

## #6: TRANSPORTATION MODES & MILES

**CORE METRIC FOR CATEGORY A & B COMMUNITIES; OPTIONAL FOR CATEGORY C COMMUNITIES**

**Bold, green font indicates metrics that must improve to be recognized at Step 5**

### METRICS

- **Vehicle Miles Traveled**
  - 6.1 **All users: Vehicle miles traveled per person, per day** (Miles/person/day)
  - 6.2 **Govt. Employees in Single Occupancy Vehicles: Vehicle miles traveled per person, per day (round trip)** (Miles/person/day)
  - 6.3 All users: mean travel time to work (one-way) (Minutes)
  - 6.4 Percent of city or tribal government employees commuting 20 or fewer minutes (%)
  
- **Transportation Mode of Commuters**
  - 6.5 Percent who “drove alone” (%)
  - 6.6 Percent using a “carpool” (%)
  - 6.7 Percent using “public transportation” (%)
  - 6.8 Percent who “walk” (%)
  - 6.8a Percent who commuted using “other means” (%)
  - 6.9 Percent who “worked at home” (%)

### METRIC DEFINITION

- **VMT (vehicle-miles traveled)** within city or reservation boundaries totals all miles measured and estimated to have been traveled by all road vehicles annually. Normalizing (dividing) this total by a city’s population and dividing by 365 gives an average VMT per person per day. (Metric 6.1)
- **Percent of city population and city employees, who commute** to work in fewer than 20 minutes from home roughly captures the extent to which a community has a close and socially/personally beneficial mix of housing and employers, and thus the relative need for roads, transit and other transportation infrastructure like sidewalks. (Metrics 6.3 and 6.4)
- **Transportation modes of commuters** in the community are estimated averages, counting journey-to-work trips by all employed people within the city, 16 years and older. (Metrics 6.5-6.9)
- **Drove alone** includes those using single-occupancy vehicles to commute. (Metrics 6.5)
- **Carpools** include van pools and ride sharing services (taxis, Uber, Lyft). (Metric 6.6)
- **Alternative metrics:** If you have been gathering or want to gather different metrics, report those and explain why they are a better fit for your city. For example, you may want a different commuting time break point – perhaps under/over 15, or 30 minutes, or more than one percentage break point - to better reflect local conditions and commuting factors.

### DATA SOURCES

- Annual VMT for all jurisdiction roads (federal, State, county, local) is MnDOT data, <http://www.dot.state.mn.us/roadway/data/data-products.html#VMT>. Select “VMT by Route System in each City, within each County.” Scroll to (or search for) the city in column B. Sum all “Annual (Total) Vehicle Miles” by all “Route System”s in the city. Divide the sum by total city population and divide that by 365. (Metric 6.1)

# Minnesota GreenStep Cities & Tribal Nations Performance Metrics for Recognition at Steps 4 and 5

VEHICLE MILES TRAVELED (VMT)		
NOTE: 2015 reports are not available.		
Title	Year(s)	
VMT by Route System <sup>1 2</sup>	PDF: [2023] Go	Excel: [2023] Go
VMT by Route System for each County <sup>1 2</sup>	PDF: [2023] Go	Excel: [2023] Go
VMT by Route System in each City, within each County <sup>1 2</sup>	PDF: [2023] Go	Excel: [2023] Go
VMT by Trunk Highway Route System for each District <sup>2</sup>	PDF: [2023] Go	Excel: [2023] Go
VMT by Basic Pavement Type for each County <sup>1 2</sup>	PDF: [2023] Go	Excel: [2023] Go
Heavy Commercial VMT by District by Route System, Trunk Highways only <sup>2</sup>	PDF: [2023] Go	Excel: [2023] Go
VMT by Functional Class for each County <sup>1 2</sup>	PDF: [2023] Go	Excel: [2023] Go

	A	B	C	D	E	F	G	H
1	2023 Daily (Average) and Annual (Total) Vehicle Miles and Centerline Miles by Route System for each County and City							
2	printed on 6/27/2024. Use of this document is subject to MnDOT's disclaimers, legal notices and policies: <a href="https://www.dot.state.mn.us/information/disclaimer.html">https://www.dot.state.mn.us/information/disclaimer.html</a> . Report is provided by MnDOT, Office of Transportation System Management							
3	County	City	Route System	Daily VMT	Annual VMT	Centerline Miles	Percent Sampled	* 100 percent due to rounding
4	Aitkin	Aitkin	2 - US Highway	8,462	3,097,075	1.3	100	
5	Aitkin	Aitkin	3 - MN Highway	16,547	8,056,281	2.6	100	
6	Aitkin	Aitkin	4 - County State Aid Highway	2,178	797,169	2.1	100	
7	Aitkin	Aitkin	7 - County Road	202	74,025	0.5	100	
8	Aitkin	Aitkin	8 - Township Road	63	23,102	1.4	0	
9	Aitkin	Aitkin	10 - Municipal Street	9,180	3,359,966	14.1	0	
10	Aitkin	Aitkin	30 - Alleyway	10	3,803	2.1	0	
11	Aitkin	Hill City	2 - US Highway	2,878	1,053,240	0.9	100	
12	Aitkin	Hill City	3 - MN Highway	621	227,311	0.6	100	
13	Aitkin	Hill City	4 - County State Aid Highway	83	30,360	0.3	100	
14	Aitkin	Hill City	7 - County Road	432	157,944	1.6	100	
15	Aitkin	Hill City	10 - Municipal Street	2,791	1,021,329	7.0	0	
16	Aitkin	Hill City	30 - Alleyway	5	1,690	0.9	0	
17	Aitkin	McGrath	3 - MN Highway	1,009	369,203	0.5	100	
18	Aitkin	McGrath	4 - County State Aid Highway	42	15,277	0.5	100	
19	Aitkin	McGrath	7 - County Road	27	9,786	0.5	100	
20	Aitkin	McGrath	10 - Municipal Street	300	109,649	1.5	0	
21	Aitkin	McGrath	30 - Alleyway	1	232	0.1	0	
22	Aitkin	McGregor	3 - MN Highway	7,618	2,788,362	1.9	100	
23	Aitkin	McGregor	4 - County State Aid Highway	1,382	505,766	1.5	100	
24	Aitkin	McGregor	10 - Municipal Street	870	391,749	4.4	0	

- Regional Indicators Initiative has VMT per person, per day for selected cities, at <https://www.regionalindicatorsmn.com/travel-chart> (Metric 6.1)
- City or Tribal mapping data, government employee survey data, timesheet data for employee commuting single occupancy miles and time. (Metrics 6.2 and 6.4)
- Total population commuting by time and percent commute mode is from [Census Data](#): type in table S0801 and type in your city name and then select "Commuting Characteristics by Sex." See the guide to [using census data](#) for more help. (Metric 6.3; 6.5-6.9)
- See the [Data Collection Process Guide](#) for more sources and optional methods on:
  - Vehicle Miles Traveled
  - Origin-Destination Data
  - Commute Characteristics

## METRIC CALCULATION AND PUBLIC REPORTING

- Report VMT using** the Regional Indicators data or the annual MnDOT data. Use data for a one-year period ending before the GreenStep reporting year. (Metric 6.1)
- Mean Travel Time to Work** American Community Survey (ACS). Use the latest estimated data before the GreenStep reporting year. Report the number in minutes. (Metric 6.3)
- Percent of city employees commuting** fewer than 20 minutes from home requires either estimates using employee home addresses and Google Maps or data from an employee survey/timesheet. (Metric 6.4)
- Travel mode for all commuters** is from the same ACS table that reports commuting time. (Metrics 6.5-6.9)

## METRIC RATIONALE

Vehicles are typically a significant expense for individuals, roads are usually a significant expense for city budgets, and vehicle emissions exact documented high health care costs and are a key contributor to greenhouse gases.

Local and tribal governments - through what they directly administer and in what they influence - can lower these transportation costs by providing and incentivizing more transportation options to their residents, businesses, and employees. Data on VMT, commute time and modal split is an essential first step, because it's hard to manage changes in what you don't measure.

## STEP 5 METRIC TARGETS

Among the Minnesota Department of Transportation's legislatively delegated authorities and purposes are the goals of: (1) promoting and increasing bicycling and walking as a percentage of all trips as energy-efficient, nonpolluting, and healthy forms of transportation, and (2) reducing greenhouse gas emissions from the state's transportation sector. Supporting these goals are Statewide Health Improvement Program (SHIP) dollars from the Minnesota Department of Health to increase active transportation in communities and work sites.

The Sustainable Transportation Advisory Council recommended a preliminary goal for a [20% reduction in Vehicle Miles Traveled \(VMT\) statewide by 2050](#) (a 7% reduction in total VMT if the current population forecast holds.) MnDOT adopted the recommendation, among others, March 2021.

At this point in time GreenStep thinks individual communities are best equipped to set realistic goals for metric improvement, and any improvement in metrics – lower VMT, shorter commutes, mode-shifting away from single-occupancy car use – has clear, quantifiable, and multiple benefits.

## LEED FOR CITIES & COMMUNITIES CRITERIA

<https://www.usgbc.org/leed/rating-systems/leed-for-cities-communities>

### **TR Prerequisite: Transportation Performance**

- Modal Split:
  - Collect and disclose data for one whole calendar year within the last 5 years on modal split showing the percentage of population commuting to work by using the following transportation modes:
    - Walk
    - Bicycle
    - Public transportation
    - Carpool/vanpool
    - Taxicab/transportation network company (TNC)
    - Drive alone
    - Telecommute/work from home
    - Other transportation modes
  - Disclose modal split for travel to other places (e.g., non-work trips, all trips) if available, but document separately from commute modal split.
- Transportation Performance
  - Measure the daily Vehicle Miles Travelled (VMT) per capita for all passenger vehicles within the city. Total VMT must be calculated for one whole calendar year within the last 5 years using either of the following methodologies:
    - Non-traffic count based
    - Traffic count based

Minnesota GreenStep Cities & Tribal Nations  
Performance Metrics for Recognition at Steps 4 and 5

- Transportation modeling software derived
- Obtain a minimum transportation performance score of 40 (use Arc reporting tool)

[RELATED BEST PRACTICE ACTIONS](#)

- [12.5](#) Implement workplace multi-modal transportation best management practices - including telework/flexwork - in city government, businesses or at a local health care provider.

[NEED HELP? CONTACT](#)

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