIPS
 IN THE REGION BY TRIP PURPOSE: 1963, 1972, 1991, 2001 AND 2011**

Trip Purpose	1963 Trip Length		1972 Trip Length		1991 Trip Length		2001 Trip Length		2011 Trip Length	
	Minutes	Miles	Minutes	Miles	Minutes	Miles	Minutes	Miles	Minutes	Miles
Home-Based Work	18.5	6.1	16.1	7.5	16.9	9.1	19.1	9.8	19.6	11.0
Home-Based Shopping	9.7	3.3	9.6	4.0	9.1	4.3	9.6	4.7	9.8	4.8
Home-Based Other	12.7	4.6	11.6	4.9	10.9	5.4	11.6	6.0	11.3	5.9
Nonhome-Based	13.0	4.0	12.4	4.9	11.6	5.7	12.3	5.9	11.7	6.2
Average	13.8	4.7	12.6	5.4	12.3	6.3	13.7	6.8	13.3	7.1

Trip Purpose	Percent Change							
	1963-2011		1972-2011		1991-2011		2001-2011	
	Minutes	Miles	Minutes	Miles	Minutes	Miles	Minutes	Miles
Home-Based Work	5.7	79.8	21.5	46.3	15.7	20.5	2.4	11.9
Home-Based Shopping	0.5	46.1	1.6	20.5	7.1	12.1	1.6	2.6
Home-Based Other	-11.4	28.0	-3.0	20.2	3.2	9.1	-3.0	-1.8
Nonhome-Based	-10.2	54.8	-5.9	26.3	0.6	8.6	-5.1	4.9
Average	-3.6	51.9	5.6	32.2	8.2	13.3	-2.8	5.0

Source: SEWRPC.

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Table V-10

**AVERAGE PERSONAL VEHICLE OCCUPANCY OF AVERAGE WEEKDAY HOUSEHOLD INTERNAL TRIPS
IN THE REGION BY SELECTED TRIP PURPOSE: 1963, 1972, 1991, 2001 AND 2011**

Year	Average Personal Vehicle Occupancy by Selected Trip Purpose (Number of Persons)				
	Home-Based Work	Home-Based Shopping	Home-Based Other	Nonhome-Based	Total Travel
1963	1.21	1.53	1.58	1.34	1.42
1972	1.17	1.47	1.54	1.38	1.39
1991	1.06	1.27	1.34	1.20	1.22
2001	1.05	1.22	1.32	1.18	1.19
2011	1.06	1.25	1.31	1.19	1.20

Source: SEWRPC.

Table V-11

**AVERAGE WEEKDAY PERSON TRIPS (EXCLUDING SCHOOL TRIPS)
BETWEEN, AND WITHIN, COUNTIES IN THE REGION: 1963, 1972, 1991, 2001, AND 2011^a**

Production County	Attraction County: 1963							
	Kenosha	Milwaukee	Ozaukee	Racine	Walworth	Washington	Waukesha	Total
Kenosha	240,900	1,700	--	14,200	1,100	--	100	258,000
Milwaukee	2,300	2,054,900	11,300	8,700	1,400	4,400	60,200	2,143,200
Ozaukee	--	20,500	42,700	--	--	1,000	600	64,800
Racine	15,000	12,600	--	332,800	1,700	--	1,300	363,400
Walworth	1,200	2,800	--	2,600	58,300	200	1,600	66,700
Washington	300	8,100	2,200	--	200	51,700	5,500	68,000
Waukesha	300	97,500	900	1,300	1,100	2,600	221,700	325,400
Total	260,000	2,198,100	57,100	359,600	63,800	59,900	291,000	3,289,500

Production County	Attraction County: 1972							
	Kenosha	Milwaukee	Ozaukee	Racine	Walworth	Washington	Waukesha	Total
Kenosha	309,600	2,300	100	16,500	2,700	--	100	331,300
Milwaukee	2,700	2,166,000	14,300	9,200	1,400	5,700	110,900	2,310,200
Ozaukee	--	30,800	89,700	100	--	3,300	2,400	126,300
Racine	18,900	20,800	--	388,100	3,100	100	2,900	433,900
Walworth	800	2,200	--	5,000	117,900	--	2,700	128,600
Washington	100	13,800	5,200	200	--	101,300	12,700	133,300
Waukesha	100	170,900	2,200	1,800	2,600	4,600	440,900	623,100
Total	332,200	2,406,800	111,500	420,900	127,700	115,000	572,600	4,086,700

Production County	Attraction County: 1991							
	Kenosha	Milwaukee	Ozaukee	Racine	Walworth	Washington	Waukesha	Total
Kenosha	297,400	6,100	100	33,100	1,500	--	700	338,900
Milwaukee	3,300	2,256,900	28,800	15,700	2,600	12,500	183,500	2,503,300
Ozaukee	200	53,000	147,200	200	100	5,300	5,500	211,500
Racine	23,300	40,500	500	445,300	4,900	300	8,000	522,800
Walworth	3,800	5,000	100	7,300	160,900	--	10,700	187,800
Washington	100	33,000	9,800	300	100	190,000	30,000	263,300
Waukesha	1,100	205,100	3,600	3,900	3,600	12,400	709,900	939,600
Total	329,200	2,599,600	190,100	505,800	173,700	220,500	948,300	4,967,200

Production County	Attraction County: 2001							
	Kenosha	Milwaukee	Ozaukee	Racine	Walworth	Washington	Waukesha	Total
Kenosha	321,800	9,000	100	35,700	4,500	300	2,300	373,700
Milwaukee	6,300	2,215,700	38,900	23,500	4,200	20,400	237,500	2,546,500
Ozaukee	--	55,800	166,200	500	--	11,000	9,400	242,900
Racine	25,300	45,900	1,600	451,800	5,300	700	15,400	546,800
Walworth	2,700	7,700	100	10,500	179,400	300	12,600	213,300
Washington	300	38,100	12,200	300	100	224,800	46,400	322,200
Waukesha	1,400	239,700	6,000	7,600	6,300	22,800	846,000	1,129,800
Total	357,800	2,611,900	225,100	529,900	199,800	280,300	1,169,600	5,374,400

Production County	Attraction County: 2011							
	Kenosha	Milwaukee	Ozaukee	Racine	Walworth	Washington	Waukesha	Total
Kenosha	302,500	12,000	300	32,200	6,300	100	2,700	356,100
Milwaukee	4,500	1,872,800	26,700	21,600	4,100	14,800	226,000	2,170,500
Ozaukee	200	48,000	170,800	500	--	14,400	7,600	241,500
Racine	28,500	57,000	100	375,400	4,400	600	19,800	485,800
Walworth	6,000	6,800	--	9,500	184,100	--	12,800	219,200
Washington	200	34,800	13,800	500	--	240,100	46,000	335,400
Waukesha	2,200	205,400	6,100	6,700	4,700	28,400	871,500	1,125,000
Total	344,100	2,236,800	217,800	446,400	203,600	298,400	1,186,400	4,933,500

^a Trips are based on the resident household survey and include all trip purposes except school. Trips are shown in produced-attracted format – that is, from area of production to area of attraction. The production county for a trip having one end at “home”, that is either beginning at or ending at home, is the county location of the “home” and the attraction county is the “non-home” end county location for that trip. The production county for trips having neither end at “home” is the county location of the trip origin and the attraction county is the county location of the trip destination. Thus, the trips shown in the table largely indicate the trips made by residents of each county of the Region on an average weekday to and from each other county.

Trips made by bicycle and walking are not included in this analysis, as they were not surveyed for non-work trip purposes in 1963, 1972, and 1991.

Source: SEWRPC.

Table V-12

AVERAGE WEEKDAY INTERNAL PERSON TRIPS PER HOUSEHOLD IN THE REGION BY AGE OF HEAD OF HOUSEHOLD AND VEHICLE AVAILABILITY: 1991, 2001, AND 2011^a

Vehicle Available	1991											
	Households				Person Trips				Person Trips per Household			
	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+
None	7,900	17,800	10,900	25,300	24,600	77,300	24,200	30,200	3.1	4.3	2.2	1.2
One	13,700	89,700	60,400	69,800	73,200	550,800	315,000	352,700	5.3	6.1	5.2	5.1
Two	13,300	156,500	84,700	26,500	101,100	1,729,800	757,300	213,500	7.6	11.1	8.9	8.1
Three or More	2,600	44,400	47,000	5,300	21,800	584,100	593,600	56,000	8.4	13.2	12.6	10.6
Total	37,500	308,400	203,000	126,900	220,700	2,942,000	1,690,100	652,400	5.9	9.5	8.3	5.1

Vehicle Available	2001											
	Households				Person Trips				Person Trips per Household			
	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+
None	5,700	19,200	23,800	15,600	18,300	62,300	53,600	26,800	3.2	3.2	2.3	1.7
One	20,500	91,600	88,300	67,000	99,500	610,800	490,100	387,900	4.9	6.7	5.6	5.8
Two	12,000	142,900	108,200	31,100	81,800	1,506,500	942,800	255,900	6.8	10.5	8.7	8.2
Three or More	4,200	59,000	64,500	5,800	38,800	695,200	704,400	56,500	9.2	11.8	10.9	9.7
Total	42,400	312,700	284,800	119,500	238,400	2,874,800	2,190,900	727,100	5.6	9.2	7.7	6.1

Vehicle Available	2011											
	Households				Person Trips				Person Trips per Household			
	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+
None	7,600	19,400	26,000	18,800	22,100	86,900	69,600	27,400	2.9	4.5	2.7	1.5
One	24,400	96,900	92,200	69,700	93,000	553,300	453,400	289,300	3.8	5.7	4.9	4.2
Two	15,800	139,100	114,000	44,800	115,200	1,353,500	923,700	278,300	7.3	9.7	8.1	6.2
Three or More	3,400	44,700	75,800	9,500	26,700	494,800	828,000	74,400	7.9	11.1	10.9	7.8
Total	51,200	300,100	308,000	142,800	257,000	2,488,500	2,274,700	669,400	5.0	8.3	7.4	4.7

^a Trips made by bicycle and walking are not included in this analysis, as they were not surveyed for non-work trip purposes in 1991.

Source: SEWRPC.

Table V-13

AVERAGE WEEKDAY INTERNAL PERSON TRIPS PER HOUSEHOLD IN THE REGION BY AGE OF HEAD OF HOUSEHOLD AND HOUSEHOLD SIZE: 1991, 2001, AND 2011^a

Household Size	1991											
	Households				Person Trips				Person Trips per Household			
	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+
One	9,700	56,600	44,900	57,400	37,600	217,800	156,400	153,800	3.9	3.8	3.5	2.7
Two	12,600	57,200	86,200	58,100	80,500	404,800	651,500	389,000	6.4	7.1	7.6	6.7
Three	7,900	60,000	39,600	8,600	52,100	535,900	411,400	76,200	6.6	8.9	10.4	8.9
Four	4,500	79,100	18,800	2,000	29,000	969,300	260,700	24,000	6.4	12.3	13.9	12.0
Five or More	2,800	55,600	13,600	800	21,600	814,200	210,100	9,500	7.7	14.6	15.4	11.9
Total	37,500	308,500	203,100	126,900	220,800	2,942,000	1,690,100	652,500	5.9	9.5	8.3	5.1

Household Size	2001											
	Households				Person Trips				Person Trips per Household			
	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+
One	12,700	57,800	84,100	56,500	42,400	221,700	329,700	216,300	3.3	3.8	3.9	3.8
Two	12,300	60,200	119,600	55,300	75,200	380,700	883,100	430,800	6.1	6.3	7.4	7.8
Three	7,800	60,700	45,100	5,300	47,800	532,100	473,500	51,200	6.1	8.8	10.5	9.7
Four	5,900	75,300	23,500	1,600	41,600	886,900	300,400	20,400	7.1	11.8	12.8	12.8
Five or More	3,800	58,700	12,700	700	31,400	853,600	204,200	8,400	8.3	14.5	16.1	12.0
Total	42,500	312,700	285,000	119,400	238,400	2,875,000	2,190,900	727,100	5.6	9.2	7.7	6.1

Household Size	2011											
	Households				Person Trips				Person Trips per Household			
	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+
One	18,700	59,800	94,300	60,500	56,400	203,600	302,900	173,200	3.0	3.4	3.2	2.9
Two	18,800	59,400	114,400	73,200	113,100	356,600	733,000	420,900	6.0	6.0	6.4	5.8
Three	9,800	59,400	47,700	7,000	52,100	462,700	486,300	55,900	5.3	7.8	10.2	8.0
Four	3,500	66,000	32,000	1,400	33,700	685,000	440,700	13,800	9.6	10.4	13.8	9.9
Five or More	400	55,500	19,700	500	1,500	780,500	311,600	5,500	3.8	14.1	15.8	11.0
Total	51,200	300,100	308,100	142,600	256,800	2,488,400	2,274,500	669,300	5.0	8.3	7.4	4.7

^a Trips made by bicycle and walking are not included in this analysis, as they were not surveyed for non-work trip purposes in 1991.

Source: SEWRPC.

TABLE V-14

**DISTRIBUTION OF AVERAGE WEEKDAY INTERNAL PERSON TRIPS BY HOUSEHOLDS
 IN THE REGION BY MODE OF TRAVEL AND AGE OF HEAD OF HOUSEHOLD: 2001 AND 2011**

Mode of Travel	Person Trips by Age of Head of Household							
	2001							
	16 to 26		27 to 46		47 to 66		67+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Auto Driver	178,700	63.3	1,970,900	64.8	1,782,700	78.9	575,100	77.1
Auto Passenger	39,900	14.1	640,500	21.1	311,700	13.8	138,700	18.6
Public Transit	11,800	4.2	70,200	2.3	50,500	2.2	9,700	1.3
School Bus	6,800	2.4	181,200	6.0	38,500	1.7	1,000	0.1
Walk and Bicycle	43,900	15.5	164,500	5.4	68,300	3.0	18,900	2.5
Other ^a	1,300	0.5	12,000	0.4	7,600	0.3	2,700	0.4
Total	282,400	100.0	3,039,300	100.0	2,259,300	100.0	746,100	100.0

Mode of Travel	Person Trips by Age of Head of Household							
	2011							
	16 to 26		27 to 46		47 to 66		67+	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Auto Driver	203,000	65.1	1,668,900	61.7	1,760,300	72.6	521,000	73.4
Auto Passenger	35,300	11.3	598,700	22.1	388,500	16.0	137,800	19.4
Public Transit	15,600	5.0	55,300	2.0	51,600	2.1	6,700	0.9
School Bus	1,800	0.6	149,500	5.5	53,500	2.2	1,200	0.2
Walk and Bicycle	54,700	17.6	218,000	8.1	150,900	6.2	40,000	5.6
Other ^a	1,200	0.4	16,100	0.6	20,800	0.9	2,700	0.4
Total	311,600	100.0	2,706,500	100.0	2,425,600	100.0	709,400	100.0

^a Includes motorcycle and taxi.

Source: SEWRPC.

Table V-15

AVERAGE WEEKDAY INTERNAL PERSON TRIPS PER HOUSEHOLD IN THE REGION BY AGE OF HEAD OF HOUSEHOLD AND TRIP PURPOSE: 1991, 2001, AND 2011^a

Trip Purpose	1991							
	Person Trips				Person Trips per Household			
	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+
Home-Based Work	65,400	713,400	440,600	49,500	1.7	2.3	2.2	0.4
Home-Based Shopping	26,700	344,300	257,400	169,400	0.7	1.1	1.3	1.3
Home-Based Other	56,700	845,200	498,000	287,400	1.5	2.7	2.5	2.3
Nonhome-Based	48,800	564,800	373,900	138,300	1.3	1.8	1.8	1.1
School	23,100	474,300	120,100	8,000	0.6	1.5	0.6	0.1
Total	220,700	2,942,000	1,690,000	652,600	5.9	9.5	8.3	5.1

Household Size	2001							
	Person Trips				Person Trips per Household			
	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+
Home-Based Work	79,300	732,000	574,800	49,100	1.9	2.3	2.0	0.4
Home-Based Shopping	27,900	273,700	300,500	159,400	0.7	0.9	1.1	1.3
Home-Based Other	64,400	897,000	668,000	333,100	1.5	2.9	2.3	2.8
Nonhome-Based	39,000	496,000	498,600	181,500	0.9	1.6	1.7	1.5
School	27,700	476,200	149,000	4,100	0.7	1.5	0.5	0.0
Total	238,300	2,874,900	2,190,900	727,200	5.6	9.2	7.7	6.1

Household Size	2011 ^b							
	Person Trips				Person Trips per Household			
	16 to 26	27 to 46	47 to 66	67+	16 to 26	27 to 46	47 to 66	67+
Home-Based Work	88,300	565,800	570,300	49,200	1.7	1.9	1.9	0.3
Home-Based Shopping	24,100	224,100	265,100	137,800	0.5	0.7	0.9	1.0
Home-Based Other	54,900	720,600	645,400	280,400	1.1	2.4	2.1	2.0
Nonhome-Based	50,200	516,500	543,600	197,200	1.0	1.7	1.8	1.4
School	39,400	461,600	250,100	4,800	0.8	1.5	0.8	0.0
Total	256,900	2,488,600	2,274,500	669,400	5.0	8.3	7.4	4.7

^a Trips made by bicycle and walking are not included in this analysis, as they were not surveyed for non-work trip purposes in 1991.

^b The decline in tripmaking from 2001 to 2011 is overstated in this table as it does not include bicycle and walking trips which increased from an estimated 295,700 trips in 2001 to 463,500 trips in 2011.

Source: SEWRPC.

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Table V-16

**COMMERCIAL-USE TRUCK AVAILABILITY AND AVERAGE WEEKDAY
 INTERNAL TRUCK TRIPS IN THE REGION BY TYPE: 1963, 1972, 1991, 2001, AND 2011**

Type of Truck	Year	Trucks			Truck Trips			
		Number	Percent of Total	Percent Change	Number	Percent of Total	Percent Change	Trips per Truck
Light	1963	33,800	57.8	--	169,500	57.8	--	5.0
	1972	51,000	66.0	50.9	185,800	50.1	9.6	3.6
	1991	49,100	56.1	-3.7	214,300	41.1	15.3	4.4
	2001	79,600	61.5	62.1	319,100	54.8	48.9	4.0
	2011	67,300	55.3	-15.5	327,000	53.2	2.5	4.9
Medium	1963	20,500	35.0	--	110,900	37.8	--	5.4
	1972	22,850	29.6	11.5	173,500	46.8	56.4	7.6
	1991	28,400	32.5	24.3	259,700	49.8	49.7	9.1
	2001	35,600	27.5	25.4	196,200	33.7	-24.5	5.5
	2011	37,900	31.2	6.5	196,400	32.0	0.1	5.2
Heavy	1963	4,200	7.2	--	13,000	4.4	--	3.1
	1972	3,400	4.4	-19.0	11,700	3.1	-10.0	3.4
	1991	3,100	3.5	-8.8	17,500	3.6	49.6	5.6
	2001	6,600	5.1	112.9	41,200	7.1	135.4	6.2
	2011	5,700	4.7	-13.6	30,500	4.9	-26.0	5.4
Municipal	1963 ^a	--	--	--	--	--	--	--
	1972 ^a	--	--	--	--	--	--	--
	1991	6,900	7.9	--	28,600	5.5	--	4.1
	2001	7,700	5.9	11.6	26,000	4.4	-9.1	3.4
	2011	10,700	8.8	39.0	60,600	9.9	133.1	5.7
Total	1963	58,500	100.0	--	293,400	100.0	--	5.0
	1972	77,250	100.0	32.1	371,000	100.0	26.4	4.8
	1991	87,500	100.0	13.3	520,100	100.0	40.2	5.9
	2001	129,500	100.0	48.0	582,500	100.0	12.0	4.5
	2011	121,600	100.0	-6.1	614,500	100.0	5.5	5.1

^a Data for Municipal Trucks for 1963 and 1972 was not collected.

Source: SEWRPC.

Table V-17

**SELECTED TRIP MAKING CHARACTERISTICS OF
 COMMERCIAL-USE TRUCKS GARAGED IN THE REGION: 1963, 1972, 1991, 2001, AND 2011**

Trip Characteristics	1963	1972	1991	2001	2011	Change							
						1963-2011		1972-2011		1991-2011		2001-2011	
						Number	Percent	Number	Percent	Number	Percent	Number	Percent
Average Weekday Trips per Truck	5.0	4.8	5.9	4.5	5.1	0.1	1.1	0.3	5.3	-0.8	-14.3	0.6	12.3
Average Trip Length (miles)	4.9	7.3	8.4	8.7	7.8	2.9	59.8	0.5	7.3	-0.6	-6.8	-0.9	-10.0

Source: SEWRPC.

Table V-18

**AVERAGE WEEKDAY EXTERNAL PERSON AND VEHICLE TRIPS
 IN THE REGION BY DIRECTION: 1963, 1972, 1991, 2001, AND 2011**

Direction	Year	Personal Vehicle Driver ^a		Personal Vehicle Passenger ^a		Personal Vehicle Person Trips			Commercial Truck Trips		Total Vehicle Trips		
		Number	Percent Change	Number	Percent Change	Number	Percent	Percent of All Directions	Number	Percent Change	Number	Percent Change	Percent of All Directions
Inbound	1963	39,700	--	47,900	--	87,600	--	45.7	7,100	--	46,800	--	46.1
	1972	46,700	17.6	33,500	-30.1	80,200	-8.4	45.3	10,900	53.5	57,600	23.1	45.8
	1991	107,300	129.8	40,300	20.3	147,600	84.0	46.5	19,300	77.1	126,600	119.8	46.3
	2001	137,500	28.1	47,700	18.4	185,200	25.5	46.9	32,000	65.8	169,500	33.9	47.4
	2011	142,600	3.7	48,600	1.9	191,200	3.2	47.4	27,800	-13.1	170,400	0.5	46.8
Outbound	1963	40,000	--	48,100	--	88,100	--	46.0	7,200	--	47,200	--	46.4
	1972	47,500	18.8	35,900	-25.4	83,400	-5.3	47.2	10,700	48.6	58,200	23.3	46.3
	1991	111,900	135.6	41,800	16.4	153,700	84.3	48.4	19,800	85.0	131,700	126.3	48.2
	2001	142,200	27.1	48,400	15.8	190,600	24.0	48.3	27,900	40.9	170,100	29.2	47.6
	2011	140,800	-1.0	48,200	-0.4	189,000	-0.8	46.8	25,300	-9.3	166,100	-2.4	45.7
Through	1963	5,900	--	10,100	--	16,000	--	8.3	1,700	--	7,600	--	7.5
	1972	6,600	11.9	6,700	-33.7	13,300	-16.9	7.5	3,300	94.1	9,900	30.3	7.9
	1991	10,000	51.5	6,100	-9.0	16,100	21.1	5.1	5,000	51.5	15,000	51.5	5.5
	2001	11,200	12.0	7,900	29.5	19,100	18.6	4.8	6,700	34.0	17,900	19.3	5.0
	2011	14,600	30.4	9,000	13.9	23,600	23.6	5.8	12,700	89.6	27,300	52.5	7.5
All Directions	1963	85,600	--	106,100	--	191,700	--	100.0	16,000	--	101,600	--	100.0
	1972	100,800	17.8	76,100	-28.3	176,900	-7.7	100.0	24,900	55.6	125,700	23.7	100.0
	1991	229,200	127.4	88,200	15.9	317,400	79.4	100.0	44,100	77.1	273,300	117.4	100.0
	2001	290,900	26.9	104,000	17.9	394,900	24.4	100.0	66,600	51.0	357,500	30.8	100.0
	2011	298,000	2.4	105,800	1.7	403,800	2.3	100.0	65,800	-1.2	363,800	1.8	100.0

^a Includes personal-use trucks.

Source: SEWRPC.

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Table V-19

**AVERAGE WEEKDAY EXTERNAL PERSONAL VEHICLE TRIPS AND VEHICLE OCCUPANCY
 IN THE REGION BY TRIP PURPOSE: 1963, 1972, 1991, 2001, AND 2011**

Trip Purpose	1963				
	Personal Vehicle Driver Trips		Total Personal Vehicle Person Trips		Vehicle Occupancy
	Number	Percent of Total	Number	Percent	
Home-Based Work	24,600	28.7	36,900	19.2	1.50
Home-Based Shopping	5,200	6.1	12,300	6.4	2.37
Home-Based Other	45,000	52.6	121,600	63.5	2.70
Nonhome-Based	9,400	11.0	18,200	9.5	1.94
School	1,400	1.6	2,700	1.4	1.93
Total	85,600	100.0	191,700	100.0	2.24

Trip Purpose	1972				
	Personal Vehicle Driver Trips		Total Personal Vehicle Person Trips		Vehicle Occupancy
	Number	Percent of Total	Number	Percent	
Home-Based Work	36,700	36.4	49,400	27.9	1.35
Home-Based Shopping	7,200	7.1	15,100	8.5	2.10
Home-Based Other	41,000	40.7	87,900	49.7	2.14
Nonhome-Based	12,300	12.2	18,700	10.6	1.52
School	3,600	3.6	5,800	3.3	1.61
Total	100,800	100.0	176,900	100.0	1.75

Trip Purpose	1991				
	Personal Vehicle Driver Trips		Total Personal Vehicle Person Trips		Vehicle Occupancy
	Number	Percent of Total	Number	Percent	
Home-Based Work	112,900	49.3	129,600	40.8	1.15
Home-Based Shopping	15,700	6.8	26,200	8.2	1.67
Home-Based Other	59,800	26.1	106,300	33.5	1.78
Nonhome-Based	33,200	14.5	44,300	14.0	1.33
School	7,600	3.3	11,000	3.5	1.45
Total	229,200	100.0	317,400	100.0	1.38

Trip Purpose	2001				
	Personal Vehicle Driver Trips		Total Personal Vehicle Person Trips		Vehicle Occupancy
	Number	Percent of Total	Number	Percent	
Home-Based Work	152,200	52.4	170,800	43.3	1.12
Home-Based Shopping	17,200	5.9	27,200	6.9	1.58
Home-Based Other	82,100	28.2	140,600	35.6	1.71
Nonhome-Based	27,100	9.3	38,000	9.6	1.40
School	12,300	4.2	18,300	4.6	1.49
Total	290,900	100.0	394,900	100.0	1.36

Trip Purpose	2011				
	Personal Vehicle Driver Trips		Total Personal Vehicle Person Trips		Vehicle Occupancy
	Number	Percent of Total	Number	Percent	
Home-Based Work	138,900	46.6	153,500	38.0	1.11
Home-Based Shopping	21,700	7.3	31,600	7.8	1.46
Home-Based Other	101,600	34.1	167,300	41.5	1.65
Nonhome-Based	25,400	8.5	33,200	8.2	1.31
School	10,400	3.5	18,200	4.5	1.75
Total	298,000	100.0	403,800	100.0	1.36

Source: SEWRPC.

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Table V-20

**DISTRIBUTION OF AVERAGE WEEKDAY EXTERNAL COMMERCIAL TRUCK TRIPS
 IN THE REGION BY DESTINATION TRIP PURPOSE: 1963, 1972, 1991, 2001, AND 2011**

Trip Purpose	1963		1972		1991		2001		2011	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Base of Operations	4,200	27.5	9,400	41.8	17,600	39.9	13,500	20.3	17,700	26.9
Work-Connected Business	700	4.6	3,200	14.2	9,700	22.0	26,200	39.3	10,400	15.8
Pick-Up/Delivery of Goods	10,100	66.0	9,800	43.6	15,300	34.7	25,600	38.4	36,100	54.9
Customer Service	300	2.0	100	0.4	1,500	3.4	1,300	2.0	1,600	2.4
Total	15,300	100.0	22,500	100.0	44,100	100.0	66,600	100.0	65,800	100.0

Trip Purpose	Change: 1963-2011		Change: 1972-2011		Change: 1991-2011		Change: 2001-2011	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Base of Operations	13,500	321.4	8,300	88.3	100	0.6	4,200	31.1
Work-Connected Business	9,700	1385.7	7,200	225.0	700	7.2	-15,800	-60.3
Pick-Up/Delivery of Goods	26,000	257.4	26,300	268.4	20,800	135.9	10,500	41.0
Customer Service	--	--	1,500	1500.0	100	6.7	300	23.1
Total	50,500	330.1	43,300	192.4	21,700	49.2	-800	-1.2

Source: SEWRPC.

Table V-21

PERCENTAGE DISTRIBUTION OF AVERAGE WEEKDAY BUS PASSENGER TRIPS IN THE REGION
 BY TRIP PURPOSE AND TRANSIT SYSTEM: 1972, 1991, 2001 AND 2011

Trip Purpose	Transit System													
	Milwaukee						Racine							
	Percent of Trips			Percent of Change			Percent of Trips			Percent Change				
	1972	1991	2001	2011 ^a	1972-2011	1991-2011	2001-2011	1972	1991	2001	2011	1972-2011	1991-2011	2001-2011
Home-Based Work	56.8	26.4	42.8	68.9	21.3	160.9	60.9	42.2	25.0	39.4	61.7	63.2	175.5	74.8
Home-Based Shopping	6.5	9.6	8.4	6.1	-6.0	-36.4	-27.3	11.2	8.6	9.6	10.4	-45.4	-29.0	-36.4
Home-Based Other	12.5	17.3	16.8	5.8	-53.4	-66.3	-65.3	19.9	23.3	21.1	9.5	-70.7	-75.0	-72.4
Nonhome-Based	4.7	7.0	7.9	7.5	59.4	7.0	-5.2	3.9	10.6	5.2	8.8	92.1	-29.3	44.1
School	19.5	39.7	24.1	11.7	-40.0	-70.5	-51.5	22.8	32.5	24.7	9.5	-48.7	-64.0	-52.7
Total	100.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0

Trip Purpose	Transit System													
	Waukesha						Kenosha							
	Percent of Trips			Percent of Change			Percent of Trips			Percent Change				
	1972	1991	2001	2011 ^a	1972-2011	1991-2011	2001-2011	1972 ^c	1991	2001	2011 ^d	1972-2011	1991-2011	2001-2011
Home-Based Work	35.5	29.0	34.6	62.8	77.0	116.6	81.6	26.5	16.4	15.8	38.2	137.0	283.0	297.6
Home-Based Shopping	10.3	5.7	14.1	12.5	21.6	119.8	-11.2	12.3	8.0	6.6	3.5	1.8	56.6	89.8
Home-Based Other	13.1	10.0	12.5	5.8	-55.5	-41.7	-53.3	19.8	13.7	8.4	3.0	-70.5	-57.4	-30.6
Nonhome-Based	0.0	4.4	9.7	6.5	-	46.6	-33.5	3.7	5.1	4.4	3.2	74.3	26.5	46.6
School	41.1	50.9	29.1	12.4	-69.9	-75.7	-57.5	37.7	56.8	64.8	52.1	-67.2	-78.2	-80.9
Total	100.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0

Trip Purpose	Transit System											
	Waukesha-Milwaukee						Milwaukee-Racine-Kenosha ^a					
	Percent of Trips			Percent Change			Percent of Trips			Percent Change		
	1972	1991	2001	2011	1972-2011	1991-2011	2001-2011	1991	2001	2011	1991-2011	2001-2011
Home-Based Work	72.0	71.2	74.9	93.6	30.0	31.4	24.9	53.8	48.0	80.4	275.3	73.9
Home-Based Shopping	12.2	6.9	0.0	0.0	-100.0	-100.0	-	1.4	13.3	0.0	-	-100.0
Home-Based Other	4.1	4.8	2.2	0.9	-77.0	-80.3	-57.1	14.0	25.3	6.4	-101.7	-93.3
Nonhome-Based	4.6	5.4	1.5	4.3	-7.6	-21.3	183.4	9.1	9.8	5.6	-97.7	-53.3
School	7.1	11.7	21.4	1.2	-82.7	-89.5	-94.3	21.7	3.6	7.7	-101.3	-94.3
Total	100.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	100.0	100.0	0.0	0.0

Trip Purpose	Transit System					
	Ozaukee ^b			Washington ^b		
	Percent of Trips		Percent Change	Percent of Trips		Percent Change
	2001	2011	2001-2011	2001	2011	2001-2011
Home-Based Work	91.5	99.3	8.6	91.3	96.6	8.8
Home-Based Shopping	0.0	0.0	-	0.4	0.0	-
Home-Based Other	2.8	0.7	-76.2	0.0	0.0	-
Nonhome-Based	1.6	0.0	-100.0	2.6	1.3	-100.0
School	4.1	0.0	-100.0	5.7	2.1	-100.0
Total	100.0	100.0	0.0	100.0	100.0	0.0

^a Service not provided in 1972.

^b Service not provided in 1972 or in 1991.

^c Excludes school "trippers," or bus runs designed to accommodate school-aged children.

^d Some or all of the school "trippers," or bus runs designed to accommodate school-aged children were not surveyed. Estimates of travel for the missing school "tripper" routes are accounted for in the school trip purpose utilizing ridership estimates for these routes based on year 2012 National Transit Database data

Source: SEWRPC.

Table V-22 (continued)

Selected Characteristics	Percent of Trips by Transit System: 2001							
	Milwaukee	Racine	Waukesha	Kenosha	Waukesha-Milwaukee	Milwaukee-Racine-Kenosha ^b	Ozaukee ^c	Washington ^c
Sex								
Male.....	40.2	41.4	48.2	39.1	41.9	54	57.2	60.3
Female.....	59.8	58.6	51.8	60.9	58.1	46	42.8	39.7
Total	100	100	100	100	100	100	100	100
Age								
One to 15.....	4.3	9.2	19.8	39.4	0.5	0	3	2
16 to 24.....	35.6	33.2	22.6	27.8	24.4	5.6	13.4	14.6
25 to 54.....	51.2	47.9	45	24.6	62.3	72.4	68.9	77.7
55 to 64.....	5.5	5.4	6.5	3	11.7	15.4	11.4	4.9
65 or Older.....	3.4	4.3	6.1	5.2	1.1	6.6	3.3	0.8
Total	100	100	100	100	100	100	100	100
Household Income (actual dollars)								
Under 30,000.....	68.4	74.0	66.7	61.3	14.8	62.4	45.6	39.1
30,000 to 49,999.....	19.0	18.9	19.3	21.1	17.2	12.9	26.7	25.3
50,000 or Over.....	12.6	7.1	14.0	17.6	68.0	24.7	27.7	35.6
Total	100	100	100	100	100	100	100	100
Race								
Black/African American.....	49.1	48.6	9.5	18.7	5.6	42	38	23.2
White.....	41.4	47.8	78.2	69.5	87.8	48.9	59.7	53.5
Other Minority.....	9.5	3.6	12.3	11.8	6.6	9.1	2.3	23.3
Total	100	100	100	100	100	100	100	100

Selected Characteristics	Percent of Trips by Transit System: 2011							
	Milwaukee ^a	Racine	Waukesha	Kenosha ^a	Waukesha-Milwaukee	Milwaukee-Racine-Kenosha ^b	Ozaukee ^c	Washington ^c
Sex								
Male.....	44.0	38.6	45.1	37.5	43.5	65.3	52.4	37.9
Female.....	56.0	61.4	54.9	62.5	56.5	34.7	47.6	62.1
Total	100	100	100	100	100	100	100	100
Age								
One to 15.....	4.0	14.8	8.9	20.9	0	0	0.7	1.3
16 to 24.....	41.4	28.6	23.3	35.5	11.6	33.9	11.6	10.4
25 to 54.....	43.2	44.7	45.6	34.4	56.0	51.1	62.3	58.9
55 to 64.....	8.3	8.9	15.2	5.8	28.2	15.0	24.4	25.3
65 or Older.....	3.1	3.0	7.0	3.4	4.2	0.0	1.0	4.1
Total	100	100	100	100	100	100	100	100
Household Income (actual dollars)								
Under 30,000.....	68.0	79.8	69.5	76.7	9.6	54.7	15.6	8.0
30,000 to 49,999.....	17.4	12.4	15.2	9.1	9.5	18.3	8.7	11.3
50,000 or Over.....	14.6	7.8	15.3	14.2	80.9	40.1	75.7	80.7
Total	100	100	100	100	100	100	100	100
Race								
Black/African American.....	44.9	45.2	14.2	38.1	2.3	45.5	4.4	0.7
White.....	39.8	38.6	67.6	41.8	87.4	38.3	86.5	93.2
Other Minority.....	15.4	16.2	18.1	20.1	10.3	16.2	9.1	6.1
Total	100	100	100	100	100	100	100	100

^aExcludes school "trippers," or bus runs designed to accommodate school-aged children.

^bService not provided in 1972.

^cService not provided in 1972 or 1991.

Source: SEWRPC.

Table V-23

**NUMBER OF AVERAGE WEEKDAY INTERREGIONAL PERSON TRIPS ON
 INTERCITY MODES IN THE REGION: 1963, 1972, 1993, 2001, AND 2011**

Mode	1963		1972		1993		2001		2011	
	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total	Number	Percent of Total
Intercity Motor Bus	2,000	1.0	1,300	0.7	1,300	0.4	1,200	0.3	1,600	0.4
Intercity Rail	4,000	2.0	900	0.3	1,800	0.5	1,900	0.4	2,800	0.6
Cross-Lake Car Ferry	1,200	0.6	700	0.4	--	--	--	--	300	0.1
Commercial Air Carrier	2,600	1.3	6,200 ^a	3.3	12,600 ^b	3.8	16,400	4.0	18,800	4.4
Personal Vehicle	191,700	95.1	176,900	95.1	317,400 ^c	95.3	394,900	95.3	403,800	94.5
Total	201,500	100.0	186,000	100.0	333,100	100.0	414,400	100.0	427,300	100.0

^a Survey taken in 1971.

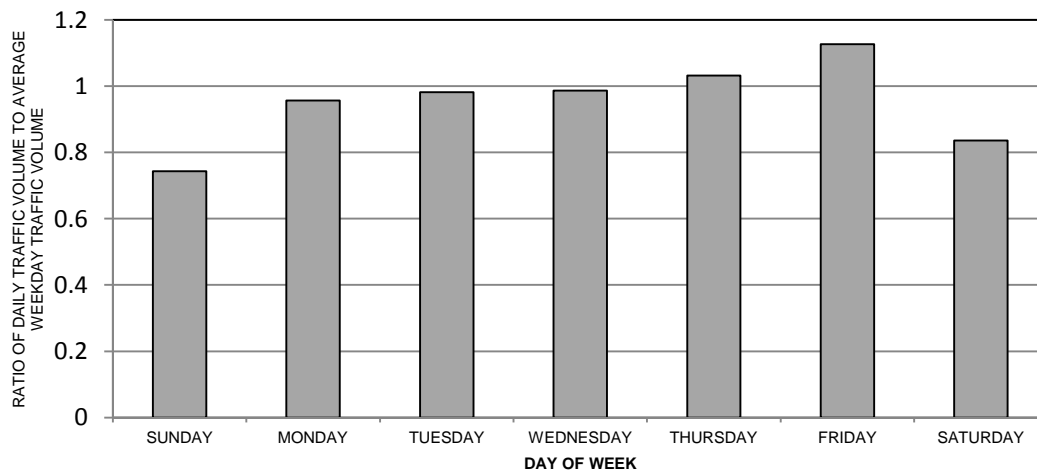
^b Survey taken in 1989.

^c Survey taken in 1991.

Source: SEWRPC.

Figure V-1

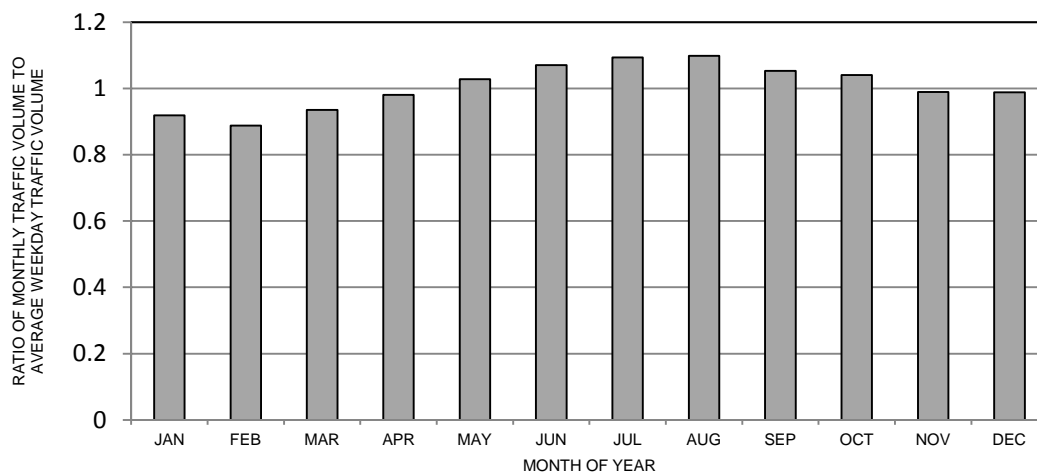
COMPARISON OF THE RATIO OF DAILY TRAFFIC VOLUMES TO AVERAGE WEEKDAY TRAFFIC VOLUMES BY DAY OF WEEK: 2011



Source: Wisconsin Department of Transportation and SEWRPC.

Figure V-2

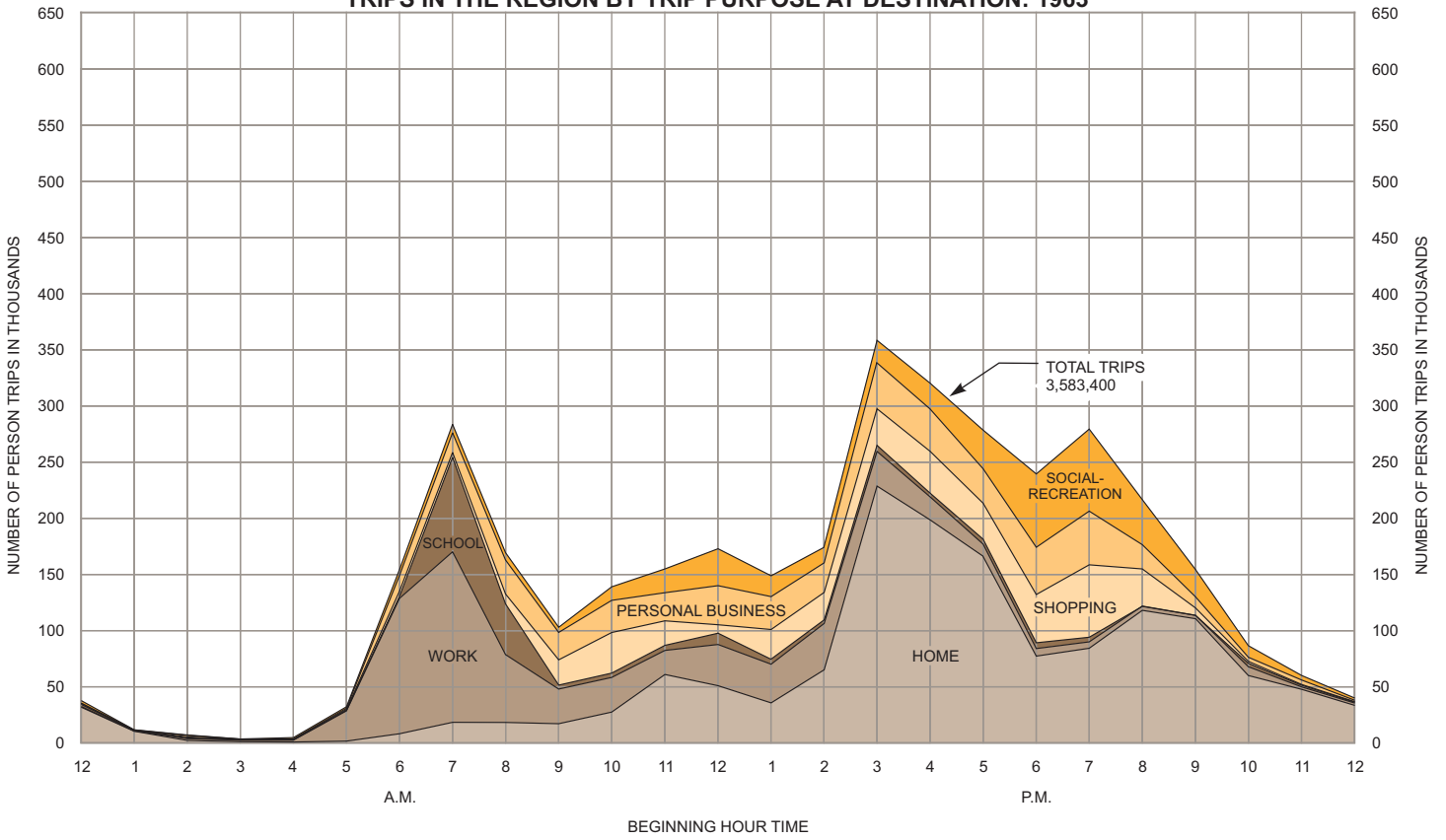
COMPARISON OF THE RATIO OF AVERAGE MONTHLY WEEKDAY TRAFFIC VOLUMES TO AVERAGE WEEKDAY TRAFFIC VOLUMES BY MONTH OF YEAR: 2011



Source: Wisconsin Department of Transportation and SEWRPC.

Figure V-3

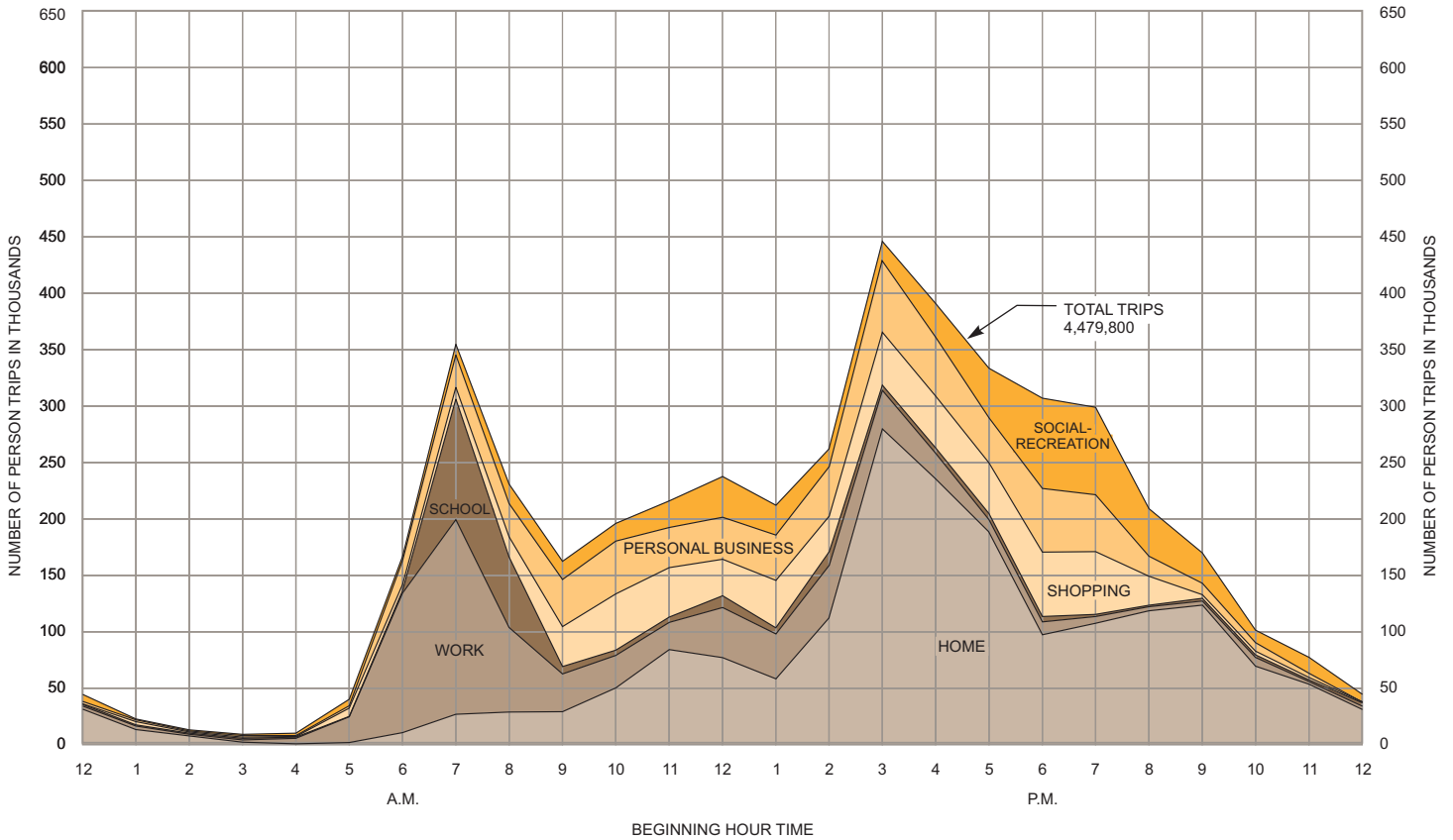
HOURLY VARIATION OF AVERAGE WEEKDAY INTERNAL PERSON TRIPS IN THE REGION BY TRIP PURPOSE AT DESTINATION: 1963



Source: SEWRPC.

Figure V-4

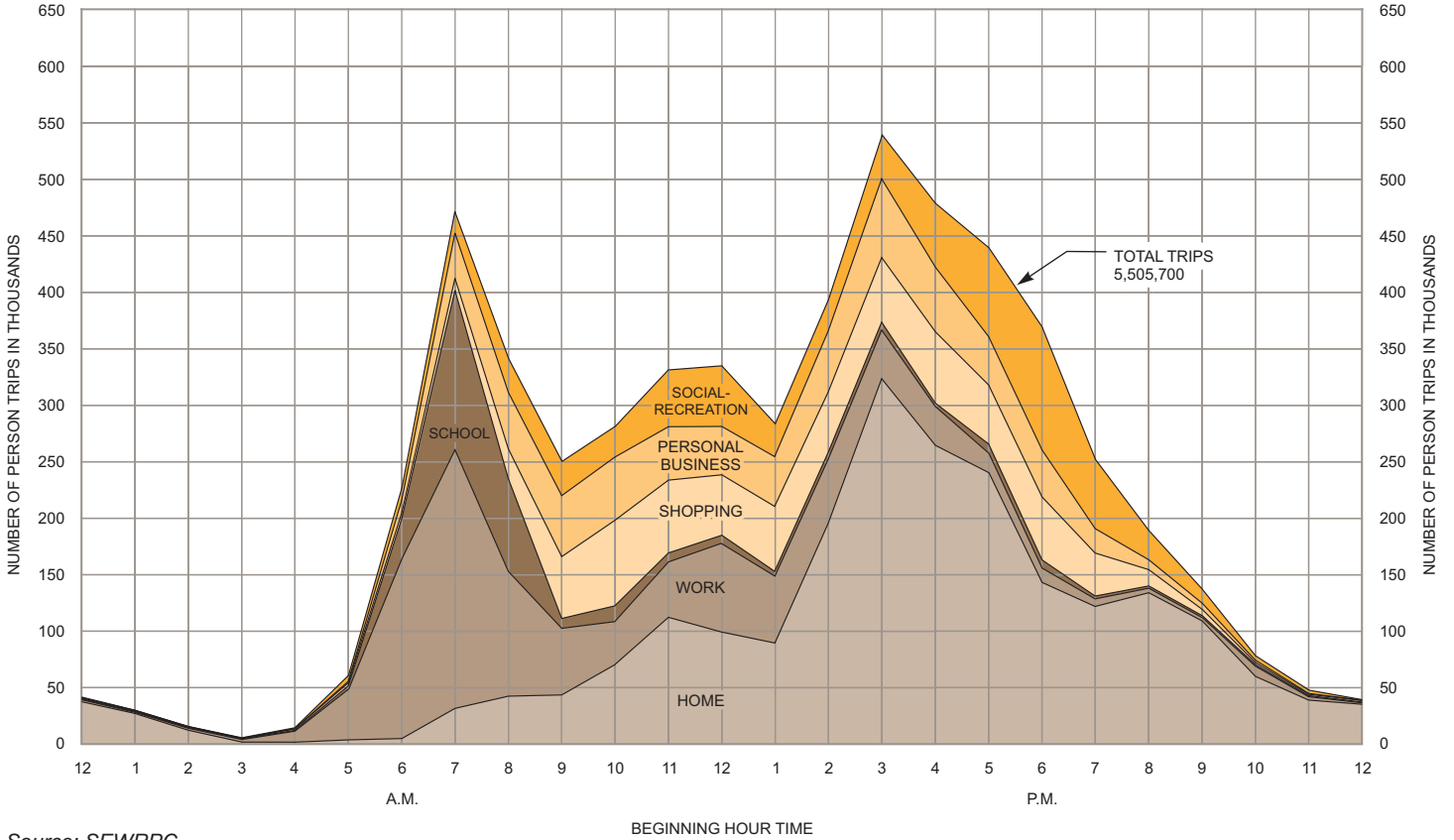
HOURLY VARIATION OF AVERAGE WEEKDAY INTERNAL PERSON TRIPS IN THE REGION BY TRIP PURPOSE AT DESTINATION: 1972



Source: SEWRPC.

Figure V-5

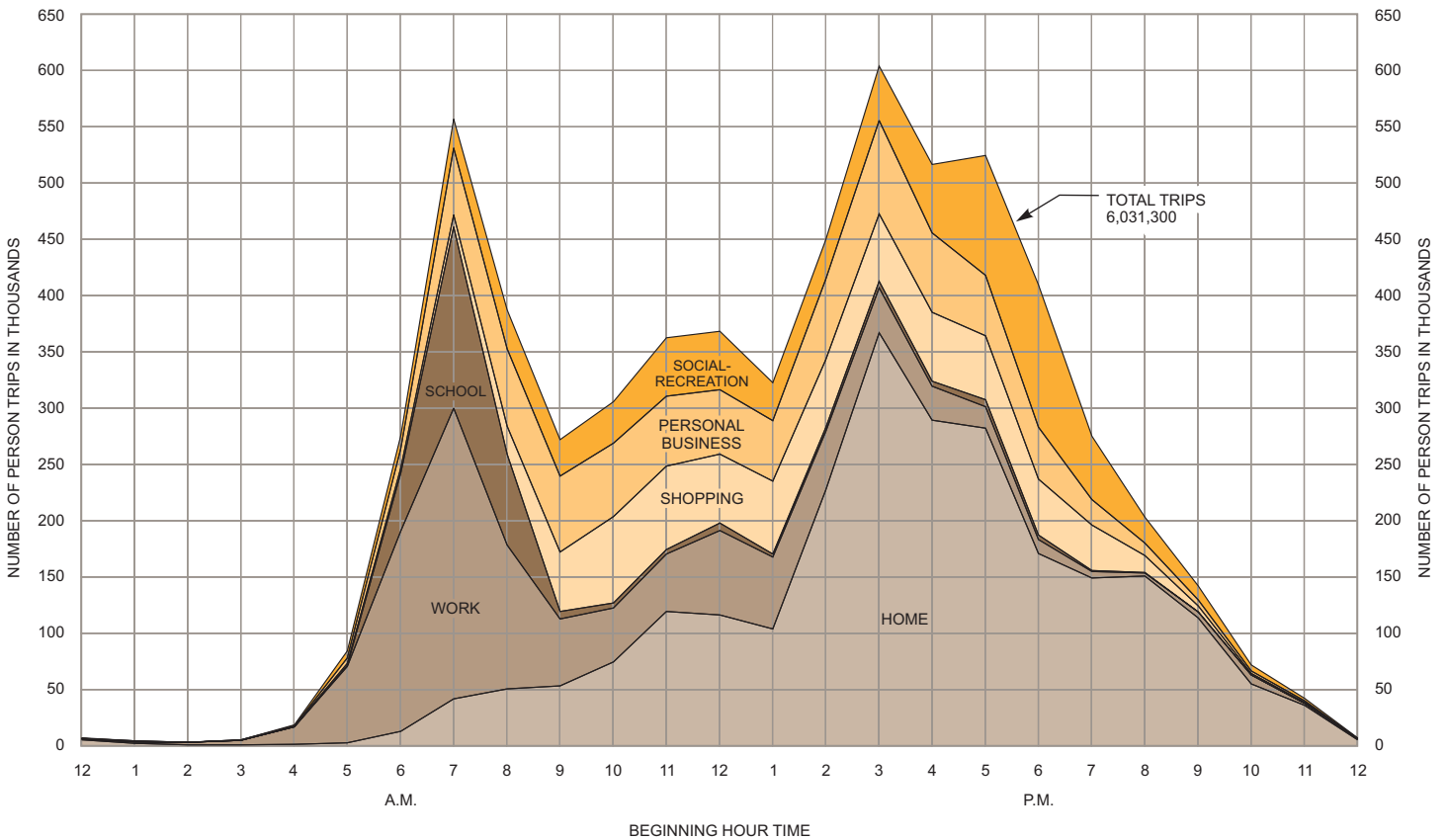
HOURLY VARIATION OF AVERAGE WEEKDAY INTERNAL PERSON TRIPS IN THE REGION BY TRIP PURPOSE AT DESTINATION: 1991



Source: SEWRPC.

Figure V-6

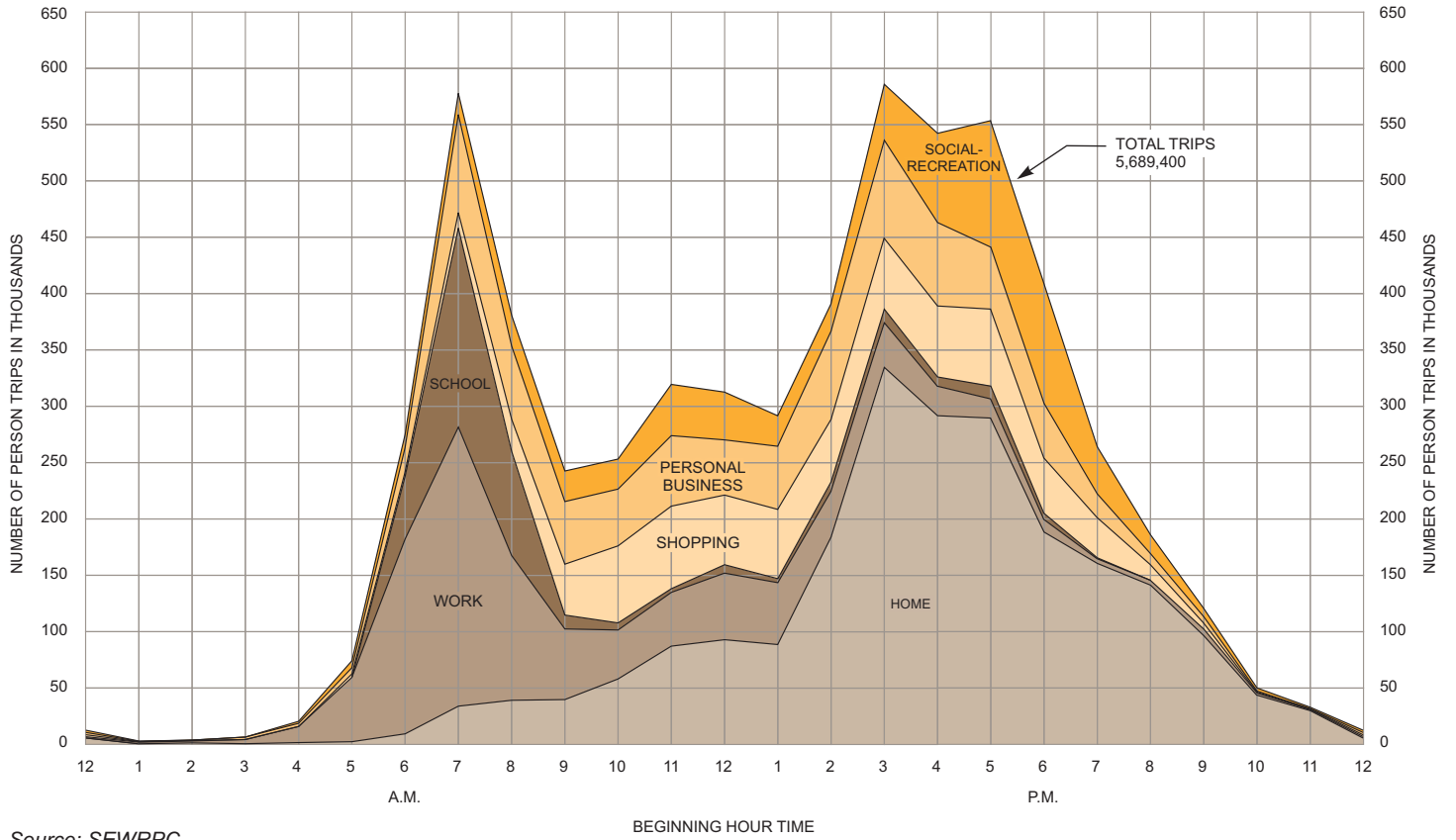
HOURLY VARIATION OF AVERAGE WEEKDAY INTERNAL PERSON TRIPS IN THE REGION BY TRIP PURPOSE AT DESTINATION: 2001



Source: SEWRPC.

Figure V-7

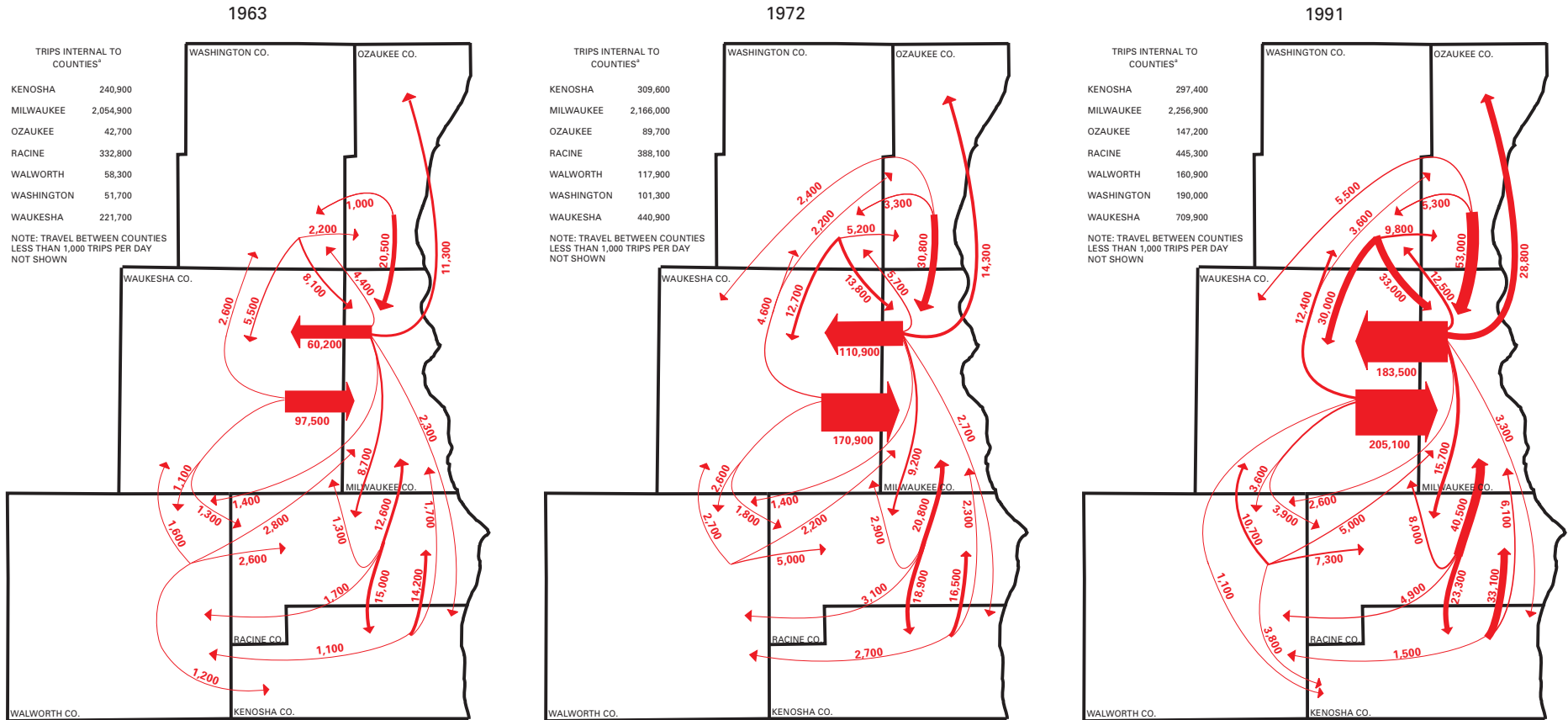
HOURLY VARIATION OF AVERAGE WEEKDAY INTERNAL PERSON TRIPS IN THE REGION BY TRIP PURPOSE AT DESTINATION: 2011



Source: SEWRPC.

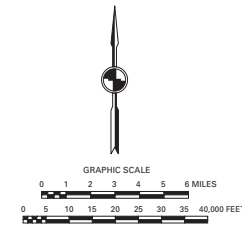
Map V-1

AVERAGE WEEKDAY PERSON TRIPS BETWEEN COUNTIES IN THE REGION: 1963, 1972, 1991, 2001, and 2011



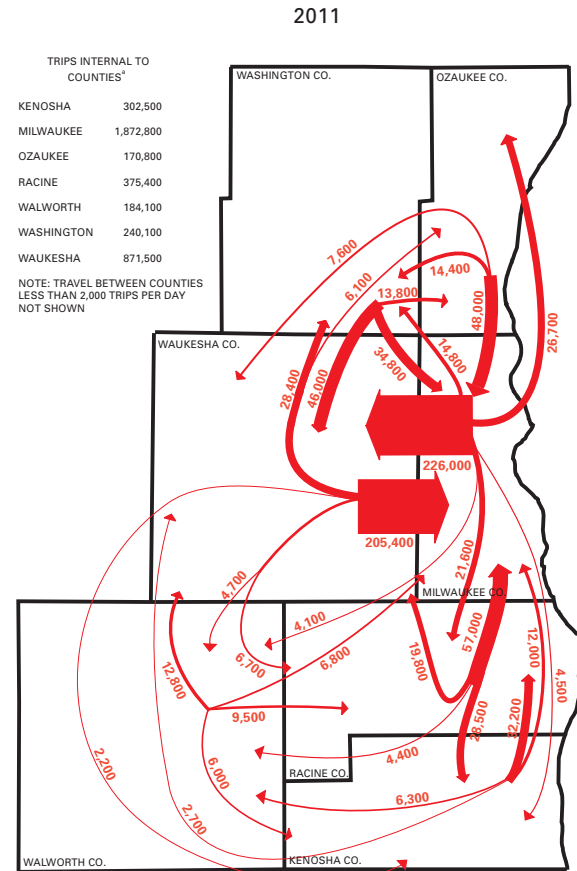
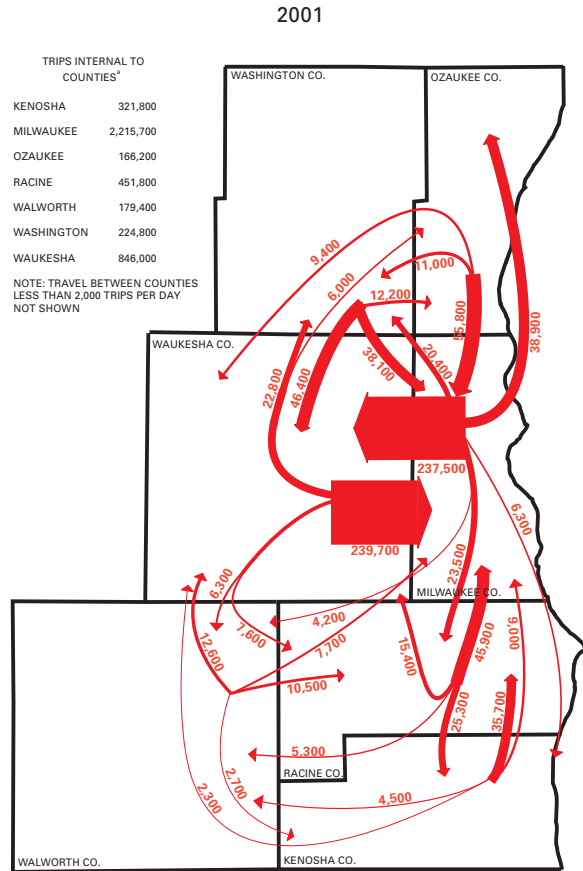
* TRIPS ARE BASED ON THE RESIDENT HOUSEHOLD SURVEY AND INCLUDE ALL TRIP PURPOSES EXCEPT SCHOOL. TRIPS ARE SHOWN IN PRODUCED-ATTRACTED FORMAT—THAT IS, FROM AREA OF PRODUCTION TO AREA OF ATTRACTION. THE PRODUCTION COUNTY FOR A TRIP HAVING ONE END AT “HOME”, THAT IS EITHER BEGINNING AT OR ENDING AT HOME, IS THE COUNTY LOCATION OF THE “HOME” AND THE ATTRACTION COUNTY IS THE “NON-HOME” END COUNTY LOCATION FOR THAT TRIP. THE PRODUCTION COUNTY FOR TRIPS HAVING NEITHER END AT “HOME” IS THE COUNTY LOCATION OF THE TRIP ORIGIN AND THE ATTRACTION COUNTY IS THE COUNTY LOCATION OF THE TRIP DESTINATION. THUS, THE TRIPS SHOWN ON THE MAP GENERALLY INDICATE THE TRIPS MADE ON AN AVERAGE WEEKDAY BY THE RESIDENTS OF A COUNTY TO AND FROM EACH OTHER COUNTY.

Source: SEWRPC.



Map V-1 (Continued)

AVERAGE WEEKDAY PERSON TRIPS BETWEEN COUNTIES IN THE REGION: 1963, 1972, 1991, 2001, and 2011



* TRIPS ARE BASED ON THE RESIDENT HOUSEHOLD SURVEY AND INCLUDE ALL TRIP PURPOSES EXCEPT SCHOOL. TRIPS ARE SHOWN IN PRODUCED-ATTRACTED FORMAT--THAT IS, FROM AREA OF PRODUCTION TO AREA OF ATTRACTION. THE PRODUCTION COUNTY FOR A TRIP HAVING ONE END AT "HOME", THAT IS EITHER BEGINNING AT OR ENDING AT HOME, IS THE COUNTY LOCATION OF THE "HOME" AND THE ATTRACTION COUNTY IS THE "NON-HOME" END COUNTY LOCATION FOR THAT TRIP. THE PRODUCTION COUNTY FOR TRIPS HAVING NEITHER END AT "HOME" IS THE COUNTY LOCATION OF THE TRIP ORIGIN AND THE ATTRACTION COUNTY IS THE COUNTY LOCATION OF THE TRIP DESTINATION. THUS, THE TRIPS SHOWN ON THE MAP GENERALLY INDICATE THE TRIPS MADE ON AN AVERAGE WEEKDAY BY THE RESIDENTS OF A COUNTY TO AND FROM EACH OTHER COUNTY.

Source: SEWRPC.

