Preliminary Draft

SEWRPC Community Assistance Planning Report No. 281

KENOSHA COUNTY TRANSIT DEVELOPMENT PLAN: 2010-2014

Chapter V

EVALUATION OF THE EXISTING TRANSIT SYSTEMS

[Text to be inserted after the section titled "EVALUATION OF KENOSHA TRANSIT AREA" and prior to "ASSESSMENT OF UNMET TRANSIT SERVICE NEEDS" on page 16 of the draft Chapter V distributed at the August 27, 2009 meeting]

EVALUATION OF WESTERN KENOSHA COUNTY TRANSIT

The evaluation of Western Kenosha County Transit includes a systemwide performance evaluation to measure how well the transit system serves existing population, employment, and activity centers, and an assessment of how well the system's overall ridership and financial performance compares to similar transit systems. These systemwide evaluations are followed with assessments of ridership and effectiveness for each individual route and transit service provided by the system in 2010, and an analysis of bus stops to determine where passenger shelters are warranted. The evaluation concludes with a review of public comments and rider concerns to identify any areas of concern for transit system riders.

Western Kenosha County Transit Systemwide Performance Evaluation: Service to Existing Population, Employment, and Land Uses

The transit system's service area should include areas that have relatively dense concentrations of population and employment, as well as major activity centers and transit-dependent population groups. For this section, staff estimated the extent to which land uses were served within a one-quarter mile walk access service area from Western Kenosha County Transit fixed-route stops. It should be noted that riders may request a specific stop along a route or can be picked up along a route by flagging the bus or calling the dispatcher, even though the service is not advertised as a flexibly-operated route. Some areas

that do not appear to be served in the analysis could potentially be served if the driver or dispatcher agreed to do so.

Western Kenosha County Transit's fixed routes were designed to maximize service to activity centers in western Kenosha County and to a lesser extent, in eastern Walworth and northern Lake Counties. The system's bus stops provide good service to the concentrations of population and employment, and to the major activity centers in the evaluation area. A detailed breakdown of the performance of the transit system's service to population, employment, and land uses is displayed in Table 5-14 and on Maps 5-9 though 5-12, and summarized below:

- Population Served. Western Kenosha County Transit fixed routes provide good service to areas with relatively dense population within western Kenosha County and the City of Lake Geneva in Walworth County (see Map 5-9). However, because the year 2000 residential development was spread throughout the rural part of the County, only about 18 percent of western Kenosha County residents were served by fixed-route bus stops. Few areas with transit-supportive residential density are outside of the fixed-route service areas.
- <u>Employment Served</u>. The transit system provides good service to the few areas with transit-supportive employment density (see Map 5-9). For year 2000 employment, about 30 percent of the jobs located in western Kenosha County were within the service area.
- Major Activity Centers Served. The transit system stops provide good service to the major activity centers, serving 19 out of 35 in western Kenosha County and a further 11 in Walworth and Lake Counties (see Map 5-10). Of the major activity centers not directly within the walk access area of a bus stop in western Kenosha County, two businesses with over 100 employees, the Breezy Hill Nursery and Randall Consolidated School, are located adjacent to an existing fixed route and could be served if the rider requests a specific stop or flags the bus. Most of the remaining activity centers not served by a stop are located in the eastern portion of the evaluation area along STH 50, and are currently served by KAT routes.
- <u>Transit-Dependent Populations</u>. The transit system's stops serve 8 out 9 facilities for seniors, people with disabilities, or low-income persons in the evaluation area (see Map 5-11). The one facility not served (Prairie Ridge Senior Apartments in the Village of Pleasant Prairie) could be

Table 5-14

LAND USES AND POPULATION GROUPS SERVED BY THE YEAR 2010
FIXED ROUTES OF THE WESTERN KENOSHA COUNTY TRANSIT SYSTEM

Performance Measure	Systemwide Performance Characteristics
Population ^a within a quarter-mile walk access of Western Kenosha County Transit bus stops	
	7,000
In western Kenosha County evaluation area	7,992
In Walworth and Lake Counties	6,632
Total population served	14,615
Percent of population in Western Kenosha County Transit evaluation area served	18
Employment ^b within a quarter-mile walk access of Western Kenosha County Transit bus stops	
In western Kenosha County evaluation area	5,323
In Walworth and Lake Counties	9,953
Total employment served	15,276
Total on playment out of	. 5,2. 5
Percent of employment in Western Kenosha County Transit evaluation area served	30
reitent di employment in western Kenosha County Transit evaluation alea serveu	30
Major activity centers ^c within a quarter-mile of Western Kenosha County Transit bus stops	
In western Kenosha County evaluation area	19 of 35
In Walworth and Lake Counties	11
III Walworth and Lake Counted	
Total activity centers served	30
Total activity certies served	30
Transit-dependent and minority population groups in evaluation area within a quarter-mile of Western Kenosha County Transit bus stops	
Residential concentrations of transit-dependent population groups served ^d	3 of 5
residential concentrations of transit-dependent population groups served	8 of 9
Facilities for seniors, low-income households, and people with disabilities served ^e	
Concentrations of total minority persons served	31 of 142

^aAll population figures are based on 2000 Census data allocated to U.S. Public Land Survey quarter sections by Commission staff.

^bAll employment figures are based on 2000 U.S. Bureau of Economic Analysis data allocated to U.S. Public Land Survey quarter sections by Commission staff.

^c The activity centers used in this analysis are shown in Map 5-10 and identified for Kenosha County in Tables 3-7 through 3-12.

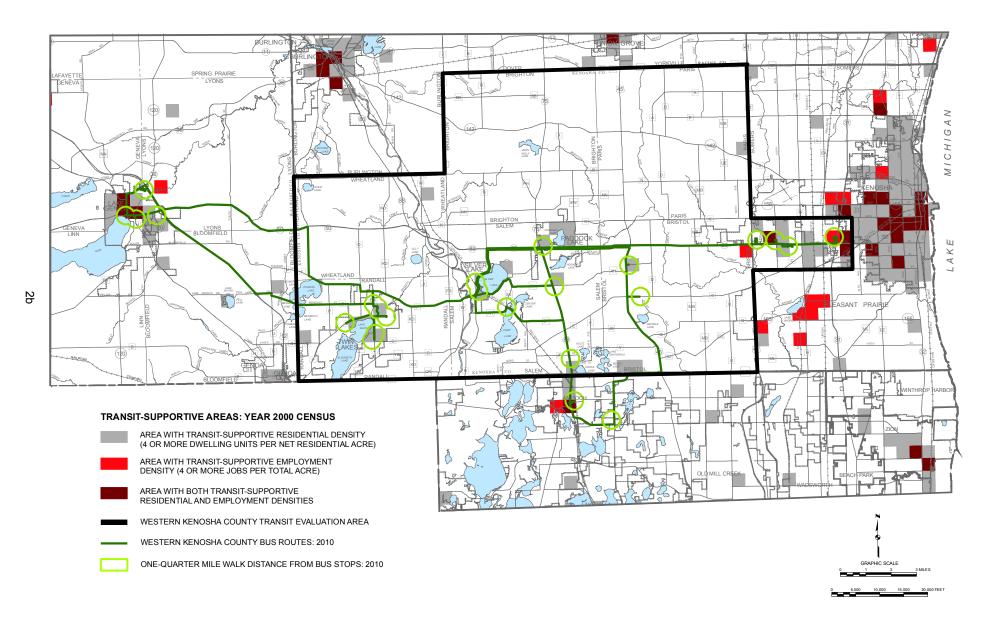
^dThe major residential concentrations of transit-dependent persons used in this analysis are based upon 2000 U.S. Census data and are shown in Map 5-11 by Census block group.

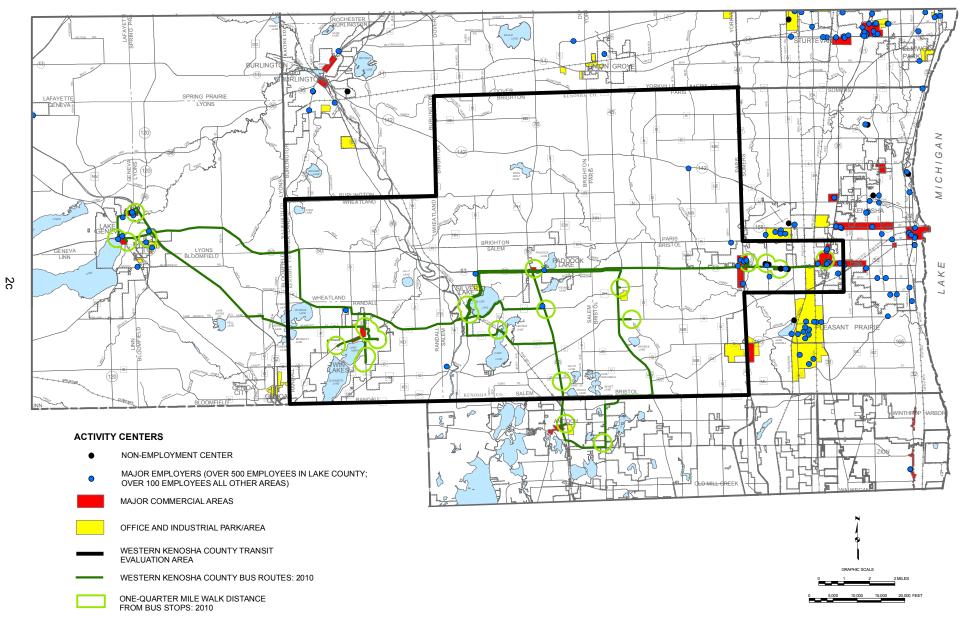
^eThe facilities for seniors, low-income households, and people with disabilities used in this analysis are shown in Map 5-11 in Chapter III and identified for Kenosha County in Table 3-13.

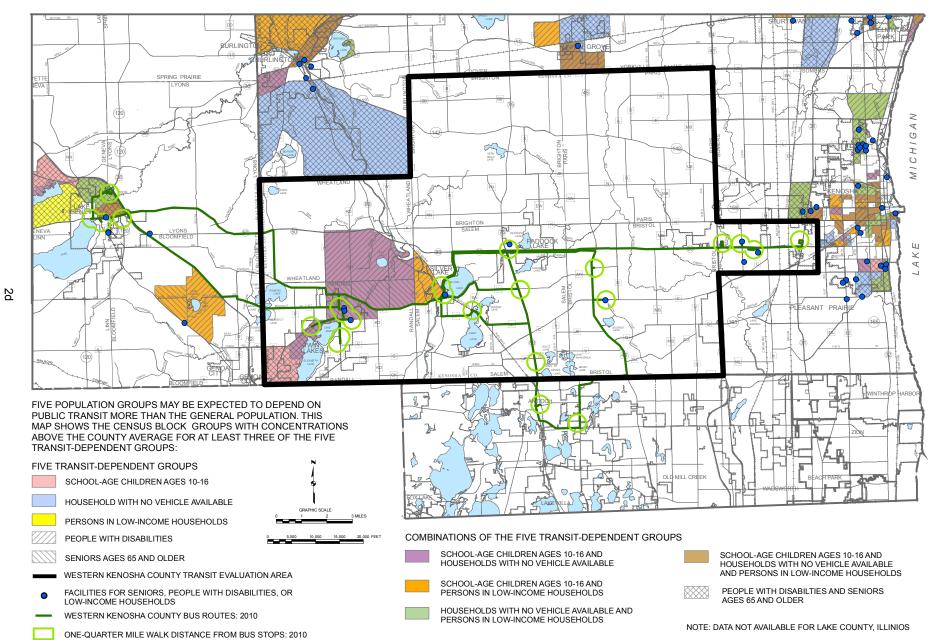
^f A "concentration" of minority population is defined as a Census block with a percentage of minority population that is higher than the County average of 11.6 percent. The major concentrations of total minority population identified within the County based upon 2000 U.S. Census data are shown in Map 5-12 by Census block.

Map 5-9

TRANSIT-SUPPORTIVE AREAS FOR CONVENTIONAL FIXED-ROUTE TRANSIT SERVICES
WITHIN AND OUTSIDE THE WALK SERVICE AREA FOR WESTERN KENOSHA COUNTY TRANSIT

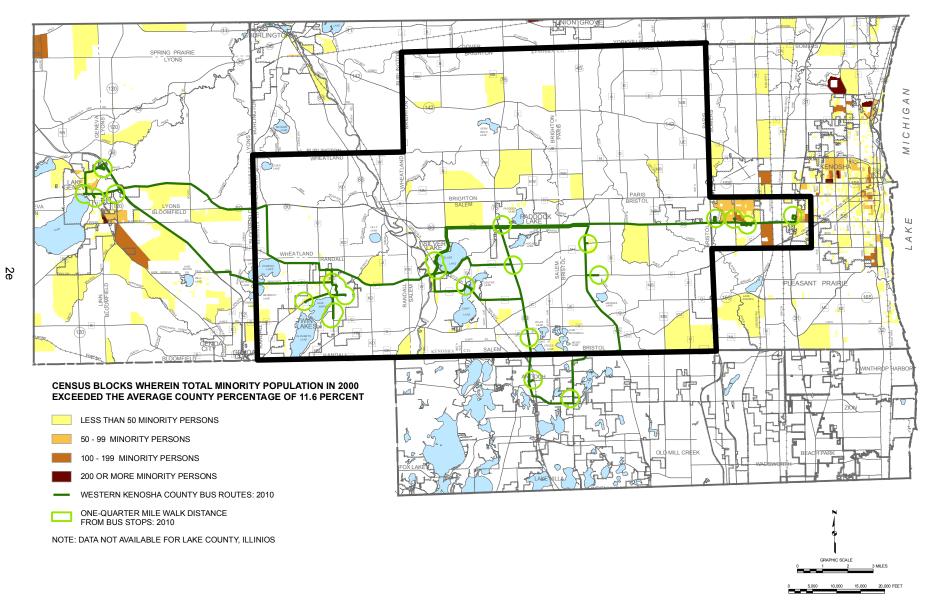






LOCATIONS OF CONCENTRATIONS OF TOTAL MINORITY PERSONS WITHIN AND **OUTSIDE THE WALK ACCESS AREA FOR WESTERN KENOSHA COUNTY TRANSIT**

Map 5-12



served by rider request. The transit system also provides good service to residential concentrations of transit-dependent groups, primarily within the Villages of Silver Lake and Twin Lakes. The fixed-route service also stops at some facilities for seniors, people with disabilities, or low-income persons and transit-dependent population groups in Walworth County, primarily in the City of Lake Geneva.

• <u>Concentrations of Minority Persons</u>. Overall, the minority population in western Kenosha County is low and widely dispersed (see Map 5-12) and there are no large concentrations of minority persons that are not served by the transit system's fixed-route service.

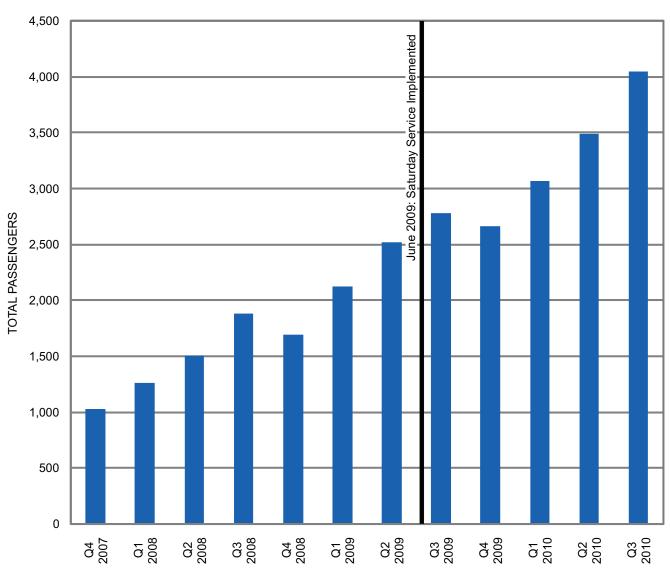
Western Kenosha County Transit Systemwide Performance Evaluation: Peer Group Comparison

A comparison of systemwide ridership and financial performance to similar transit systems is a standard element in the evaluation of a transit system. However, Western Kenosha County Transit is a relatively new service, having been initiated in 2007, and the County has been experimenting with a variety of different services. The system added Saturday service in mid-2009 and commuter service in late 2009. As illustrated in Figure 5-4, ridership on the system has been increasing consistently since its start in 2007. Objective 2, Service Performance Standard 2 in Chapter IV of this report cautioned that a reasonable period of time should be allowed for ridership to develop and stabilize before evaluating the performance of new services to determine if the service is to be continued, modified, or eliminated.

Therefore, a peer group comparison must be considered with caution, and principally used to help identify reasonable targets for future transit system performance, and assembling a menu of "best practices" from similar rural transit systems for use in developing alternative service improvement plans. Table 5-15 displays the peer group of eight rural transit systems located in Wisconsin, Minnesota, and Michigan, with service area populations similar to that of western Kenosha County and similar transit services to multiple rural communities. All of the peer systems are "mature" transit systems that have been in operation for over 10 years. Therefore, the most recent ridership, service, and operating cost data for Western Kenosha County Transit were used to compare the system to the 2009 data available for the peer groups from the rural national transit database. Table 5-16 presents a comparison of key ridership, service, and financial performance measures for Western Kenosha County Transit and the peer systems for fixed-route and demand-response operations combined. A review of the table produces the following conclusions:

Figure 5-4

TOTAL WESTERN KENOSHA COUNTY TRANSIT PASSENGER ACTIVITY
BY QUARTER: OCTOBER 2007 - SEPTEMBER 2010



Source: Western Kenosha County Transit.

Table 5-15

SELECTED SERVICE CHARACTERISTICS FOR WESTERN KENOSHA COUNTY TRANSIT (2010)

AND OTHER TRANSIT SYSTEMS IN PEER GROUP (2009)

Transit System	Service Area	Services Provided ^a	Primary Service Area Population	Hours of Operation	Annual Ridership	Number of Weekday Bus Routes	Total Number of Vehicles (Demand Response and Fixed-Route)	One-Way Adult Cash Fares
Western Kenosha County Transit	Western Kenosha County with service to destinations in Walworth County and northern Illinois	Fixed-route bus Demand-response (all of Kenosha County)	37,100	Weekdays: 7:30 AM – 5:30 PM Saturdays: 8:00 AM – 5:00 PM	14,400	3	-	Bus: \$2.00 Demand-response: \$3.00
Allegan County Transportation Department (Michigan)	Eastern Allegan County	Deviated fixed-route	105,200	Weekdays: 5:00 AM – 9:30 AM 1:30 PM – 5:30 PM	35,800	3	25	Bus: \$2.00
Bay Area Rural Transit (Wisconsin)	Ashland and Bayfield Counties	Deviated fixed-route Demand-response (in certain areas)	12,800	Weekdays: 6:45 AM – 6:30 PM Saturdays: 9:00 AM – 5:00 PM	67,200	2		Bus: \$3.50 max. (fares vary by zone) Demand-response: \$1.50 (within city) \$2.75 (up to 5 miles outside city)
Clay County Rural Transit (Minnesota)	Clay County and a portion of Becker County (City of Moorhead)	Deviated fixed-route Demand-response	54,400	Weekdays: 6:30 AM – 6:30 PM	38,600	N/A		Bus: \$2.00 Demand-response: \$1.50 (within city) \$2.50 (up to 5 miles outside city)
Eastern Upper Peninsula Transit Authority (Michigan)	Luce and Chippewa Counties	Deviated fixed-route Demand-response	28,500	Weekdays: 5:00 AM – 11:30 PM Saturdays: 5:00 AM – 11:30 PM Sundays: 5:00 AM – 11:30 PM	53,000	3		Bus: \$3.50 - \$5.50 Demand-response: \$4.00 - \$5.50
Hubbard County Heartland Express (Minnesota)	Hubbard County	Deviated fixed-route Demand-response	22,500	Weekdays: 8:00 AM – 4:00 PM	28,200	1	= -	Bus: \$2.75 Demand-response: \$1.50 (within city) \$2.75 (outside city)

30

^a "Deviated fixed-route" refers to a transit service in which a vehicle may deviate either within a given distance of a predefined route (route deviation) or within a defined geographic zone containing a limited number of fixed stops and no predefined route (point deviation). "Demand-response" (often called "shared-ride taxi", "dial-a-ride", or "door-to-door" service) refers to a transit service in which a passenger contacts a dispatcher, who sends a vehicle to pick the passenger up and transport the passenger to a specific destination.

Table 5-16

COMPARISON OF KEY INDICATORS OF RIDERSHIP AND FINANCIAL PERFORMANCE FOR WESTERN KENOSHA COUNTY TRANSIT (2010) AND OTHER TRANSIT SYSTEMS IN PEER GROUP (2009)

		Operating Data ^a									
		Bus Systems in Peer Group ^c									
Performance Measure	Western Kenosha County Transit ^b	Average	Minimum	Maximum							
Service Area Population	37,100	47,000	12,800	105,200							
Ridership Total Passengers ^d	14,400	41,700	18,600	67,200							
Service Levels											
Revenue Vehicle Miles	255,600	270,100	85,700	550,800							
Revenue Vehicle Hours	13,700	12,900	5,100	24,900							
Service Effectiveness											
Revenue Vehicle Hours per Capita	0.37	0.38	0.09	1.10							
Passengers per Capita	0.39	1.49	0.34	5.23							
Passengers per Revenue Vehicle Mile	0.06	0.19	0.07	0.30							
Passengers per Revenue Vehicle Hour	1.05	3.87	1.44	7.59							
Service Efficiency											
Operating Expense per Revenue Vehicle Mile	\$2.28	\$1.86	\$0.97	\$2.58							
Operating Expense per Revenue Vehicle Hour	42.42	38.21	19.76	55.29							
Cost Effectiveness											
Operating Expense per Passenger	\$40.51	\$11.81	\$7.28	\$30.75							
Operating Revenue per Passenger	0.75	3.58	0.33	15.01							
Net Cost per Passenger	39.76	8.23	5.32	15.73							
Farebox Recovery Rate (percent)	1.8	23.1	4.1	48.8							

^a Operating data are reported for fixed-route and demand-response operations combined. Western Kenosha County Transit data are for year 2010; the peer data are for 2009.

Source: Rural National Transit Database, Western Kenosha County Transit, and SEWRPC.

^b Western Kenosha County Transit does not collect and report data on revenue vehicle miles or revenue vehicle hours, so the two measures are estimated using total vehicle miles and total vehicle hours and subtracting the approximate non-revenue vehicle miles and non-revenue vehicle hours.

^c Key performance indicators were developed based on information reported by eight other rural bus systems. The eight systems are identified in Table 5-15. Average, minimum, and maximum values are calculated from individual performance measures calculated for each transit system in the peer group.

^d This measure of ridership counts all passengers each time they board a transit vehicle. Passengers who transfer one or more times to different routes of a transit system are counted as two or more passengers in completing a single trip between a specific origin and destination.

- Ridership and Service. Western Kenosha County Transit's service area population and levels of
 service provided (revenue vehicle miles and revenue vehicle hours) fall within the range of values
 of the peer transit systems. However, ridership on the system must continue to grow significantly
 in order for it to favorably compare with the peer group.
- <u>Service Effectiveness</u>. The four service effectiveness measures capture information on how well the transit system is utilized. Compared to the peer group, the transit system provides reasonable service levels given the size of its service area population, as measured by revenue vehicle hours per capita. However, as noted above, ridership needs to continue to increase in order for the system to achieve values for passengers per capita, passengers per revenue vehicle hour, and passengers per revenue vehicle mile are reasonable when compared to the range of values shown for the peer group.
- <u>Service Efficiency</u>. The two service efficiency measures capture information on the transit systems' cost per unit of service provided. Western Kenosha County Transit's operating expense per revenue vehicle mile and operating expense per revenue vehicle hour are both higher than the peer group average, but are within the range of values shown for the peer group. Again, because the service is so new, limited conclusions can be drawn about these values.
- <u>Cost Effectiveness</u>. Cost effectiveness indicators compare the cost of providing the service to the level of consumption of the service by the public. For most of these measures, Western Kenosha County Transit falls outside of the range of values in the peer group. The system will need to continue to increase ridership and decrease the unit costs of providing the service to achieve values that fall within a reasonable range of the peer systems.

Overall, the peer group comparison indicates that Western Kenosha County Transit needs to continue to increase ridership and consider ways to reduce the system's cost per hour and per mile. In Chapter 6, "Alternative and Recommended Transit Service Improvements", the Commission staff will review the practices of similar rural transit service providers, in an attempt to find ways that Western Kenosha County Transit can increase ridership, reduce costs, and develop efficiencies for providing its services.

Western Kenosha County Transit Evaluation: Performance of Routes and Transit Services

Ridership, Service Effectiveness, and Cost Effectiveness of Routes and Transit Services

Table 5-17

AVERAGE DAILY PERFORMANCE MEASURES FOR WESTERN KENOSHA
COUNTY TRANSIT SERVICES: JANUARY-JUNE, 2010

				Weekday	Service				
			Regular	Routes ^a			Door-to-		
Perform	nance Measure	Route No. 1			Average	Commuter Service ^a	Door Service	Saturday Service	
	Vehicle Hours	13.4	13.5	13.7	13.5	9.7	13.0	21.8	
Ridership	Vehicle Miles	270	310	260	280	200	210	470	
and Service Levels	Decading December	17	7	14	40	0	44	10	
	Boarding Passengers	Minimum	acceptable	level: 10 ^b	13	9	11	12	
	Passengers per	1.3	0.5	1.0	0.0	0.0	0.0	0.5	
Service	Vehicle Hour	Minimum	acceptable I	evel: 0.7 ^b	0.9	0.9	0.8	0.5	
Effectiveness	Passengers per Vehicle Mile	0.06	0.02	0.05	0.05	0.04	0.03	0.03	
		Minimum a	acceptable le	evel: 0.04 ^b	0.03	0.04	0.03	0.03	
Evnence	Operating Cost ^c	\$630	\$630 \$650		\$640	\$390	\$690	\$980	
Expenses	Operating Assistance ^c	610	640	620	620	380	670	970	
	Operating Cost per	\$37	\$93	\$45	\$58	\$46	\$63	\$82	
	Passenger	Maximum	acceptable l	evel: \$70 ^b	φυο	Φ40	φυσ	\$8∠	
Cost	Operating Assistance	\$36	\$91	\$44	¢ E7	Ф.4 <i>Е</i>		CO1	
Effectiveness	per Passenger	Maximum	acceptable I	evel: \$69 ^b	\$57	\$45	\$61	\$81	
	Farebox Recovery	2.9	1.1	2.4	2.1			1.3	
	Rate (Percent)	Minimum	acceptable I	evel: 1.7 ^b	۷.۱	2.3	3.2	1.3	

^aRoute Nos. 1, 2, and 3 include vehicle hours, vehicle miles, and passengers for the morning and evening commuter service. The three buses operated on those routes also provide the morning and evening commuter service, and the transit operator (Kenosha Achievement Center) does not currently report the ridership, hours, or mileage dedicated to commuter service separately for each bus. Therefore, ridership and service for the commuter routes cannot be subtracted for each of the individual routes. The operator does, however, report the ridership, miles, and hours for all the commuter routes combined, and those combined values are shown under the "Commuter Service" column. Commuter service was initiated in December of 2009.

Source: Kenosha County, Kenosha Achievement Center, and SEWRPC.

^bThe minimum acceptable performance level for the ridership, service effectiveness, and farebox recovery measures is 20 percent below the overall average for all regular routes. The maximum acceptable performance level for the operating cost per passenger and operating assistance per passenger measures is 20 percent above the overall average for all regular routes.

Bold red text in these measures indicates that a route performs worse than the acceptable level for that particular measure.

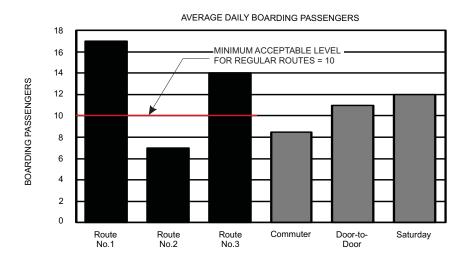
^cOperating cost values were estimated using a cost model that allocates annual expenses to the hours, miles, and the number of vehicles operated for each service. Operating assistance values were estimated using the estimated operating cost, the average systemwide revenue per passenger, and the average daily boarding passengers for each service.

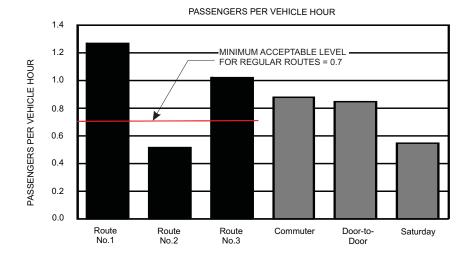
The previous sections assessed the systemwide performance of the transit system. This section of the evaluation looks at the ridership and financial performance of the weekday regular routes of the transit system, in order to identify the routes with the lowest overall performance levels based on boarding passengers; passengers per vehicle-hour and per vehicle-mile; operating cost and operating assistance per passenger; and farebox recovery rate. These measures are also presented for the weekday commuter service, door-to-door service, and Saturday route service provided by Western Kenosha County Transit in 2010.

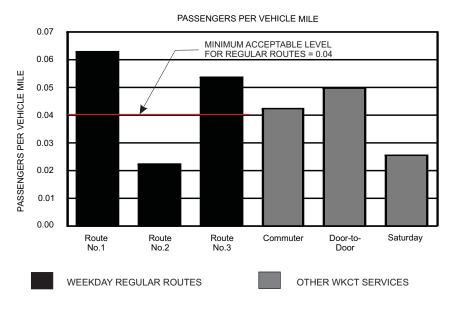
Table 5-17 and Figures 5-5 and 5-6 display the estimated service effectiveness and cost effectiveness measures for the regular routes, as well as the commuter, door-to-door, and Saturday services provided. The performance measures presented in the table and figures are based upon daily route data maintained by the Kenosha Achievement Center and a cost model that allocated the annual systemwide expenses to the hours, miles, and the number of vehicles operated for each service. A minimum (or maximum) acceptable performance level accompanies each performance measure for the three regular routes of the system. Where ridership, service effectiveness, and farebox recovery levels are more than 20 percent below the average of the three regular routes, bold red text indicates the level is below the minimum acceptable performance level. Where cost effectiveness measures are more than 20 percent above the average of the three regular routes, bold red text indicates the level is above the maximum acceptable performance level. Acceptable performance levels were not determined for the commuter, door-to-door, and Saturday services provided by Western Kenosha County Transit because of the uniqueness of these services; however, they are included in the table and charts to provide a basis for comparing the performance of these services to the regular routes of the system. The following observations may be drawn from the information in the tables and figures:

• Regular Routes. Route No. 1, which travels between the Village of Twin Lakes and the City of Kenosha, is the best-performing route in the transit system. It had the highest ridership, service

Figure 5-5
SERVICE EFFECTIVENESS MEASURES FOR WESTERN KENOSHA
COUNTY TRANSIT SERVICES: JANUARY-JUNE, 2010



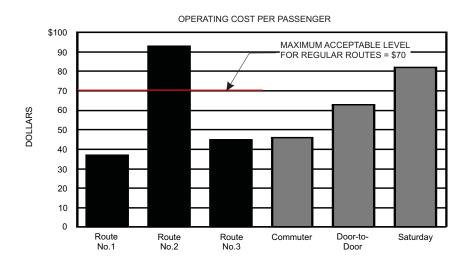


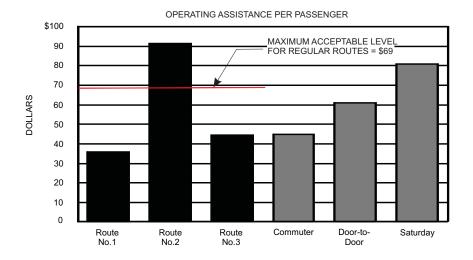


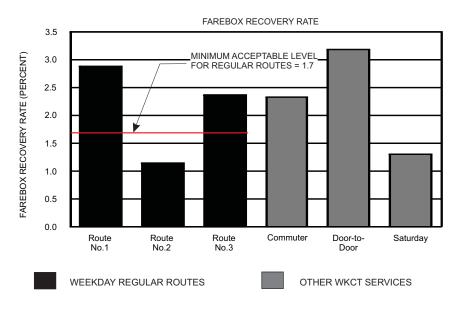
Source: Kenosha Achievement Center and SEWRPC.

Figure 5-6

COST EFFECTIVENESS MEASURES FOR WESTERN KENOSHA
COUNTY TRANSIT SERVICES: JANUARY-JUNE, 2010







Source: Kenosha Achievement Center and SEWRPC.

effectiveness measures, and farebox recovery rate, and had the best cost effectiveness levels of the three routes. Route No. 3, which serves the Village of Twin Lakes and the City of Lake Geneva, also demonstrated acceptable levels for all the performance measures. Route No. 2 (serving the Villages of Paddock Lake and Silver Lake, the City of Antioch in Illinois, and the Town of Bristol) had the lowest performance levels of the three regular routes. The low ridership and high mileage of Route No. 2 contribute to these low levels, which are lower than the performance levels calculated for the door-to-door and Saturday service. These results indicate that potential changes to Route No. 2 to improve its performance should be considered.

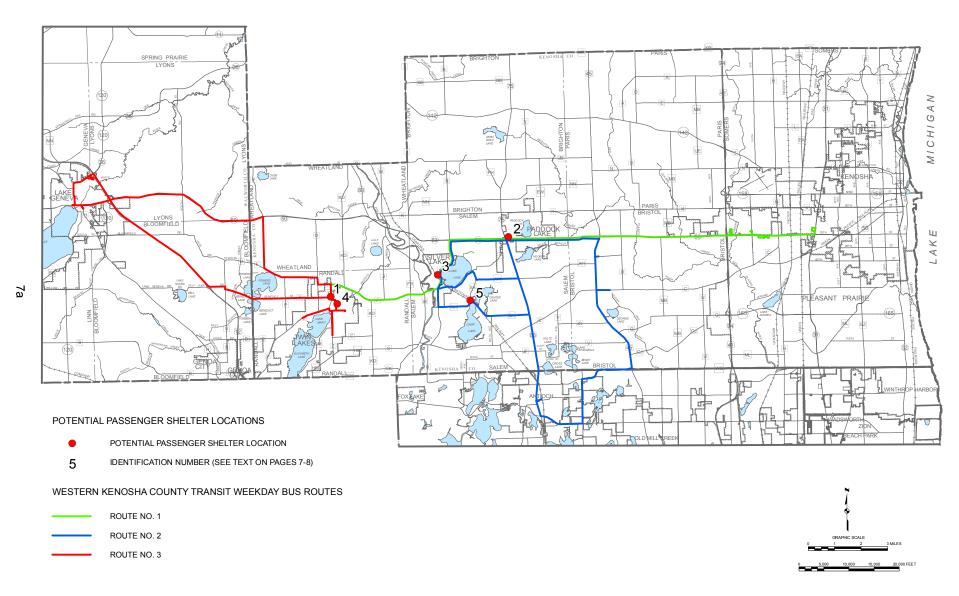
- Commuter Service. The County introduced commuter service in December 2009, which provides special route service before the regular routes begin (from 5:45 a.m. to 8:00 a.m.) and after regular routes end (after 4:00 p.m. for Route No. 2 and after 5:30 p.m. for Route Nos. 1 and 3). It should be noted that the data for Route Nos. 1, 2, and 3 include the vehicle hours, vehicle miles, and passengers for the commuter service. Although Kenosha Achievement Center does track the ridership, hours, and mileage for all the commuter routes combined, it does not currently collect the data in such a way that allows those figures to be subtracted from the individual regular routes. In 2010, average daily ridership on the commuter service started at 6 riders per average weekday in January, increased to 11 riders daily in April, and was carrying 8 riders daily in June. Even though the service was still new, it compared reasonably well when measured against the regular weekday routes, with about-average service effectiveness measures, and better-thanaverage cost effectiveness measures. The service is likely to improve in these measures as ridership grows. Changes to the commuter service are not likely to be necessary at this time based on this analysis.
- <u>Door-to-door service</u>. The transit system's advance reservation door-to-door service, which is open to the public, is available to Kenosha County residents that cannot complete their trip using

only the fixed-bus routes, and serves to fulfill both the Americans with Disabilities (ADA) requirement for fixed-route bus systems to provide complementary paratransit, and Kenosha County Department of Human Services' mission to provide transportation for seniors and people with disabilities throughout the County. The door-to-door service was provided with two vehicles in 2010, with one vehicle operating an average of 9.5 hours per weekday, and the other vehicle operating as needed to accommodate the demand, with an average of 3.5 hours per weekday. The County added the second vehicle in January of 2009, in part to accommodate the demand for subscription transportation to and from the Daybreak Alzheimer's Respite Program at Kenosha Area Family and Aging Services at 7730 Sheridan Road in Kenosha. It is worth noting that the service performed better than Route No. 2 and the Saturday service in terms of service effectiveness and cost effectiveness. The door-to-door service carried 11 riders on an average weekday from January through June, 2010. To improve the cost-effectiveness of the service, Western Kenosha County Transit should consider ways to fully utilize the vehicles providing both door-to-door service and fixed-route service in order to minimize the number of vehicles needed for both services.

Saturday Service. Western Kenosha County Transit began offering Saturday fixed-route service in June of 2009, and discontinued it in January of 2011. The transit system operated two routes with two vehicles on Saturdays between 8:00 a.m. and 5:00 p.m., serving most of the stops that are served by the weekday routes but with different schedules and alignments. The performance levels of the Saturday service were only slightly better than Route No. 2. Saturday transit services typically carry fewer riders than weekday service, but the ridership on the service may have also been lower due to confusion about the schedules and alignments of the Saturday routes. If the County decides to re-establish Saturday service in the future, it should consider providing the schedule and map of the routes in the same brochure as the regular weekday service, and consider providing fewer vehicle hours of Saturday service.

Map 5-13

LOCATIONS THAT SHOULD BE CONSIDERED FOR PASSENGER SHELTERS FOR WESTERN KENOSHA COUNTY TRANSIT



Provision of Passenger Shelters for Western Kenosha County Transit

One way to improve passengers' comfort and convenience while using the transit system is through the provision of shelters at fixed-route transit stops. In 2010, Kenosha County received American Recovery and Reinvestment Act of 2009 (ARRA) funds to purchase and install two passenger shelters. The Commission staff identified certain key locations where passenger shelters should be considered based on several factors, including the number of boarding passengers per month at the stop, whether the stop is located within the County borders, whether the stop is a transfer point between routes, whether the stop serves a facility for seniors and persons with disabilities, or whether passengers must wait in an open area exposed to wind and rain. The key locations that the County should consider for the two ARRA-funded passenger shelters, as well as future shelter placement, are listed below and displayed on Map 5-13.

Potential Passenger Shelter Locations

- 1. Aurora Medical Center, 700 N. Lake Avenue, Twin Lakes. This stop has about 175 boarding passengers per month, is a major transfer point between Route Nos. 1 and 3, and serves a facility for seniors and persons with disabilities (Aurora Medical Center). Passengers can wait for a bus inside the Aurora Medical Center, but only from 8:00 a.m. to 5:00 p.m. on Monday, Wednesday, and Friday, and 8:00 a.m. to 6:00 p.m. on Tuesday, while the transit system provides weekday service to the stop between 5:45 a.m. and 7:15 p.m.
- 2. Village Plaza Shopping Center, 75th Street and Antioch Road, Paddock Lake. This stop has about 175 boarding passengers per month, is a major transfer point between WKCT Route Nos. 1 and 2, and serves a facility for seniors and persons with disabilities (Aurora Medical Center).
 Passengers can wait for a bus inside the Aurora Medical Center from 8:00 a.m. to 5:00 p.m. daily, or inside the SuperValu grocery store from 6:00 a.m. to 10:00 p.m. daily, with the transit system providing weekday service to the stop between 6:15 a.m. and 6:45 p.m.

- 3. Silver Lake Village Hall, 113 S. First Street, Silver Lake. This stop has about 90 boarding passengers per month. Passengers can wait for a bus inside Village Hall, but only from 8:30 a.m. to 5:00 p.m. daily, while the transit system provides weekday service to the stop between 6:00 a.m. and 7:00 p.m. The stop is not a major transfer point, and does not serve a facility for seniors and persons with disabilities.
- 4. Meadowview Village Apartments, 450 Lincoln Drive, Twin Lakes. This stop has about 40 boarding passengers per month and serves a facility for seniors and persons with disabilities. The stop is not a major transfer point, and passengers can wait for a bus inside the apartment building at any time.
- 5. <u>Downtown Camp Lake, 9610 Camp Lake Road, Camp Lake</u>. This stop has about 20 boarding passengers per month. Passengers can wait for a bus inside the Tess' Market grocery store from 7:00 a.m. to 7:00 p.m. daily, with the transit system providing weekday service to the stop between 9:20 a.m. and 2:20 p.m. The stop is not a major transfer point, and does not serve a facility for seniors and persons with disabilities.

It should be noted that Kenosha County may not have the authority to construct a shelter at all of these locations. Most of the locations where shelters would need to be constructed are on private property. Kenosha County would need to work with the property owner to obtain permission and determine if space could be dedicated to installing a shelter.

Summary of Western Kenosha County Transit Passenger Comments and Concerns

The final section of the evaluation is a review of passenger comments and concerns to assess the extent that transit system riders perceive the service to be safe, reliable, convenient, and comfortable. These comments were taken from several sources, including a public hearing held by Kenosha County's Aging

and Disability Resource Center on August 24, 2010, at the Community Library in Salem, WI, and two surveys of transit system riders conducted in March 2009 and March 2010, respectively. Many of the comments dealt with a very specific aspect of service, such as requests to increase service at certain times along certain routes, or to add service to a certain location. The comments can be summarized as follows:

- In general, comments indicated that riders are very satisfied with the service provided by the transit system and believe the system is well-run, with many comments stating "keep up the good work" or "service is fantastic" and the overwhelming majority of survey respondents rating the service as "excellent".
- A number of Western Kenosha County Transit riders would like more transit service. Most of the comments requesting more service suggested service to additional locations, particularly major shopping destinations located in Western Kenosha County, the City of Burlington in Racine County, the City of Lake Geneva in Walworth County, and Village of Antioch, IL. Several comments also requested increased service frequency, longer hours of service, more weekend service, or more connections to other transit services such as PACE or Metra.
- Other comments suggested improvements beyond the scope of this study, including adding
 bicycle accommodations, improving communications between dispatch and drivers, enhancing
 the appearance of buses, and modifying the way information is provided to potential riders.

Some of the comments pertaining to extending transit service hours, increasing service frequency, and making changes to bus routes will be addressed in the next chapter, which will propose service improvements.

[The following text will be inserted under Unmet Transit Service Needs in the Western Kenosha County Transit Evaluation Area, on page 17 of the draft Chapter V distributed at the August 27, 2009 meeting, under the revised heading.]

Unmet Transit Service Needs and Transit Service Deficiencies in the Western Kenosha County Transit Evaluation Area

- 1. Reduce Number of Vehicles Used to Operate the System: Western Kenosha County Transit currently needs five vehicles to operate its fixed-route and demand-response transit services. One of those demand-response vehicles is primarily needed because of subscription transportation to the Daybreak Alzheimer's Respite Program at peak periods. The County Aging Services division should study whether using the Western Kenosha County Transit service to provide these trips is the most efficient way to address the Respite Program's transportation needs. Also, because Route No. 2 had low performance values, the County could consider reducing the number of trips on that route and providing demand-response service with the same vehicle. For example, the transit system could continue to provide commuter service to Antioch in early morning and evening periods. The same vehicle could operate two regular trips to Antioch during the off-peak periods, and could provide demand-response service at other times.
- 2. <u>Increase Ridership</u>: Western Kenosha County Transit's ridership has been growing since the service began operation in September 2007. The County has also done a good job of promoting the service with presentations, discounted passes, articles in the Kenosha newspaper, advertisements on a western Kenosha County news website, and an easy-to-use brochure and website. However, ridership on the system is still low for the amount of service provided. A recent Transit Cooperative Research Program study used transit service operating and ridership data from the Rural National Transit Database to develop a general rule of thumb for estimating demand on rural transit systems. The rule of thumb states that rural transit travel demand equals

about 0.2 passengers per rural vehicle mile of service provided¹. Coincidentally, the peer group evaluation for Western Kenosha County Transit produced nearly the same result. Table 5-16 showed that the peer group average was 0.19 passengers per revenue vehicle mile of service. The maximum passengers per revenue vehicle mile in the peer group was 0.30, and the minimum was 0.07. The Transit Cooperative Research Program report recommends using the range of ratios from peer systems to develop a range of estimated demand for new rural transit services. Using the peer group average, maximum, and minimum, and multiplying it by the annual revenue vehicle miles operated by Western Kenosha County Transit (255,600) results in the following estimates for demand:

- Average demand (based on .19 passengers per revenue vehicle mile): 48,600
- Maximum demand (based on 0.30 passengers per revenue vehicle mile): 76,700
- Minimum demand (based on 0.07 passengers per revenue vehicle mile): 17,900

In 2009, Western Kenosha County Transit carried 14,400 passengers. The range in estimates for demand suggests that if service levels were maintained, the ridership on the system would eventually stabilize somewhere between 15,000 and 70,000 annual passengers, most likely closer to 50,000. The transit system should continue its efforts to market its services and seek ways to attract more passengers.

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¹ Transportation Research Board, Transit Cooperative Research Program Web-Only Document 49, Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation, December 2009.

[The following text will be inserted under Unmet Transit Service Needs for Travel between Kenosha County and Surrounding Area, on page 17 of the draft Chapter V distributed at the August 27, 2009 meeting.]

1. Travel between eastern Kenosha and Racine Counties. Since 2006, when the City of Racine eliminated bus service to the UW-Parkside campus, the only transit service between the Cities of Kenosha and Racine has been provided by Wisconsin Coach Lines, which operates eight trips a day between Kenosha, Racine and Milwaukee. This service has several drawbacks for local transit service: first, the system requires passengers traveling between Kenosha Area Transit and Belle Urban System routes to transfer in the central transfer terminals of the two cities. The Belle Urban System central transfer station is located about a mile outside the Racine central business district, making it particularly inconvenient for City of Kenosha residents traveling to major activity centers (such as Gateway Technical College) in downtown Racine. Second, the Belle Urban System does not have a transfer agreement with Wisconsin Coach Lines (unlike Kenosha Area Transit), so passengers must pay two full fares when transferring between a Belle Urban System route and the Wisconsin Coach Lines route. Third, the service was designed for commuter trips to Milwaukee and therefore does not have the frequency of service that is needed to make such a service truly convenient for travel between the two cities.

To investigate the level of demand for restoring some sort of service that would provide improved passenger transit service between the two cities, Commission staff reviewed the average weekday travel survey data that was displayed in Maps 3-11 and 3-12 [distributed as Attachment 4 to the minutes of the Advisory Committee meeting of April 29, 2009]. About 49,400 person trips were made between eastern Kenosha County and eastern Racine County on a typical weekday. Of those trips, about 17,500 were made between the primary transit service areas in the Cities of Kenosha and Racine. It is reasonable to assume that up to 2 percent of those trips (350 trips) could be made by transit.

Commission staff also conducted an analysis to determine the potential demand for restoring transit service from the City of Racine area to the University of Wisconsin-Parkside campus. For the 2010-2011 school year, University of Wisconsin-Parkside had about 5,300 enrolled students and about 700 employees. Of those students, about 1,000 (19 percent) lived on campus. The University of Wisconsin-Parkside registrar's office provided data listing the number of employees and students' permanent residences by zip code. Map 5-14 graphically displays the distribution of residences for University of Wisconsin-Parkside employees and students. Unfortunately, the university was not able to determine whether any of these students lived on campus, or had different addresses while classes were in session. As the map shows, most students and employees reside in eastern Kenosha and Racine Counties. About 1,600 students and employees have permanent residences in the primary transit service area in the City of Kenosha, and about 1,500 students and employees have permanent residences in the primary transit service area in the City of Racine. The nearly-equal distribution of students and employees between the two cities supports the notion that transit should be provided to campus from both the Cities of Kenosha and Racine.

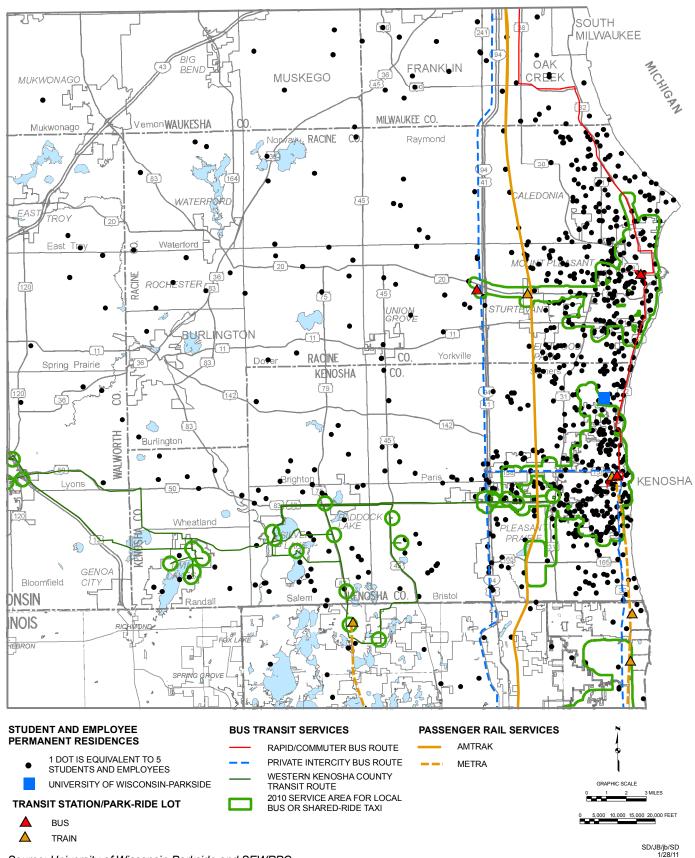
The preceding analyses demonstrate that there is an unmet transit service need for frequent and convenient transit service connecting the City of Kenosha and the City of Racine along a corridor west of the lakeshore STH 32 (in order to avoid duplicating the existing Wisconsin Coach Lines service), with a stop at UW-Parkside.

2. Travel between eastern Kenosha County and eastern Lake County.

Commission staff also conducted several analyses to determine the extent of unmet need for transit travel between Kenosha County and Lake County. There are currently only two connecting transit services between the two Counties: the Metra Commuter rail service that stops

Map 5-14

PERMANENT RESIDENCES OF UNIVERSITY OF WISCONSIN-PARKSIDE STUDENTS AND EMPLOYEES COMPARED TO PUBLIC TRANSIT SERVICE AREAS IN KENOSHA COUNTY AND ADJACENT COUNTIES: FALL 2010 HEADCOUNT



at the station in downtown Kenosha, and the Western Kenosha County Transit route that serves the Village of Antioch, IL. All the public and private transit services in Kenosha County and surrounding counties are displayed on Map 5-15, which also shows some of the major employers and major universities that could attract cross-county travel.

To determine the extent to which Kenosha County residents currently use the Metra commuter rail services in northeastern Illinois, Commission staff requested data from Metra's most recent travel survey. Figure 5-7 graphically displays the number of Kenosha and Racine County residents boarding at Metra stations in the 2006, along with the origin communities of those residents. The City of Kenosha Metra station was by far the most popular station for Kenosha County residents. About 300 average daily boarding passengers were Kenosha or Racine County residents, with most coming from the City of Kenosha. Going south along the Union Pacific North (UP-N) Metra line, the Winthrop Harbor station, with 35 daily boardings by Kenosha County residents, was slightly more popular with residents of Pleasant Prairie. The next significant station on the UP-N line was the Waukegan station, with 29 average daily boarding passengers who were Kenosha or Racine County residents, likely attracted by the more frequent service at this station. For residents of western Kenosha County, the Antioch station (the terminus of Metra's North Central Service Line) was most popular, with most boarding passengers coming from the central Kenosha County communities of Trevor, Bristol, and Salem. The Fox Lake Station on the Milwaukee District West line was more popular for residents of Twin Lakes. None of these boarding passenger levels indicate a strong need for additional transit service to the Metra stations in Northern Illinois.

To investigate the level of potential demand for non-rail commuter transit services between eastern Kenosha County communities and northern Illinois communities not already served by Metra, Commission staff used the U.S. Census Bureau's Longitudinal Employment and

Map 5-15

MAJOR ACTIVITY CENTERS AND EMPLOYMENT CONCENTRATIONS COMPARED TO PUBLIC TRANSIT SERVICE AREAS IN KENOSHA COUNTY AND ADJACENT COUNTIES: 2010

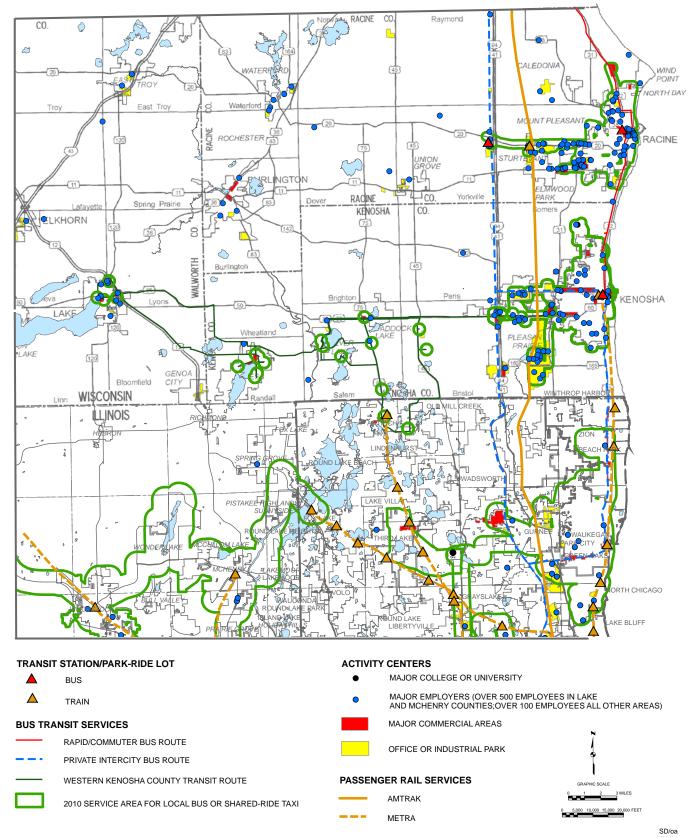
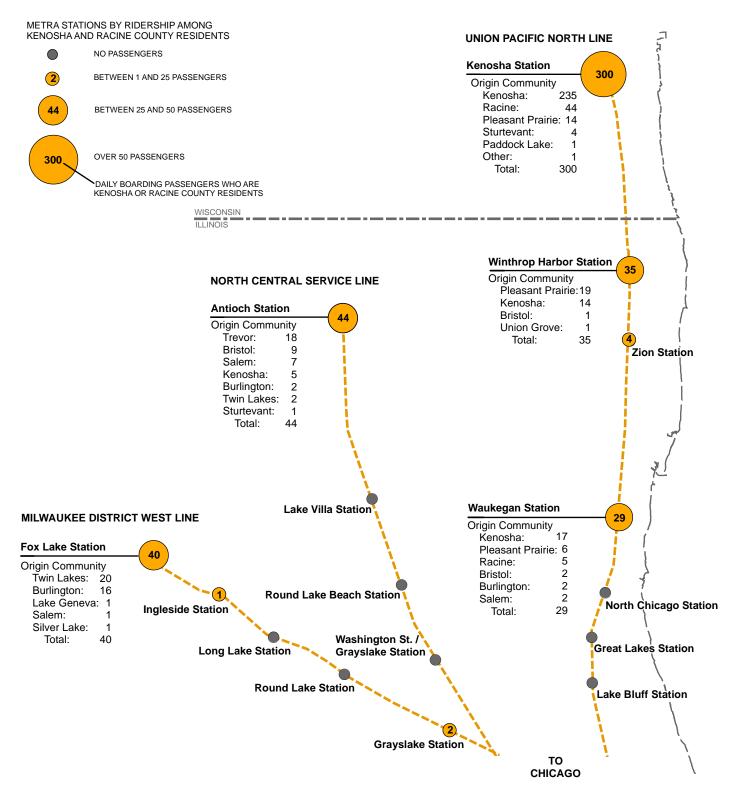


Figure 5-7

AVERAGE DAILY BOARDING PASSENGERS AT METRA STATIONS
WHO ARE KENOSHA OR RACINE COUNTY RESIDENTS: 2006



Household Demographics data on residence and job location for 2007 and 2008. As Table 5-18 shows, a total of 72,800 workers with jobs lived in the City of Kenosha and the Village of Pleasant Prairie. Of that total, about 6,300, or 16 percent, worked in one of the top five Illinois communities shown in the table. (Illinois communities where fewer than 300 City of Kenosha residents were employed were not included in the analysis.) The Cities of Waukegan (1,760 jobs) and North Chicago (1,630 jobs) accounted for the highest number of Kenosha and Pleasant Prairie residents with jobs in Illinois.

For comparison, Commission staff also analyzed the number of Illinois residents with jobs in Kenosha and Pleasant Prairie to determine whether there was an unmet need for demand for transit service to Kenosha County from that population. As Table 5-18 shows, the number of Illinois residents traveling to Kenosha or Pleasant Prairie is fairly low. About 1,400 of the 42,900 jobs in Kenosha and Pleasant Prairie are filled by residents from the top five Illinois communities.

Based on the data reported above, it is not clear that there would be sufficient demand for a fixed-route bus commuter service between communities in Lake County and Kenosha County at this time.

Table 5-18

EASTERN KENOSHA COUNTY RESIDENTS WHO WORK IN ILLINOIS: 2007-2008 AVERAGE

	Total Number of	Illinois Community Where Workers are Employed											
Kenosha County Wo Community Where Workers Jobs	Workers with	Chicago		Gurnee		North Chicago		Waukegan		Zion		Total	
Reside		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
City of Kenosha	45,200	1,020	2.3	660	1.5	1,220	2.7	1,230	2.7	650	1.4	4,780	10.6
Village of Pleasant Prairie	27,600	180	0.7	240	0.9	540	2.0	400	1.4	200	0.7	1,560	5.7
Total	72,800	1,200	1.6	900	1.2	1,760	2.4	1,630	2.2	850	1.2	6,340	8.7

ILLINOIS RESIDENTS WHO WORK IN EASTERN KENOSHA COUNTY: 2007-2008 AVERAGE

			Illinois Community Where Workers Reside											
Eastern Kenosha County Community Where Workers	,		Chicago		Gurnee		Winthrop Harbor		Waukegan		Zion		Total	
are Employed	Community	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
City of Kenosha	31,200	130	0.4	80	0.3	100	0.3	290	0.9	190	0.6	790	2.5	
Village of Pleasant Prairie	11,700	60	0.5	80	0.7	80	0.7	250	2.1	140	1.2	610	5.2	
Total	42,900	190	0.4	160	0.4	180	0.4	540	1.3	330	0.8	1,400	3.3	

Note: Illinois communities where fewer than 300 Kenosha residents were employed were not included in this table. The next-highest community that could be listed in the table is the city of Lake Forest, Illinois, where about 290 Kenosha residents work. For comparison, about 290 Kenosha residents also work in the City of Brookfield in Waukesha County.

Source: Longitudinal Employer-Household Dynamics (LEHD) study conducted by the U.S. Census Bureau.

[The following text will be inserted under Summary of the Evaluation of Western Kenosha County Transit, on page 21 of the draft Chapter V distributed at the August 27, 2009 meeting.]

This chapter evaluated the performance of Western Kenosha County Transit based on performance measures identified in the transit system objectives and standards in Chapter IV. The evaluation included assessments of performance on a systemwide basis and route-by-route basis. Some of the most important findings of the transit system evaluation are listed below:

- The existing transit system provides good service to the existing residential and employment
 concentrations, major activity centers, and facilities for transit-dependent populations in the
 western portion of the County. A number of activity centers, major employers, and facilities that
 are not within a quarter-mile walk access of a bus stop are located on or close to a route and could
 be served by rider request.
- 2. Western Kenosha County Transit is still a new service, and its ridership is still growing. A comparison to the "peer group" of similar transit systems that have been operating for 10 years or more indicates that the transit system needs to continue to increase ridership and consider ways to reduce the system's cost per hour and per mile, in order for it to favorably compare with the ridership and cost effectiveness measures of the peer group.
- 3. Route No. 1 is the best-performing route in the transit system, while Route No. 2 had the lowest-performing ridership, service effectiveness and cost-effectiveness measures out of all the transit services. The transit system's commuter service compared reasonably well when measured against the regular weekday routes, with average service-effectiveness measures, and better-than-average cost-effectiveness measures. The transit system's advance reservation door-to-door service was provided with two vehicles in 2010, with one vehicle operating an average of 9.5

hours per weekday, and the other operating as needed to accommodate the demand, an average of 3.5 hours per weekday. To improve the cost-effectiveness of the weekday transit services, the County should consider ways to fully-utilize the vehicles providing both door-to-door service and fixed-route service in order to minimize the number of vehicles needed for both services.

- 4. Commission staff identified locations the County should consider for future passenger shelters, based on the number of boarding passengers per month, potential for transfers between routes; whether the stop serves a facility for seniors or persons with disabilities; or whether passengers must wait in an open area exposed to wind and rain. The five locations identified are: the Aurora Medical Center in Twin Lakes; the Village Plaza shopping center in Paddock Lake; Silver Lake Village Hall; Meadowview Village Apartments on Lincoln Drive in Twin Lakes; and Downtown Camp Lake, at 9610 Camp Lake Road. Most of the above locations are on private property. Kenosha County would need to work with the property owner to obtain permission and determine if space could be dedicated to installing a shelter.
- 5. Passenger comments at public hearings and on surveys reveal a very favorable opinion of Western Kenosha County Transit system. Some comment request service to additional locations, or increased service frequency, longer hours of service, or more weekend service. Some of these suggestions will be addressed in the next chapter, which proposes alternative transit service improvements.

[The following text will be inserted after the first numbered paragraph in the Summary of Unmet Needs for Transit Service, on page 21 of the draft Chapter V distributed at the August 27, 2009 meeting.]

2. In the Western Kenosha County Transit evaluation area, the unmet transit service needs and transit service deficiencies included: a need to consider ways to reduce the number of vehicles needed to operate the system on weekdays, particularly by reducing the amount of service provided on the current Route No. 2 and examining whether some of the trips made on the demand-responsive service might be provided more efficiently through other transportation services. There is also a need to market and promote the transit system to increase ridership.

For travel between Kenosha County and surrounding Counties, there is an unmet transit service need for frequent and convenient transit service connecting the City of Kenosha and the City of Racine along a corridor west of the lakeshore STH 32, with a stop at UW-Parkside. It is not clear that there is an unmet need for a fixed-route bus commuter service between communities in Lake County and Kenosha County at this time.