Greater Minnesota Transit Plan 2010 - 2030

December 2009

Your Destination...Our Priority

Minnesota Department of Transportation
Transportation Building
395 John Ireland Boulevard
Saint Paul, MN 55155

February 2010

Dear Citizens of Minnesota,

I am pleased to share with you the *Greater Minnesota Transit Plan 2010-2030*. This plan is the result of extensive collaboration over the last 20 months between the citizens of Minnesota, transit systems throughout Greater Minnesota, other partners and stakeholders, and the Minnesota Department of Transportation. Thank you to everyone who participated in the outreach meetings and commented on the draft plan.

The *Greater Minnesota Transit Plan 2010-2030* establishes a 20-year strategic plan that sets forth directions for the future of public transportation in Greater Minnesota (outside the seven county metro area). It describes current challenges, examines future transit service needs and estimates future levels of funding that would be required to meet that need. Finally, it establishes policies to guide future transit investments in Greater Minnesota.

The success of transit in Greater Minnesota depends on the coordinated efforts of many government agencies and public and private transit providers. The policies and strategies identified in this plan provide the framework for our joint efforts and a foundation for the next undertaking—the *Greater Minnesota Transit Investment Plan*. As directed by the Minnesota State Legislature (§174.24 subd. 1a), the objective of the *Greater Minnesota Transit Investment (or Implementation) Plan* is to determine the level of funding required to meet at least 80% of unmet transit service needs in Greater Minnesota by July 1, 2015 and at least 90% by July 1, 2025. To achieve that objective, we will analyze existing transit service, demographic trends, travel destinations and transportation coordination opportunities on a county level. The plan will also specifically address special transportation service ridership and needs.

Mn/DOT will continue to involve citizens, stakeholders and partners as we develop the *Greater Minnesota Transit Investment Plan*. Together we can realize the shared vision of a safe, efficient and sustainable transportation system.

Sincerely,

Thomas K. Sorel

Thomas K. Sorel

Commissioner

An Equal Opportunity Employer

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Chapter 1:
Executive Summary

Public transportation empowers individuals to be independent, seek and retain employment, access medical care, and gain access to new opportunities. The Greater Minnesota Transit Plan is a 20-year strategic plan that sets forth future directions for the future of public transportation in Greater Minnesota. The plan describes current challenges in the state, examines future transit service needs and analyzes future levels of funding to meet that need.

The planning effort was lead by the Minnesota Department of Transportation (Mn/DOT) Office of Transit. As illustrated in Figure 1.1, Mn/DOT is responsible for planning and programming for many modes of transportation including highways, freight, rail, bicycles, pedestrians, transit, and aeronautics. As one of Mn/DOT's Modal and Specialty Plans, the Greater Minnesota Transit Plan will be incorporated into the Minnesota Statewide Transportation Plan.

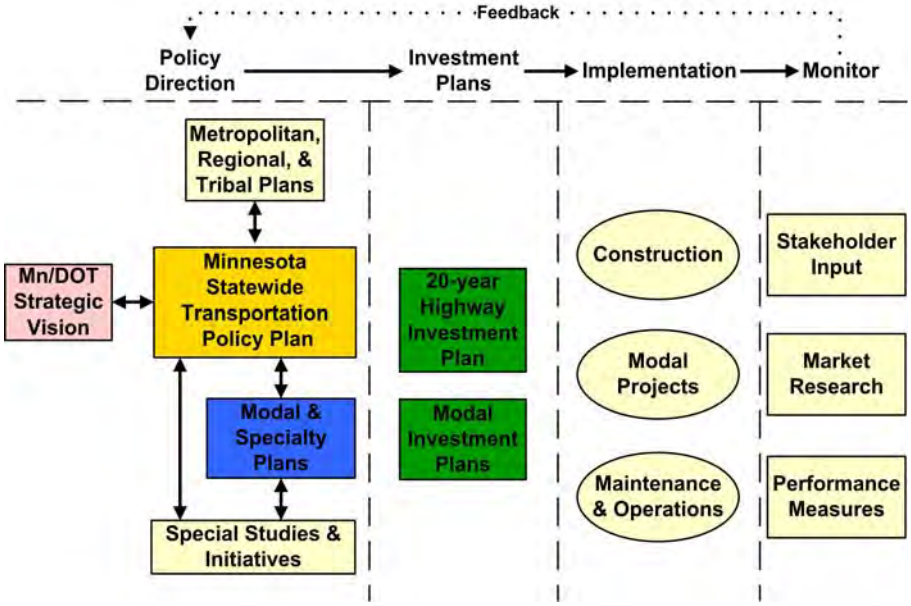


Figure 1.1 Planning and Programming Process

Source: Mn/DOT Office of Investment Management

This plan has been developed by Mn/DOT's Office of Transit in cooperation and consultation with its partner transportation providers, both public and private, stakeholders, and the general public. Stakeholders include the Minnesota Department of Employment and Economic Development (DEED), Minnesota Department of Health, Minnesota Department of Human Services, Minnesota State Council on Disability, Minnesota Board on Aging, Udac, University of Minnesota's Center for Transportation Studies, regional development commissions, metropolitan planning organizations, and public transit providers. The planning process included work and discussions during advisory and technical committee meetings, facilitated workshops, structured interviews, and an electronic survey.

Challenges

Throughout Greater Minnesota, public transportation service provides residents with enhanced personal mobility and improved access to destinations. Of the 80 counties in Greater Minnesota, 76 currently have some level of public transit service. The diversity of service needs, the uncertainties involved with funding, and the variety of services present unique challenges to transit service providers. The stakeholder involvement process resulted in the identification of major themes that shaped the development of this plan and are summarized in five challenges.

Challenge 1: Maintaining and Expanding Public Transit

One of the biggest challenges facing public transportation agencies is finding sufficient and reliable sources of funds to not only operate and maintain existing systems, but also to expand service. Funding levels are subject to fluctuations as the State's general fund is appropriated every two years. In addition, local funds must be available to provide a percentage of matching funding. Funding is dedicated to transit through the State's Motor Vehicle Sales Tax (MVST), but revenues fluctuate substantially with the economy. There is still a need for a stable source in order to maintain transit service within Greater Minnesota. In addition, in order to expand transit services, additional funding would need to be identified.

Challenge 2: Changing Mobility Needs of Individuals

Personal mobility needs in Greater Minnesota are changing in response to a growing population with evolving characteristics. Public transit is the means by which these trips are made by those who choose not to or cannot drive. This section provides background information on demographic conditions and trends that influence Greater Minnesota, both in terms of historic trends as well as future projections. Specific emphasis is placed on consumer groups that have traditionally had mobility limitations: seniors, minorities, low-income persons, and persons with disabilities. As these populations change and grow, the challenge is how to implement transit services to meet their mobility needs.

Growing Population

Minnesota has grown more rapidly since 2000 than neighboring states in the Upper Midwest, but has not grown as fast as the nation as a whole. Between 1990 and 2007, Minnesota's population increased by almost 19 percent from 4.4 million residents to nearly 5.2 million residents. From 2000 to 2030, the population of Greater Minnesota is expected to increase by 32 percent - adding nearly three-quarters of a million people - with the largest population gains in the areas immediately north and northwest of the Twin Cities.

Aging Population

As people age, isolation becomes a growing problem, and access and mobility become increasingly critical needs. For older Americans, affordable, reliable transportation options are essential. In 2005, approximately 12 percent of Minnesotans were 65 years of age or older. By 2035, the proportion of seniors is expected to nearly double, with 21 percent of Minnesotans aged 65 or older. This trend is illustrated in Figure 1.2.

In 2000, the Office of Transit conducted the Greater Minnesota Transit Market Research Study which surveyed transit riders across Minnesota. It found that between 50 and 60 percent of users in rural counties were 65 years of age or older. This aging demographic trend will impact the need for transit services in the future.

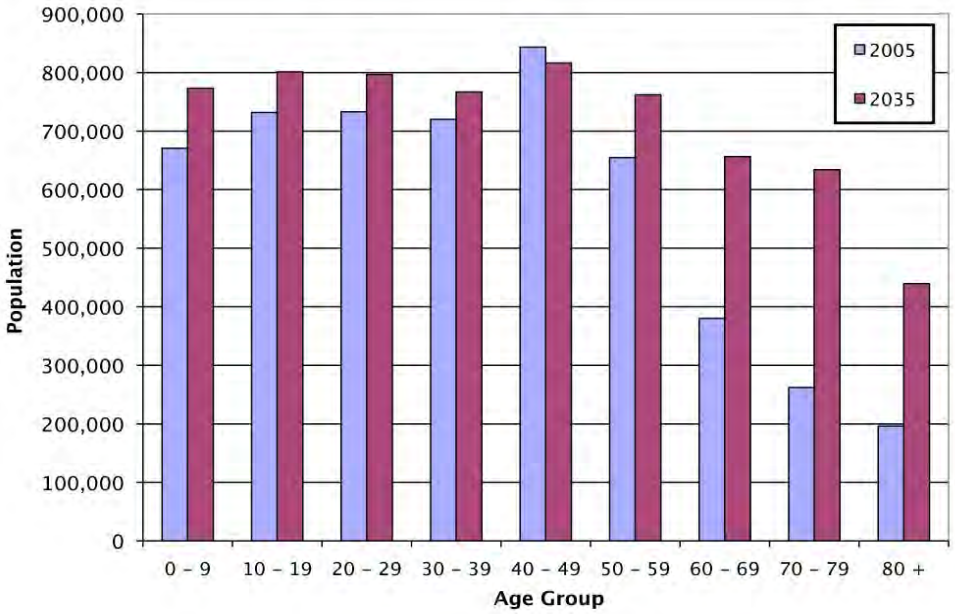


Figure 1.2 Minnesota's Population by Age, 2005–2035

Source: U.S. Census Bureau, Minnesota State Demographic Center

Changing Population: Persons with Disabilities, Low-Income Persons, and Minorities

Persons with disabilities comprise 15 to 20 percent of the total population in most Greater Minnesota regions. The Americans with Disabilities Act (ADA) defines a person with a disability as an individual with a physical or mental impairment that substantially limits one or more major life activities, such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working. It is anticipated that this population will grow at a faster rate than the general population in future years due to the significant number of seniors with disabilities. Limited funding for public transit service restricts the ability to meet the needs of persons with disabilities.

The percentage of Minnesotans living at or below the poverty line is just under 10 percent statewide. The Greater Minnesota Transit Market Research Study surveyed transit riders in 2000 on basic demographic characteristics. Between 58 and 69 percent of the respondents to the onboard survey had annual incomes below $15,000. The low-income population across the state is expected to grow at a faster rate than the general population due to the number of elderly poor.

The ethnic and racial composition of Minnesota's population is changing, but it is still less diverse than the nation. Minnesota's nonwhite and Latino (minority) population increased from 6 percent to 14 percent between 1990 and 2005. In coming decades, Minnesota's population is anticipated to continue becoming more racially and ethnically diverse. Between 2005 and 2015, the nonwhite population is projected to grow by 35 percent, compared to a growth rate of 7 percent for the white population. During the same time period, the Hispanic population is expected to increase by 47 percent. Much of the rapid growth in the nonwhite and Latino population stems from migration from other states and from outside of the United States.

Challenge 3: Changing Mobility Needs of the Workforce

Greater Minnesota's employment is projected to grow through 2030 with the largest gains expected in regions to the north and northwest of the Twin Cities. The statewide increase in employment is

projected to be almost 30 percent from 2000 to 2030, equating to an increase of approximately 350,000 workers.

The workforce is also changing as Minnesotans increasingly work outside of their county of residence. The number of Minnesota workers employed in their county of residence has fallen steadily since 1970, dropping to 66 percent in 2000. Counties surrounding Minneapolis and Saint Paul have the lowest percentages of residents who live and work in the same county because of proximity to the strong Twin Cities job market.

The Metropolitan Council 2030 Transportation Policy Plan has taken first steps toward addressing this trend around the Twin Cities Metropolitan Area by identifying several corridors that may help connect residents of Greater Minnesota counties with important employment centers in the Twin Cities. These corridors are as follows:

- Transitways that should be evaluated further to see if they warrant light rail transit (LRT) or bus rapid transit (BRT) service: I-35W north of downtown Minneapolis, TH 36, TH 65/Central Avenue, and I-94 east of downtown Saint Paul and Minneapolis
- Long-distance express bus routes: I-35 from North Branch, I-35 from Faribault, TH 55 from Buffalo, and St. Cloud to Big Lake (connecting to the Northstar Commuter Rail service)

Challenge 4: Changing Transit Options in Greater Minnesota

Opportunities exist to continue expanding transit options in Greater Minnesota to better meet existing and emerging individual and commuter mobility challenges. Various transit options are available and can be explored. Each transit option presents its own challenges and opportunities.

Possible Transit Options

Intercity Bus

Intercity Bus Service is regularly scheduled bus service for the general public that operates with limited stops over fixed routes, connects two or more urban areas not in close proximity, has the capacity for transporting baggage carried by passengers, and makes meaningful connections with scheduled intercity bus service to more distant points, if such service is available. The intercity bus system in Greater Minnesota is operated by three main carriers: Jefferson Lines, Greyhound Lines, and Megabus. Jefferson Lines provides the majority of service in Greater Minnesota and is currently the only recipient in Minnesota of federal assistance for rural intercity transit service through the Section 5311(f) program. While ridership on routes in rural Minnesota increased in 2008, national intercity bus ridership levels have decreased significantly since the 1960s. Despite a smaller network in 2009 than in 1999, 85 percent of Minnesotans in rural areas live within 25 miles of an intercity bus stop.

Volunteer Driver

Expanding transit service by engaging volunteer drivers is a strategy that enables communities to address the problem of limited public transportation and the high cost of private transportation. However, volunteer driver programs are often subject to a shortage of volunteers, liability and insurance issues, and general program administration. Still, volunteer drivers greatly increase mobility for the primary consumer groups in Greater Minnesota including transit dependent senior populations, persons with disabilities, and the economically disadvantaged. Volunteer driver programs administered by public transit agencies are presently available in 48 counties across Greater Minnesota.

Rideshare

Rideshare programs, either through carpooling or vanpooling, provide additional transportation options to commuters who travel long distances, such as from Greater Minnesota to job sites in the Twin Cities. Ridesharing has many benefits including reduced costs, increased time-savings through the use of high-occupancy vehicle (HOV) lanes, reduced greenhouse gas emissions, and reduced need for additional parking spaces at destinations. Despite these benefits, the cost to administer and support a formal program, the diversity of transit providers, and the various layers of government involved present a challenge for implementing formal rideshare programs.

College/University Fare Integration

Many transit operations now have enhanced systems of fare integration with local universities. Commonly known in Minnesota as "U-Pass," this student-oriented transit program allows students at local participating universities to take public transit at reduced or no cost. Administration of the program and adequate funding are challenges that both the universities and transit providers face. U-Pass programs occur at several locations across Greater Minnesota, including:

- Duluth Transit Authority: University of Minnesota, Duluth; College of St. Scholastica; and Lake Superior College
- Metro Area Transit: Minnesota State University, Moorhead
- Metro Bus: St. Cloud State University
- Paul Bunyan Transit: Bemidji State University and Northwest Technical College
- Western Community Action: Southwest Minnesota State University

Commuter Bus

Commuter bus (or commuter coach) is an express bus service that targets commuters who make trips during weekday peak hours, connecting a transit center or park and ride located outside a major metropolitan area to the central city. This transit mode addresses mobility needs spreading beyond traditional transit service areas. Finding sufficient funding for these services, however, is a significant challenge for implementing commuter bus services.

Rail

Greater Minnesota currently has intercity passenger rail service that operates daily along the Empire Builder corridor from Chicago to Portland/Seattle. In addition, the Northstar Commuter Rail opened for service between Big Lake and Minneapolis in November 2009. While there is increased interest in new passenger rail projects across the state, creating a new passenger rail network requires sufficient capital and operating funding from both the state and federal levels. Mn/DOT is currently developing a Statewide Freight and Passenger Rail Plan that will identify and prioritize corridors for future intercity passenger rail lines.

Facilities

This section describes facilities that utilize innovative ideas and technology to expand the transit network or to provide transit advantages. These techniques are primarily found and used in the Twin Cities Metropolitan Area. The funding, administration, and maintenance of these facilities pose a challenge to providing this supportive infrastructure in Greater Minnesota.

Park-and-Pool Facilities: Park-and-pool facilities are places where people can leave their private vehicles and meet a carpool or vanpool. Park-and-pool lots lack the access to transit services that park-

and-ride lots offer. Mn/DOT manages park-and-pool facilities located in Greater Minnesota on the Trunk Highway System.

Park-and-Ride Facilities: Park-and-ride facilities are parking lots for private vehicles that offer connections to transit services. Park-and-ride lots make transit more accessible to people who live outside transit system boundaries, reduce traffic congestion on the road, and offer greater transportation options for commuters.

Bus-only shoulders: Bus-only shoulders refer to the utilization of highway shoulders by transit buses during peak travel periods and heavy congestion. Bus-only shoulder facilities allow transit operators to have more predictable route travel times, provide an incentive to ride the bus through both the actual and perceived time savings, and decrease congestion for drivers on the road.

Bicycling and Walking Facilities: State agencies and many local and regional jurisdictions provide bicycle and pedestrian facilities such as paved shoulders, on-road bike lanes, and off-road shared use paths and sidewalks with curb ramps. In addition to offering mobility to those who are unable to or choose not to drive, these facilities offer other connections to transit.

Challenge 5: Coordination of Services

Federal, state, and local governments and community-based organizations have created specialized programs to meet particular transportation needs. At the federal level, there are at least 62 separate programs that provide special transportation services to people with disabilities, low-income individuals, and older adults. Coordinating services in the most cost-efficient and effective manner can be a challenge due to the variety of human service programs and public transit providers.

Human service transportation providers include the following:

- **Elderly and Persons with Disabilities Capital Program:** Human service agencies assisted by Mn/DOT are private non-profit organizations that receive capital funding through the Federal Transit Administration's Elderly Individuals and Individuals with Disabilities Program (Section 5310). The program requires that the agencies coordinate services with other agencies to receive capital funding; however, the extent of this coordination is hampered by the larger issues of insurance requirements and Special Transportation Service regulations.

- **Non-Emergency Medical Transportation:** Non-emergency medical transportation involves transporting a patient to and from the source of medical care when the medical condition is not life threatening. In Greater Minnesota, non-emergency medical transportation services are administered on a countywide basis with each county subcontracting the actual transportation services to a third party HMO provider. Although run by the same individual organizations, the counties act independently and there is frequent duplication of administrative costs in addition to lack of transportation coordination between county boundaries.

- **Head Start:** Head Start is a national program that provides family and child development services to America's low-income, pre-school age children and their families. Part of Head Start's operation includes the safe and secure transport of children back and forth to school. Head Start has been challenged by a flat operating budget, lack of capital funding for equipment, and federal regulations that mandate a variety of safety features that are not required of other transportation services.

Existing Public Transit Systems

An extensive network of public transit systems exists in Greater Minnesota that can help meet a significant level of existing and emerging mobility challenges. This network of public transit is a vital piece of the overall transportation system serving Minnesota. In Greater Minnesota, public transit systems presently serve the mobility needs of the general public including the elderly and/or persons with disabilities, low-income persons, commuters, students, and recreational users. Table 1.1 shows that public transportation agencies provided more than 11 million rides to Greater Minnesota residents in 2008.

Table 1.1 Greater Minnesota Public Transit Ridership by System Type, 2008

Type	Total Rides (Millions)
Urbanized	7.4
Small Urban	0.9
Rural	2.6
Elderly and Persons with Disabilities	0.2
Total	**11.2**

Source: Mn/DOT Office of Transit

Figure 1.3 illustrates that in 2009, public transit systems serve 76 counties in Greater Minnesota and provide a range of service options to residents. Fixed-route, route deviation, and demand response are the three main types of services provided through the transit systems in these areas. As of 2009, 68 counties have county-wide service providers, 8 counties have municipal service providers only, and 4 counties have no public transit service providers.

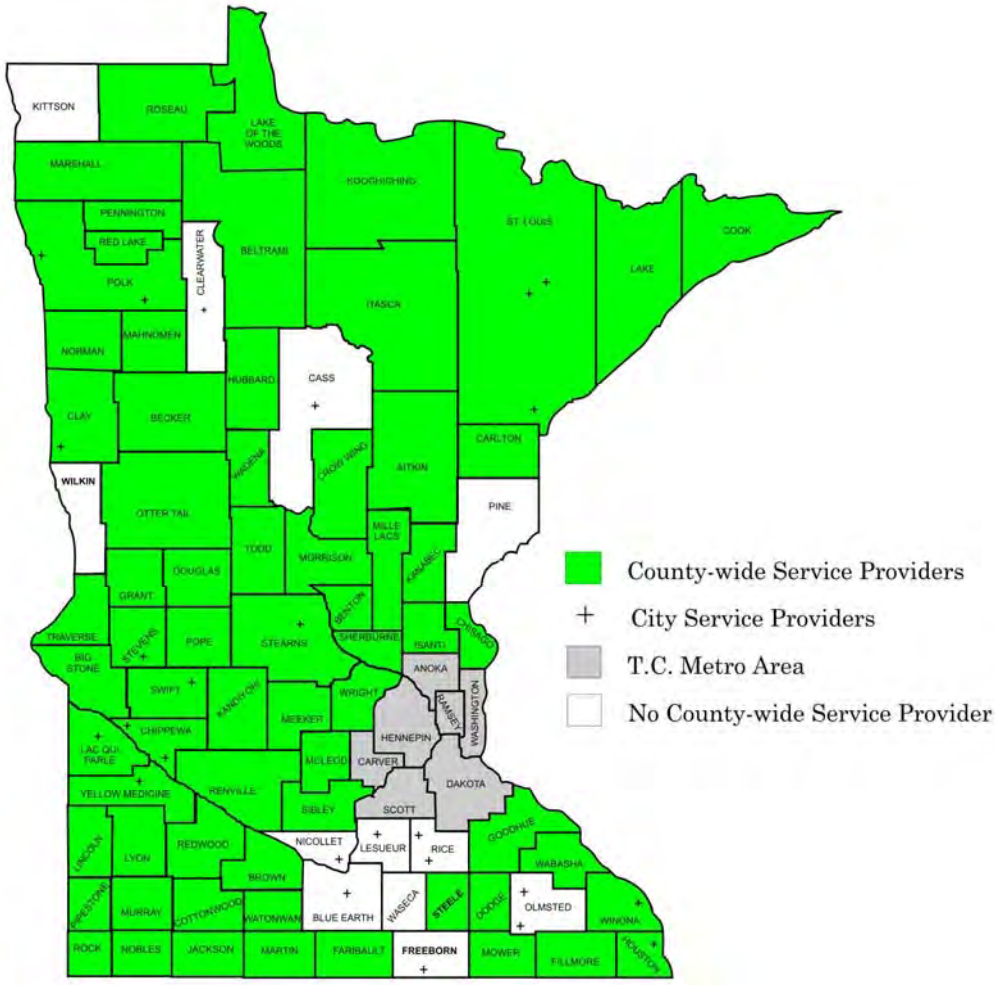


Figure 1.3 Greater Minnesota Public Transit Service Providers

Source: Mn/DOT Office of Transit

The Mn/DOT Office of Transit is responsible for the administration of state and federal transit assistance funds for Greater Minnesota. Public transportation programs in Minnesota are funded through a federal-state-local partnership. Local sources pay a share of the total operating costs, which in 2008 was a minimum of 15 or 20 percent, depending on the size of the locality, with the remainder of the operating cost paid from state and federal sources.

Public transit in Minnesota is supported from a variety of sources including the State General Fund, the Motor Vehicle Sales Tax (MVST), the federal government, and local jurisdictions. In a statewide referendum in 2006, Minnesotans voted to dedicate a portion of MVST to transit. Local jurisdictions provide funding through a combination of farebox revenue, advertising, property tax, etc. Figure 1.4 shows the sources of Greater Minnesota's funding for public transit systems operating costs from 2005 to 2009. (Numbers for 2005, 2006, 2007, and 2008 represent actual reported operating costs. 2009 numbers are estimates.)

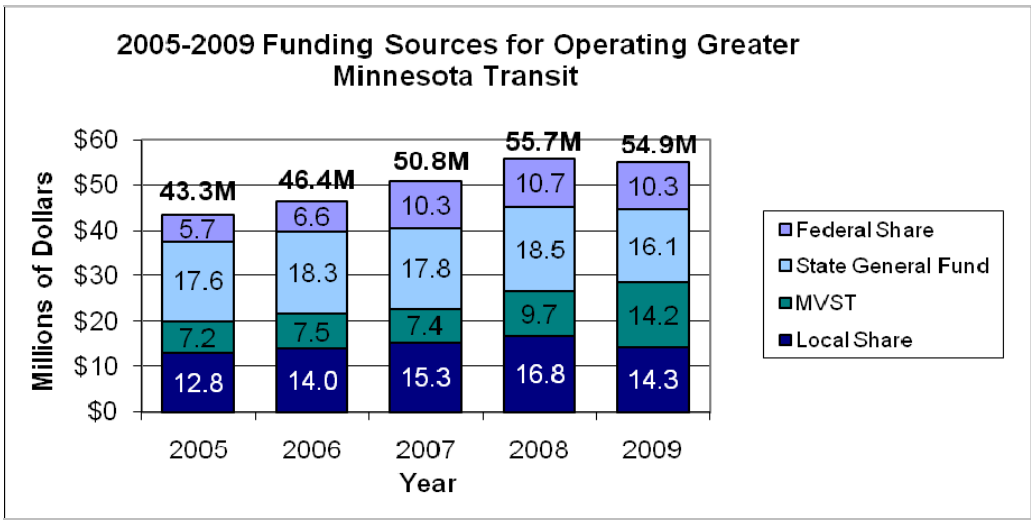


Figure 1.4 2005-2009 Funding Sources for Operating Greater Minnesota Transit

Source: Mn/DOT Office of Transit

Future Transit Needs and Demand for Service

Gauging the need for transit is different from estimating demand for transit services. Need is always greater than demand and exists whether or not public transit is available. Demand reflects the number of trips actually made given the level of service provided and cost to the rider. Estimating future demand for transit services is typically based on household trip rates or per capita usage rates from sample systems. A constrained estimate of future demand was developed for 2010, 2020, and 2030 using per capita usage rates from Minnesota peer system data.

In the analysis of future demand, Greater Minnesota transit systems were grouped by similar characteristics, including size, service area, and type of service provided. Next, transit systems were compared amongst themselves within each peer group. This peer group analysis defines a rate of performance that other similar systems can strive to achieve. The passenger per capita demand rate were defined as the 80th percentile for each peer group. This threshold represents a transition point from moderate performance, where most systems can be expected to perform, to very good performance, where only a few systems can consistently perform. The passengers per capita demand rate was applied to the population served by each transit agency.

- Urban Fixed Route
- ADA Paratransit
- County
- Multi-County
- Small Urban (Population over 10,000)
- Small Urban (Population under 10,000)

Estimates were also produced for underserved areas of the state as well as unserved areas. Underserved areas are counties within which a small urban transit system currently operates but county-wide service is not available. Overall demand estimates are summarized in Table 1.2.

Table 1.2 Summary of Estimated Demand

	Annual Trips (Millions)		
	2010	**2020**	**2030**
Urban Areas	8.4	9.8	11.0
Small Urban/Rural Areas	4.8	5.3	5.6
Underserved/Unserved Areas	1.0	1.1	1.2
Total	**14.2**	**16.2**	**17.8**

Service Hours to Meet Future Demand

Estimates of the service hours needed to meet the 80 percent demand target were prepared using productivity rates of passengers per revenue hour. A transit service goal of meeting at least 80 percent of unmet transit service needs in Greater Minnesota is contained in Minnesota Statute 174.24, Subd. 1a. Transit service needs implementation plan. The service hour estimates are summarized in Figure 1.5.

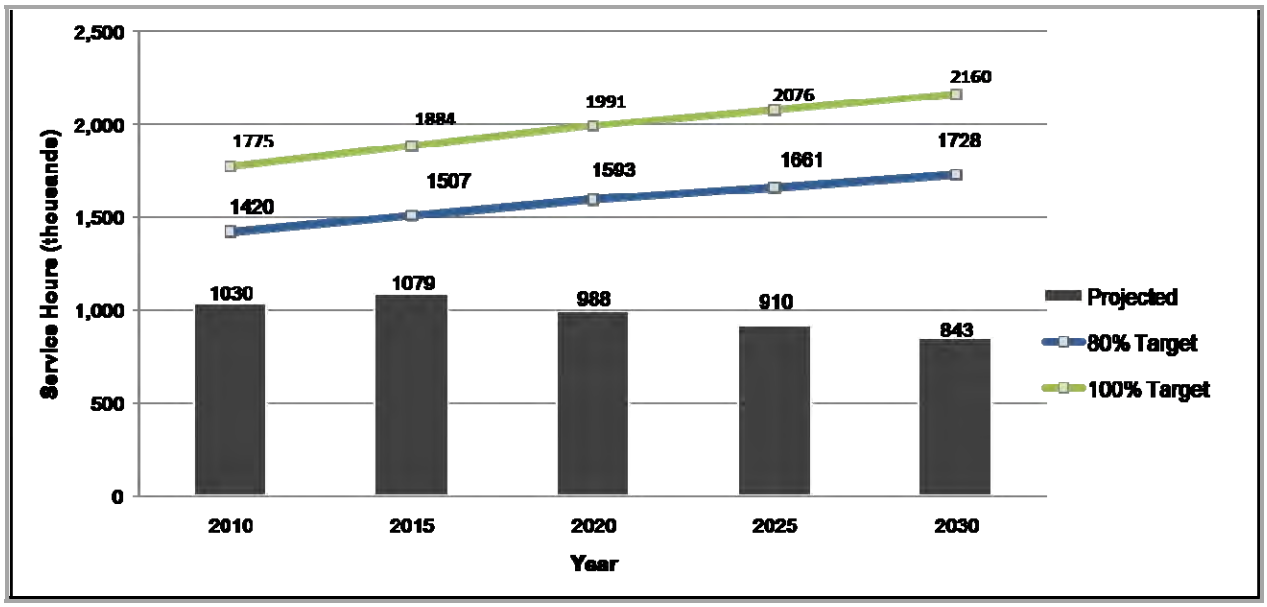


Figure 1.5 Greater Minnesota Transit Targeted and Projected Bus Service Hours, 2010–2030

Financial Analysis

Operating and capital cost estimates were prepared for existing services that are expected to grow with increasing demand, as well as for new services that could be implemented in currently underserved or unserved areas of the state.

Operating Costs

The future year costs to operate the services required to meet estimated future demand are based on the current cost per service hour for all services across Greater Minnesota. To estimate future costs, the baseline hourly rate was increased at an annual rate of three percent. Estimated future annual operating costs are summarized in Table 1.3.

Table 1.3 Annual Operating Cost Estimates, 2010–2030

	Annual Operating Cost			
Service Classification	**2008**	**2010**	**2020**	**2030**
Urban Areas	$26,820,169	$27,793,710	$43,218,500	$64,794,560
Small Urban/Rural Areas	$28,837,645	$46,145,820	$68,753,100	$99,110,100
Underserved Areas/Unserved Areas	N/A	$9,854,670	$14,353,300	$20,248,300
Total	**$55,657,814**	**$83,794,200**	**$126,324,900**	**$184,152,960**

Capital Costs

Capital cost estimates include vehicle replacement costs for existing services, equipment needed to expand current services to keep pace with increasing demand, new equipment for underserved and unserved areas, and replacement costs for these new fleets in the outer years. Estimated future annual capital costs are summarized in Table 1.4.

Table 1.4 Total Fleet Cost Estimates

	2010	**2020**	**2030**
Replacement Fleet Costs	$11,508,150*	$15,465,991	$20,784,999
Total Expanded Fleet Costs	$3,432,000	$18,888,089	$24,385,883
Total	**$14,940,150**	**$34,354,080**	**$45,170,882**

** $7.4 million for 60 vehicles under the American Recovery and Reinvestment Act included in this total.*

Vision, Policies, and Strategies

The vision, goals, and strategies presented below are the result of the concerted planning effort of stakeholders, community leaders, advisory committee members, and Mn/DOT transit professionals. In addition to providing technical research and demand modeling, consultant staff coordinated stakeholder involvement to support the development of the vision, policies, and strategies.

Vision

A high-quality coordinated transit network that is integrated into the overall transportation system and that meets the mobility needs of the people of Minnesota.

Policies

The current plan takes a comprehensive approach to planning for transit services in Greater Minnesota. These five policies seek to achieve Mn/DOT's vision for Greater Minnesota transit by establishing a set of overarching policies with accompanying strategies. These policies and their accompanying strategies will shape how Mn/DOT will manage its transit programs in the future.

Policy 1. Maintain and expand the statewide public transit network.

Strategy 1: Mn/DOT will maintain the viability of existing transit systems through the allocation of operating and financial assistance first to existing public transit service that meets performance targets.

Strategy 2: Mn/DOT will provide resources to start new transit services in areas without public transit when new financial resources are available to expand service.

Strategy 3: Mn/DOT will provide resources to expand core service frequencies and weekday or weekend service hours of existing providers when all geographic areas seeking public transit services have services and new financial resources are available.

Policy 2. Increase mobility for individuals and the workforce.

Strategy 1: Mn/DOT will work with the Metropolitan Planning Organizations (MPOs), Regional Development Commissions (RDCs), and tribal and local government to evaluate options to address mobility needs of individuals and the workforce, such as new routes, expanded carpool and vanpool assistance, and park-and-pool and park-and-ride lots.

Strategy 2: Mn/DOT, in its planning and policy work, will work to ensure that long-range public transit decisions in Greater Minnesota address future demographic shifts.

Policy 3. Provide a safe and reliable transit environment.

Strategy 1: Mn/DOT will work with transit providers to develop safety and security plans.

Strategy 2: Mn/DOT will provide continuing defensive driver training for transit operators through the Rural Transit Assistance Program (RTAP).

Strategy 3: Mn/DOT will make available safety and security training for transit staff.

Policy 4. Prioritize infrastructure investments to increase access to services.

Strategy 1: Mn/DOT will invest in size-appropriate ADA-accessible equipment to maximize operating efficiencies.

Strategy 2: Mn/DOT will invest in transit maintenance and storage facilities and passenger facilities that meet program guidelines and are consistent with local plans as funds are available.

Strategy 3: Mn/DOT will work with transit providers to replace or rehabilitate transit fleets following industry standards for vehicle replacement cycles.

Strategy 4: Mn/DOT, in cooperation with RDCs, tribal governments, local jurisdictions, and advocacy and recreation groups, should coordinate efforts to enhance regional bicycle and pedestrian systems.

Strategy 5: Mn/DOT will invest in advanced technology applications first at the largest service providers to add vehicle tracking technology and improve customer information, trip scheduling and fare payment/revenue handling.

Policy 5. Enhance coordination and communication to reach the broadest possible audience with the most cost-effective service.

Strategy 1: Mn/DOT will work in partnership with local human service and state agencies to coordinate service planning and operations for all users including the elderly, persons with disabilities, and low-income populations.

Strategy 2: Mn/DOT will work with local providers to expand marketing and information services to better inform target populations of available services.

Strategy 3: Mn/DOT and local transit and planning officials must work together to generate land use and transportation interaction decisions to yield more cost-effective transit solutions.

Strategy 4: Mn/DOT will support a peer-to-peer network to encourage the exchange of best practices information among transit providers.

Strategy 5: Mn/DOT will evaluate options for enhancing communication and coordination at the local level, including establishing mobility management organizations and mobility managers at least at the regional level.

Next Step: Greater Minnesota Transit Investment Plan

Following the completion of the Greater Minnesota Transit Plan, Mn/DOT will undertake the development of a Transit Needs Investment Plan as directed by the Minnesota State Legislature in Minnesota Statute 174.24, Subd. 1a. Transit service needs implementation plan. The plan will specifically address special transportation service ridership and needs. Based on identified needs, the objective of the plan is to determine the level of funding required to meet at least 80 percent of unmet transit service needs in greater Minnesota by July 1, 2015, and at least 90 percent of unmet transit service needs in greater Minnesota by July 1, 2025. This plan will be completed in 2010.

Chapter 2:
Plan Purpose and Development Process

Public transportation empowers individuals to be independent, seek and retain employment, access medical care, and gain access to new opportunities. The Greater Minnesota Transit Plan is a 20-year strategic plan that sets forth strategic directions for the future of public transportation in Greater Minnesota. The plan describes current challenges that the state is facing, examines future transit service needs and analyzes future levels of funding to meet that need.

Mn/DOT's Office of Transit administers the provision of transit services in Greater Minnesota in partnership with the federal government and local communities. This role is maintained through the development of policies and programs that provide technical and financial assistance to local transit programs; evaluate and improve performance of local transit systems; ensure effective utilization of state and federal investment in public transportation; and ensure compliance with all pertinent state and federal laws, rules, and regulations.

Relationship to Statewide Transportation Plan

Figure 2.1 highlights Mn/DOT's responsibility to plan and program many modes of transportation, including highways, freight, rail, bicycles and pedestrians, transit, and aeronautics. These plans may also develop investment policies and performance measures that serve as an important input for the statewide planning process. As one of Mn/DOT's Modal and Specialty Plans, the Greater Minnesota Transit Plan will be incorporated into the Minnesota Statewide Transportation Plan.

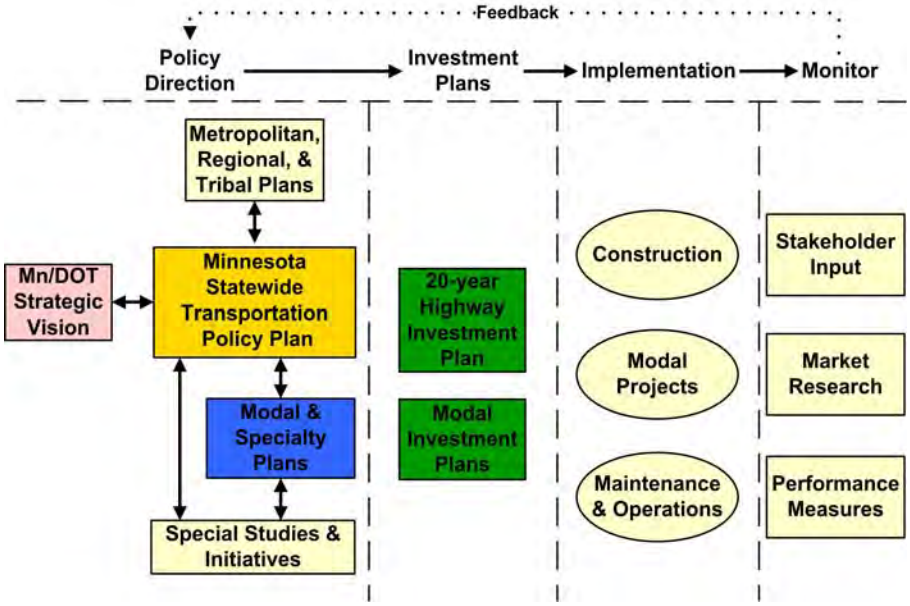


Figure 2.1 Planning and Programming Process

Source: Mn/DOT Office of Investment Management

Public Involvement

"Hear Every Voice" is Mn/DOT's policy on public and stakeholder participation. In Mn/DOT's decision-making processes, stakeholder consultation and public involvement play an integral role. In order to fulfill the department's mission, Mn/DOT is committed to involving members of the public throughout the state in the development of its plans. To "hear every voice," Mn/DOT's stakeholder consultation and public involvement processes for the Greater Minnesota Transit Plan included:

- Early and continuing public involvement opportunities
- Timely information about public transportation issues
- Reasonable public access to technical and policy information
- Adequate public notice of public involvement activities and time for public review and comment at key decision points
- Consideration and response to public input during the planning process

Project Management and Decision-Making Structure

The project management and decision-making structure for the Greater Minnesota Transit Plan 2010-2030 is presented below. The structure served as a guide for both internal and external communications.

Advisory Committee

The Advisory Committee was responsible for providing advice at key project milestones on a broader level than that of the Technical Team. The public involvement responsibilities of the Advisory Committee included providing advisory services for the development of the vision and providing assistance with stakeholder communications, including engaging stakeholders in the public involvement process.

Advisory Committee members included:

- Association of Minnesota Counties
- Chisago/Isanti County Heartland Express
- Duluth Transit Authority
- East Central Regional Development Commission
- Fargo/Moorhead Metropolitan Planning Organization
- Metropolitan Council
- Minnesota Board on Aging
- Minnesota Department of Employment and Economic Development
- Minnesota Department of Health
- Minnesota Department of Human Services
- Minnesota Department of Transportation – District 4
- Minnesota Department of Transportation – Office of Transit
- Minnesota Department of Transportation – Office of Investment Management
- Minnesota Public Transit Association
- Minnesota State Council on Disability
- Udac

- University of Minnesota, Center for Transportation Studies

Technical Team

The Technical Team provided overall project management and guided the work of the consultant team. For public involvement activities, Technical Team responsibilities included reviewing and approving surveys and other materials for release to stakeholders, facilitating stakeholder communication, and obtaining, organizing, and integrating stakeholder and public input into the plan update process.

Technical Team members included staff from the Mn/DOT Office of Transit, Office of Investment Management, and Modal Planning and Program Management Division.

Stakeholder Input

The stakeholder assessment process was an integral part of identifying current issues in public transportation and developing a vision for transit in Greater Minnesota. Government agencies, transit providers, human services organizations, healthcare organizations, business organizations, elected officials, and the general public were all included in the stakeholder assessment.

Three main stakeholder assessment strategies were used in the development of the plan: facilitated workshops, structured interviews, and an electronic survey. This section contains a summary of these strategies and their outcomes.

Facilitated Workshops

A series of seven facilitated workshops were held in Detroit Lakes, St. Cloud, Marshall, Duluth, Bemidji, Rochester, and Mankato during September 2008. The purpose of the workshops was to gather input from key stakeholder groups and provide an opportunity for the general public to learn about the project and provide feedback.

The workshops were structured into three main parts. The first portion of the workshop included background information on the project and the development process for the plan. The second portion of the workshop was an open discussion for participants to identify and discuss transit issues in Greater Minnesota. Discussions were facilitated regarding issues in service, marketing, coordination, regulation, and insurance. In the final portion of the workshop, project staff led workshop participants through a prioritization exercise in which they were asked to identify the top issues they wanted to see addressed in the plan. The list of issues included key issues identified in the 2006 locally developed transit coordination plans as well as additional issues identified during the discussion portion of the workshop.

While the discussions and prioritizations varied slightly by region, there were several issues that emerged as main themes at all seven workshops:

- Evening and weekend service
- Technology for trip scheduling
- Education for prospective users
- Appropriate size vehicles
- Expanded services in rural areas
- Expanded employee (commuter) services
- Coordination of trips with nursing homes, assisted living facilities, and healthcare providers
- Expanded transportation services across county lines

- Park-and-rides/infrastructure
- Establishment of mobility management organizations

Structured Interviews

Mn/DOT conducted 35 structured interviews with leaders from state and regional agencies in September 2008. Agencies represented at the interviews included state agencies, regional development commissions, area agencies on aging, and chambers of commerce.

The interviews served to gather an assessment from agency leaders on how well current transit service in Greater Minnesota was meeting local needs at the time of the interview. Questions focused on service gaps, groups benefiting from additional transit, priorities for expanding service, and emerging transit issues.

Table 2.1 Summary of Results from Structured Interviews

Topic	Top Responses
Greatest needs for additional transit	Expanded service area and hours Access to service in rural areas Education on available transit
Groups benefitting most from additional transit service	Seniors (83%) Persons with disabilities (69%)
Greatest challenges facing transit in the next five years	Availability of funding Aging population Coordination/crossing borders Increase in fuel costs*

**The cost of fuel at the time of the structured interviews was at a record high.*

Electronic Survey

Thirty-five electronic surveys were also completed by transit providers throughout Greater Minnesota in October 2008 as a complementary data collection method to the structured interviews.

Survey questions focused on the same topics as the structured interviews; however, the electronic survey also included several questions on the coordination of services.

Table 2.2 Summary of Results from Electronic Survey

Topic	Top Responses
Groups benefitting most from additional transit service	Seniors (37%) Commuters (23%)
Service gaps in current transit system	Time of service (74%) Service area coverage (51%)
Current barriers to expanding/improving service	Funding for operations (97%) Funding for equipment (43%) (prior to ARRA)
Top priorities for new funding	Expanded service hours (43%) Expanded service area (34%)
Greatest challenges to providing service	Funding (94%) Fuel prices (29%) Labor costs (29%)
Experiencing benefit from coordinating transit services with other organizations	Yes (89%) No (3%) Does not apply (8%)

Stakeholder Process Findings

The findings of the stakeholder assessment presented several key themes that were identified by stakeholders as issues throughout the assessment activities:

- **Expansion of service hours and area:** The need for expanded service hours and area was noted throughout the stakeholder process. Key issues were evening and weekend service as well as expanded options for service in rural areas.
- **Expansion of core services:** In contrast to the need for expanded service hours and area, a need for expanding core services was also identified. This expansion would increase service frequency and additional on-demand capacity during core service hours.
- **Technology:** Stakeholders identified a need for the expanded use of technology in trip planning and the coordination of services.
- **Commuter services:** Communities of all sizes expressed a need for increased commuter services to keep their transit systems and their communities viable.
- **Rideshare:** Expanding or promoting rideshare resources was identified as a strategy for expanding service, particularly under budgetary constraints.
- **Volunteer driver programs:** The expansion of resources for volunteer driver programs was also noted as a cost-effective strategy for expanding service.
- **Infrastructure:** Infrastructure, such as park-and-ride facilities, transfer stations, and service hubs, was identified as a need for expanding services.
- **Appropriate size vehicles and vehicle accessibility:** The need for size-appropriate vehicles was noted as an issue for increasing service availability and efficiency. A need for additional vehicles was also expressed as a key need, particularly in rural areas.
- **Coordination:** Coordination of services between transit providers and agencies was identified as a high priority for increasing system efficiencies.

- **Mobility management:** The use of mobility management organizations, either statewide or regionally, was identified as a strategy for expanding and improving coordination efforts.
- **Regulation and insurance issues:** Stakeholders also expressed a need for clarification or easing of transit regulations. It was also noted that insurance issues need to be addressed.
- **Information and education:** Stakeholders noted a lack of public awareness on current transit options in Greater Minnesota and expressed a need for additional information and education on available services.
- **Medical service and rider aides:** Stakeholders identified a growing need for rider aides for transit users who have specialized medical needs. A greater need for the coordination of medical trips by nursing homes and assisted living facilities was also identified.
- **Funding and costs:** The availability of funding was noted by stakeholders throughout the public involvement process as a challenge to providing service. Rising fuel prices were also noted as a challenge.

Stakeholder Feedback

Before finalizing the plan, the draft findings, conclusions, and directions for the Greater Minnesota Transit Plan were presented for stakeholder review and input. Opportunities for public input were provided through a series of open house outreach meetings, a videoconference conducted with participants from earlier workshops, development of project website content, and a public hearing. All comments received were catalogued to provide a record for the process.

Outreach Meetings

Seven outreach meetings were held across the state during April and May 2009 in conjunction with open house meetings being conducted during the development of the State Rail Plan. Summary information highlighting the study process and results was displayed at the open house meetings and staff members were available to address questions and record comments. The meetings were held in St. Cloud, Rochester, Duluth, Minneapolis-Saint Paul, Red Wing, Mankato, and Moorhead.

Videoconference

A videoconference session was conducted in April 2009 to communicate the key plan findings to participants from the facilitated workshops conducted earlier in the process. Each Mn/DOT District hosted a video link to allow participants the opportunity to review the plan highlights and provide feedback on the proposed outcomes.

Project Website

A link to the Greater Minnesota Transit Plan was provided on the Mn/DOT website. Information was provided on the overall study process and timeline as well as links to the draft plan and technical analysis documentation prepared for the plan. Viewers were offered the opportunity to review and comment on the proposed plan.

Public Hearing

A public hearing was conducted prior to finalization of the plan. This afforded an additional opportunity for stakeholder feedback on the proposed plan before final adoption. All comments were catalogued and became part of the formal record of the process.

Chapter 3: Challenges

Throughout Greater Minnesota, public transportation service provides residents with enhanced personal mobility and improved access to destinations. There are significant challenges facing transit users and providers. The stakeholder involvement process resulted in the identification of major themes that shaped the development of this plan and are summarized in five challenges. These challenges relate primarily to maintaining and expanding public transit services, meeting mobility needs of individuals and the workforce, exploring new transit service options and strategies, and addressing coordination of services among the many providers.

Challenge 1: Maintaining and Expanding Public Transit

Minnesota's public transit systems provide transportation alternatives to driving alone and allow people to live independently and participate in the state's communities and economy. Over the past decade, Minnesota has also expanded transit service to previously unserved areas, while maintaining an emphasis on keeping the existing service and infrastructure safe and in efficient operating condition. These transit services are funded through a financial partnership that includes local, state, and federal participation.

One of the biggest challenges facing public transportation agencies is finding sufficient and reliable sources of funds to not only operate and maintain existing systems, but also to expand service. Funding levels are subject to fluctuations as the State's general fund is appropriated every two years and local funds must be available to provide a percentage of matching funding. Funding is dedicated to transit through the State's Motor Vehicle Sales Tax (MVST), but revenues fluctuate substantially with the economy. There is still a need for a stable source in order to maintain transit service within Greater Minnesota. In addition, in order to expand transit services, additional funding would need to be identified.

Themes Related to the Challenge

Various outreach efforts including facilitated workshops, structured interviews, and an electronic survey have been used to gather public input for this planning effort. These responses are described in detail in Chapter 2, Plan Purpose and Development Process. Other public involvement activities have been conducted outside the scope of this plan but have been used for additional support to key themes. The following themes within the Regional Coordination Plans and MPO Transit Development Plans have been found to relate to the challenge.

Regional Coordination Plans

As part of Congress's reauthorization of the surface transportation act (SAFETEA-LU) in 2005, grantees under the New Freedom Initiative, Job Access and Reverse Commute (JARC) program, and Elderly and Disabled Transportation Program (5310) must be part of a "locally developed coordinated public transit/human service transportation plan" in order to receive funding for fiscal year 2007 and beyond. These plans are intended to help state and community leaders, agencies, and stakeholders develop programs and action plans for coordinated services.

Themes that emerged from Minnesota's regional coordination plans included funding, increased span of service, and service to outlying areas.

- **Funding**

Most regions identified insufficient funding as a primary barrier to successful coordination and provision of transit services. In many cases, most of the subsequent needs identified by regions would be satisfied in part by a substantial increase in funding. However, several plans recognized that rider needs far exceed the amount of available funding.

- **Increased Span of Service**

For many communities with public transit systems in place, operations are limited to daytime hours during weekdays only. Several regional plans express a need for expanded service hours on evenings and weekends to meet the diverse needs of transit customers.

- **Service to Outlying Areas**

Many regional plans expressed difficulty in providing services to outlying rural areas. Plans identified a need to improve services to county areas outside of small cities and to non-urbanized rural areas.

MPO Transit Development Plans

Each of Greater Minnesota's Metropolitan Planning Organizations (MPO) has a Transit Development Plan (TDP). A TDP is a seven-year planning document that guides operations/capital budgeting processes and future planning. Each TDP is updated annually, with a public hearing for community comment prior to adoption by the MPO. Each TDP does the following:

- Outlines the goals, objectives, standards, capital improvement program, and operating and financial programs.
- Provides a general direction for future delivery of public transportation.
- Assigns a general timeline for future improvements to the public transportation service.
- Assigns general cost and revenue requirements for future improvements to the public transportation system.

TDPs also identify issues relating to maintaining and expanding infrastructure in their respective geographic areas. In Minnesota, TDPs are available from Duluth, Rochester, St. Cloud, Fargo/Moorhead, and Grand Forks/East Grand Forks.

Duluth

The Duluth Transit Authority (DTA) has identified a need for additional resources to meet current demand. The agency's plan states that instances in which buses cannot pick up waiting passengers because of capacity constraints are becoming common. Additional service hours should be targeted at specific existing routes.

Rochester

Rochester Public Transit offers fixed-route and demand responsive/ADA paratransit service throughout the Rochester area. A recent service analysis identified unmet needs in the area, including additional service to the southwest portion of the city and north and south crosstown routings.

St. Cloud

St. Cloud Metro Bus operates fixed-route service as well as demand responsive general public and ADA paratransit service within the St. Cloud metropolitan area. Metro Bus has identified a number of specific unmet service needs, including a connection to Northstar Commuter Rail at Big Lake, expansion of service hours on holidays, and service to a number of key destinations in the St. Cloud area.

Fargo/Moorhead

Fargo/Moorhead Metro Area Transit has identified a need for expanded fixed-route service to the growing areas throughout the cities. Specific unmet needs include service to neighboring communities, increased service frequency for college transit customers, and funding for city-wide demand responsive service.

Grand Forks/East Grand Forks

Grand Forks/East Grand Forks Transit has identified a need for service to employers. Specific unmet needs include service to the East Grand Forks Industrial Park and American Crystal Sugar Plant.

Challenge 2: Changing Mobility Needs of Individuals

People who cannot or do not drive face difficulties getting to work, school, and medical care. Personal mobility means having transportation services available that can take an individual where the individual needs to travel, when the individual wants to travel, being informed about the services, knowing how to use them, being able to use them, and having the means to pay for them. Public transit is the means by which these trips are made by those who choose not to or cannot drive.

This section provides background information on demographic conditions and trends that influence Greater Minnesota, both in terms of historic trends as well as future projections. These trends reflect the growing mobility needs of Greater Minnesota's population. Specific emphasis in this discussion will be placed on consumer groups that have traditionally had mobility limitations: seniors, minorities, low-income persons, and persons with disabilities. As these populations change and grow, the challenge is how to implement transit services to meet their mobility needs.

Growing Population

As illustrated in Figure 3.1, Minnesota has grown more rapidly since 2000 than its neighboring states in the Upper Midwest, but has not grown as fast as the nation as a whole. Between 1990 and 2007, Minnesota's population increased by almost 19 percent from 4.4 million residents to nearly 5.2 million residents.

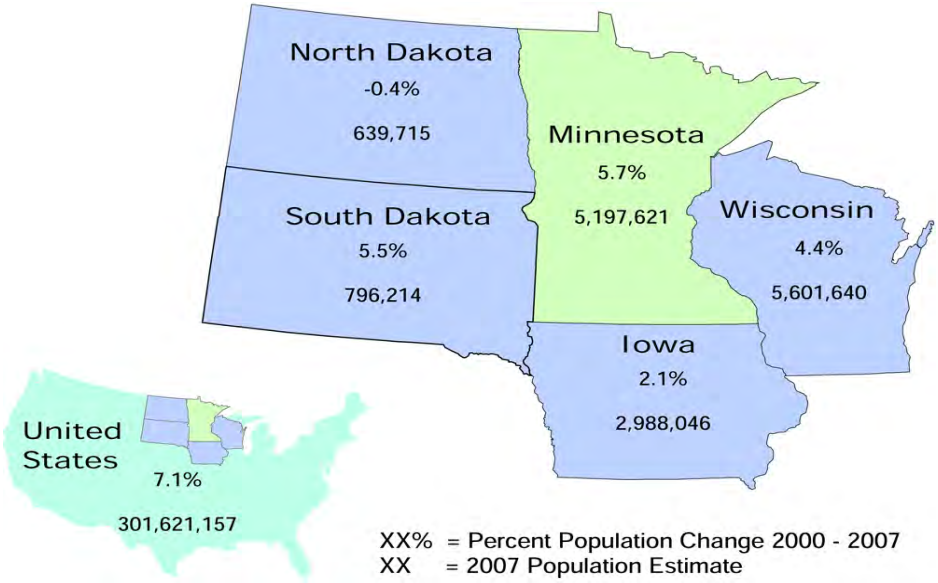


Figure 3.1 Minnesota Statewide Population Growth, 2000 to 2007

Source: U.S. Census Bureau

The majority of the state's population growth has historically been focused on urban areas of the state, including regional centers such as Rochester and St. Cloud. The recent trend of population growth in urban areas is expected to continue in the future for Greater Minnesota as illustrated in Figure 3.2.

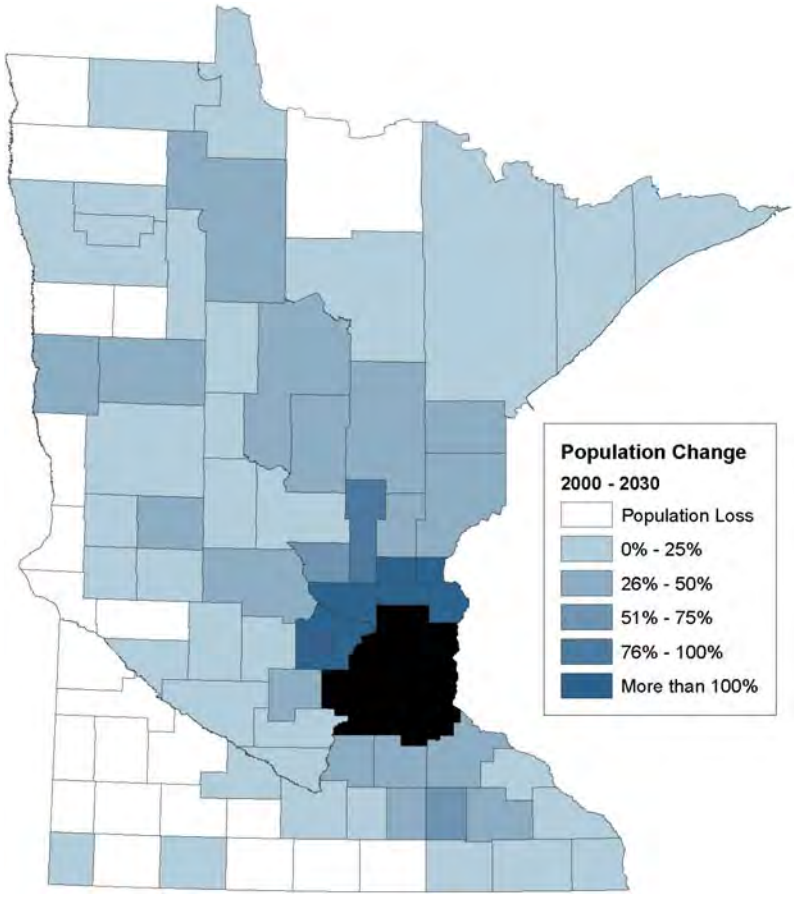
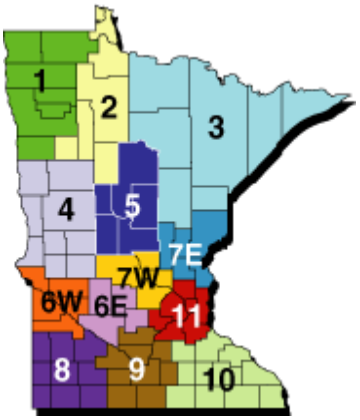


Figure 3.2 Population Change by County, 2000–2030

Source: U.S. Census Bureau and Minnesota State Demographic Center

To better interpret the trends across the state, the socioeconomic data was analyzed within the state's Economic Development Regions. The regions and their corresponding counties are shown in



1: Kittson, Marshall, Norman, Pennington, Polk, Red Lake, Roseau

2: Beltrami, Clearwater, Hubbard, Lake of the Woods, Mahnomen

3: Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, St. Louis

4: Becker, Clay, Douglas, Grant, Otter Tail, Pope, Stevens, Traverse, Wilkin

5: Cass, Crow Wing, Morrison, Todd, Wadena

6W: Big Stone, Chippewa, Lac qui Parle, Swift, Yellow Medicine

6E: Kandiyohi, McLeod, Meeker, Renville

7W: Benton, Sherburne, Stearns, Wright

7E: Chisago, Isanti, Kanabec, Mille Lacs, Pine

8: Cottonwood, Jackson, Lincoln, Lyon, Murray, Nobles, Pipestone, Redwood, Rock

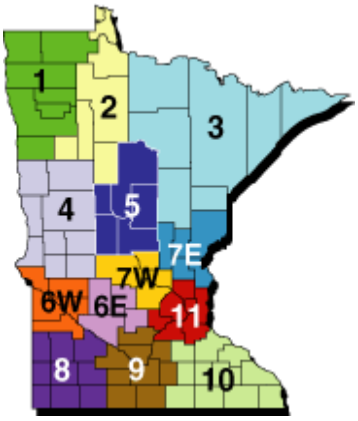
9: Blue Earth, Brown, Faribault, Le Sueur, Martin, Nicollet, Sibley, Waseca, Watonwan

10: Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha, Winona

11: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, Washington

Figure 3.3.

1: Kittson, Marshall, Norman, Pennington, Polk, Red Lake, Roseau



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11: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, Washington

Figure 3.3 Minnesota DEED Economic Development Regions

Source: Minnesota Department of Employment and Economic Development

From 2000 to 2030, the population of Greater Minnesota is expected to increase by 32 percent—adding nearly three-quarters of a million people. However, population growth will not occur uniformly throughout the state. As illustrated in Figure 3.2, the largest population gains in the state will occur immediately north and northwest of the Twin Cities. The majority of growth will occur in Regions 7E and 7W, with 42 percent of the state's total growth occurring in 7W. Wright County alone will gain over 130,000 residents, moving it from the fourth largest county in Greater Minnesota to the largest. Region 10 is also expected to see large gains, accounting for 18 percent of the state's total gains.

Some parts of the state are not expected to experience growth in population. While most of the northern third of the state will likely experience modest gains in population, some populations in that portion of the state are expected to decrease slightly. Between now and 2030, 17 counties are expected to lose population, with the majority of those losses occurring in Regions 6W and 8 where virtually all counties are expected to decrease in population.

Aging Population

As people age, isolation becomes a growing problem, and access and mobility become increasingly critical needs. For older Americans, affordable, reliable transportation options are essential. In 2005, approximately 12 percent of Minnesotans were 65 years of age or older. By 2020, Minnesota is expected to have more seniors than kindergartners. By 2035, the proportion of seniors is expected to nearly double, with 21 percent of Minnesotans aged 65 or older. Figure 3.4 shows the population for age cohorts for 2005 and 2035, and illustrates the significant increase in the size for cohorts over 60.

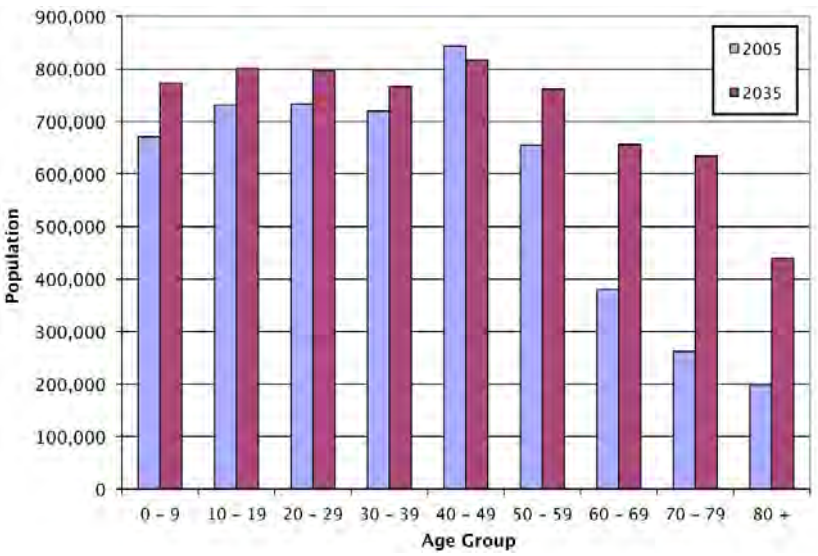

Figure 3.4 Minnesota's Population by Age, 2005–2035

Source: U.S. Census Bureau, Minnesota State Demographic Center

The Transit Market Research Study from 2000 surveyed transit riders across Minnesota. It showed that between 50 and 60 percent of users in rural counties were 65 years of age or older. This aging demographic trend will impact the need for transit services in the future.

Figure 3.5 shows the change in elderly population between 2000 and 2030 by county.

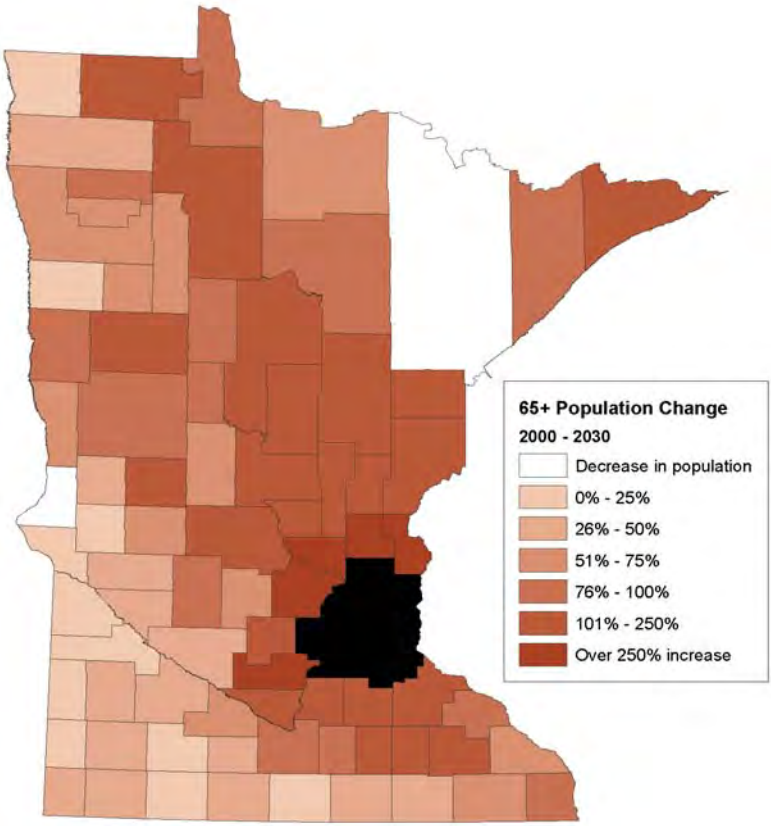

Figure 3.5 Age 65+ Population Change, 2000–2030

Source: U.S. Census Bureau and Minnesota State Demographic Center

Changing Population

The makeup of the population in Greater Minnesota is changing as the overall size of the population grows. Significant changes have occurred in recent years among some of the key user markets of public transit services. These shifts present ongoing challenges to service providers.

Persons with Disabilities

Persons with disabilities comprise 15 to 20 percent of the total population in most of Greater Minnesota's Economic Development Regions, as shown in Figure 3.6. The Americans with Disabilities Act (ADA) defines a person with a disability as an individual with a physical or mental impairment that substantially limits one or more major life activities, such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working. It is anticipated that this population will grow at a faster rate than the general population in future years due to the significant number of seniors with disabilities.

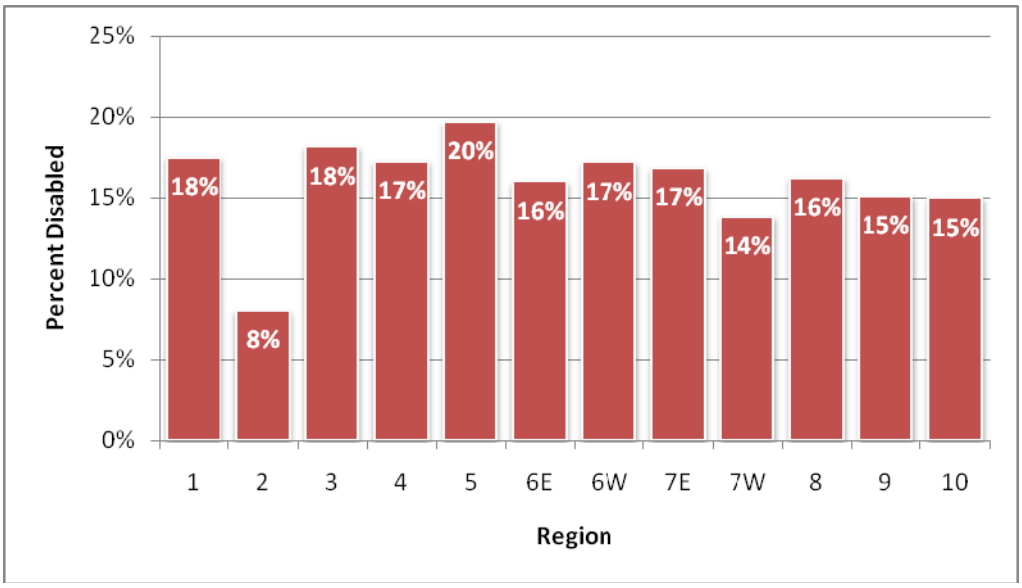

Figure 3.6 Percent of Population with a Disability by Region, 2000

Source: U.S. Census Bureau

The percentage of persons with disabilities relative to the entire population is similar across regions and ranges from 13.8 percent (Region 7W) to 19.7 percent (Region 5). The exception is Region 2, whose population has approximately half the percentage of persons with disabilities as other regions across the state.

For many people with disabilities, life is severely limited by the lack of transportation. Some people with disabilities who are willing and able to work cannot do so because of inadequate transportation. Others cannot shop, socialize, enjoy recreational or spiritual activities, or even leave their homes for the same reason. Limited funding for public transit service restricts the ability to meet the needs of persons with disabilities.

Low-Income Persons and Access to Transportation

The percentage of Minnesotans living at or below the poverty line is just under 10 percent statewide. Since the 2000 Census, the number of households living in poverty has increased slightly. However, Minnesota's poverty rate remains lower than the national average. Within the state, poverty fell between 1990 and 2000 but has increased by a few percentage points since then. The percent of Minnesotans below the poverty line was estimated to be 9.2 percent in 2005, compared to 7.9 percent in the 2000 Census. Figure 3.7 illustrates the relative presence of poverty across the state by county, and Figure 3.8 shows the estimate of households in poverty by region within the state. The Greater Minnesota Transit Market Research Study surveyed transit riders in 2000 on basic demographic characteristics. Between 58 and 69 percent of the respondents to the onboard survey had annual incomes below $15,000. The low-income population across the state is expected to grow at a faster rate than the general population due to the number of elderly poor.

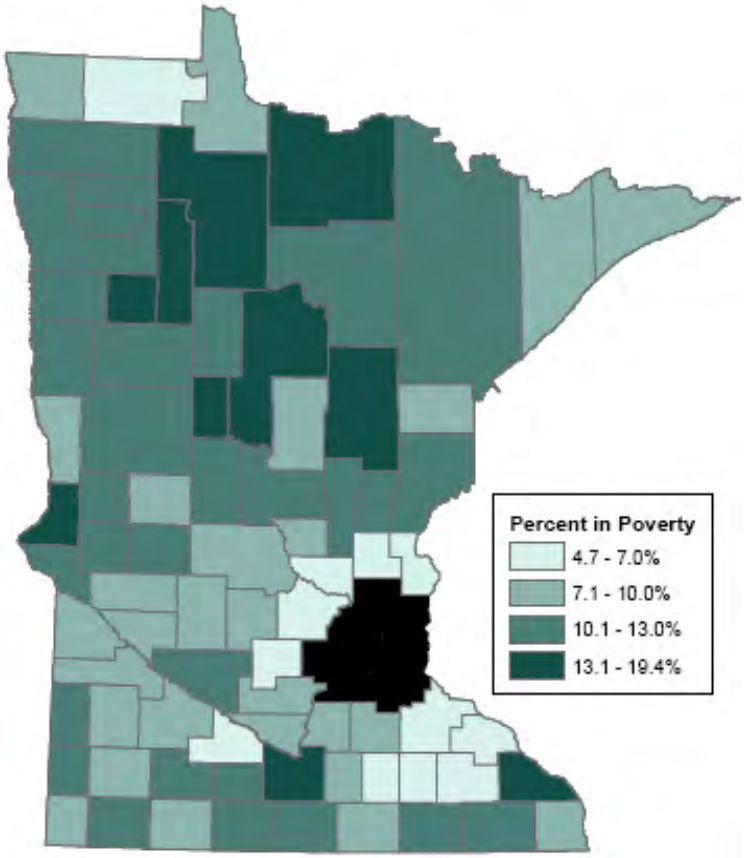

Figure 3.7 Percent in Poverty by County, 2005

Source: Minnesota State Demographic Center

Another indicator of transportation need is lack of access to a vehicle for all persons in a household. Approximately 6.5 percent of Minnesota households have no access to a vehicle. Another 29.5 percent of households have access to only one vehicle. In these households people look to public transit to meet their mobility needs.

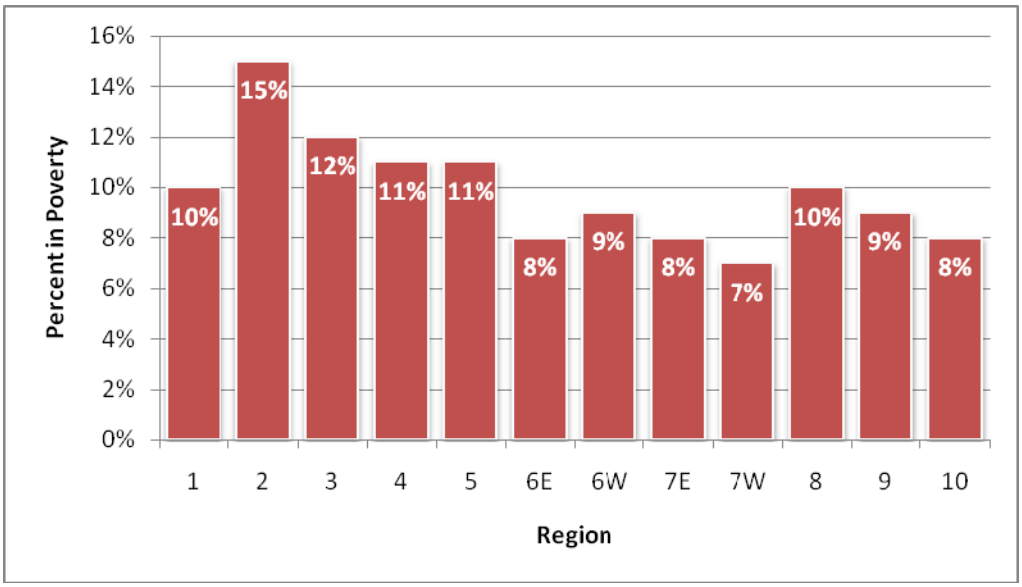

Figure 3.8 Poverty Estimates by Region, 2005

Source: Minnesota State Demographic Center

Those in poverty or with limited access to personal transportation are often described as transit dependent and are one of the principal transit consumer groups.

Minorities

The ethnic and racial composition of Minnesota's population is changing, but it is still less diverse than the nation. Minnesota's nonwhite and Latino (minority) population increased from six percent to 14 percent between 1990 and 2005. In coming decades, Minnesota's population is anticipated to continue becoming more racially and ethnically diverse. Between 2005 and 2015, the nonwhite population is projected to grow by 35 percent, compared to a growth rate of seven percent for the white population. During the same time period, the Hispanic population is expected to increase by 47 percent. Much of the rapid growth in the nonwhite and Latino population stems from migration from other states and from outside of the United States.

The largest proportions of minority populations are found in northern Minnesota counties with large concentrations of American Indians. As illustrated in Figure 3.9, minority levels for individual counties range from under five percent in much of the central portion of the state to almost 22 percent in Beltrami County in Region 2.

Documenting nondiscrimination in transportation as it pertains to minorities is required by Title VI of the Civil Rights Act of 1964. Mn/DOT is working to ensure that all Minnesotans have meaningful access to transit services, including minorities.

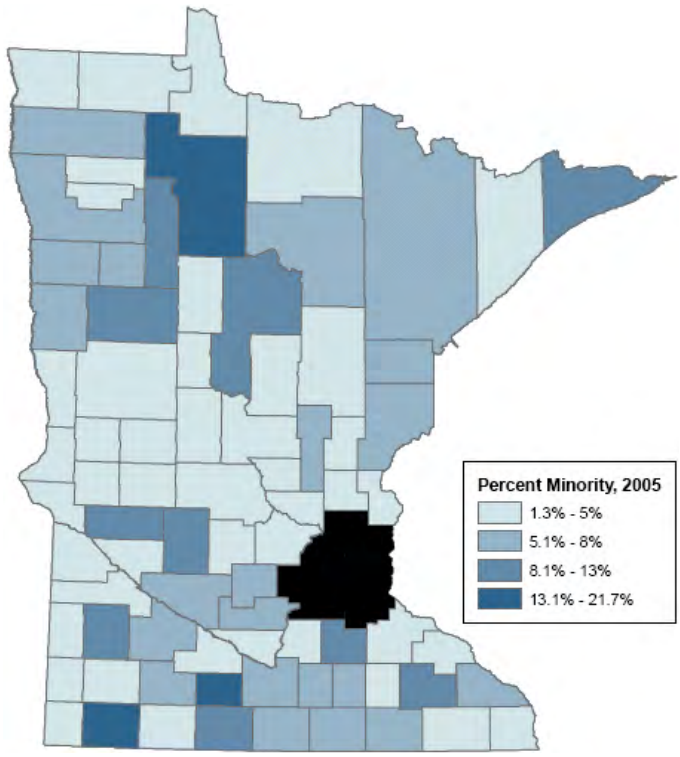

Figure 3.9 Percent Minority by County, 2005

Source: Minnesota State Demographic Center

At the regional level, slight variations in minority population levels exist throughout Greater Minnesota. As displayed in Table 3.1, most regions range from approximately four percent minority (Region 7W) to seven percent minority (Region 8). At 16.3 percent, Region 2's proportion of minorities is far greater than that of any other region.

Table 3.1 Minority Population by Region, 2005

Region	Minority Population	Total Population	Portion of Total (Percent)
1	4,728	88,226	5.4
2	13,161	80,572	16.3
3	18,504	325,356	5.7
4	10,944	218,479	5.0
5	7,106	161,547	4.4
6E	7,587	119,255	6.4
6W	2,480	48,135	5.2
7E	6,269	159,296	3.9
7W	12,839	378,151	3.4
8	8,727	119,059	7.3
9	12,703	227,538	5.6
10	32,858	485,909	6.8

Source: Minnesota Demographic Center

Themes Related to the Challenge

Various outreach efforts including facilitated workshops, structured interviews, and an electronic survey have been used to gather public input for this planning effort. These responses are described in detail in Chapter 2, Plan Purpose and Development Process. Other public involvement activities have been conducted outside the scope of this plan but have been used for additional support to key themes. The following themes within the Regional Coordination Plans have been found to relate to the challenge.

Regional Coordination Plans

As part of Congress's reauthorization of the surface transportation act (SAFETEA-LU) in 2005, grantees under the New Freedom Initiative, Job Access and Reverse Commute (JARC) program, and Elderly and Disabled Transportation Program (5310) must be part of a "locally developed coordinated public transit/human service transportation plan" in order to receive funding for fiscal year 2007 and beyond. These plans are intended to help state and community leaders, agencies, and stakeholders develop programs and action plans for coordinated services.

Themes that emerged from Minnesota's regional coordination plans included affordable cost to riders and rider education and awareness.

- **Affordable Cost to Riders**

Regional plans identified a need to keep the cost of public transportation services affordable for users. This need is directly linked to the availability of funding to service providers.

- **Rider Education and Awareness**

Many plans identified a demonstrated need to better educate riders and potential riders about the availability of services and how to access those services. A related issue for many regions was the need to coordinate marketing of available services through a common directory.

Challenge 3: Changing Mobility Needs of the Workforce

Historical trends in employment, as well as the commuting patterns that connect rural Minnesota residents to jobs, play a large role in determining the shape of this plan. During the public involvement process, stakeholders consistently identified an increasing need for employment-related transit services to provide residents in Greater Minnesota with increased access to employment opportunities. As commuter travel needs continue to spread beyond traditional transit service areas, meeting the mobility needs of the workforce is a significant challenge.

This section will examine trends in Greater Minnesota employment growth and commuting patterns to help determine demand for transit services. Three trends will be examined in this section: long-term growth in employment in Greater Minnesota, more Minnesotans live and work in different counties, and increased commuting into urban areas.

Long-Term Growth in Employment in Greater Minnesota

Greater Minnesota's employment is projected to continue to grow through 2030 with the largest gains expected in regions to the north and northwest of the Twin Cities. In addition, employment growth is also expected to concentrate in regional centers, corresponding with population growth projected in

these areas. The statewide increase in employment is projected to be almost 30 percent from 2000 to 2030, equating to an increase of approximately 350,000 workers.

The highest growth in employment will occur in Regions 7E, 7W, and 10, as shown in Table 3.2. Employment growth is expected to remain virtually flat in the northern portions of the state in Regions 1 and 3, and losses are expected in the southwest in Regions 6W and 8. Most of the rest of the state will likely see modest gains.

Table 3.2 Greater Minnesota Employment Change by Region, 2000–2030

Region	2000	2030	Change	Change (Percent)
1	44,390	45,460	1,070	2
2	36,788	44,690	7,902	21
3	159,133	159,030	-103	--
4	106,760	124,820	18,060	17
5	73,973	92,790	18,817	25
6E	61,512	68,630	7,118	12
6W	24,292	20,640	-3,652	-15
7E	70,655	135,030	64,375	91
7W	179,878	346,100	166,222	92
8	63,203	59,310	-3,893	-6
9	122,543	135,370	12,827	10
10	250,694	310,890	60,196	24
Total	1,193,821	1,542,760	348,939	29

Source: Minnesota State Demographic Center

Figure 3.10 presents the percentage change in employment between 2000 and 2030 by county.

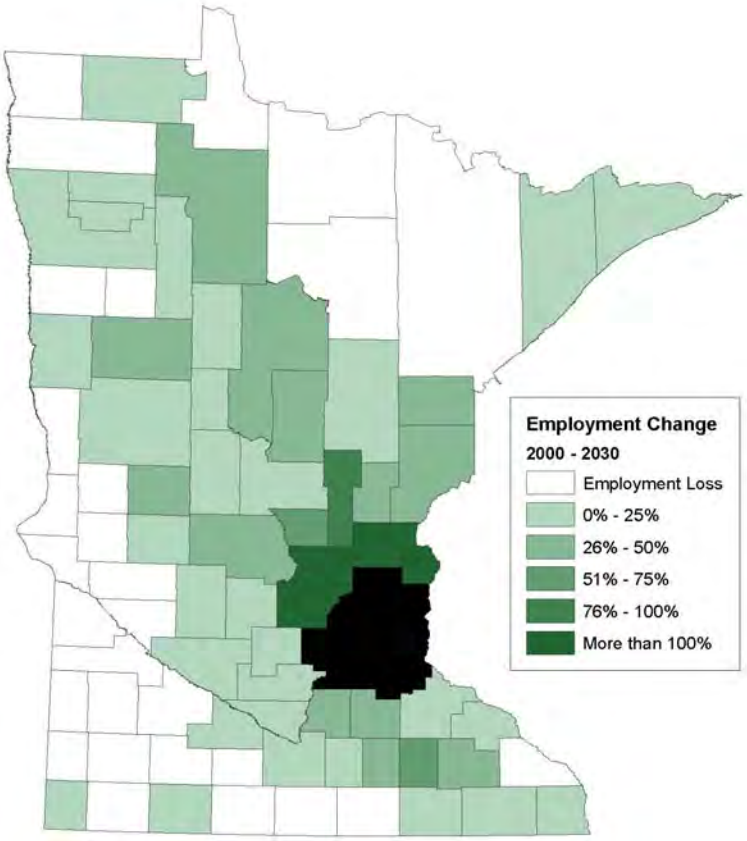

Figure 3.10 Projected Change in Employment by County, 2000–2030

Source: Minnesota State Demographic Center

Minnesotans Increasingly Live and Work in Different Counties

The number of Minnesota workers employed in their county of residence has fallen steadily since 1970. In that year, over 80 percent of Minnesota workers were employed in the same county where they lived. By 2000, this figure had fallen to 66.3 percent.

Rates of working outside the county of residence range from three percent in outlying counties to nearly 70 percent in the Twin Cities collar counties, as shown in Figure 3.11. Generally, these rates decline as distance from the Twin Cities increases. Because of their proximity to the strong job market of the Twin Cities, exurban counties surrounding Minneapolis and Saint Paul have the lowest percentages of residents who live and work in the same county. The Twin Cities area is a magnet for workers from other regions. In addition, counties containing regional centers, such as Rochester and Duluth, have lower rates than their neighboring counties.

It is important to acknowledge that a work trip across county boundaries is not necessarily longer than a work trip within a county. For some people, a trip from one county to another may mean a journey of a just a few blocks. However, on average, the declining proportion of workers employed in their county of residence indicates that Minnesotans are commuting longer distances.

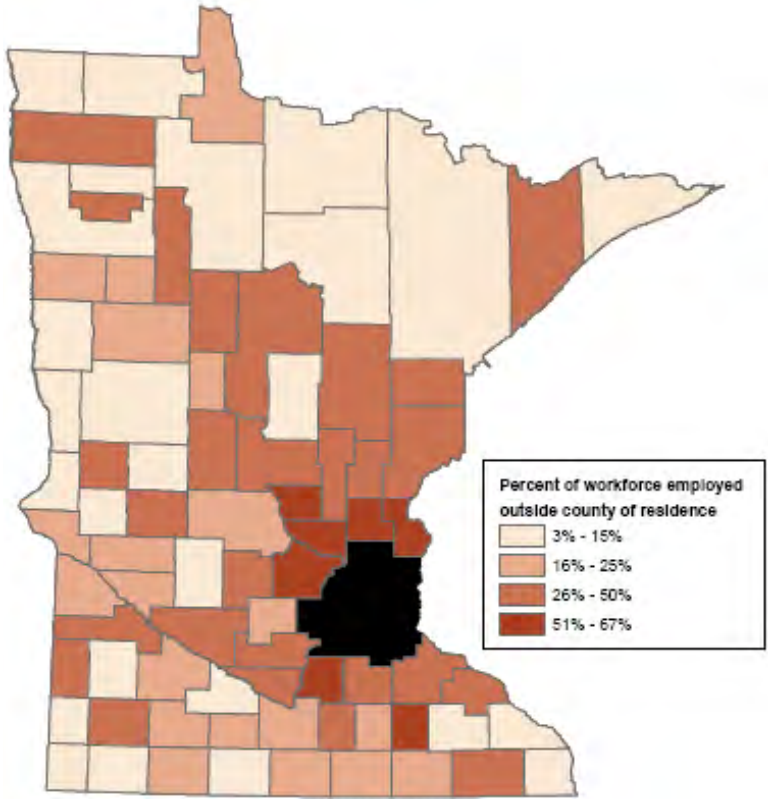

Figure 3.11 Employment Outside County of Residence, 2000

Source: U.S. Census Bureau

As employment growth continues in areas adjacent to the Twin Cities and in regional centers across Greater Minnesota, the trend of Minnesotans working outside the county they live in is expected to continue as workers are drawn to these employment concentrations. This will present greater challenges for transit, as commute distances will likely increase with even more diverse origins and destinations.

Increased Commuting into Urban Areas

Twin Cities

While the regions of Greater Minnesota play a vital role in the state's economic success, the Twin Cities Metropolitan Area serves as the state's economic and employment hub. Commuter transit corridors focused on the Twin Cities Metropolitan Area connect residents of Greater Minnesota counties with important employment centers in the Twin Cities. The Metropolitan Council 2030 Transportation Policy Plan identifies several promising corridors for further study as potential transitway/commuter corridors and long-distance express routes to serve both the Twin Cities Metropolitan Area and other areas throughout Greater Minnesota.

Four corridors were identified for initial screening and possible alternatives analysis studies. These corridors are as follows:

- I-35W north of downtown Minneapolis
- Trunk Highway 36
- Trunk Highway 65/Central Avenue

- I-94 east of downtown Saint Paul and Minneapolis

Further, long-distance express bus routes may be introduced outside of the seven-county area where appropriate, to provide transit service between exurban areas and downtown Minneapolis or Saint Paul. Possible corridors include the following:

- I-35 from North Branch
- I-35 from Faribault
- TH 55 from Buffalo
- St. Cloud to Big Lake (connecting to the Northstar Commuter Rail service)

Greater Minnesota

Worker flows to employment centers in Greater Minnesota can be examined through commute shed analysis. This type of analysis uses Longitudinal Employment and Household Dynamics (LEHD) data, a type of information from the U.S. Census Bureau that links worker home origins with their employment destinations.

Figure 3.12, Figure 3.13, and Figure 3.14 illustrate commute sheds for Rochester, Duluth, and St. Cloud, which are the three largest regional centers in Greater Minnesota. These figures illustrate the difference between commute sheds for these regional centers. Duluth has the most tightly constrained commute shed with the majority of workers commuting within a 10- to 15-mile radius. Rochester and St. Cloud have a broader area from which workers travel. Both of these cities show a large number of workers commuting 15 to 20 miles.

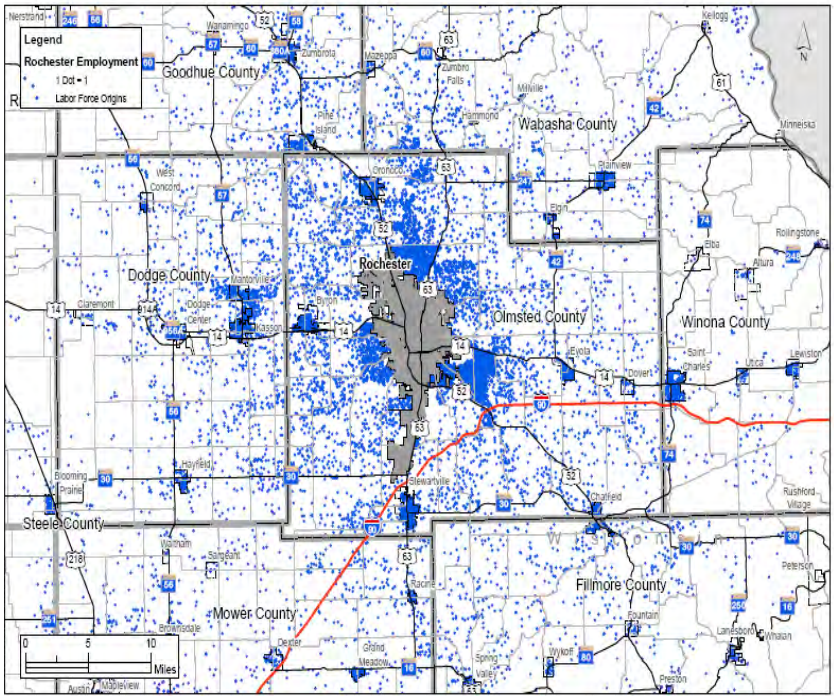

Figure 3.12 City of Rochester Commute Shed

Source: U.S. Census Bureau, LEHD.

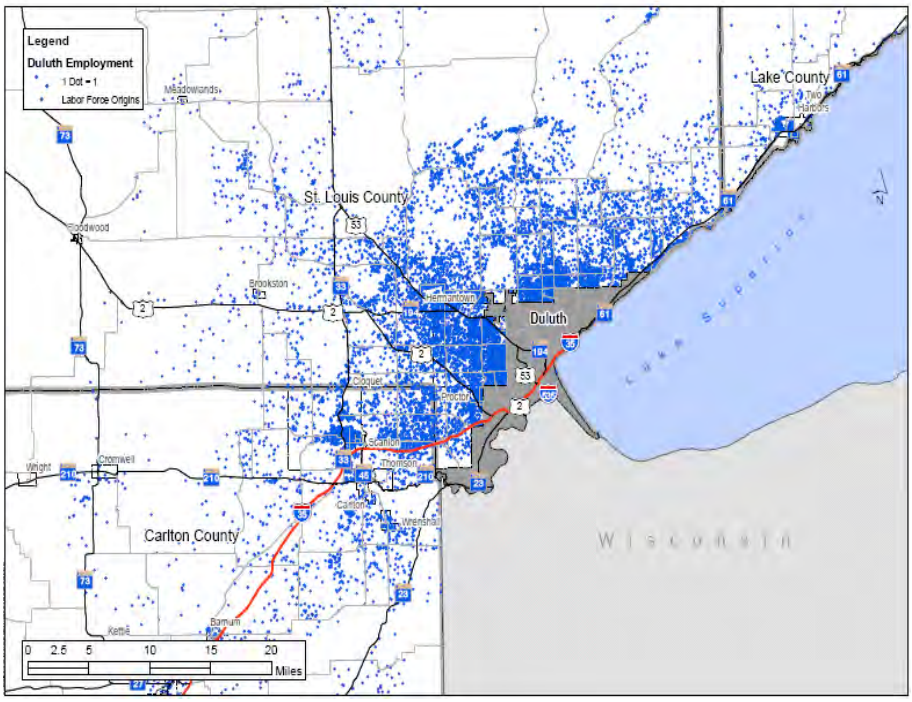

Figure 3.13 City of Duluth Commute Shed

Source: U.S. Census Bureau, LEHD

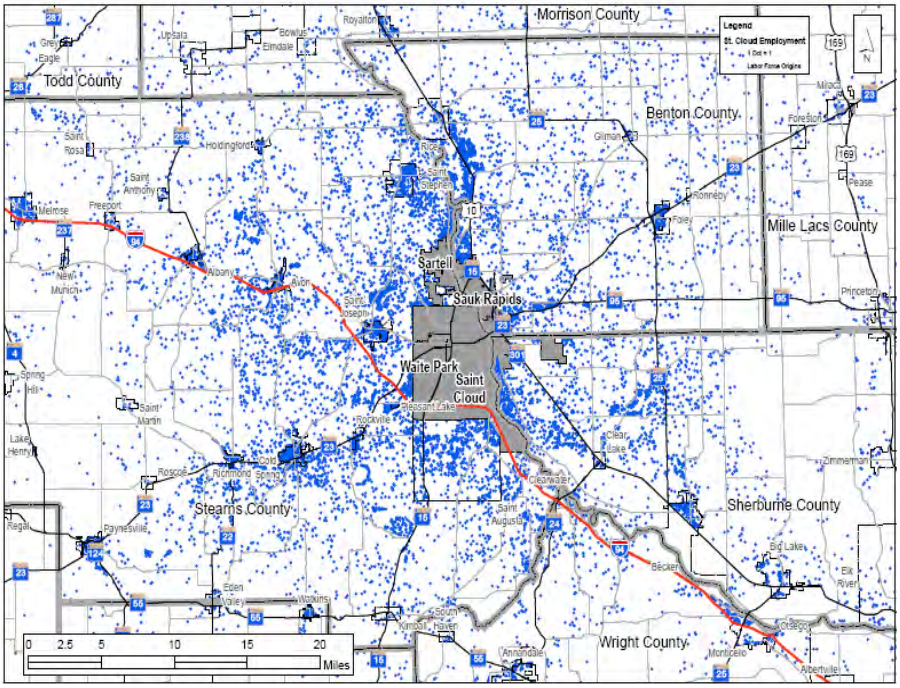

Figure 3.14 City of St. Cloud Commute Shed

Source: U.S. Census Bureau, LEHD

Themes Related to the Challenge

Various outreach efforts including facilitated workshops, structured interviews, and an electronic survey have been used to gather public input for this planning effort. These responses are described in detail in Chapter 2, Plan Purpose and Development Process. Other public involvement activities have been conducted outside the scope of this plan but have been used for additional support to key themes.

Challenge 4: Changing Transit Options in Greater Minnesota

In Minnesota, residents have many choices about how to travel to work, school, and other destinations. Each day a decision has to be made at a personal level about how to travel. As a state, we also have to make decisions regarding the multiplicity of transit options. We live in an increasingly multimodal society; therefore, it is important to discuss the various transit options that are available and may have potential in Greater Minnesota. Knowing when to take advantage of each transit option and determining its applicability presents both a challenge and an opportunity for Greater Minnesota. This section describes several transit options for Greater Minnesota, including intercity bus, commuter bus, rail, and rideshare.

Possible Transit Options

Intercity Bus

Intercity Bus Service is regularly scheduled bus service for the general public that operates with limited stops over fixed routes connecting two or more urban areas not in close proximity, has the capacity for transporting baggage carried by passengers, and makes meaningful connections with scheduled intercity bus service to more distant points, if such service is available. Commuter bus service is not included in this definition. The intercity bus system is operated by three main carriers: Jefferson Lines, Greyhound Lines, and Megabus. Jefferson Lines provides the majority of service in Greater Minnesota and at this time is the only recipient in Minnesota of federal assistance for rural intercity transit service through the Section 5311(f) program. Both Greyhound and Megabus focus on providing express services, such as from the Twin Cities to Chicago. Intercity bus services as of June 2009 are shown in Figure 3.15.

While ridership on routes in rural Minnesota increased in 2008, national intercity bus ridership levels have decreased significantly since the 1960s. The advent of the freeway system led bus companies to shift services away from small towns and rural areas. Intercity bus deregulation in 1982 also allowed the firms to drop unprofitable rural services. Despite a smaller network in 2009 than in 1999, 85 percent of Minnesotans in rural areas live within 25 miles of an intercity bus stop.

Several population groups are known to need and use intercity bus based on demographic characteristics such as age, income, or automobile availability. These segments of the population are defined using Census categories and include young adults (ages 18 to 24), auto-less households, older adults (age 60 and above), persons living below the poverty level, and persons with a mobility limitation.

Figure 3.15 2009 Intercity Bus Services

Source: Mn/DOT

Volunteer Driver

The volunteer driver system is a program where transportation is provided by a volunteer who drives their own vehicle. The use of volunteer drivers may be used to supplement public transportation buses but is usually used to access destinations beyond the public transit system area served. Volunteer driver programs administered by public transit agencies are presently available in 48 counties in Greater Minnesota, as shown in Figure 3.16.

Expanding transit service by engaging volunteer drivers is a strategy that enables communities to address limited public transportation and the high cost of private transportation. However, volunteer driver programs are often subject to a shortage of volunteers, issues regarding insurance coverage, and

general program administration. Still, volunteer drivers greatly increase mobility for the primary consumer groups in Greater Minnesota including the transit dependent senior populations, persons with disabilities, and the economically disadvantaged.

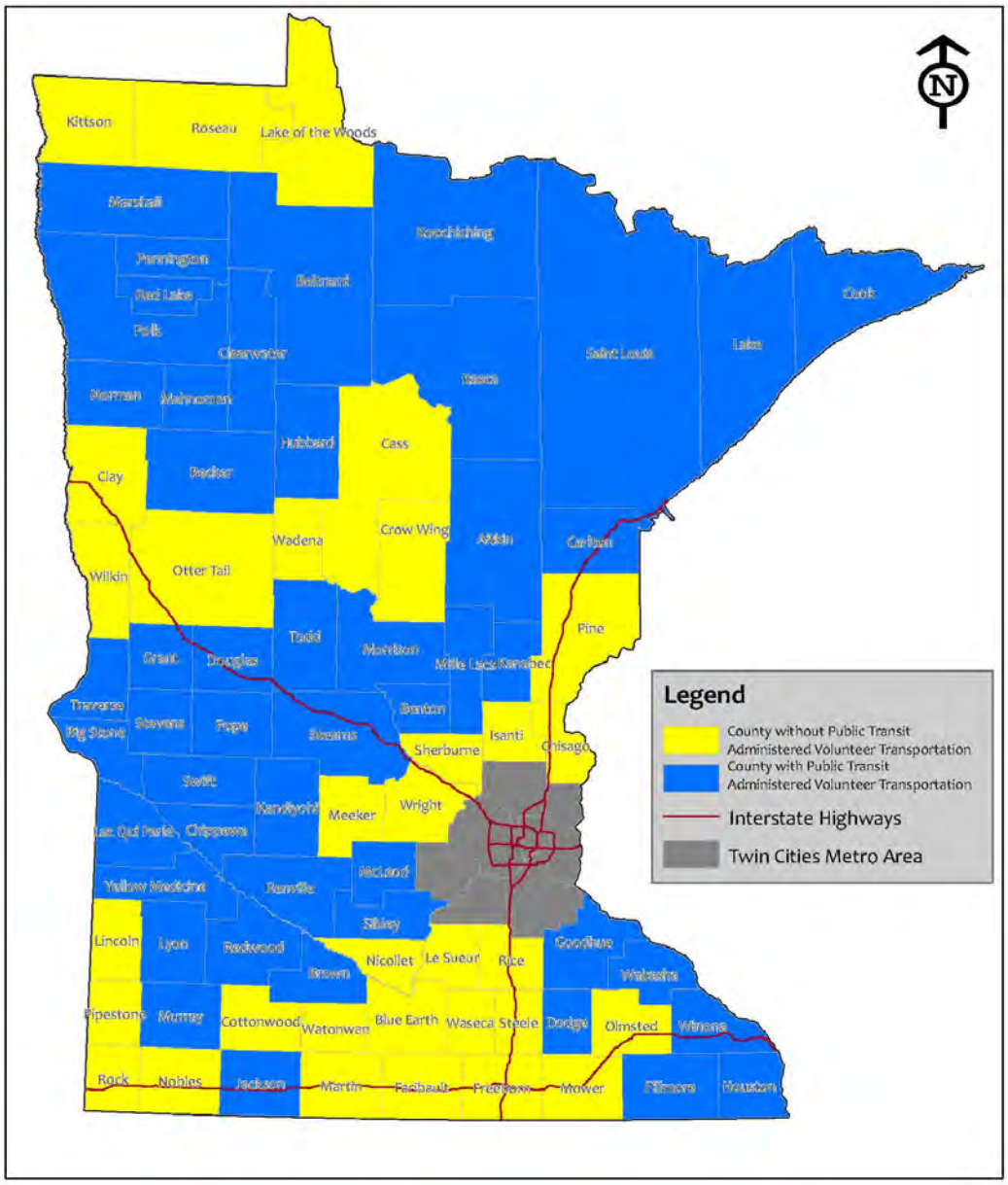

Figure 3.16 Public Transit-Administered Volunteer Transportation

Source: Mn/DOT

Rideshare

Ridesharing, either through carpooling or vanpooling, serve commuters who travel long distances to get to work, such as from Greater Minnesota to job sites in the Twin Cities. Unlike carpooling, vanpooling is usually administered by a transit provider. For Greater Minnesota residents, vanpools are currently available through the Metropolitan Council to residents who travel to the Twin Cities Metropolitan Area. The program, known as Van-Go!, had 92 vanpools in operation as of February 2009. Many of

these vanpools that travel into the Twin Cities Metropolitan Area originate in Greater Minnesota as shown in Figure 3.17.

Both carpooling and vanpooling reduce the costs involved in repetitive or long-distance driving by sharing the costs of the trip. By ridesharing, commuters may use high-occupancy vehicle (HOV) lanes, which provide an incentive to rideshare and also help to reduce traffic congestion for people who drive alone. Both carpooling and vanpooling provide similar environmental benefits by reducing the number of cars on the road, thus reducing greenhouse gas emissions and the need for additional parking spaces at the destination.

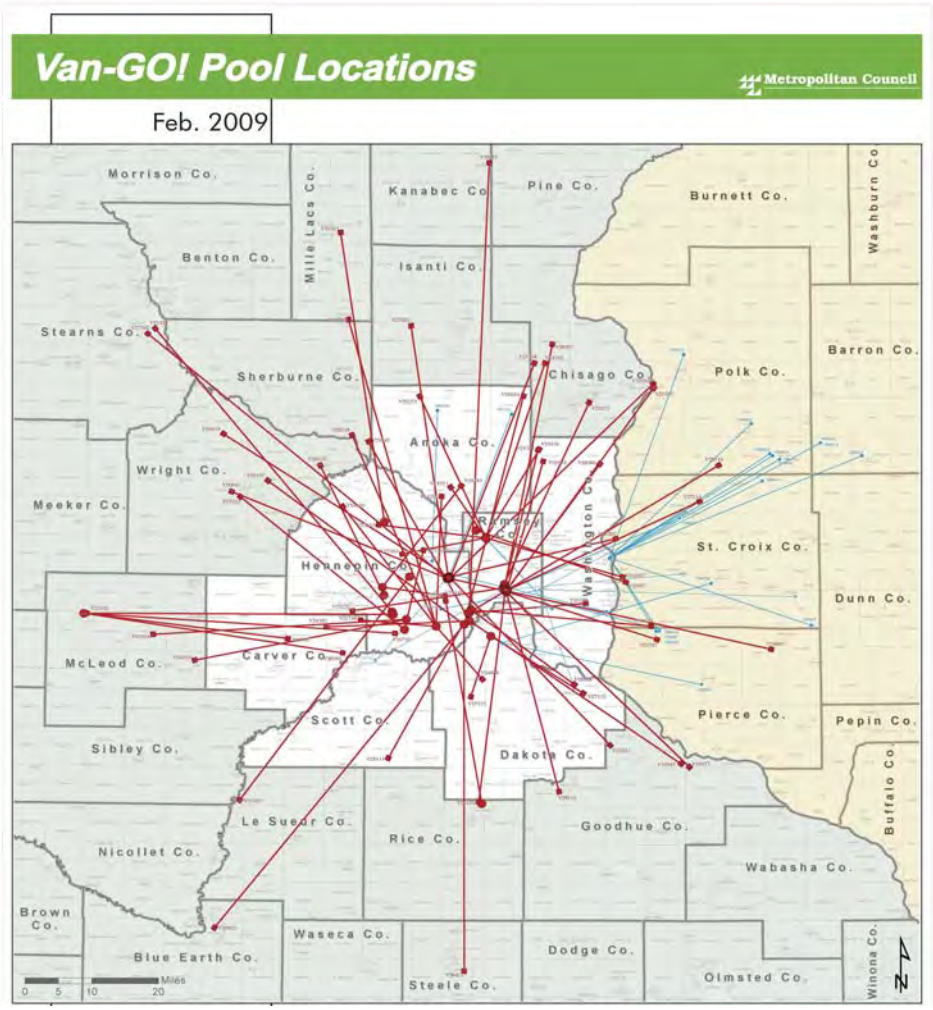

Figure 3.17 Minnesota Vanpool Origins and Destinations, 2009

Source: Metropolitan Council

Despite these benefits, implementing formal rideshare programs is a challenge. While this transit option does address the mobility needs that are spreading beyond traditional service areas, the cost to administer and support a formal program can be an issue. In addition, given the diversity of transit providers and various levels of government, deciding what agency or entity should take responsibility for the program is a challenge. While rideshare programs into other urban areas may be a possibility for Greater Minnesota since they provide regular transit services in a low-density rural area where other

transit services may not be economically feasible, a recent pilot vanpool project in Fargo/Moorhead was discontinued after it was deemed to be too expensive. Nonetheless, a study from North Dakota State University on rural and small urban vanpooling (*Vanpooling in North Dakota: Feasibility and Operating Scenarios*) indicated that vanpooling is viewed positively by the majority of owners and participants.

College/University Fare Integration

Many transit operations now have enhanced systems of fare integration with local universities. Commonly known in Minnesota as "U-Pass," this student-oriented transit program allows students at local participating universities to take public transit at reduced or no cost. This partnership between the local public transit agency and local universities or colleges occurs at several locations across Greater Minnesota, including:

- **Duluth Transit Authority:** University of Minnesota, Duluth; College of St. Scholastica; and Lake Superior College
- **Metro Area Transit:** Minnesota State University, Moorhead
- **Metro Bus:** St. Cloud State University
- **Paul Bunyan Transit:** Bemidji State University and Northwest Technical College
- **Western Community Action:** Southwest Minnesota State University

Although U-Pass is a strategy to cope with increasing congestion and, in the case of smaller communities, the increased demand for parking due to university growth, administration of the program and adequate funding are challenges that both the universities and transit providers face. Despite these challenges, the U-Pass program has greatly impacted ridership and travel patterns and illustrates the effect that the U-Pass system has as an effective travel demand management (TDM) strategy. Universities in both large urban and small "college town" communities around the country have embraced U-Pass as a strategy to encourage the use of public transit and improve their community. The U-Pass programs represent an increasingly important part of the vision for transportation in Greater Minnesota.

Commuter Bus

Commuter bus (or commuter coach) is an express bus service that targets commuters who make trips during weekday peak hours. Service is provided over fixed routes with a regular schedule, connecting a transit center or park and ride lot located outside a major metropolitan area to the central city. In general, commuter coach operates inbound service in the morning and outbound service in the afternoon. This service tends to provide greater amenities for travelers including bathrooms, reclining seats, and, more recently, wireless internet access. This transit mode addresses mobility needs spreading beyond traditional transit service areas.

Sometimes, commuter bus systems operate as precursors to future rail lines in order to better quantify demand and provide service in the interim before the establishment of the commuter rail service. An example of this is the Northstar Commuter Coach, which operated between Big Lake and downtown Minneapolis. In late 2009, this commuter bus service was superseded by the Northstar Commuter Rail, Minnesota's first commuter rail line.

While the majority of commuter bus routes provide service into the Twin Cities, commuter bus service also exists in Greater Minnesota. Rochester City Lines connects passengers from more than 40

surrounding cities and towns with downtown Rochester. For passengers, the accessibility to transit in the downtowns, the higher cost and availability of parking, and the quick and often more comfortable bus trip often makes commuter coach service an attractive alternative to driving. Finding sufficient funding for these services, however, is a significant challenge for implementing commuter bus services.

Rail

Greater Minnesota currently has intercity passenger rail service that operates daily along the Empire Builder corridor from Chicago to Portland/Seattle. The Minnesota locations served by passenger rail include Winona, Red Wing, Saint Paul, St. Cloud, Staples, Detroit Lakes, and Moorhead (Fargo). There is increased interest across the state in passenger rail projects for Greater Minnesota. However, creating a new passenger rail network will be a challenge as each line will need to find sufficient capital and operating funding from both the state and federal levels. Mn/DOT is currently developing a Statewide Freight and Passenger Rail Plan which will identify and prioritize corridors for future intercity passenger rail lines.

Other passenger rail projects that will serve Greater Minnesota include the state's first commuter rail line which opened for service between Big Lake and Minneapolis in late 2009. The Northstar Commuter Rail serves Greater Minnesota residents northwest of the Twin Cities, connecting them with Minneapolis. This project and other future commuter rail corridors will provide residents of Greater Minnesota increased transportation options for connections with the Twin Cities Metro Area.

Facilities

This section describes facilities that utilize innovative ideas and technology to expand the transit network or to provide transit advantages. These techniques are primarily found and used in the Twin Cities Metropolitan Area. The funding, administration, and maintenance of these facilities pose a challenge to providing this supportive infrastructure in Greater Minnesota.

Park-and-Pool Facilities

Park-and-pool facilities are places where people can leave their private vehicles and meet a carpool or vanpool. Park-and-pool lots lack the access to transit services that park-and-ride lots offer. While Metro Transit manages and operates park-and-ride facilities in the Twin Cities, Mn/DOT owns park-and-pool facilities located in Greater Minnesota on the Trunk Highway System. The majority of these Greater Minnesota park-and-pool lots are located in Mn/DOT District 1 (Duluth) and District 3 (St. Cloud).

Park-and-Ride Facilities

Park-and-ride facilities are parking lots for private vehicles that offer connections to transit services. Park-and-ride lots provide an essential service—a place to leave the car. Park-and-ride lots are also a place to meet up with a carpool or vanpool. The vehicle is stored in the car park during the day and retrieved when the commuter returns. Park-and-rides are generally located in the suburbs of metropolitan areas or on the outer edges of large cities.

During facilitated workshops in the fall of 2008, members of the public, regional agency representatives, and transit providers mentioned park-and-ride infrastructure as a need in Greater Minnesota. Park-and-ride lots are another form of transportation innovation that make transit more accessible to people who live outside the transit system boundaries and also serve as a travel demand management (TDM) strategy to reduce traffic congestion on the road and offer greater transportation options for commuters. Park-and-ride lots may be a possible action to better integrate transit and highways in Greater Minnesota.

Bus-Only Shoulders

Bus-only shoulders (BOS) refer to the utilization of highway shoulders by transit buses during peak travel periods with heavy congestion. Bus-only shoulders allow transit operators to have more predictable route travel times, thus decreasing their operating costs. In addition, BOS provide an incentive for riding the bus by both the actual and perceived time savings. BOS also affect the travel times for non-transit users on the same road by getting more people out of their cars and onto the bus, thereby decreasing congestion.

The Twin Cities Metropolitan Area is home to 290 miles of bus-only shoulders, more than five times the number of BOS miles in the rest of the nation combined. Mn/DOT's Team Transit manages the BOS in collaboration with the region's transit operators. Team Transit has developed various criteria for the design, development, and implementation of BOS, and plans for accommodations for BOS on both existing and future roadway projects. Existing and planned bus-only shoulders are shown in Figure 3.18.

Although currently a Twin Cities Metropolitan Area program, BOS has the potential to expand into Greater Minnesota, particularly in the urban areas that experience traffic congestion during peak travel periods. BOS could also be implemented as a temporary measure during construction activities on highways which reduce the carrying capacity of a roadway. In general, BOS is an innovative concept that offers increased possibilities for transit in Greater Minnesota.

Figure 3.18 Current and Planned Bus-Only Shoulders

Source: Mn/DOT

Bicycling and Walking Facilities

State agencies and many local and regional jurisdictions provide bicycle and pedestrian facilities, such as paved shoulders, on-road bike lanes, and off-road shared use paths and sidewalks with curb ramps. These facilities offer mobility to those who are unable to or choose not to drive. When these facilities are linked to transit routes, more people can take advantage of transit through the improved intermodal connections; this expands the transportation network, supports development around transit, increases mobility for Minnesota residents, and can also lead to increased numbers of transit riders.

Features that complement walking/bicycling-and-transit include but are not limited to safe intersection crossings, bus routes with sidewalks, park-and-ride lots approached by sidewalks, bicycle racks on buses, park-and-ride lots with bicycle parking, and guaranteed ride home programs. These and other features exist in the Twin Cities, but are limited in Greater Minnesota.

Providing this supportive infrastructure in Greater Minnesota presents a challenge. There is a need for coordinated planning between state agencies and local and regional jurisdictions. Inherent in this challenge is putting in place policies that create or enhance development around transit and supporting funding strategies that favor intermodal connections.

Themes Related to the Challenge

Various outreach efforts including facilitated workshops, structured interviews, and an electronic survey have been used to gather public input for this planning effort. These responses are described in detail in Chapter 2, Plan Purpose and Development Process. Other public involvement activities have been conducted outside the scope of this plan but have been used for additional support to key themes.

Challenge 5: Coordination of Services

Federal, state, and local governments and community-based organizations have created specialized programs to meet particular transportation needs. At the federal level alone, in 2005 there are at least 62 separate programs, administered by eight federal departments that provide special transportation services to people with disabilities, low-income individuals, and/or older adults. In spite of the significant investment in public transportation services, gaps in service still exist in many communities. These gaps in service, in both rural and urban areas, are particularly burdensome for transportation-disadvantaged individuals, who may not have access to cars or alternative transportation.

The variety of human service programs and public transit providers presents a challenge to coordinate services in the most cost-efficient and effective manner. Inherent in this challenge is the variety of requirements – both federal and state – in the provision of transportation services. Each program may require different data to be reported and may operate under a different funding cycle. As such, coordinating across local agencies is complicated by the fact that the organizations are likely to use different billing systems—some may reimburse consumers directly, others may reimburse providers, and others may operate their own vehicles with no direct billing required. Insurance requirements also interfere with the ability of agencies to coordinate transportation services. In many cases, the insurance requirements prohibit agencies from sharing vehicles or clients.

Coordinating with Human Service Transportation

Human service transportation systems usually provide transportation to specific consumer groups with a specific purpose, such as attending a class, visiting the doctor, or participating in an event. Human

service transportation may be categorized into three broad categories – transportation provided by Elderly and Persons with Disabilities Program, Non-Emergency Medical Transportation, and Head Start. Coordination of human service transportation will continue to be a priority for the state of Minnesota in the future.

Elderly and Persons with Disabilities Capital Program

The human service agencies assisted by Mn/DOT are private non-profit organizations that receive capital funding through the Federal Transit Administration's Elderly Individuals and Individuals with Disabilities Program (Section 5310). This program provides capital assistance to private non-profit service providers when public transit is deemed inadequate or unavailable, with the purpose of increasing mobility for older adults and people with disabilities. There are approximately 120 Section 5310 providers across Minnesota. The program requires that the agencies coordinate services with other agencies to receive capital funding; however, the extent of this coordination is hampered by the larger issues of insurance requirements and Special Transportation Service regulations.

Non-Emergency Medical Transportation

One of the largest human service transportation programs is non-emergency medical transportation which involves transporting a patient to and from the source of medical care when the medical condition is not life threatening.

Enrollees in Minnesota's publicly funded health care programs may be eligible to receive transportation services to obtain covered medical services from both local providers and from tertiary care centers at some distance from their homes. In Greater Minnesota, non-emergency medical transportation services are administered on a countywide basis with each county subcontracting the actual transportation services to a third party HMO provider. Although run by the same individual organizations, the counties act independently and there is frequent duplication of administrative costs in addition to lack of transportation coordination between county boundaries.

Head Start

Founded in 1965, Head Start is a national program that provides family and child development services to America's low-income, pre-school age children and their families. Part of Head Start's operation includes the safe and secure transport of children back and forth to school. In Minnesota, 27 Head Start grantees provided 6,366 children with rides in 2008.

Over the past eight years, Head Start has been challenged by a flat operating budget that has not kept pace with the cost of inflation. In addition, the organization is further constrained by a lack of capital funding for equipment, such as vans or buses. Federal regulations also mandate a variety of safety features that are not required of other transportation services, including human services transportation and public transit systems.

Mn/DOT is working with Head Start to address some of these issues and increase coordination and collaboration efforts with other transit systems. Another program with potential to complement Head Start is Safe Routes to School, a federal program administered by Mn/DOT. Locations of Head Start programs and services are shown in Figure 3.19.

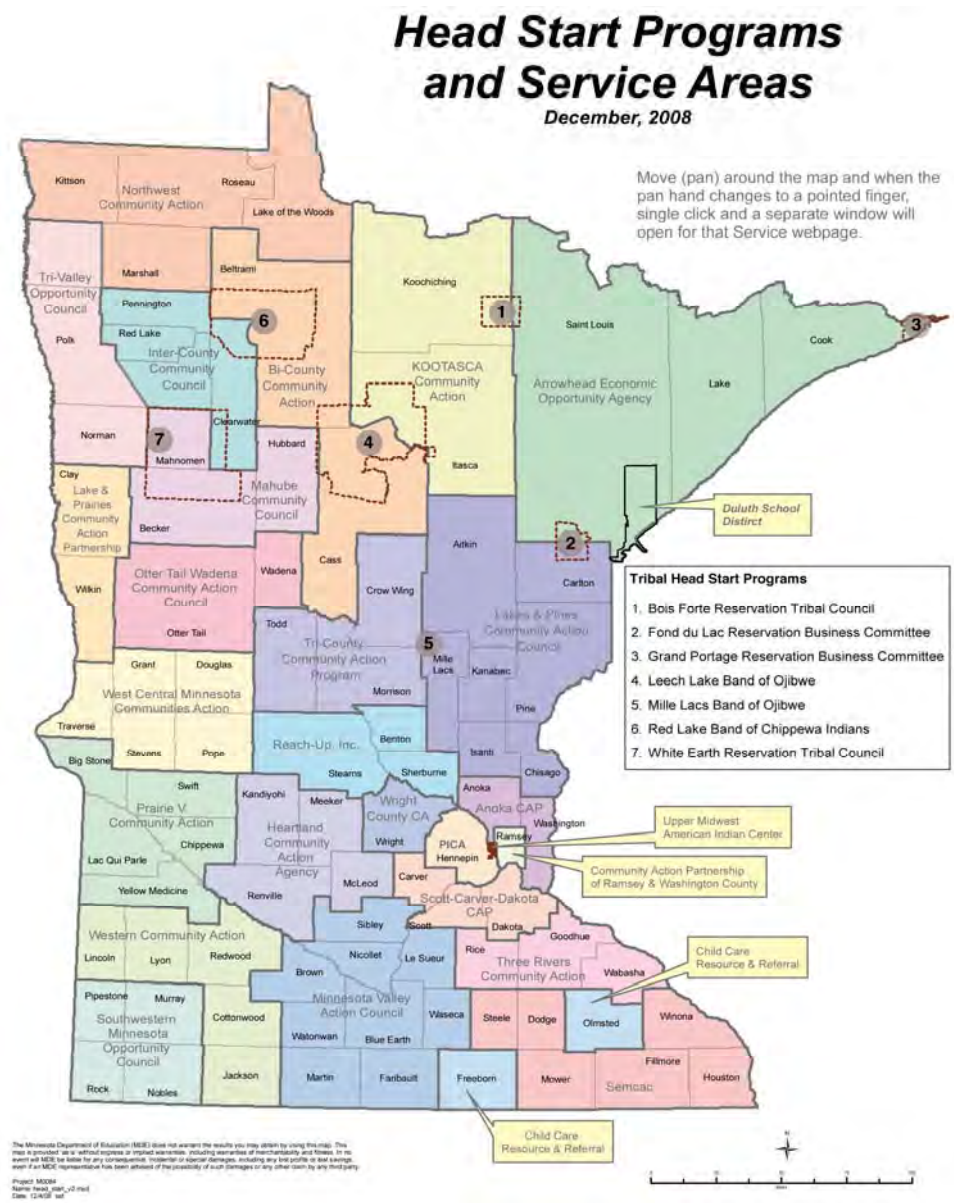

Figure 3.19 Head Start Programs and Service Areas

Source: Mn/DOT

Themes Related to the Challenge

Various outreach efforts including facilitated workshops, structured interviews, and an electronic survey have been used to gather public input for this planning effort. These responses are described in detail in Chapter 2, Plan Purpose and Development Process. Other public involvement activities have been conducted outside the scope of this plan but have been used for additional support to key themes. The following themes within the Regional Coordination Plans have been found to relate to the challenge.

Regional Coordination Plans

As part of Congress's reauthorization of the surface transportation act (SAFETEA-LU) in 2005, grantees under the New Freedom Initiative, Job Access and Reverse Commute (JARC) program, and Elderly and Disabled Transportation Program (5310) must be part of a "locally developed coordinated public transit/human service transportation plan" in order to receive funding for fiscal year 2007 and beyond. These plans are intended to help state and community leaders, agencies, and stakeholders develop programs and action plans for coordinated services.

Themes that emerged from Minnesota's regional coordination plans included coordination of county services, overcoming regulatory barriers, and the need for mobility management. These are additional areas of concern for program development for the public transit systems in greater Minnesota.

- **Coordination of County Services**

A commonly identified need was the coordination of county services. Although transit customers often wish to complete trips between counties, county lines often act as barriers. Several plans stated that counties were unwilling to allow their vehicles and drivers to cross into other counties.

- **Overcoming Regulatory Barriers**

Regions expressed a desire to share vehicles between 5310 programs and public transit operations. The method by which each program is administered currently limits this potential coordination strategy.

- **Mobility Management**

Mobility management is an approach to transportation that maximizes resources through collaboration between transit providers and other agencies and organizations, with an emphasis on meeting user needs and providing alternatives to the single occupant automobile. It uses all of the community resources and types of transit systems to meet the demand for service, including public transit systems. Mobility management is influenced by a variety of factors, including increased mobility on the part of individuals with disabilities, rapid growth in the senior population, reduced federal and state transportation funds, and demand for accountability.

The concept of mobility management has been advanced by a federal initiative called United We Ride. This initiative provides a framework for states and communities to use in assessing their degree of coordination in human service transportation and developing action plans to improve mobility. A person or agency may act as a Mobility Manager, providing a "one-stop shop" for all community mobility needs, including trip scheduling/sharing, marketing and outreach, planning and policy development, and facilitation of regionalization of transportation programs. In addition to advocating for transit and transportation services, the Mobility Manager can develop contacts and relationships with key stakeholders and providers. Active management may include contract, grant, and assistance programs, and handling of the administration and support of volunteer drivers and county van/bus services.

In the mobility management model, transportation agencies serve as mobility managers for the region. In the past, most transportation planning has been conducted at the macro level. Mobility managers take a different approach by examining the micro environment and focusing on the needs of the individual transportation users. By taking a micro view, mobility management focuses on individual needs by using all available resources and matching need with resources, infusing an individualized customer focus into transportation planning and services.

The use of technology, in conjunction with policy and procedural changes, can enhance mobility management. Available technologies include:

- Automatic vehicle locators
- Trip planning software
- Electronic fare collection

In communities where both the public and private sectors are already providing some level of transportation, these services can offer a strong base from which to build a coordinated transportation network. One of the most common forms for this coordination is a transportation brokerage. The brokerage concept is not new, but has gained new interest in the last few years because of its use with Medicaid transportation. A transportation brokerage is simply a mechanism to match ride requests with available transportation resources. Someone, an individual or agency, must manage or "broker" the ride requests to the transportation providers. Typically, this broker should be an independent and objective party that performs the matches based on the best transportation (mode and timing) for the lowest cost. A variety of transportation options can be used (for example, taxis, volunteers, fixed-route bus service, and demand responsive dial-a-ride type services).

Chapter 4:
Existing Public Transit Systems

Greater Minnesota public transit is a vital piece of the overall transportation system serving Minnesota. In Greater Minnesota, public transit systems serve the mobility needs of the general public including the elderly, persons with disabilities, low-income persons, commuters, students, and recreational users.

Inherent in its definition, public transportation systems are comprised of transportation services that are available to the general public. Public transit in Greater Minnesota is typically bus transportation provided in rural areas, small towns, and urban centers. These services may include traditional fixed-route, deviated route, and demand response programs—all of which are administered and operated by the public transit agency. In 2009, there are 60 public transit systems serving Greater Minnesota, providing a range of service options to residents in 76 counties (Figure 4.1).

Transit System Peer Group Categorization

Greater Minnesota's transit systems were organized into peer groups beginning in the 2001 Greater Minnesota Public Transportation Plan because of the substantial difference in characteristics among the various transit services. The peer groups were developed based on system size, service area, and type of service provided. Since the 2001 plan, several of the Greater Minnesota transit systems have undergone changes that have resulted in the elimination of two of the original peer groups. Based on current conditions, the following six groups remain:

- Urban Fixed-Route
- Americans with Disabilities Act (ADA) Paratransit
- County
- Multi-County
- Small Urban (Population over 10,000)
- Small Urban (Population under 10,000)

Peer Group Trend Analysis

The Office of Transit uses several different approaches to assess transit service performance. They can be grouped into three types of performance indicators: cost-efficiency, service effectiveness, and cost-effectiveness. Cost-efficiency measures focus on the relationship between operating cost and services provided. Service effectiveness measures, also called productivity measures, relate the amount of service consumed per unit of service output. Cost-effectiveness measures, also called economic measures, indicate fiscal balance and health.

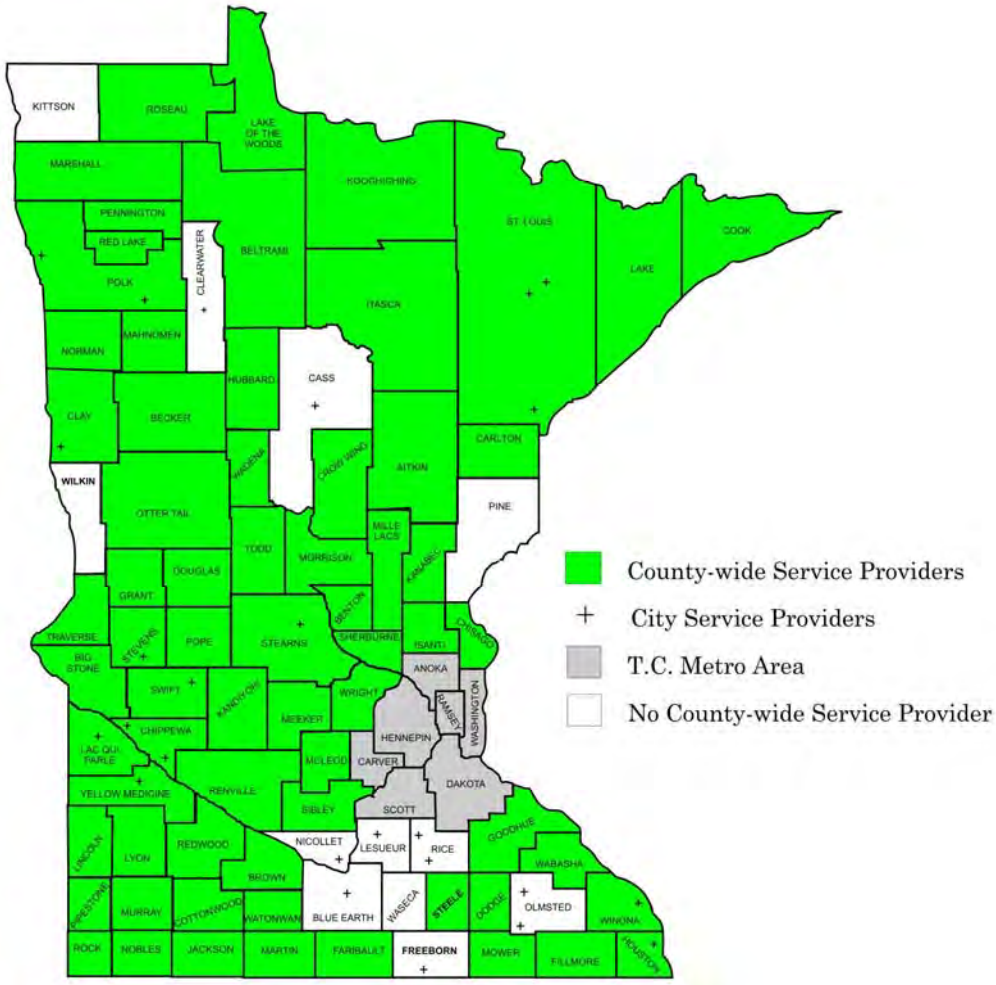

Figure 4.1 Greater Minnesota Public Transit Service Providers

Source: Mn/DOT Office of Transit

Cost-efficiency can be measured using cost per mile or cost per service hour. More cost-efficient transit services require lower costs to produce a unit of service. According to cost-efficiency indicators, County systems are the least costly to operate, while the Urban systems are most costly. In the Urban Fixed-Route systems, it costs twice as much to produce a unit of service as compared to the County systems due to higher personnel costs.

Service effectiveness can be measured using passengers per service mile and passengers per service hour. More effective transit systems serve larger numbers of people per unit of service output. According to service effectiveness measures, Urban Fixed-Route systems are three times more effective in carrying passengers as compared to the Small Urban systems and five times more effective than the County and Multi-County systems. Services are implemented based on the most appropriate and effective service type for each geographic area.

Cost-effectiveness typically evaluates a system's cost per passenger, revenue per passenger, revenue per service hour, and farebox recovery ratio. More cost-effective transit services generate larger revenues per service or consumptive unit. The farebox recovery ratio is the ratio of revenue earned by a transit agency through passenger fares compared to its operating expenses.

Examination of cost-effectiveness measures shows that one system category does not consistently lead or lag behind the others. Instead, the following trends can be observed:

- **Cost per passenger:** ADA Paratransit systems are two times more costly to operate than the other services. This trend is due to the complexities and challenges of providing the services.
- **Revenue per passenger:** Services that operate over larger distances, such as County, Multi-County, and ADA Paratransit systems, generate the highest revenue per passenger.
- **Revenue per hour:** Urban Fixed-Route systems generate two times the revenue per service hour compared to the other systems. This trend is due to larger passenger volumes.
- **Farebox recovery ratio:** Urban Fixed-Route systems lead in this measure, due to larger passenger volumes. The other systems are comparable to one another, with ADA Paratransit systems lagging due to limitations on fare collection coupled with extraordinarily high costs.

Types of Public Transit Services

In Greater Minnesota, public transit systems provide three main types of service. Service types are defined based on how buses are routed. The service routing directly determines the accessibility of the transit system to the potential customer. Many of the public transit systems in Greater Minnesota either supplement their fixed-route or route deviation service with demand response service. In more rural areas or for elderly users and/or persons with a disability, many communities have demand response as their primary transportation service. In this section, types of public transit services are described according to their peer group categorization.

Fixed-Route

With fixed-route services, the transit vehicle travels an established route. Passengers are picked up and dropped off at designated locations along the route. Printed timetables, designated bus stops, and use of large transit vehicles characterize fixed-route service. In Greater Minnesota, this type of service is operated by the Urban Fixed-Route systems in Duluth, St. Cloud, Rochester, Moorhead, East Grand Forks, and Mankato.

Route Deviation

Route deviation service allows deviations from the general route path to provide direct transportation access to passengers who live in the vicinity of that basic route path. In a deviated route system, a vehicle travels a basic route, picking up and dropping off passengers anywhere along the route. On request, and perhaps with additional charge, the vehicle will deviate a few blocks from the route to pick up and deliver a passenger. Deviated route service allows a greater number of passengers more direct access to vehicles and provides for greater and more flexible coverage within the service area without significantly increasing trip times. In Greater Minnesota, both types of Small Urban, County, and Multi-County systems operate route deviation service.

Demand Response

Demand response service allows direct transportation access to passengers who live in a specified service area. Demand response service is characterized by flexible routing and scheduling of relatively small vehicles at the user's demand. A vehicle travels anywhere in a defined service area picking up and dropping off passengers at multiple origin and destination points. Demand response service allows a

greater degree of flexibility in responding to trip requests within the service area than deviated route service. In Greater Minnesota, both ADA Paratransit systems, Small Urban, County, and Multi-County systems operate demand response service. Examples of demand response service include general public dial-a-ride and ADA complementary paratransit.

General Public Dial-A-Ride

Dial-a-ride service allows passengers to be picked up within a very short time from when a trip is requested. Dial-a-ride service provides curb-to-curb transportation to patrons who request service by telephone, either on an ad hoc or subscription basis.

ADA Complementary Paratransit

The Americans with Disabilities Act (ADA) requires public transit agencies that provide fixed-route service to provide complementary paratransit services to people with disabilities who cannot use the fixed-route bus or rail service because of a disability. The ADA regulations specifically define a population of customers who are entitled to this service as a civil right. In general, ADA complementary paratransit service must be provided within 3/4 of a mile of a bus route or rail station, at the same hours and days, for no more than twice the regular fixed-route fare.

Transit Technology

Technology provides an opportunity for transit systems of all types to better manage data, identify potential areas for improvement, and enhance user experiences. The following examples illustrate the technological advancements in transit planning and operations management that are emerging across the country.

- **Automated vehicle location:** Computerized tools that track the real-time location of a transit vehicle, allowing for dispatching and schedule monitoring with reference to the roadway network and planned schedule.
- **Scheduling/dispatch software:** Software customized for transit that improves the efficiency in collecting and recalling client information, call taking, scheduling, vehicle routing, agency/client billing, and other functions supporting paratransit service.
- **Electronic fare payment:** Allows payment without a cash transaction and include bar-coded cards, magnetic strip cards, and smart cards similar to debit or credit cards.
- **Automated stop announcers:** These devices announce the next stop, stop requests, or other travel information for passengers in audible and visual formats.
- **Travel planning services:** Services allowing potential passengers to plan their trip. Travel planning services can be provided through automated telephone systems, the Internet, at high traffic locations such as malls, public buildings, or tourist attractions, or through individual customer service.

Table 4.3 on the following pages contains an inventory of Greater Minnesota transit systems by peer group category, and the types and availability of services provided in 2008.

Table 4.3 Greater Minnesota Transit Service Provider 2008 Inventory

Peer Group	System	Area Served	Population Served	Service Type			Availability			
				Fixed-route	Route Deviation	Demand Response	M-F ≥ 10 Hours	M-F < 10 Hours	Saturday	Sunday
Urban Fixed-Route Systems	Duluth	Cities of Duluth, Hermantown, and Proctor, MN; and service to Superior, WI	123,643	•			•		•	•
	E. Grand Forks	City of East Grand Forks	7,816	•			•		•	
	La Crescent	City of La Crescent, MN and La Crosse, WI	4,923		•		•			
	Mankato	City of Mankato	35,031	•		•	•		•	
	Moorhead	Cities of Dilworth and Moorhead	37,708	•			•		•	
	Rochester	City of Rochester	107,735	•			•		•	
	St. Cloud	Cities of St. Cloud, Sartell, Sauk Rapids, and Waite Park	96,702	•		•	•		•	•
ADA Paratransit Systems	Duluth DAR	Cities of Duluth, Hermantown, and Proctor, MN; and service to Superior, WI	123,643			•	•		•	•
	East Grand Forks DAR	City of East Grand Forks	7,816			•	•		•	
	Moorhead DAR	Cities of Dilworth and Moorhead	37,708			•	•		•	
	Rochester DAR	City of Rochester; Townships of Cascade, Haverhill, and Marion	107,735			•	•		•	
	St. Cloud DAR	Cities of St. Cloud, Sartell, Sauk Rapids, and Waite Park	96,702			•	•		•	•

Peer Group	System	Area Served	Population Served	Service Type			Availability			
				Fixed-route	Route Deviation	Demand Response	M-F ≥ 10 Hours	M-F < 10 Hours	Saturday	Sunday
County Systems	Austin-Mower	City of Austin in Mower County	39,210		•	•	•		•	•
	Becker Co.	Cities of Audubon, Callaway, Detroit Lakes, Frazee, Lake Park, Ogema, and Osage in Becker County	32,203		•	•	•			
	Brown Co.	Cities of Comfrey, Essig, Evan, Hanska, New Ulm, Sleepy Eye, and Springfield in Brown County	26,794		•	•		•		•
	Clay Co.	Cities of Auburn, Barnesville, Detroit Lakes, Dilworth, Felton, Hawley, Hitterdahl, Moorhead, Sabin, and Ulen in Clay County and portions of Becker County	54,385		•	•		•		
	Cottonwood Co.	Cities of Mountain Lake, North Jackson County, Westbrook, Windom, and Worthington in Cottonwood County	11,950		•	•		•		
	Crow Wing	Cities of Baxter and Brainerd in Crow Wing County	60,556		•	•		•		
	Faribault Co.	Cities of Blue Earth, Bricelyn, Huntley, Kiester, Minnesota Lake, Walters, Wells, and Winnebago in Faribault County	15,650			•		•		
	Grant Co.	Grant County	6,171		•	•		•		
	Hubbard Co.	City of Park Rapids and Hubbard County	22,469		•	•	•			
	Kandiyohi Co.	Cities of Atwater, Blomkest, Kandiyohi, Lake Lillian, Pennock, Prinsburg, Raymond, Regal and Sunburg in Kandiyohi County	41,639		•	•	•		•	
	Lincoln Co.	Cities of Canby, Marshall, and Pipestone in Lincoln County; and Brookings and Watertown, SD	57,867			•	•			
	Mahnomen	Mahnomen County; to and from Detroit Lakes, Ogema, and White Earth	117,771			•		•		
	Martin Co.	Cities of Dunnell, Fairmont, Granada, Sherburn, Trimont, Truman, and Welcome in Martin County	21,206			•	•		•	
	Meeker Co.	Meeker County	23,621		•	•	•			
	Murray Co.	Murray County	8,935			•		•		
	Paul Bunyan	Beltrami County	43,334		•	•	•		•	
	Pipestone Co.	Pipestone County	9,513			•	•		•	•
	Prairieland	Cities of Adrian, Bigelow, Brewster, Dundee, Ellsworth, Kinbrae, Leota, Lismore, Reading, Round Lake, Rushmore, St. Kilian, Wilmont, and Worthington in Nobles County	20,730		•	•	•			

Peer Group	System	Area Served	Population Served	Service Type			Availability			
				Fixed-route	Route Deviation	Demand Response	M-F ≥ 10 Hours	M-F < 10 Hours	Saturday	Sunday
County Systems (continued)	Red Lake	Cities of Bemidji, Little Rock, Ponemah, Red lake, and Redby in Beltrami County	13,059			•	•			
	Renville Co.	Renville County	16,937		•	•	•			
	Rock Co.	Cities of Ash Creek, Beaver Creek, Hardwick, Hills, Kanaranzi, Kenneth, Luverne, Magnolia, and Steen in Rock County	9,616			•		•		•
	Steele Co.	Steele County	36,165		•	•	•		•	•
	Transit Alts.	Cities of Fergus Falls, Parker Prairie, Pelican Rapids, and Perham in Otter Tail County	57,159		•	•	•			
	Wadena Co.	Cities of Menahga, Sebeka, Verndale, and Wadena in Wadena County; City of Bluffton in Otter Tail County; and the City of Staples in Todd and Wadena Counties	13,787		•	•		•		•
	Watonwan Co.	Cities of Fairmont, Lake Crystal, Mankato, Mountain Lake, New Ulm, Sleepy Eye, Trimont, and Windom in Watonwan County	65,420			•	•			
Multi-County Systems	Arrowhead	Aitkin, Carlton, Cook, Itasca, Koochiching, Lake, and St. Louis Counties	201,713		•	•	•		•	•
	Far N. Transit	Lake of the Woods and Roseau Counties	21,152			•	•			
	Isanti - Chisago	Cities of Braham, Cambridge, Center City, Chisago City, Isanti, Lindstrom, North Branch, Rush City, Taylor Falls, and Wyoming in Chisago and Isanti Counties	42,477		•		•			
	Prairie Five	Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine Counties	48,135			•	•			
	Rainbow Ride	Douglas, Pope, Stevens, Traverse, and Southern Todd Counties	63,657			•	•		•	
	RiverRider	Sherburne and Wright Counties	194,968		•	•		•		
	SEMCAC	City of Blooming Prairie; Dodge, Fillmore, Houston, and Winona Counties	82,690		•	•	•			
	Three Rivers	Cities of Cannon Falls, Elgin, Frontenac, Kellogg, Lake City, Mazeppa, Plainview, Red Wing, Wabasha, and Zumbrota in Goodhue and Wabasha Counties	34,999		•	•	•		•	
	Timber Trails	Mille Lacs and Kanabec Counties	41,513		•	•		•		
	Trailblazer	McLeod and Sibley Counties	53,463			•	•			
	Tri-CAP	Benton, Morrison, and Stearns Counties	119,630		•	•	•			
	Tri-Valley	City of Bagley; Marshall, Norman, Pennington, Polk, and Red Lake Counties	75,265		•	•	•			
	Western Comm Action	Cities of Willmar, and Worthington; Jackson, Lyon, and Redwood Counties; limited service in Cottonwood and Lincoln Counties; and service to Sioux Falls, SD	52,242		•	•	•		•	•

Peer Group	System	Area Served	Population Served	Service Type			Availability			
				Fixed-route	Route Deviation	Demand Response	M-F ≥ 10 Hours	M-F < 10 Hours	Saturday	Sunday
Small Urban Systems (Population over 10,000)	Albert Lea	City of Albert Lea	18,153		•	•		•		
	Faribault	City of Faribault	22,605		•		•		•	•
	Hibbing	City of Hibbing	16,582		•	•	•		•	•
	Northfield	City of Northfield	18,961		•	•	•		•	
	St. Peter	Cities of Kasota and St. Peter	11,368			•	•		•	
	Virginia	Cities of Virginia and Mountain Iron	11,794		•	•	•			
	Winona	Cities of Goodview and Winona	30,592		•		•			
Small Urban Systems (Population under 10,000)	Benson	City of Benson	3,346			•	•		•	•
	Dawson	City of Dawson	1,478			•			•	
	Fosston	City of Fosston	1,531			•	•			•
	Granite Falls	City of Granite Falls	3,088			•	•			
	Le Sueur	City of Le Sueur	4,305		•	•		•		
	Montevideo	City of Montevideo	5,474			•	•			
	Morris	City of Morris	5,085			•	•		•	•
	Pine River	City of Pine River	954			•		•		
	Stewartville	City of Stewartville; Townships of High Forest, Pleasant Grove, and Racine	7,973			•		•		

Chapter 5:
Future Transit Needs and Demand for Service

Transit Need versus Transit Demand

Generally, **"transit need"** is defined as the identification of various market segments that are transit dependent and are in need of public transit services, e.g. senior citizens, disabled persons, low income persons, those without access to a vehicle, and youth. **"Transit demand"** is the number of trips that people make.

Gauging the need for transit is different from estimating demand for transit services. Need is always greater than demand and it exists whether or not public transit is available. This planning effort included quantifying the need for mobility to provide a sense for the overall "gap" across Greater Minnesota. The analysis used household trip rates for varying levels of personal vehicle ownership along with projections of future vehicle ownership to establish the broad level of need.

Demand reflects the number of trips actually made given the level of transit service provided in an area and fare cost to the rider. A constrained estimate of future demand for Greater Minnesota transit services was developed for this plan using per capita usage rates from Greater Minnesota peer systems. This method estimates demand based on transit service performance targets, utilizing the 80th percentile of the passengers per capita rate as a reasonable performance target.

Establishing the Broad Level of Service Need

The identification of local service needs is the ongoing responsibility of the individual transit systems across the state. The regional workshops along with the survey and interview outreach efforts conducted as part of this plan confirmed a wide range of service needs exist at the local level. These include expanding the span of daily hours of service, extending the geographic reach of service, broadening coordination activities within the family of service providers, and finding better ways of addressing commuter needs. The major urban areas, through their detailed service planning efforts, also continue to identify additional fixed-route and paratransit service expansion needs including more frequent service, greater overall capacity, expanding beyond the current borders of the service areas, and better handling of commuter needs.

One approach to quantifying need is the Mobility Gap, in which trip rates observed for households owning one or more personal vehicles are compared to trip rates observed for households having similar characteristics but owning no personal vehicles. The basis of this approach is that households with a personal automobile have few limitations and therefore, make all the trips they "need". The difference in trip rates—the "gap"—is then multiplied by the number of households in an area, yielding an estimate of the number of additional trips that might be taken if all households had equal access to a personal vehicle or other high-quality transportation service. However, one could argue that people use cars for more trips then they really "need" and that all personal vehicles do not guarantee high quality transportation service.

The Greater Minnesota mobility gap estimate used data from the 2001 National Household Transportation Survey - West North Central Division, which includes North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, and Minnesota. Table 5.1 illustrates the daily household trip rate by vehicle ownership. Households with one vehicle make about 5.4 trips per day and households with no

vehicles make about 2.3 trips per day. The difference between these rates, approximately three trips per day, represents the potential mobility gap for households owning no vehicle.

Table 5.1 Daily Household Trip Rate vs. Vehicle Ownership

Vehicles in Household	Urban	Rural	Total
0	2.4	2.3	2.3
1	5.5	5.1	5.4
2	11.6	10.3	11.1
Overall	**9.5**	**9.3**	**9.5**

Source: 2001 National Household Transportation Survey

As illustrated in the calculation below, the Mobility Gap was calculated by multiplying the trip rate difference for households without vehicles available compared to households with one vehicle by the number of households without vehicles in each county:

Trip Rate Difference (between zero- and one-vehicle households) (Table 5.1)	x	Number of households with no vehicle available	X	Number of Days (365)	=	Mobility Gap (Number of Annual Trips) (Table 5.2)

The Mobility Gap approach yields high estimates of travel need in Greater Minnesota, summarized in Table 5.2. While this method may provide a measure of the relative mobility limitations experienced by households that lack access to a personal vehicle, it is important to acknowledge that these estimates far exceed actual demand observed by local transit systems.

Table 5.2 Mobility Gap Summary for Greater Minnesota

	2010	2020	2030
Mobility Gap (Annual Trips)	66.4 Million	72.2 Million	76.4 Million

Estimating Demand for Public Transit

The method of forecasting demand for transit service that best represents the characteristics of the population and existing transportation programs makes use of data from in-state peers. This method builds on per capita demand rates observed for Greater Minnesota peer group transit providers. Transit providers were assigned to peer groups based on service area and type of service provided. For this analysis, the systems were divided into six peer groups: urban fixed-route, ADA paratransit, county, multi-county, small urban (population over 10,000), and small urban (population under 10,000).

The passengers per capita demand rate was identified for each peer group based on 2007 data from each service provider. As illustrated in Figure 5.1 for county systems, the demand rate was defined as the 80th percentile value for each peer group. For clarification, the 50th percentile demand rate represents the value at which half the service category's demand rate is above and below that level. At the 80th percentile, eighty percent of the service category's demand rate is below the value.

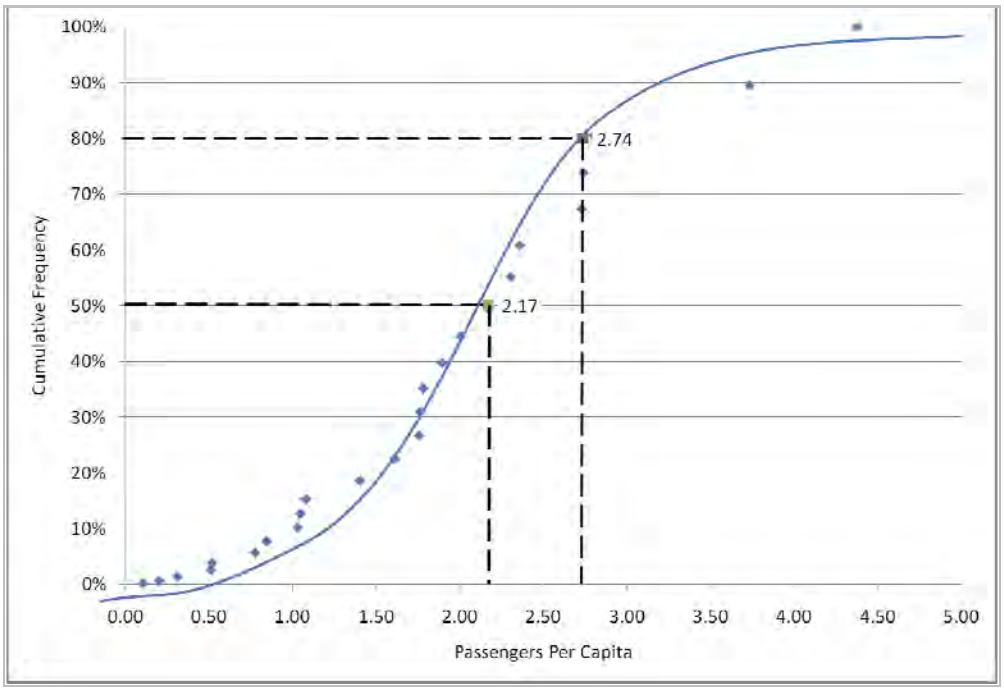

Figure 5.1 Passengers per Capita for County Systems, 2007

The 80th percentile value was selected as the base rate from which demand will be estimated because it represents the transition point from moderate performance outcomes, where a good number of systems can be expected to perform, to upper levels of performance where only a few systems can consistently perform. Table 5.3 shows the 2007 80th percentile passengers per capita rate for all of the in-state peer groups. Demand for the systems already performing above the 80th percentile rate was estimated using their current rates. Demand is typically related to population density and land-use patterns.

The 80th percentile passengers per capita rate is different than the 80% transit service goal as contained in Minnesota Statute 174.24, Subd. 1a. Transit service needs implementation plan. It is important to acknowledge that most transit providers will need to modify and expand services to reach the 80th percentile demand rate. Reaching optimum demand rates will take time and resources, but the growth is considered reasonable. This method represents the level of passenger demand that would result should all systems eventually reach the 80th percentile per capita rate across the state.

Table 5.3 80th Percentile Passengers Per Capita Rates

Peer Group	80th Percentile Passengers Per Capita (2007)
Urban Fixed-Route	23.3
ADA Paratransit	1.0
County	2.7
Multi-County	2.2
Small Urban (Population over 10,000)	5.4
Small Urban (Population under 10,000)	14.5

The passengers per capita rates for demand in each peer group were applied to population projections for the existing service areas. The results were then grouped by urban, small urban and rural areas resulting in an overall estimate for the state for those areas currently operating public transit services. Estimates were also produced for underserved areas of the state as well as unserved areas. Underserved areas are counties within which a portion of the population is served by a small urban transit system but county-wide transit service is not available to all residents. Unserved areas are those counties without any public transit service available.

80th percentile passengers per capita rate by peer group (Table 5.3)	x	Area Population	=	Annual Demand by Number of Trips (Table 5.4)

Table 5.4 summarizes the demand estimates. Demand in urban areas is expected to increase by 30 percent between 2010 and 2030 representing 62 percent of the statewide total by 2030. This indicates that over the next 20 years the largest increases in Greater Minnesota transit demand are expected to occur in the urban areas. Demand in small urban and rural areas is expected to grow by 18 percent over the same period. By 2030, it is also estimated that areas of the state that are currently under- or unserved by transit service will generate demand for over one million transit trips annually.

Table 5.4 Summary of Estimated Demand

Service Grouping	Annual Trips (millions)			
	Actual 2008	**2010**	**2020**	**2030**
Urban Areas	7.61	8.41	9.81	10.97
Small Urban/Rural Areas	3.58	4.78	5.27	5.64
Underserved/Unserved Areas	N/A	1.02	1.11	1.16
Total	**11.19**	**14.21**	**16.18**	**17.77**

Figure 5.2 illustrates the actual passenger ridership for years 2000 and 2005 along with future year estimates for passenger demand. Beginning in 2010, future year estimates incorporate areas that are unserved or underserved by transit systems. Actual ridership was over 11 million in 2008. By 2030, demand for transit in Greater Minnesota is anticipated to increase by 25 percent over 2010 levels and climb to nearly 18 million trips per year.

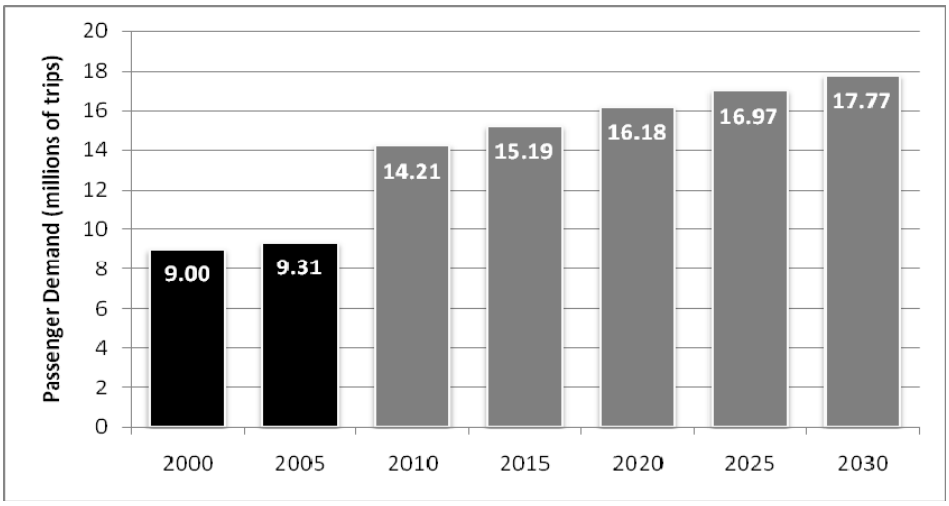

Figure 5.2 Total Actual/Estimated Greater Minnesota Transit Passenger Demand, 2000–2030

Service Hours to Meet Future Demand Estimates

Service hours are used as a budgeting tool and in estimating the future costs to operate transit services. Estimates of service hours were developed using an approach similar to that used to develop estimates of future demand. Passengers per revenue hour data reported for each transit provider was plotted to identify the productivity rate for each service category. Table 5.5 shows the rates used to prepare the estimate of service hours. A recent significant ridership gain by transit systems in the absence of additional service hours indicates that systems are able to operate at a higher productivity rate. There is some question as to the sustainability of this gain in ridership due to moderating factors such as fuel costs and an economic recovery.

Table 5.5 Productivity Rate for Passengers per Revenue Hour

Peer Group	Passengers Per Revenue Hour
Urban Fixed-Route	
Duluth	21.9
Mankato	15.1
Moorhead	18.0
Rochester	19.0
St. Cloud	25.8
ADA Paratransit	
Duluth	1.5
Mankato	2.3
Moorhead	2.2
Rochester	3.3
St. Cloud	3.6
County	2.74
Multi-County	2.23
Small Urban (Population over 10,000)	5.38
Small Urban (Population under 10,000)	14.47

The productivity rates represent 2007 conditions for the transit systems. For the purposes of projecting service needs, it was assumed that the urban systems would maintain their current levels of productivity. For other systems, it was assumed that each should provide the 80th percentile productivity rate for its corresponding service category. This 80th percentile productivity rate is different than the 80% transit service goal as described in Minnesota Statute 174.24, Subd. 1a. Transit service needs implementation plan.

$$\frac{\textbf{Annual Passenger Trips (by Peer Group)}}{\textbf{Hourly Productivity (by Peer Group)}} = \textbf{Annual Service Hours (Table 5.6)}$$

Table 5.6 presents the estimated annual service hour targets in Greater Minnesota to meet 80% of projected future demand. All service hour targets represent 80% of estimated future demand which correspond to the transit service goal contained within Minnesota Statute 174.24, Subd. 1a. By 2030, an estimated 1.7 million annual service hours will be required to meet demand targets for transit services in Greater Minnesota. Over one third of this requirement will go toward meeting demand targets in Greater Minnesota urban areas. Nearly 200,000 of these hours will be needed in areas that are currently without transit service or underserved by a nearby system.

Table 5.6 Estimate of Service Hours Required to Meet Estimated 80% Demand Target

Service Classification	Annual Service Hours (thousands)			
	2008 (Actual)	**2010 (Target)**	**2020 (Target)**	**2030 (Target)**
Urban Areas	389	471	545	608
Small Urban/Rural Areas	626	782	867	930
Underserved Areas/Unserved Areas	N/A	167	181	190
TOTAL	**1,013**	**1,420**	**1,593**	**1,728**

Figure 5.3 shows the bus service hour estimates along with actual and projected levels of service assuming funding remains at current levels. Funding is the major determining factor for what level of service is able to be put in place. For example, the number of service hours provided didn't go up when fuel prices rose despite increased ridership. In recent years, the actual level of service provided has not kept pace with demand due to funding limitations. The gap between fully meeting demand targets and service actually provided is anticipated to widen in future years unless additional resources are available for investing in Greater Minnesota transit services.

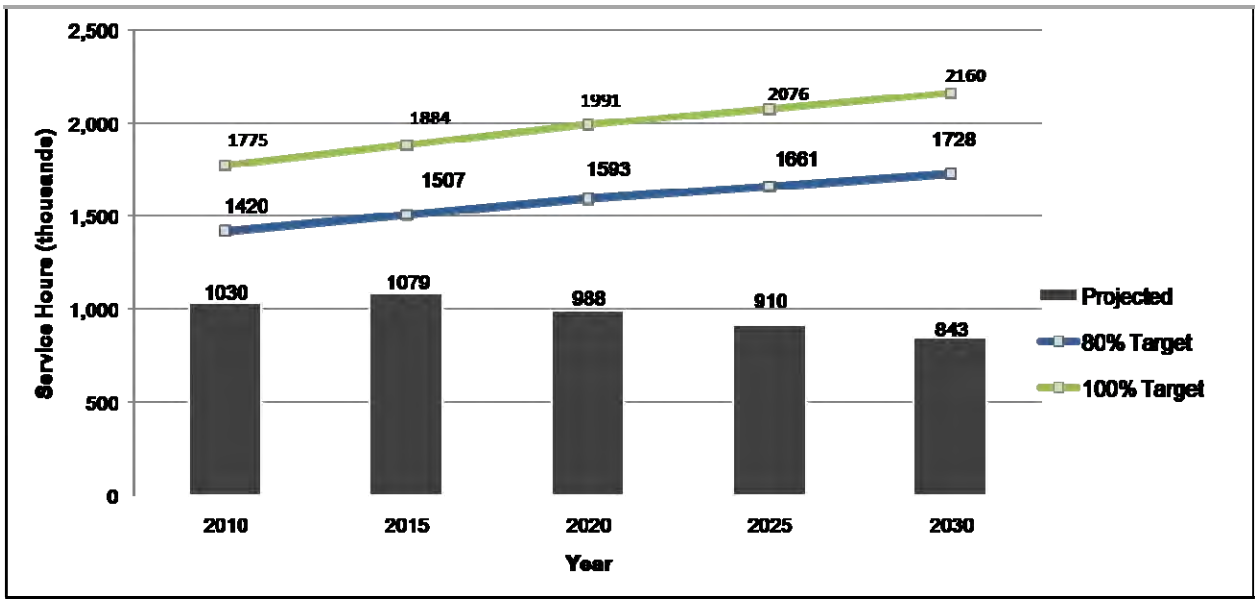

Figure 5.3 Greater Minnesota Transit Targeted and Projected Bus Service Hours, 2010–2030

Chapter 6:
Financial Analysis

This section presents financial analysis on the costs of both current and future transit services to meet the levels of demand expected across Greater Minnesota. This section also contains operating and capital cost estimates for expanded service to meet increasing demand as well as new services that could be implemented in currently underserved or unserved areas of the state.

Current Operating Funding

Public transportation programs in Minnesota are funded through a federal-state-local partnership and administered by the Mn/DOT Office of Transit. Public transit in Minnesota is supported from a variety of sources including the State General Fund, the Motor Vehicle Sales Tax (MVST), the federal government, and local jurisdictions through fares, contracted service and local contributions.

While the single greatest source of funding for public transit systems in Greater Minnesota has historically come from the state's General Fund appropriations, dedicated funding is generated by the MVST. MVST collects revenues from car sales and directs a certain percentage towards transit assistance. A constitutional amendment passed in 2006 specifies that at least 40% of MVST revenues will be directed to transit by 2012. The current legislative allocation provides 4% of the total MVST revenue for transit in Greater Minnesota. Figure 6.1 shows the sources of Greater Minnesota's funding for public transit systems operating costs from 2005 to 2009. (Numbers for 2005, 2006, 2007, and 2008 represent actual reported operating costs. 2009 numbers are estimates.)

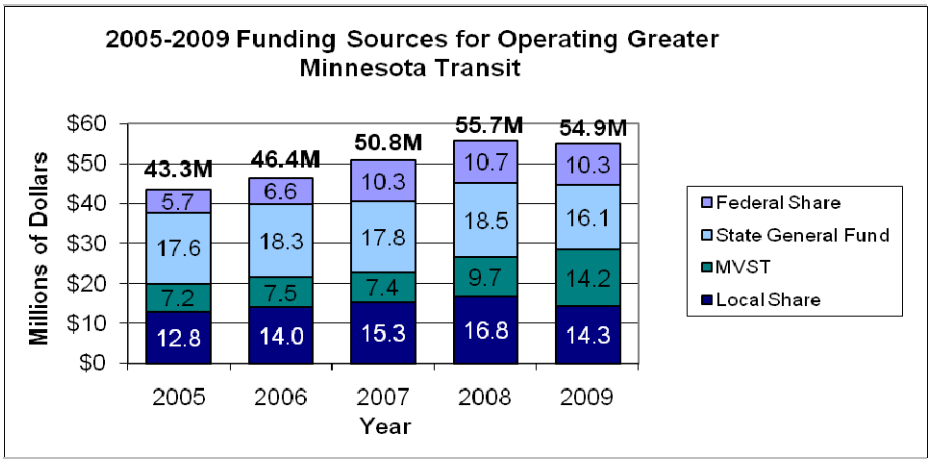

Figure 6.1 Funding Sources for Operating Greater Minnesota Transit

Source: Mn/DOT Office of Transit

Minnesota currently receives funding from the Federal Transit Administration through different federal programs for transit in Greater Minnesota. These include formula funds for public transit systems as well as programs for planning, capital improvements, and targeted programs for the elderly, persons with disabilities and low income individuals.

The local share of funding for transit in Greater Minnesota is set by a fixed local share funding formula. In Urbanized (more than 50,000 population) and Small Urban (2,500 to 50,000 population) areas, the

local share is set at 20%. For rural areas (less than 2,500 population) and for programs serving the elderly and disabled, the local share is set at 15%. The local match can be met through a combination of fare box revenue, auxiliary revenues, and local tax levels.

In 2008, public transportation agencies provided over 11 million rides to residents in Greater Minnesota, as shown in Table 6.1.

Table 6.1 Greater Minnesota Public Transit Ridership by System Type, 2008

System Type	Total Rides
Urbanized	7,382,174
Small Urban	934,152
Rural	2,647,061
Elderly and Persons with Disabilities	225,080
Total	**11,188,467**

Source: Mn/DOT Office of Transit

Future Operating Costs

Service hours needed to meet future demand targets were estimated in Chapter 5, Future Transit Needs and Demand for Service. Table 6.2 contains a summary of annual service hours required to meet the 80% demand level target in Greater Minnesota for years 2010, 2020, and 2030.

Table 6.2 Estimate of Service Hours Required to Meet Estimated 80% Demand Target

Service Classification	Annual Service Hours (thousands)			
	2008 (Actual)	2010 (Target)	2020 (Target)	2030 (Target)
Urban Areas	389	471	545	608
Small Urban/Rural Areas	626	782	867	930
Underserved Areas/Unserved Areas	N/A	167	181	190
TOTAL	**1,015**	**1,420**	**1,593**	**1,728**

The future costs to operate the services required to meet estimated future demand are based on the current cost per service hour for all services across Greater Minnesota. The average hourly cost for all transit systems in Greater Minnesota in 2008, $55.62, is used as a baseline to estimate future total operating costs. To estimate future costs, this baseline hourly rate is increased at an annual rate of 3 percent[1]. Estimated hourly costs for years 2010, 2020, and 2030 are shown in Table 6.3.

Table 6.3 Hourly Operating Cost Estimates, 2010–2030

	2010	2020	2030
Estimated hourly operating cost	$59.01	$79.30	$106.57

Future operating costs were based on estimated service hours and hourly operating costs. To calculate estimates for future years, the hourly rate in the appropriate year is applied to the total number of service hours for that year:

[1] This is the Transit Operating Cost Index (TOPCI) developed by Mn/DOT.

Hourly Rate in Year 20XX (Table 6.3)	x	Total Annual Service Hours in Year 20XX (Table 6.2)	=	Total Operating Cost in Year 20XX (Table 6.4)

The results of this calculation are shown in Table 6.4 for urban areas, small urban, and rural areas, and under- and unserved areas of the state.

Table 6.4 Annual Operating Cost Estimates, 2010–2030

		Annual Operating Cost		
Service Classification	**2008**	**2010**	**2020**	**2030**
Urban Areas	$26,820,169	$27,793,710	$43,218,500	$64,794,560
Small Urban/Rural Areas	$28,837,645	$46,145,820	$68,753,100	$99,110,100
Underserved Areas/Unserved Areas	N/A	$9,854,670	$14,353,300	$20,248,300
Total	**$55,657,814**	**$83,794,200**	**$126,324,900**	**$184,152,960**

In 2008, the total operating cost for transit services in Greater Minnesota reached $55.7 million. Between 2010 and 2030, total operating costs for existing and additional Greater Minnesota transit services are projected to more than double. In 2010, almost $84 million will be needed to meet the 80% target level of demand, with more than half of costs attributed to small urban and rural areas. By 2030, the operating costs of providing transit services to meet the 80% target to Greater Minnesota are expected to rise to more than $184 million.

However, there are services that Greater Minnesota transit systems provide which are not funded through state or federal programs. Future operating costs incorporate these services into future growth estimates. In 2008, these locally funded transit services were estimated to be in the range of $7-8 million. This issue was raised during the public involvement process.

Future Capital Costs

Capital cost estimates include vehicle replacement costs for existing services, equipment needed to expand current services to keep pace with increasing demand, new equipment for underserved and unserved areas, and replacement costs for these new fleets in the outer years.

In 2008, transit systems across Greater Minnesota operated a total of 651 vehicles, ranging from small cutaways to full-size transit buses. Vehicles are currently funded through an 80% federal-20% local partnership. Vehicles purchased through Mn/DOT's Office of Transit are required to meet ADA vehicle regulations. Mn/DOT classifies transit vehicles into different classes based on size, vehicle life, and use. Fleet costs in this analysis are calculated based on three classes of vehicles currently in use across Greater Minnesota:

Class 300/400 vehicles are light-duty cutaway buses with service lives of four and five years, respectively. The majority of the total Greater Minnesota transit fleet is composed of Class 400 vehicles, which are widely used in rural systems and in complementary paratransit.

Class 500 vehicles are medium-duty buses with a service life of seven years.

Class 600/700 vehicles are heavy-duty transit buses with service lives of 10 and 12 years, respectively, and are used primarily in large urban systems.

The 2008 inventory of vehicles forms the baseline for future estimates of vehicle needs and capital costs. A count of vehicle types by service classification in Greater Minnesota is shown in Table 6.5.

Table 6.5 Vehicle Counts by Service Classification, 2008

Service Classification	Class 300/400	Class 500	Class 600/700
Urban Areas	39	--	175
Small Urban/Rural Areas	329	108	--
Total	**368**	**108**	**175**

Vehicle costs play a key role in determining future fleet costs. To calculate fleet replacement and expansion costs for future years, vehicle unit costs for each vehicle type were projected out to year 2030, increasing at an annual rate of three percent[2]. Estimated vehicle costs through 2030 are shown in Table 6.6.

Table 6.6 Estimated Vehicle Unit Costs through 2030

	Estimated Vehicle Cost		
Vehicle Type	**2010**	**2020**	**2030**
Class 300/400	$66,000	$88,698	$119,203
Class 500	$114,000	$153,206	$205,897
Class 600/700	$305,000	$409,894	$550,864

Source: Minnesota Department of Transportation

Fleet Replacement for Existing Services

Fleet replacement costs are a product of vehicle cost and service life, both of which vary considerably according to vehicle type. To maintain a safe and viable transit system, it is assumed that a certain percentage of each system's fleet is replaced annually. Based on vehicle type and average service life, rates of annual fleet turnover were calculated, as shown in Table 6.7.

Table 6.7 Annual Vehicle Replacement Rates

Vehicle Type	Annual Turnover Rate
Class 300/400	20%
Class 500	15%
Class 600/700	9%

Fleet replacement costs are calculated by multiplying the total vehicle count by type, the estimated vehicle unit cost, and the associated annual turnover rate:

Total Vehicle Count by Type (Table 6.5)	x	Estimated Vehicle Unit Cost (Table 6.6)	x	Annual Turnover Rate by Type (Table 6.7)	=	Total Fleet Replacement Cost (Table 6.8)

[2] This is the Transit Operating Cost Index (TOPCI) developed by Mn/DOT.

Table 6.8 contains a summary of total replacement costs by service classification. Costs are shown for replacement of current fleets in urban and small urban/rural areas as a snapshot of years 2010, 2020, and 2030. The total cost to replace current fleets for the years 2011-2030 is $318,505,149.

Table 6.8 Total Fleet Replacement Costs for Existing Transit Systems

Service Classification	2010	2020	2030
Urban Areas (current fleet)	$5,318,550	$7,147,686	$9,605,893
Small Urban/Rural Areas (current fleet)	$6,189,600	$8,318,305	$11,179,106
Total	**$11,508,150***	**$15,465,991**	**$20,784,999**

** $7.417 million for 60 vehicles purchased under the American Recovery and Reinvestment Act included in this total.*

Additional Fleet to Meet Demand

Vehicles are needed to meet currently unmet demand as well as demand projected to grow in future years. Vehicle needs for currently unmet demand are based on the gap in service hours between current service levels and estimated current demand, as previously shown in Table 6.2. Table 6.9 summarizes the additional fleet requirements, based on 2,000 annual hours per Class 300/400 vehicle and 2,500 annual hours per Class 600/700 vehicle to meet the 80% target level of demand. Estimates for 2010 assume that transit systems will use excess capacity within their existing fleet to provide the additional service hours needed to reach the 80% target demand level.

Table 6.9 Additional Fleet Requirements to Meet Demand

Vehicle Type	2010	2020	2030
Class 300/400	52	55	41
Class 600/700	0	25	22
Total	**52**	**80**	**62**

Cost of the fleet to meet expanded fleet demand are calculated by multiplying the vehicle type by the vehicle unit cost:

Additional Fleet to Meet Demand by Vehicle Type (Table 6.9)	**x**	**Estimated Vehicle Unit Cost (Table 6.6)**	**=**	**Cost of Additional Fleet (Table 6.10)**

The costs associated with acquiring additional vehicles to meet unmet and growing demand are displayed in Table 6.10.

Table 6.10 Cost of Additional Fleet

Service Classification	2010	2020	2030
Urban Areas	$0	$10,697,574	$12,435,076
Small Urban/Rural Areas	$0	$3,769,685	$3,754,905
Underserved/Unserved Areas	$3,432,000	$620,889	$536,415
Total	**$3,432,000**	**$15,088,149**	**$16,726,396**

In addition, there are additional costs associated with fleet replacement for the expanded fleet in the outer years. A summary of the total costs associated with an expanded fleet have been displayed in Table 6.11.

Table 6.11 Total Expanded Fleet Costs – Initial Purchase and Replacement Costs

	2010	2020	2030
Initial Purchase Cost for Additional Fleet	$3,432,000	$15,088,149	$16,726,396
Replacement Cost for Additional Fleet	$0	$3,799,940	$7,659,487
TOTAL	**$3,432,000**	**$18,888,089**	**$24,385,883**

The capital cost spikes that are expected in 2010 are due to the significant investment required to start-up new services in the underserved and unserved areas. These capital cost spikes are also due to the expansion of services to reach statewide transit 80% demand targets in most small urban and rural areas.

Total Fleet Costs

The total capital costs are determined by summing the cost to replace existing fleet and cost of expanded fleet (both initial purchases and replacement of additional vehicles). Total costs to keep pace with fleet replacement cycles and to add vehicles to meet future demand are shown in Table 6.12.

Fleet Replacement Costs (Table 6.8)	+	Total Expanded Fleet Costs (Table 6.11)	=	Total Cost to Meet Existing and Expanded Fleet Demand (Table 6.12)

In 2010, it is estimated that fleet-related capital costs will be approximately $31.1 million to meet the full level of demand across the state. In 2030, capital costs to maintain and expand transit vehicle fleets in Greater Minnesota will equal approximately $45.2 million.

Table 6.12 Total Costs to meet existing and expanded fleet demand

	2010	2020	2030
Replacement Fleet Costs	$11,508,150*	$15,465,991	$20,784,999
Total Expanded Fleet Costs	$3,432,000	$18,888,089	$24,385,883
Total	**$14,940,150**	**$34,354,080**	**$45,170,882**

** $7.417 million for 60 vehicles purchased under the American Recovery and Reinvestment Act included in this total.*

Summary of Future Operating and Capital Costs

The future annual operating costs for Greater Minnesota public transit service will grow from $54 million in 2008 to more than $184 million in 2030. These costs assume service levels grow to meet the 80% demand level target and include annual cost inflation of 3 percent. By 2030, services operating in the urban areas will account for 35 percent of the total operating costs across the state.

The future cumulative capital costs consist of a fleet replacement component for existing services along with a new fleet component for expanded services. The on-going fleet replacement cost of existing services will increase from $11.5 million in 2010 to $20.7 million in 2030. The cost for additional vehicles to expand services to meet the 80% demand level target, including initial purchases and their associated replacement costs in the outer years, will reach $24.4 million in 2030. The total capital cost will be $14.9 million in 2010 and $45.2 million in 2030.

Chapter 7: Strategic Directions

The Mn/DOT Office of Transit employs four major mechanisms for issuing strategic guidance to locally operated transit systems. The Office of Transit provides planning and operational guidance to public transit systems through technical memos on specific issues as they arise. The Transit Providers' Guidebook is a guide for operators of public transit service in rural and small urban areas and is a resource for effectively managing and operating a successful transit service. Mn/DOT provides overarching policy guidance for the future of transit in Greater Minnesota through this Greater Minnesota Transit Plan. This plan sets forth the vision, policies, and strategies for transit through 2030 in Greater Minnesota.

Overview

The vision, policies, and strategies presented below are the result of a concerted planning effort that included stakeholders, community leaders, advisory committee members, and Mn/DOT transit professionals. In addition to providing technical research and demand modeling, consultant staff coordinated stakeholder involvement to support the development of the vision, policies, and strategies.

The Greater Minnesota Transit Plan Advisory Committee was instrumental in evaluating the technical work and advising on key elements of the vision, policies, and strategies. The Advisory Committee provided direction on important themes, including mobility needs, service delivery, and community impacts. As the product of these discussions, the vision represents the long-term outcome desired for transit in Greater Minnesota. The five policies broadly state the guiding principles upon which Mn/DOT will make decisions leading to the achievement of the vision. Each policy has corresponding strategies that provide specific implementation activities.

Performance measures and indicators are also included in this chapter under the appropriate policies. Mn/DOT's Statewide Transportation Plan has 10 major policy areas with corresponding measures. The Office of Transit identified four performance measures relating to public transit that are included in the Statewide Transportation Plan. These performance measures are monitored and reported on an annual basis. In addition, the office of Transit regularly collects information on other indicators for reporting purposes and providing guidance for improving transit services.

Vision

A high-quality coordinated transit network that is integrated into the overall state transportation system and that meets the mobility needs of the people of Minnesota.

Policies

The current plan takes a comprehensive approach to planning for transit services in Greater Minnesota. The identification of the five challenges in Chapter 3 has led this plan to expand from one goal based on transit services from the 2001 plan to five policies that encompass a wider range of themes. These five policies seek to achieve Mn/DOT's vision for Greater Minnesota transit by establishing a set of overarching policies with accompanying strategies. These policies and their accompanying strategies will shape how Mn/DOT will manage its transit programs in the future.

Mn/DOT will seek to meet its estimated future performance targets through the five following policies:

1. Maintain and expand the statewide public transit network.
2. Increase mobility for individuals and the workforce.
3. Provide a safe and reliable transit environment.
4. Invest in infrastructure to increase access to services.
5. Enhance coordination and communication to reach the broadest possible audience in a cost-effective manner.

Greater Minnesota Transit Policy 1: Maintain and expand the statewide public transit network.

Background

Mn/DOT has worked for many years with local jurisdictions to develop a statewide network of transit services. While full coverage is not yet available, 76 out of 80 counties in Greater Minnesota operate some level of public transit service. The current investment in transit services, equipment, and infrastructure is significant, and this investment should be maintained as long as the local services are efficiently and effectively operated. Existing services must continue to meet annual performance expectations or be subject to adjustment or potential removal from the funding program.

If additional state or federal funds become available beyond that necessary to maintain current service levels of the 66 public transit systems serving 76 Greater Minnesota counties, Mn/DOT will first look to extend service into currently unserved areas that are seeking transit service. This strategy ensures that those geographic areas currently without public transit service have an opportunity to more fully address local transportation needs if they so choose. Mn/DOT will work with the local jurisdiction to identify reasonable service levels and performance targets. Funding will be available for services and equipment. Start-up service must meet annual performance expectations or be subject to adjustment or potential removal from the funding program.

When all geographic areas of Greater Minnesota seeking public transit service provide some level of public transit service, any excess program funding for service or equipment will be available for increasing the investment in existing service areas. These investments should be directed to expand core services where the greatest return on investment can be expected. That will include increasing service frequencies for fixed routes, adding service hours and capacity for on-demand and route services to address capacity limitations and new markets, and expanding weekday and weekend service hours.

Strategies

Strategy 1: Mn/DOT will maintain the viability of existing transit systems through the allocation of operating and financial assistance first to existing public transit service that meets performance targets.

Strategy 2: Mn/DOT will provide resources to start new transit services in areas without public transit when new financial resources are available to fund service.

Strategy 3: Mn/DOT will provide resources to expand core service frequencies and weekday or weekend service hours of existing providers when all geographic areas seeking public transit services have services and new financial resources are available.

Measures

Measure 1: Greater Minnesota Public Transit Bus Service Hours

This measure evaluates how well Minnesota is meeting rural transit needs in Greater Minnesota. This is based on the total number of bus service hours provided compared to the total number of hours needed to meet transit needs. Demographic trends mean that additional service is needed to adequately meet transit demands in Greater Minnesota.

Measure 2: Access to Intercity Bus Services

Intercity bus service has historically been declining around the nation and also within the State of Minnesota. However, Mn/DOT is working to retain a statewide network and improve service where possible and when funds become available. This measure evaluates scheduled intercity bus service to Level 1 and 2 regional trade centers.

Indicators

Indicator 1: Cost efficiency (cost/mile and miles/vehicle)

Indicator 2: Service effectiveness (passengers/service hour and passengers/mile)

Indicator 3: Cost effectiveness (cost/service hour, cost/passenger trip, and revenue recovery percentage)

Indicator 4: Availability (hours (span) of service and frequency)

Ties to Statewide Transportation Plan Policy 7, Greater Minnesota Metropolitan and Regional Mobility.

Greater Minnesota Transit Policy 2: Increase mobility for individuals and the workforce.

Background

Minnesota's population is growing, aging, and changing. For people with mobility constraints, transit provides access to important destinations, such as school, work, nutrition sites, shopping, places of worship, and medical facilities. Transit providers must continue to provide transportation services for the general public while placing emphasis on primary consumer groups including seniors, persons with disabilities, and low-income persons, and minorities. Regional, multi-modal systems that incorporate pedestrians and bicyclists as important components of the public transit systems will continue to be an emphasis in planning and programming transit services in Greater Minnesota.

The local jurisdictions, through Metropolitan Planning Organizations (MPOs), Regional Development Commissions (RDCs), and Mn/DOT district offices, should regularly evaluate travel needs and markets to identify changing conditions. Transit services directed at special markets, such as commuter needs, must be carefully evaluated to identify reasonable opportunities for success. Responding to a wide range of commuter needs can be very challenging. Therefore, local areas are encouraged to identify the most pressing needs by market group, such as the low-income populations, or by geographic area, such as a key travel corridor. From that work, the appropriate response can be identified (for example, direct commuter service, investment in park-and-ride or park-and-pool lots, or provision of rideshare promotion services).

The commuter needs of Twin Cities metropolitan area collar counties present a significant challenge. Mn/DOT, along with the collar counties and the Metropolitan Council, must work together to evaluate the most pressing commuter needs by travel corridor and identify infrastructure and service ideas. Investments in park-and-ride and park-and-pool lots will be focused on Trunk Highway corridors where the greatest commuter concentrations are found. Local jurisdictions will need to identify candidate locations and acknowledge an on-going commitment to maintain such facilities.

Another very challenging travel market is travel between communities. This represents travel from smaller communities to regional centers for a variety of services along with longer distance intercity travel connecting regional centers with points beyond Minnesota. Mn/DOT must work with local communities to identify the level of travel needs between communities and evaluate reasonable strategies to address those needs.

Strategies

Strategy 1: Mn/DOT will work with MPOs, Regional Development Commissions (RDCs), tribal and local governments, and transit providers to plan for and provide options to address mobility needs of individuals and the workforce such as new routes, expanded carpool and vanpool assistance, and park-and-pool and park-and-ride lots.

Strategy 2: Mn/DOT, through plans and policies, will work to ensure that long-range public transit decisions in Greater Minnesota address future demographic shifts.

Measures

Measure 1: Greater Minnesota Public Transit Bus Service Hours

This measure evaluates how well Minnesota is meeting rural transit needs in Greater Minnesota. This is based on the total number of bus service hours provided compared to the total number of hours needed to meet transit needs. Demographic trends mean that additional service is needed to adequately meet transit demands in Greater Minnesota.

Measure 2: Access to Intercity Bus Services

Intercity bus service has historically been declining around the nation and also within the State of Minnesota. However, Mn/DOT is working to retain a statewide network and improve service where possible and when funds become available. This measure evaluates scheduled intercity bus service to Level 1 and 2 regional trade centers.

Indicators

Indicator 1: Availability (hours (span) of service and frequency)

Indicator 2: Ridership productivity (number of trips per year)

Ties to Statewide Transportation Plan Policies 5, Statewide Connections and 7, Greater Minnesota Metropolitan and Regional Mobility.

Greater Minnesota Transit Policy 3: Provide a safe and reliable transit environment.

Background

The highest priority at Mn/DOT is traveler safety. Safety and security are inherent in all of the Greater Minnesota Transit Plan policies and are primary considerations in all public transit systems planning, operations, and maintenance activities. Public transportation should be operated and maintained to ensure the safety and security of riders, employees, and facilities. Transit safety incidents are tracked and reported to the National Transportation Database (NTD) for national analysis.

The Federal Transit Administration (FTA) has placed a high priority on system safety programs. The FTA monitors and/or audits safety commitment and system safety program standards in the United States through the regulated State Safety Oversight Program. Mn/DOT expects that transit systems will implement safety standards and policies throughout their planning and operations through the written confirmation of responsibilities, expectations, and objectives.

Strategies

Strategy 1: Mn/DOT will work with transit providers to develop vehicle and facility safety and security plans.

Strategy 2: Mn/DOT will provide continuing training for transit operators through the Rural Transit Assistance Program (RTAP).

Measure

Measure 1: Greater Minnesota Public Transit Safety

This measure evaluates the number of FTA-defined reportable incidents for Greater Minnesota transit systems.

Indicators

Indicator 1: Maintenance program effectiveness (maintenance expense/revenue mile)

Indicator 2: Accident rate (accidents/100,000 miles)

Indicator 3: Fleet composition (class size and spare ratio)

Ties to Statewide Transportation Plan Policy 1, Safety, and 2, Infrastructure Preservation.

Greater Minnesota Transit Policy 4: Invest in infrastructure to increase access to services.

Background

The investments in equipment and infrastructure to support transit services should be focused on areas that yield proven results. Transit fleets need to be maintained and replaced at levels that are consistent

with industry standards. Mn/DOT will work with the local transit providers to establish a schedule for vehicle replacement or overhaul to ensure fleets of existing services are kept current. Mn/DOT will also work with local jurisdictions to identify the most appropriate mix of vehicle sizes for each system to best meet local needs. Investments in vehicle storage, maintenance, and administrative space will need to meet program guidelines and accountability standards as specified by Mn/DOT.

Investments in advanced technology applications for transit should be carefully evaluated by the local jurisdictions to identify the best potential for success. The greatest return on investment will be found in the areas of trip reservations and scheduling, customer information services, and fare payment/revenue handling systems.

Strategies

Strategy 1: Mn/DOT will continue to invest in size-appropriate ADA-accessible equipment to maximize operating efficiencies.

Strategy 2: Mn/DOT will invest in transit maintenance and storage facilities and passenger facilities that meet program guidelines and are consistent with local plans as funds are available.

Strategy 3: Mn/DOT will work with transit providers to replace or rehabilitate transit fleets following industry standards for vehicle replacement cycles.

Strategy 4: Mn/DOT will invest in advanced technology applications.

Measure

Measure 1: Remaining Service Life for Transit Fleets in Greater Minnesota

Transit fleet vehicles are an important component of the infrastructure necessary to deliver transit passenger services. When vehicles get older, there are increased issues with maintenance and availability that need to be monitored closely to ensure that regular services can be provided to customers. This measure evaluates the remaining useful lifespan of the transit fleet available to customers in Greater Minnesota.

Indicator

Indicator 1: Fleet composition (class size and spare ratio)

Ties to Statewide Transportation Plan Policy 2, Infrastructure Preservation.

Greater Minnesota Transit Policy 5: Enhance coordination and communication to reach the broadest possible audience in a cost-effective manner.

Background

To meet the widest level of transportation needs in Greater Minnesota, local public transit services must coordinate operations and administration with local human service agencies and providers. As so many

transit customers come from the elderly, disabled, and low-income populations, it is essential for these transit services to work with human service agencies to plan for and implement effective and cost-efficient services. Mn/DOT will continue to expand its working relationship with state agencies through the Interagency Committee on Transit Coordination (ICTC) to identify improved coordination activities and address the trip needs of all transit users including the elderly, persons with disabilities, and low-income populations.

One of the ways coordination can be expanded locally is to invest in mobility management activities. In many areas across the country, mobility management organizations are taking shape to serve as a centralized system of information and expand coordination of transportation services and resources. The intent is to improve transportation options for customers by improving access to information and reducing confusion among customers and advocates and to coordinate, where possible, the many local service providers. Mobility management activities must derive from and be consistent with local coordination plans. Such systems should be established at least at the regional or district level across the state to ensure reasonable coverage.

Local transit providers should routinely fund efforts to provide information about available services to potential customers. Effective transportation decision-making requires understanding and addressing the unique needs of many different socioeconomic groups. Early, inclusive, and meaningful public involvement in transportation decision-making is a proven means for designing transportation facilities that fit more harmoniously into communities. The transit providers should also pro-actively work with local jurisdictions to incorporate transit into land use decisions.

While bicycle and pedestrian travel is generally local in nature, there is growing interest in linking systems to allow uninterrupted travel throughout a larger area. Enhanced coordination between transit and bicycle/pedestrian systems increases the non-motorized transportation network. For example, the system of scenic bikeways supports non-motorized travel in Greater Minnesota through a combination of low-volume highways and paved trails. Coordination at the regional level is necessary to successfully develop these multimodal systems.

Strategies

Strategy 1: Mn/DOT will work in partnership with local human service agencies and state agencies to coordinate service planning and operations for target populations including the elderly, persons with disabilities, and low-income populations.

Strategy 2: Mn/DOT will work with local providers to expand marketing and information services to better inform target populations of available services.

Strategy 3: Mn/DOT will work with local transit and planning officials to generate land use and transportation interaction decisions.

Strategy 4: Mn/DOT will evaluate options for enhancing communication and coordination at the local level, including establishing mobility management organizations at the regional level.

Strategy 5: Mn/DOT, in cooperation with agencies and stakeholders such as MPOs, RDCs, tribal governments, local jurisdictions, and advocacy and recreation groups should coordinate efforts to enhance regional bicycle and pedestrian system interconnectivity to transit.

Indicators

Indicator 1: Cost efficiency (cost/mile and miles/vehicle)

Indicator 2: Service effectiveness (passengers/service hour and passengers/mile)

Indicator 3: Cost effectiveness (cost/service hour, cost/passenger trip, and revenue recovery percentage)

Indicator 4: Availability (hours (span) of service and frequency)

Indicator 5: Ridership productivity (number of trips per year)

Greater Minnesota Transit Investment Plan

Following the completion of the Greater Minnesota Transit Plan, Mn/DOT will undertake the development of a Greater Minnesota Transit Investment Plan as directed by the Minnesota State Legislature as described in Minnesota Statute 174.24, Subd. 1a. Transit service needs implementation plan. The Transit Investment Plan will include:

- An analysis of ridership and transit service needs throughout greater Minnesota
- A calculation of unmet needs
- An assessment of the level and type of service required to meet unmet needs
- An analysis of costs and revenue options
- A plan to reduce unmet transit service needs

Appendix A: Plan Definitions

Accessible Vehicle: A vehicle equipped with a wheelchair accessibility package that allows passengers using wheelchairs to enter, exit, and ride in the vehicle.

Americans with Disabilities Act (ADA): The passage of the Americans with Disabilities Act in July 1991 gave direction to local transit agencies to ensure full access to transportation for persons with disabilities.

American Public Transportation Association (APTA): The national nonprofit trade association representing the public transit industry.

Access transportation services (ATS): Transportation services provided by volunteer driver, common carrier (bus, taxicab, other commercial carrier, or private automobile), contract for service, or direct mileage reimbursement to the recipient or the recipient's driver.

Automatic Vehicle Location: Computerized tools that track the real-time location of a transit vehicle, allowing for dispatching and schedule monitoring with reference to the roadway network and planned schedule.

Capital Cost: The cost of equipment and facilities required to support transportation systems: vehicles, radios, shelters, etc.

Carpooling: An arrangement where two or more people share the use and cost of privately owned vehicles in traveling together to and from pre-arranged destinations.

Carsharing: An automobile rental service designed to substitute for private vehicle ownership.

Commuter Coach: Regularly scheduled express bus service with the general public as a target market. Provided over fixed routes connecting a transit center or park and ride located outside a major metropolitan area to the central city

Commuter Rail: An electric or diesel propelled railway for urban passenger train service consisting of local short distance travel operating between a central city and adjacent suburbs.

Coordination: A cooperative arrangement among transportation providers and/or purchasers aimed at realizing increased benefits through the shared management and/or operation of one or more transportation-related functions.

Cost Effectiveness: The ratio of the cost of a transit system to the level of service provided. Various measures, for example cost per passenger trip, may be used to determine cost effectiveness.

Department of Employment and Economic Development (DEED): The state's principal economic development agency, with programs promoting business recruitment, expansion, and retention; workforce development; international trade; and community development.

Dial-A-Ride or Demand Responsive: A transportation service characterized by flexible routing and scheduling of relatively small vehicles to provide door-to-door or point-to-point transportation at the user's demand.

Economic Development Regions: Subdivisions of the state as defined by the Minnesota Department of Employment and Economic Development (DEED).

Electronic Fare Payment: A method of allowing payments without a cash transaction and include bar-coded cards, magnetic strip cards and smart cards similar to debit or credit cards.

Exurban area: A community that is primarily residential and located far away from the downtown core, from which most residents commute to other areas to earn their livelihood.

Fare: The designed payment for a ride on a passenger vehicle, whether cash, tokens, transfer or pass.

Farebox: A device that accepts coins, bills, tickets and tokens given by passengers as payment for rides.

Farebox Recovery Ratio: Measure of the proportion of operating expenses covered by passenger fares; found by dividing fare box revenue by total operating expenses for each mode and/or systemwide.

Farebox Revenue of Fee-for-service (FFS): The revenue earned by a transit agency through passenger fares.

Fixed-Route: Transportation service operated over a set route or network of routes generally on a regular time schedule (also known as Regular Route).

Flexible Fixed-route: Transportation service that operates on a regular route, but will on demand change the route to meet the user's need. (See Route Deviation)

Marketing: A comprehensive process to induce greater usage of transportation services by determining the need or demand of the community and potential customers, developing and implementing service on the basis of these needs, pricing the services, promoting the services, and evaluating the services as implemented in relation to customer need and marketing goals.

Metropolitan Council: The regional planning agency serving the Twin Cities seven-county metropolitan area and providing essential services to the region.

Metropolitan Planning Organization (MPO): A federally required transportation planning body responsible for the Regional Transportation Plan and the Transportation Improvement Program in its region; the governor designates an MPO in every urbanized area with a population of over 50,000.

Mobility Manager: helps individuals connect with available transportation sources. Responsibilities include trip scheduling/sharing, marketing and outreach, planning and policy development, and facilitating regionalization of transportation programs.

Operating Cost or Expense: The recurring costs of providing transit service, i.e., wages, salaries, fuel, oil, taxes, maintenance, depreciation, insurance, marketing, etc.

Park-and-ride: A facility for commuters to leave their personal vehicles and board a transit vehicle, usually oriented toward a downtown commercial core.

Paratransit: Flexible forms of public transportation services that provide rides to the elderly and persons with disabilities.

Passenger Miles: The sum total of all passengers' trip lengths for a transit system.

Passenger Trip: One person making a one-way trip from origin to destination. One round trip equals two passenger trips.

Peak Period or Peak Travel Times: The hours when passenger demand is greatest.

Pedestrian: A person traveling on foot.

Peer-to-Peer Network: A group of similarly-sized transit providers used to compare and evaluate system performance.

Public-Private Partnership: A venture which is funded and operated through a partnership of government and one or more private sector companies.

Public Transportation: Transportation service that is available to any person upon payment of the fare, and which cannot be reserved for the private or exclusive use of one individual or group. "Public" in this sense refers to the access to the service, not to the ownership of the system that provides the service.

Ridesharing: A form of transportation, other than public transit, in which more than one person shares in the use of the vehicle, such as a van or car, to make a trip.

Route Deviation: Transportation service that operates on a specific route, but will on demand change the route to meet the user's need. (See Flexible Fixed Route)

Rural Area: A geographic area with a population of less than 2,500 (Section 5311).

Scheduling/Dispatch Software: Software customized for transit that improves the efficiency in collecting and recalling client information, call-taking, scheduling, vehicle routing, billing, and other functions supporting paratransit service.

Service or Revenue Hours: Hours traveled by a vehicle in revenue service (when available for travel by the general public). Revenue hours include layover/recovery time but do not include deadhead time.

Service or Revenue Miles: Miles traveled by a vehicle in revenue service (when available for travel by the general public). Revenue miles do not include deadhead miles.

Small Urban: A geographic area with a central city that has a population of between 2,500 and 50,000 (Section 5311).

Stop Announcers: Device that announces the next stop, stop requests, or other travel information for passengers in audible and visual formats.

Special transportation services (STS): Services that meet the transportation needs of a recipient who, because of physical or mental impairment, is unable to safely use a common carrier and does not require ambulance service.

Transit: All forms of riding together, at least two persons riding per trip. The term includes fixed-route and paratransit services as well as ridesharing.

Transit Center: A fixed location where passengers can transfer from one route or mode to another.

Travel Demand Management (TDM): A set of coordinated policies and operating strategies that combine incentives and disincentives to driving alone.

Travel Planning: Services allowing potential passengers to plan their trip. Travel planning services can be provided through automated telephone systems, the Internet, at high traffic locations such as malls, public buildings, or tourist attractions, or through individual customer service.

Unlinked Passenger Trips: A measure of the amount of transit service consumed by passengers. It is the number of passengers who board a vehicle. A passenger is counted each time he/she boards a vehicle even though he/she may be on the same journey from origin to destination and transfers between vehicles to complete the trip.

Vanpooling: Vans (and very rarely, small buses and other vehicles) operating as a ridesharing arrangement, providing transportation to a group of individuals traveling between their homes and a regular destination within the same geographical area.

Vehicle Hours: Hours traveled by a vehicle from the time it pulls out from the garage to the time it returns to the garage from revenue service. Vehicle hours include revenue hours plus deadhead time.

Vehicle Miles: Miles traveled by a vehicle from the time it pulls out from the garage to the time it returns to the garage from revenue service. Vehicle miles include revenue miles plus deadhead miles.

Vehicle Sharing: Using excess capacity (idle vehicles) from other transit agencies or transportation providers to meet demand for additional service.