



## ENVIRONMENTAL JUSTICE ANALYSIS

This appendix provides a systems-level analysis of the potential beneficial or adverse impacts the objectives and strategies identified in Chapter 4 of the Statewide Multimodal Transportation Plan may have on the state's environmental justice populations: racial and ethnic minorities, households without vehicles, and persons who are low-income, are age 65 or older, are age 16 or younger, or who have limited English proficiency. Since this analysis occurs at the statewide system-level, the analysis is general and qualitative in nature. MnDOT will complete additional environmental justice analyses on its modal investment plans, as an element of other plans and studies, and for its individual capital investment projects. Those individual project analyses identify specific impacts on communities and neighborhoods and work to avoid or mitigate adverse impacts through the project planning process and related project design decisions.

### ENVIRONMENTAL JUSTICE OVERVIEW

Presidential Executive Order 12898, issued in 1994, directed each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority and low-income populations." The order builds on Title VI of the Civil Rights Act of 1964 which prohibits discrimination on the basis of race, color or national origin. The order also provides protection to low-income groups.

There are three fundamental principles of environmental justice:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The Executive Order and subsequent orders by the U.S. Department of Transportation define minority and low-income populations as:

- Black – a person having origins in any of the black racial groups of Africa.
- American Indian and Alaskan Native – a person having origins in any original people of North America and who maintains cultural identification through tribal affiliation or community recognition.
- Asian – a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent.
- Native Hawaiian or Other Pacific Islander – a person having origins in any of the original peoples of Hawaii, Guam, Samoa, and other Pacific Islands.

- Hispanic – a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
- Low-income – a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines.

While not specifically identified by Title VI or the Executive Order, MnDOT chooses to expand its Environmental Justice analyses to include persons age 65 and older, persons age 16 and younger, persons with limited English proficiency, and households with zero vehicles because these additional population groups have unique transportation needs.

## OVERVIEW OF MINNESOTA’S MINORITY, AGE 65 AND OLDER, AGE 16 AND YOUNGER, LIMITED ENGLISH PROFICIENCY, LOW-INCOME, AND ZERO-VEHICLE HOUSEHOLD POPULATIONS

Based on the most recent decennial U.S. Census, 5.3 million persons lived in Minnesota in 2010. Table 1 shows Minnesota’s 2010 population based on race, ethnicity, age, limited English proficiency, low-income, and households with zero vehicles. As noted in the table:

- 85.3 percent of Minnesota’s population is white
- Minnesota’s black population is the state’s largest minority population, closely followed by the Hispanic and Asian populations
- Persons age 65 and older account for 12.9 percent of the state’s population, while those 16 and under account for 22.8 percent
- 10.6 percent of the state’s population is below the poverty level
- 3.1 percent of those age 5 and older speak English “less than very well”
- Almost seven percent of Minnesotan households do not have a vehicle

**Table 1: Minnesota’s Demographics, 2010**

Population	2010 Population	Percent of Total Minnesota Population
Total Population <sup>1</sup>	5,303,925	100.0%
White Alone <sup>1</sup>	4,524,062	85.3%
Black Alone <sup>1</sup>	274,412	5.2%
American Indian and Alaska Native Alone <sup>1</sup>	60,916	1.2%
Asian Alone <sup>1</sup>	214,234	4.0%
Native Hawaiian or Other Pacific Islander Alone <sup>1</sup>	2,156	<0.1%
Some Other Race Alone <sup>1</sup>	103,000	1.9%
Two or More Races <sup>1</sup>	125,145	2.4%
Hispanic <sup>1</sup>	250,258	4.7%
Age 65 and older <sup>1</sup>	683,121	12.9%
Age 16 and under <sup>1</sup>	1,209,188	22.8%
Persons below the poverty level <sup>2,3</sup>	542,133	10.6%
Persons age 5 and older who speak English “less than very well” <sup>2,4</sup>	153,772	3.1%
Households with zero vehicles <sup>2,5</sup>	144,242	6.9%

Source: 2010 U.S. Census

<sup>1</sup>Data from 2010 Census Summary File 1.

<sup>2</sup>Data from 2006-2010 American Community Survey 5-year Estimates.

<sup>3</sup>For persons below the poverty level, the total Minnesota estimated population was 5,119,104.

<sup>4</sup>Includes those who speak Spanish, Russian, Hmong, Vietnamese and African Languages. Total estimated Minnesota population age 5 and older was 4,889,304.

<sup>5</sup>Total estimated households in Minnesota was 2,085,917.

While Table 1 provides a statewide overview, population is not evenly distributed across the state. Tables 2-6 provide a breakdown of these populations based on MnDOT Districts (Figure 1). Table 2 provides a breakdown of minority and ethnic populations within each District. As shown in Table 2, the Metro District, which includes the Twin Cities metropolitan area, has the largest populations. The 2010 Census data shows that the Metro District has:

- 54.7 percent of the state's total population
- The majority of the state's minority populations: 87.2 percent of the state's black population, 85.8 percent of the state's Asian population, and 67.3 percent of the state's Hispanic population

District 2 has the state's largest American Indian population.

Outside of the Metro District, District 6 has the state's largest black, Asian, and Hispanic populations.

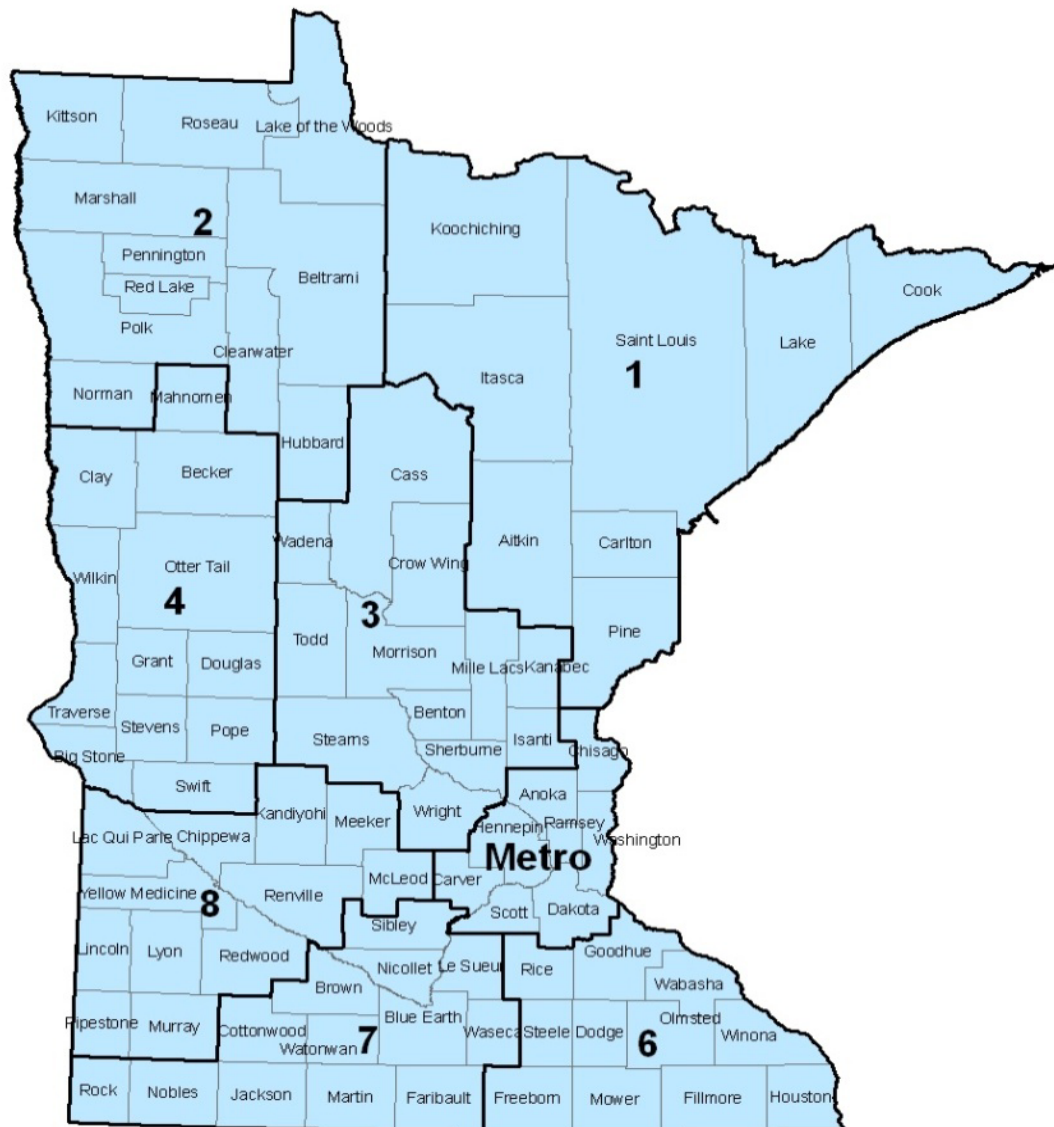


Figure 1: MnDOT Transportation Districts

**Table 2: Minnesota's Demographics by MnDOT District, 2010**  
 Minority Populations within each District and Percentage of Total District Population

MnDOT District	Total Population	White Alone	Black Alone	American Indian or Alaskan Native Alone	Asian Alone	Native Hawaiian and Other Pacific Islander Alone	Some Other Race Alone	Two or More Races	Hispanic
1	355,975	330,743	4,146	10,250	2,336	98	837	7,565	4,469
		92.9%	1.2%	2.9%	0.7%	<0.1%	0.2%	2.1%	1.3%
2	163,701	145,447	913	11,446	1,174	34	1,149	3,538	4,157
		88.8%	0.6%	7.0%	0.7%	<0.1%	0.7%	2.2%	2.5%
3	645,447	606,625	9,531	7,265	7,021	230	4,641	10,134	13,846
		94.0%	1.5%	1.1%	1.1%	<0.1%	0.7%	1.6%	2.2%
4	242,153	226,484	1,792	6,240	1,655	79	1,581	4,322	5,481
		93.5%	0.7%	2.6%	0.7%	<0.1%	0.7%	1.8%	2.3%
Metro	2,903,454	2,297,977	239,368	21,230	183,899	1,272	74,655	85,053	168,393
		79.1%	8.2%	0.7%	6.3%	<0.1%	2.6%	2.9%	5.8%
6	494,684	451,152	12,389	1,717	12,010	197	8,918	8,301	24,805
		91.2%	2.5%	0.4%	2.4%	<0.1%	1.8%	1.7%	5.0%
7	284,320	264,215	4,120	922	4,121	74	7,194	3,674	17,112
		92.9%	1.5%	0.3%	1.5%	<0.1%	2.5%	1.3%	6.0%
8	214,191	201,419	2,153	1,846	2,018	172	4,025	2,558	11,995
		94.0%	1.0%	0.9%	0.9%	0.1%	1.9%	1.2%	5.6%

Source: 2010 U.S. Census

As shown in Table 3, District 4 has the largest percentage (17.9 percent) of persons age 65 and older. The Metro District has the smallest percentage (10.8 percent) of those age 65 and older. Metro District has the highest percentage of those age 16 and younger (23.2 percent), while District 1 has the smallest percentage (19.2 percent) of those 16 and younger.

**Table 3: Persons Age 65 and Older and Age 16 and Under**  
Senior and Youth Populations within each District and Percentage of Total District Population

MnDOT District	Total District Population	Age 65 and Older		Age 16 and Under	
		Estimated population	Estimated percent of district population	Estimated population	Estimated percent of district population
1	355,975	61,059	17.2	68,333	19.2
2	163,701	27,134	16.6	37,071	22.7
3	645,447	83,735	13.0	156,826	24.3
4	242,153	43,336	17.9	51,612	21.3
<b>Metro</b>	2,903,454	312,997	10.8	673,650	23.2
6	494,684	72,355	14.6	112,163	22.7
7	284,320	45,054	15.9	60,923	21.4
8	214,191	37,451	17.5	48,610	22.7

Source: Source: 2010 U.S. Census

Using American Community Survey data, Table 4 shows the estimated number of persons below the poverty level. The Census Bureau estimated 10.6 percent, or approximately 542,133 Minnesotans, were below poverty thresholds in the past twelve months. District 1 and 2 have the highest percentage of their populations below the poverty level, 13.8 percent and 13.9 percent respectively.

**Table 4: Persons Below the Poverty Level**  
Persons in Poverty within each District and Percentage of Total District Population

MnDOT District	Estimated district population	Estimated district population below poverty	Estimated percent below poverty
1	341,962	47,111	13.8
2	158,108	22,013	13.9
3	618,770	64,375	10.4
4	231,320	27,212	11.8
<b>Metro</b>	2,812,955	279,690	9.9
6	473,462	46,821	9.9
7	273,660	33,905	12.4
8	208,867	21,006	10.1

Source: 2006-2010 American Community Survey 5-Year Estimates

A person's inability to speak English, at least moderately well, can be a barrier to participation in the transportation planning process. The American Community Survey estimates the number of individuals age 5 years and older who speak English "less than very well." Table 5 compares this data by MnDOT district based on some of the common non-English languages spoken in Minnesota – Spanish, Russian, Hmong, Vietnamese, and African languages. The

majority (89.7 percent) of Minnesota’s population age 5 years and older speak only English. Of those that speak English “less than very well,” the majority reside in the Metro District.

**Table 5: Population Age 5 and Older Who Speak English “Less Than Very Well” by MnDOT District**  
Limited English Populations within each District and Percentage of Total District Population

MnDOT District	Estimated population age 5 and older	Estimated persons who speak English “less than very well”									
		Spanish		Russian		Hmong		Vietnamese		African Languages	
		Estimated population	Estimated percent of district population	Estimated population	Estimated percent of district population	Estimated population	Estimated percent of district population	Estimated population	Estimated percent of district population	Estimated population	Estimated percent of district population
1	355,212	1,241	0.3	49	<0.0	127	<0.0	111	<0.0	34	<0.0
2	152,378	672	0.4	59	<0.0	17	<0.0	70	<0.0	21	<0.0
3	589,844	4,521	0.8	410	0.1	152	<0.0	614	0.1	778	0.1
4	225,841	1,475	0.7	34	<0.0	13	<0.0	146	0.1	434	0.2
<b>Metro</b>	<b>2,663,752</b>	<b>59,011</b>	<b>2.2</b>	<b>5,972</b>	<b>0.2</b>	<b>24,445</b>	<b>0.9</b>	<b>9,282</b>	<b>0.3</b>	<b>21,554</b>	<b>0.8</b>
6	456,814	8,689	1.9	137	<0.0	237	0.1	790	0.2	2,252	0.5
7	265,148	5,470	2.1	23	<0.0	77	<0.0	245	0.1	368	0.1
8	200,315	3,309	1.7	9	<0.0	358	0.2	67	<0.0	499	0.2

Source: 2006-2010 American Community Survey 5-Year Estimates

Households with zero vehicles are another demographic variable that was used to identify populations that may have a greater reliance on transit and non-motorized vehicle services. Table 6 shows the estimated number of Minnesota households that had zero vehicles. The American Community Survey estimated that 6.9 percent, or approximately 144,242 Minnesota households, do not have a vehicle.

**Table 6: Households with Zero Vehicles**  
Zero Vehicle Populations within each District and Percentage of Total District Population

MnDOT District	Estimated households	Estimated households with zero vehicles	Percent of estimated households with zero vehicles
1	152,820	11,813	7.7
2	66,152	4,007	6.1
3	245,330	11,364	4.6
4	99,967	5,653	5.7
<b>Metro</b>	<b>1,130,045</b>	<b>88,610</b>	<b>7.8</b>
6	192,209	11,348	5.9
7	112,071	6,674	6.0
8	87,323	4,773	5.5

Source: 2006-2010 American Community Survey 5-Year Estimates

## PLAN OBJECTIVES RELATED TO MINORITY, AGE 65 AND OLDER, AGE 16 AND YOUNGER, LIMITED ENGLISH, LOW-INCOME, AND ZERO-VEHICLE HOUSEHOLD POPULATIONS

As described in Chapters 1 and 4, the Statewide Multimodal Transportation Plan identifies policy objectives and strategies to steer Minnesota in a direction to achieve the Minnesota GO 50-year vision and guiding principles. The Vision and Guiding Principles recognize Minnesota's aging and increasingly diverse population as a challenge and opportunity for Minnesota over the next 50 years. This demographic shift will increase the urgency to improve accessibility of the transportation system. One of the vision statements calls for a transportation system that is accessible regardless of socio-economic status or individual ability. This statement speaks directly to the positive impacts that an accessible transportation system can provide – both in terms of cost and service area. In contrast, a transportation system that has limited accessibility becomes a considerable barrier to the quality of life.

The Vision and Guiding Principles also acknowledge the importance of the state's transportation system in maintaining the state's economic competitiveness. Economic competitiveness can be defined as simply as jobs or as broadly as building a solid education system as the foundation to provide an educated work force.

Finally, the Vision and Guiding Principles note that transportation influences the health of people and the environment. They state that the transportation system should be designed so that it is compatible with natural systems and minimizes resource use and pollution. Transportation decisions directly and indirectly influence air quality, water quality and noise. Land use and transportation conducive to active living can also influence Minnesotans' health. By seeking ways to avoid, minimize and mitigate transportation's impact on the environment, Minnesotans' quality of life will improve.

The following statements provide examples of what implementing the Minnesota GO Vision and Guiding Principles could mean. These statements are not meant to be all-inclusive, but instead to provide a few examples of potential outcomes.

- Reliable and affordable transit options for people who cannot or choose not to operate a personal vehicle in rural and urban areas
- Connected options to walk and bike
- Waterways, rail, transitways, roads, trails, airports, and pipelines integrated and strategically located to enable critical connections for Minnesota's businesses and communities
- An integrated network of streets, roads, and highways that collectively support freight, mass transit, non-motorized transportation and personal vehicles

The Statewide Multimodal Transportation Plan builds on the foundation provided by the Minnesota GO Vision and Guiding Principles. The objectives and strategies are written to meet the Vision, follow the Guiding Principles, and address the challenges and opportunities identified during the visioning process.

The Plan identifies six policy objectives:

- Accountability, Transparency and Communication
- Traveler Safety
- Transportation in Context
- Critical Connections
- Asset Management
- System Security

Each of these objectives includes a series of strategies to achieve the stated objective.

At a statewide system-level, the six objectives and their related strategies have a positive impact on minority, age 65 and older, age 16 and younger, limited English proficiency, low-income, and zero-vehicle household populations as well as other Minnesotans. Examples of the potential benefits for each objective are summarized below.

## Accountability, Transparency and Communication

Maintaining the public's trust is crucial. A key part of that trust is ensuring that everyone, regardless of income, age, or ability, has the opportunity to be heard throughout the transportation decision making process. This objective seeks to make transportation decisions through processes that:

- Are open and supported by data and analysis.
- Provide for and support coordination, collaboration, and innovation.
- Ensure efficient and effective use of public resources.

### *Benefits*

- Public engagement activities that provide opportunities for all transportation users.
- Improved coordination and collaboration among transportation partners to improve efficiencies and identify cost savings.
- Education activities to better inform stakeholders and the general public on how the transportation decision making process works.
- Regular reporting of performance measures and targets to improve accountability of public resources.

## Traveler Safety

Safety remains a top priority for MnDOT and its transportation partners. This objective seeks to:

- Safeguard travelers, transportation facilities and services.
- Apply proven strategies to reduce fatalities and serious injuries for all travel modes.

### *Benefits*

- Applying an integrated safety approach such as Toward Zero Deaths to all transportation modes.
- Continued collaboration and coordination on safety campaigns.
- Planning, designing, operating and maintaining transportation systems in a manner that considers the safety of all users regardless of income or ability.
- Implementing a statewide trauma system to reduce emergency response time and increase survival rates.

## Transportation in Context

Transportation decisions affect more than just the transportation system. They can affect natural resources, such as air and water, and cultural resources, such as historic buildings and sacred lands. They can also influence economic activity. Stated simply, transportation decisions can affect an individual's day-to-day life. The goal of this objective is to recognize there is no one-size-fits-all solution and that transportation decisions should be made in a manner that:

- Respect and complement the natural, cultural and social context
- Integrate land uses and transportation systems to leverage public and private investments

### *Benefits*

- Continued implementation of Context Sensitive Solutions to better balance the needs of all transportation stakeholders.
- Increased coordination between land use and transportation decisions to identify cost efficiencies and encourage walking and bicycling.
- Coordination among transportation partners to identify ways to avoid, minimize and mitigate adverse impacts of transportation decisions.
- Collaboration with transportation partners to create and maintain jobs through transportation investments.



## Critical Connections

Every day people and goods move within and between a neighborhood, community, region, state, nation and the world using a variety of connections. While many connections can be viewed as important, transportation agencies have finite resources. This objective seeks to:

- Identify connections that are essential for Minnesotan's prosperity and quality of life
- Invest to maintain and improve these essential connections
- Consider new connections that could improve Minnesotan's prosperity and quality of life

### *Benefits*

- Increased transportation options such as transit, bicycle, pedestrian, intercity bus, and intercity passenger rail.
- Improved multimodal connections to key resources and amenities throughout communities.
- Enhanced communication between transportation partners to identify and remove barriers, increase collaboration, and share resources.
- Improved accessibility to the transportation system regardless of income or ability.

## Asset Management

Asset management seeks to cost-effectively operate, maintain and improve transportation assets once they are built or purchased. Transportation assets include all aspects of the transportation system such as roads, trails, rail trackage, and buses. Given limited resources, it is essential to identify priorities and make the appropriate trade-offs when necessary. The goal of this objective is to:

- Strategically maintain and operate transportation assets.
- Rely on data, partners' needs and public expectations to inform the transportation decision making process.
- Use technology and innovation to improve the efficiency and performance of transportation assets.
- Recognize the transportation system may change over time.

### *Benefits*

- Investment decisions that give priority to maintaining and operating key transportation assets.
- Consideration of safety, operations and maintenance needs during planning and programming to better reflect the full cost of decisions.
- Transportation systems that are operated and maintained based on identified priorities.
- A decision-making process that considers the potential impacts investment decisions may have to the state's economy, environment and quality of life.

## System Security

Transportation security has grown in importance due to the impacts of man-made and natural disasters. During emergencies, the transportation system must support the public's well-being by ensuring access to medical facilities, food and supplies. Efforts can also be taken to better protect the transportation system from potential threats such as floods. The goal of this objective is to:

- Reduce system vulnerability
- Ensure system redundancy to meet essential travel needs during emergencies

### *Benefits*

- Coordinated response plans that ensure mitigation, response and recovery activities are timely and effective.
- A statewide communication system for public safety providers that allows emergency responders from different organizations to communicate with each other.

## NEXT STEPS

As laid out in the Statewide Multimodal Transportation Plan, the six objectives and their related strategies benefit traditionally underrepresented populations along with other Minnesotans. At the statewide system-level, the objectives and strategies identified in the Plan offer an approach that provides the framework for improved connections and accessibility, supports economic development, and seeks to avoid and minimize negative impacts on the state's environmental and cultural resources. At the system-level, the objectives and strategies outlined in the Statewide Multimodal Transportation Plan do not result in any inherent disproportionate negative impacts on minority, age 65 and older, age 16 and younger, limited English proficiency, low-income, or zero-vehicle household populations.

The Minnesota GO Vision and Guiding Principles and the objectives and strategies identified in this Plan will provide the groundwork for MnDOT's modal investment plans. The modal investment plans will identify specific policies, project-level and programmatic recommendations for their modal systems as well as related performance measures. MnDOT will review the recommendations identified in the modal investment plans to ensure they do not result in disproportionately high and adverse human health or environmental effects.

MnDOT will also continue to ensure that its other planning efforts and project-specific decisions do not result in disproportionately high and adverse human health or environmental effects. In all instances, MnDOT will work to avoid, minimize and mitigate any negative impacts.