

EXECUTIVE SUMMARY

Aspen VMT Model

VMT = vehicle miles of travel

The City of Aspen tracks community-wide greenhouse gas (GHG) emissions to measure progress towards its climate mitigation goals.

In 2014 the Canary Initiative developed a “VMT model” to provide a robust and replicable means of estimating GHG emissions from motor vehicles, which represent about 19% of total GHG emissions in Aspen. The VMT model improves the accuracy of our estimates and provides a straightforward methodology for future updates.

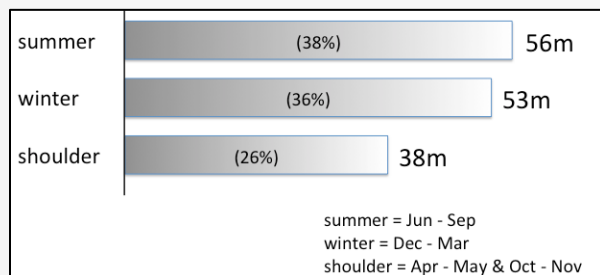
Vehicle miles of travel (VMT) is a measure of the total miles of vehicular travel (all types of motor vehicles) attributable to the City of Aspen during a calendar year. Miles attributable to Aspen include miles traveled internally (within a defined “emissions inventory boundary”), plus half of the miles traveled to and from the city. Miles traveled through the city without stopping are not included.

The VMT model relies on data from traffic counts, a regional travel patterns study completed by RFTA (the regional transit agency), and vehicle registration data from the Colorado Department of Revenue, as well as other national, state and local data sources. The VMT estimate can be updated annually as needed and the model should be recalibrated in 2019.

Although Aspen’s annual VMT did not increase from 2004 to 2014, some annual fluctuation in traffic levels is expected. During the summer of 2015, for example, the city is experiencing a surge in visitor traffic associated with low gas prices, pent-up demand for vacation travel and other regional and national trends.

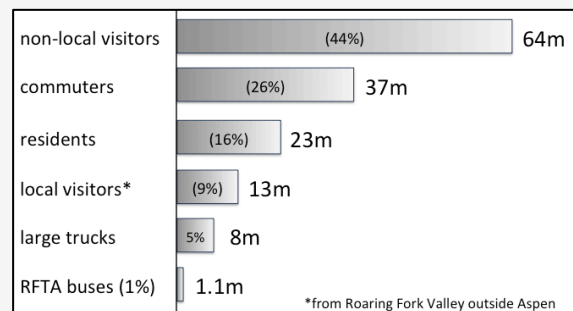
KEY OUTCOMES

VMT by season



annual 2014 VMT = 147 million

VMT by traveler



prepared by

Charlier Associates, Inc.

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VMT Attributable to Aspen by Vehicle Type

(last updated 5/20/15)

2014 VMT Attributable to Aspen by Vehicle Type

Vehicle Type	Fuel Type	Miles per Gallon	Average Daily VMT				% of Total VMT	Annual VMT	Gallons of Fuel Consumed
			Summer	Winter	Shoulder	Annual			
Car (sedan, wagon, small SUV, crossover)	Gasoline	24.4	180,831	163,386	114,340	152,852	38.1%	55,791,068	2,287,611
Car (sedan, wagon, small SUV, crossover)	Diesel	25.0	1,563	1,532	1,132	1,409	0.4%	514,322	20,593
Car (sedan, wagon, small SUV, crossover)	Electric	n/a	105	119	99	108	0.03%	39,406	0
Truck (med/large SUV, pickup, van, minivan)	Gasoline	17.9	225,314	220,311	156,626	200,750	50.0%	73,273,931	4,082,787
Truck (med/large SUV, pickup, van, minivan)	Diesel	17.6	19,349	20,119	14,108	17,859	4.4%	6,518,415	370,400
Motorcycle	Gasoline	43.5	6,325	1,612	4,464	4,134	1.0%	1,508,814	34,650
RFTA Bus (standard)	B5 Biodiesel	4.3	2,098	3,387	1,710	2,396	0.6%	874,468	205,757
RFTA Bus (BRT)	CNG	5.8	569	646	403	539	0.1%	196,641	34,199
Single-Unit Truck (& other bus)	Gasoline	7.3	1,953	1,851	1,269	1,691	0.4%	617,226	83,982
Single-Unit Truck (& other bus)	Diesel	7.3	2,651	2,511	1,722	2,295	0.6%	837,532	113,958
Combination Truck (semi, tractor-trailer)	Diesel	5.8	20,341	19,177	12,959	17,492	4.4%	6,384,608	1,091,479
Total			461,099	434,651	308,833	401,524	100%	146,556,433	8,325,416

Fuel Consumed by Season		
Summer	Winter	Shoulder
904,585	808,685	572,527
7,637	7,424	5,527
0	0	0
1,531,635	1,480,258	1,066,300
134,136	137,513	98,028
17,720	4,480	12,508
60,224	97,238	49,093
12,064	13,705	8,542
32,426	30,724	21,062
44,000	41,690	28,580
424,236	399,956	270,278
3,168,664	3,021,671	2,132,445

2014 Light Duty Vehicle Fleet Average Fuel Economy by Season

Vehicle Type	Fuel Type	Annual	Summer	Winter	Shoulder
Car (sedan, wagon, small SUV, crossover)	Gasoline	24.4	24.4	24.4	24.3
Car (sedan, wagon, small SUV, crossover)	Diesel	25.0	25.0	25.0	25.0
Car (sedan, wagon, small SUV, crossover)	Electric	n/a	n/a	n/a	n/a
Truck (med/large SUV, pickup, van, minivan)	Gasoline	17.9	18.0	17.9	17.9
Truck (med/large SUV, pickup, van, minivan)	Diesel	17.6	17.7	17.6	17.5
Motorcycle	Gasoline	43.5	43.5	43.5	43.5

2014 Fuel Consumed by Fuel Type (gallons)

Fuel Type	Summer	Winter	Shoulder	Annual
Gasoline	2,486,367	2,324,146	1,672,398	6,489,031
Diesel	610,010	586,582	402,412	1,596,429
B5 Biodiesel	60,224	97,238	49,093	205,757
CNG	12,064	13,705	8,542	34,199
Total	3,168,664	3,021,671	2,132,445	8,325,416

VMT Attributable to Aspen by Travel Group

2014 VMT Internal to Aspen EIB by Travel Group

Travel Group	Average Daily VMT				Annual VMT
	Summer	Winter	Shoulder	Annual	
Residents	39,414	47,032	43,059	43,168	15,756,479
Commuters	43,967	48,926	39,002	43,965	16,047,243
Local Visitors	18,496	19,272	8,772	15,513	5,662,231
Non-local Visitors	80,901	63,961	43,729	62,864	22,945,345
RFTA Buses (transit)	2,667	4,033	2,113	2,935	1,071,110
Single-Unit Trucks (& other buses)	965	946	710	874	318,947
Combination Trucks	1,954	1,916	1,439	1,770	645,885
Total	188,364	186,086	138,823	171,088	62,447,239

% LDV			
Summer	Winter	Shoulder	Annual
22%	26%	32%	26%
24%	27%	29%	27%
10%	11%	7%	9%
44%	36%	32%	38%
100%	100%	100%	100%

2014 VMT External to Aspen EIB by Travel Group

Travel Group	Average Daily VMT				Annual VMT
	Summer	Winter	Shoulder	Annual	
Residents	19,105	19,621	19,772	19,499	7,117,255
Commuters	59,466	66,172	52,750	59,463	21,703,814
Local Visitors	22,747	27,107	10,604	20,153	7,355,727
Non-local Visitors	147,631	117,907	71,924	112,487	41,057,862
RFTA Buses (transit)	0	0	0	0	0
Single-Unit Trucks (& other buses)	3,639	3,416	2,280	3,112	1,135,812
Combination Trucks	18,387	17,261	11,520	15,723	5,738,723
Total	270,974	251,484	168,850	230,436	84,109,194

% LDV			
Summer	Winter	Shoulder	Annual
8%	9%	13%	9%
24%	29%	34%	28%
9%	12%	7%	10%
59%	51%	46%	53%
100%	100%	100%	100%

2014 VMT Attributable to Aspen EIB by Travel Group

Travel Group	Average Daily VMT				Annual VMT
	Summer	Winter	Shoulder	Annual	
Residents	58,519	66,654	62,830	62,668	22,873,734
Commuters	103,433	115,098	91,752	103,428	37,751,057
Local Visitors	41,242	46,379	19,376	35,666	13,017,958
Non-local Visitors	228,533	181,868	115,653	175,351	64,003,207
RFTA Buses (transit)	2,667	4,033	2,113	2,935	1,071,110
Single-Unit Trucks (& other buses)	4,604	4,362	2,991	3,986	1,454,759
Combination Trucks	20,341	19,177	12,959	17,492	6,384,608
Total	459,338	437,571	307,673	401,524	146,556,433

% LDV			
Summer	Winter	Shoulder	Annual
14%	16%	22%	17%
24%	28%	32%	27%
10%	11%	7%	9%
53%	44%	40%	46%
100%	100%	100%	100%