

# Performance Measure Summary - Atlanta GA

There are several inventory and performance measures listed in the pages of this Urban Area Report for the years from 1982 to 2017. There is no single performance measure that experts agree "says it all". A few key points should be recognized by users of the Urban Mobility Scorecard data.

**Use the trends** - The multi-year performance measures are better indicators, in most cases, than any single year. Examining a few measures over many years reduces the chance that data variations or the estimating procedures may have caused a "spike" in any single year. (5 years is 5 times better than 1 year.)

**Use several measures** - Each performance measure illustrates a different element of congestion. (The view is more interesting from atop several measures.)

**Compare to similar regions** - Congestion analyses that compare areas with similar characteristics (for example, population, growth rate, road and public transportation system design) are usually more insightful than comparisons of different regions. (Los Angeles is not Peoria.)

**Compare ranking changes and performance measure values** - In some performance measures, a small change in the value may cause a significant change in rank from one year to the next. This is the case when there are several regions with nearly the same value. (15 hours is only 1 hour more than 14 hours.)

**Consider the scope of improvement options** - Any improvement project in a corridor within most of the regions will only have a modest effect on the regional congestion level. (To have an effect on areawide congestion, there must be significant change in the system or service.)

## Performance Measures and Definition of Terms

**Travel Time Index** - A measure of congestion that focuses on each trip and each mile of travel. It is calculated as the ratio of travel time in the peak period to travel time in free-flow. A value of 1.30 indicates that a 20-minute free-flow trip takes 26 minutes in the peak.

**Planning Time Index** - A travel time reliability measure that represents the total travel time that should be planned for a trip. Computed with the 95th percentile travel time it represents the amount of time that should be planned for a commute trip to be late for only 1 day a month. If it is computed with the 80th percentile travel time it represents the amount of time that should be planned for a trip to be late for only 1 day a week. A PTI of 2.00 means that for a 20-minute trip in light traffic, 40 minutes should be planned.

**Peak Commuters** - Number of travelers who begin a trip during the morning or evening peak travel periods (6 to 10 a.m. and 3 to 7 p.m.). "Commuters" are private vehicle users unless specifically noted.

**Annual Delay per Commuter** - A yearly sum of all the per-trip delays for those persons who travel in the peak period (6 to 10 a.m. and 3 to 7 p.m.). This measure illustrates the effect of traffic slowdowns as well as the length of each trip.

**Total Delay** - The overall size of the congestion problem. Measured by the total travel time above that needed to complete a trip at free-flow speeds. The ranking of total delay usually follows the population ranking (larger regions usually have more delay).

**Free-Flow Speeds** - These values are derived from time periods with lighter traffic volumes in the INRIX speed database. They are used as the national comparison thresholds. Other speed thresholds may be appropriate for urban project evaluations or sub-region studies.

**Excess Fuel Consumed** - Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

**Congestion Cost** - Value of travel delay for 2017 (estimated at \$18.29 per hour of person travel and \$59.94 per hour of truck time) and excess fuel consumption estimated using state average cost per gallon.

**Urban Area** - The developed area (population density more than 1,000 persons per square mile) within a metropolitan region. The urban area boundaries change frequently (every year for most growing areas), so increases include both new growth and development that was previously in areas designated as rural.

**Number of Rush Hours** - Time when the road system might have congestion.

# Mobility Data for Atlanta GA

Inventory Measures	2017	2016	2015	2014	2013	2012
<b>Urban Area Information</b>						
Population (1000s)	4,900	4,750	4,600	4,500	4,475	4,425
Rank	9	9	9	9	9	9
Commuters (1000s)	2,300	2,225	2,120	2,069	2,077	2,054
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	55,427	53,580	52,495	51,367	49,469	50,245
Arterial Streets	54,375	51,152	49,889	45,569	44,233	43,850
<b>Cost Components</b>						
Value of Time (\$/hour)	18.12	17.91	17.69	17.67	17.39	17.14
Commercial Cost (\$/hour)	52.14	50.20	46.87	44.82	41.23	39.66
Gasoline (\$/gallon)	2.24	2.12	2.19	3.18	3.41	3.43
Diesel (\$/gallon)	2.50	2.30	2.50	3.57	3.86	3.86
System Performance	2017	2016	2015	2014	2013	2012
<b>Congested Travel (% of peak VMT)</b>	3.0	--	--	--	--	--
<b>Congested System (% of lane-miles)</b>	19.6	--	--	--	--	--
<b>Congested Time (number of "Rush Hours")</b>	4.6	--	--	--	--	--
<b>Annual Excess Fuel Consumed</b>						
Total Fuel (1000 gallons)	76,874	76,570	76,194	76,060	75,617	73,929
Rank	10	10	10	10	10	10
Fuel per Peak Auto Commuter (gallons)	31	30	28	27	27	25
Rank	7	9	12	12	12	13
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	237,405	235,198	232,059	227,691	224,398	215,539
Rank	8	8	8	8	6	7
Delay per Auto Commuter (pers-hrs)	77	74	71	68	66	64
Rank	8	8	9	10	10	8
<b>Travel Time Index</b>						
Rank	1.30	1.28	1.27	1.25	1.25	1.24
Rank	19	20	20	25	24	26
<b>Commuter Stress Index</b>						
Rank	1.36	--	--	--	--	--
Rank	16	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	2.10	--	--	--	--	--
Rank	12	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	4,754	4,636	4,505	4,478	4,344	4,114
Rank	8	8	8	8	8	7
Cost per Auto Commuter (\$)	1,653	1,649	1,618	1,578	1,572	1,528
Rank	5	5	5	5	5	5
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	9,971	9,878	9,746	9,563	9,425	9,053
Rank	8	8	8	8	6	7
Annual Gallons of Wasted Fuel (000)	16,297	16,233	16,153	16,125	16,031	15,673
Rank	10	10	10	10	10	10
Annual Congestion Cost (\$ million)	497	472	441	434	403	375
Rank	8	8	8	8	8	8

\* Note: Zeroes in the table reflect values less than 0.5.

# Mobility Data for Atlanta GA

Inventory Measures	2011	2010	2009	2008	2007	2006
<b>Urban Area Information</b>						
Population (1000s)	4,360	4,300	4,200	4,170	4,130	4,070
Rank	9	9	10	10	10	10
Commuters (1000s)	2,062	2,053	2,005	1,983	1,950	1,907
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	49,501	48,865	47,000	46,000	47,830	48,055
Arterial Streets	43,201	42,646	42,373	42,500	44,800	44,630
<b>Cost Components</b>						
Value of Time (\$/hour)	16.79	16.28	16.01	16.07	15.47	15.06
Commercial Cost (\$/hour)	44.62	42.50	41.83	40.77	39.30	37.88
Gasoline (\$/gallon)	3.20	2.60	2.15	3.42	2.92	2.59
Diesel (\$/gallon)	3.64	2.88	2.46	4.12	3.29	2.77
System Performance	2011	2010	2009	2008	2007	2006
<b>Congested Travel (% of peak VMT)</b>	--	--	--	--	--	--
<b>Congested System (% of lane-miles)</b>	--	--	--	--	--	--
<b>Congested Time (number of "Rush Hours")</b>	--	--	--	--	--	--
<b>Annual Excess Fuel Consumed</b>						
Total Fuel (1000 gallons)	72,896	71,843	71,197	74,329	75,014	73,671
Rank	9	9	9	9	10	10
Fuel per Peak Auto Commuter (gallons)	24	24	23	24	23	23
Rank	14	13	10	9	13	14
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	208,732	201,977	194,600	193,488	195,270	191,775
Rank	7	7	7	6	6	6
Delay per Auto Commuter (pers-hrs)	63	60	59	56	57	57
Rank	8	8	7	10	10	10
<b>Travel Time Index</b>						
Rank	1.23	1.23	1.24	1.25	1.26	1.26
Rank	28	28	24	24	24	23
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	3,941	3,657	3,442	3,535	3,402	3,228
Rank	7	7	7	7	6	6
Cost per Auto Commuter (\$)	1,528	1,525	1,494	1,472	1,545	1,558
Rank	5	5	5	5	5	5
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	8,767	8,483	8,173	8,126	8,201	8,055
Rank	7	7	7	6	6	6
Annual Gallons of Wasted Fuel (000)	15,454	15,231	15,094	15,758	15,903	15,618
Rank	9	9	9	9	10	10
Annual Congestion Cost (\$ million)	399	360	337	356	335	311
Rank	7	7	7	7	6	6

\* Note: Zeroes in the table reflect values less than 0.5.

# Mobility Data for Atlanta GA

Inventory Measures	2005	2004	2003	2002	2001	2000
<b>Urban Area Information</b>						
Population (1000s)	4,020	3,980	3,940	3,900	3,850	3,775
Rank	10	11	11	11	11	11
Commuters (1000s)	1,869	1,837	1,804	1,755	1,705	1,645
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	49,200	49,000	48,500	47,390	46,150	45,800
Arterial Streets	45,000	44,850	44,000	42,500	41,000	39,750
<b>Cost Components</b>						
Value of Time (\$/hour)	14.58	14.10	13.73	13.43	13.22	12.85
Commercial Cost (\$/hour)	36.51	35.19	33.92	32.69	31.51	30.38
Gasoline (\$/gallon)	2.23	1.83	1.14	1.24	1.39	1.41
Diesel (\$/gallon)	2.40	1.84	1.40	1.24	1.39	1.38
System Performance	2005	2004	2003	2002	2001	2000
<b>Congested Travel (% of peak VMT)</b>	--	--	--	--	--	--
<b>Congested System (% of lane-miles)</b>	--	--	--	--	--	--
<b>Congested Time (number of "Rush Hours")</b>	--	--	--	--	--	--
<b>Annual Excess Fuel Consumed</b>						
Total Fuel (1000 gallons)	72,566	71,063	69,216	67,384	64,445	61,360
Rank	8	8	9	9	8	8
Fuel per Peak Auto Commuter (gallons)	22	22	21	20	19	18
Rank	15	12	13	15	13	16
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	188,897	184,986	180,178	175,407	167,758	159,727
Rank	6	6	6	6	6	6
Delay per Auto Commuter (pers-hrs)	57	57	56	55	54	53
Rank	8	7	7	7	7	7
<b>Travel Time Index</b>						
Rank	22	23	21	19	18	19
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	3,057	2,869	2,678	2,552	2,409	2,231
Rank	6	6	6	6	6	6
Cost per Auto Commuter (\$)	1,586	1,606	1,607	1,598	1,549	1,515
Rank	5	5	5	5	5	5
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	7,934	7,769	7,567	7,367	7,046	6,709
Rank	6	6	6	6	6	6
Annual Gallons of Wasted Fuel (000)	15,384	15,065	14,674	14,285	13,662	13,008
Rank	8	8	9	9	8	8
Annual Congestion Cost (\$ million)	291	268	246	229	214	197
Rank	6	6	6	6	6	6

\* Note: Zeroes in the table reflect values less than 0.5.

# Mobility Data for Atlanta GA

Inventory Measures	1999	1998	1997	1996	1995	1994
<b>Urban Area Information</b>						
Population (1000s)	3,690	3,575	3,450	3,330	3,250	3,150
Rank	10	10	10	10	11	11
Commuters (1000s)	1,582	1,507	1,430	1,360	1,304	1,245
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	44,630	42,000	39,650	36,750	35,395	33,840
Arterial Streets	38,600	37,000	35,900	34,400	32,500	31,000
<b>Cost Components</b>						
Value of Time (\$/hour)	12.43	12.17	11.98	11.71	11.37	11.06
Commercial Cost (\$/hour)	29.28	28.89	28.50	28.12	27.75	27.38
Gasoline (\$/gallon)	0.98	0.93	1.03	1.13	1.05	0.94
Diesel (\$/gallon)	1.02	1.05	1.15	1.26	1.17	1.04
System Performance	1999	1998	1997	1996	1995	1994
<b>Congested Travel (% of peak VMT)</b>	--	--	--	--	--	--
<b>Congested System (% of lane-miles)</b>	--	--	--	--	--	--
<b>Congested Time (number of "Rush Hours")</b>	--	--	--	--	--	--
<b>Annual Excess Fuel Consumed</b>						
Total Fuel (1000 gallons)	58,916	55,351	51,089	47,150	44,828	41,014
Rank	7	8	10	9	9	10
Fuel per Peak Auto Commuter (gallons)	17	16	14	13	13	12
Rank	17	18	26	29	19	21
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	153,365	144,086	132,991	122,738	116,692	106,764
Rank	6	6	5	6	6	7
Delay per Auto Commuter (pers-hrs)	53	51	49	48	47	45
Rank	7	7	8	8	8	9
<b>Travel Time Index</b>						
Rank	17	14	15	17	13	16
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	2,050	1,886	1,720	1,559	1,439	1,278
Rank	6	6	6	6	7	7
Cost per Auto Commuter (\$)	1,505	1,446	1,356	1,280	1,256	1,182
Rank	5	5	5	5	6	7
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	6,441	6,052	5,586	5,155	4,901	4,484
Rank	6	6	5	6	6	7
Annual Gallons of Wasted Fuel (000)	12,490	11,735	10,831	9,996	9,503	8,695
Rank	7	8	10	9	9	10
Annual Congestion Cost (\$ million)	178	166	152	140	130	117
Rank	6	6	6	6	7	7

\* Note: Zeroes in the table reflect values less than 0.5.

# Mobility Data for Atlanta GA

Inventory Measures	1993	1992	1991	1990	1989	1988
<b>Urban Area Information</b>						
Population (1000s)	3,060	2,970	2,900	2,840	2,795	2,740
Rank	11	11	11	11	11	11
Commuters (1000s)	1,190	1,137	1,092	1,052	1,028	1,000
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	30,675	27,510	25,970	25,260	24,755	23,105
Arterial Streets	28,500	26,510	25,000	23,000	21,900	20,600
<b>Cost Components</b>						
Value of Time (\$/hour)	10.78	10.47	10.17	9.75	9.25	8.83
Commercial Cost (\$/hour)	27.02	26.66	26.30	25.95	25.60	25.26
Gasoline (\$/gallon)	0.97	0.99	1.00	1.01	1.07	0.99
Diesel (\$/gallon)	1.08	1.11	1.16	1.03	0.96	0.89
System Performance	1993	1992	1991	1990	1989	1988
<b>Congested Travel (% of peak VMT)</b>	--	--	--	--	--	--
<b>Congested System (% of lane-miles)</b>	--	--	--	--	--	--
<b>Congested Time (number of "Rush Hours")</b>	--	--	--	--	--	--
<b>Annual Excess Fuel Consumed</b>						
Total Fuel (1000 gallons)	37,529	32,721	28,091	25,953	24,645	23,055
Rank	11	12	12	12	12	12
Fuel per Peak Auto Commuter (gallons)	11	10	8	7	7	7
Rank	22	24	45	50	39	27
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	97,694	85,177	73,125	67,559	64,154	60,016
Rank	7	9	10	12	12	12
Delay per Auto Commuter (pers-hrs)	43	39	35	33	32	31
Rank	9	12	13	13	13	13
<b>Travel Time Index</b>						
Rank	1.20	1.18	1.16	1.15	1.15	1.14
Rank	17	18	21	21	19	21
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	1,143	971	812	722	655	586
Rank	7	10	12	12	12	12
Cost per Auto Commuter (\$)	1,111	999	884	854	858	842
Rank	8	8	10	10	10	11
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	4,103	3,577	3,071	2,837	2,694	2,521
Rank	7	9	10	12	12	12
Annual Gallons of Wasted Fuel (000)	7,956	6,937	5,955	5,502	5,225	4,888
Rank	11	12	12	12	12	12
Annual Congestion Cost (\$ million)	106	91	78	70	66	60
Rank	7	10	12	12	12	12

\* Note: Zeroes in the table reflect values less than 0.5.

# Mobility Data for Atlanta GA

Inventory Measures	1987	1986	1985	1984	1983	1982
<b>Urban Area Information</b>						
Population (1000s)	2,680	2,600	2,510	2,430	2,330	2,200
Rank	11	11	11	12	12	12
Commuters (1000s)	969	933	894	859	818	764
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	22,965	21,650	19,555	18,230	16,995	14,270
Arterial Streets	19,900	19,280	18,020	17,500	17,000	16,500
<b>Cost Components</b>						
Value of Time (\$/hour)	8.48	8.18	8.03	7.75	7.43	7.20
Commercial Cost (\$/hour)	24.93	24.60	24.27	23.94	23.63	23.31
Gasoline (\$/gallon)	0.99	0.97	1.27	1.28	1.31	1.37
Diesel (\$/gallon)	0.89	0.87	1.14	1.15	1.17	1.23
System Performance	1987	1986	1985	1984	1983	1982
<b>Congested Travel (% of peak VMT)</b>	--	--	--	--	--	--
<b>Congested System (% of lane-miles)</b>	--	--	--	--	--	--
<b>Congested Time (number of "Rush Hours")</b>	--	--	--	--	--	--
<b>Annual Excess Fuel Consumed</b>						
Total Fuel (1000 gallons)	21,050	18,273	16,640	14,879	13,675	12,553
Rank	12	13	14	14	14	14
Fuel per Peak Auto Commuter (gallons)	7	5	4	4	4	4
Rank	22	40	50	41	35	19
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	54,797	47,568	43,316	38,731	35,599	32,678
Rank	12	12	12	12	12	12
Delay per Auto Commuter (pers-hrs)	29	26	25	23	22	22
Rank	15	15	14	13	13	13
<b>Travel Time Index</b>						
Rank	1.13	1.12	1.11	1.11	1.10	1.10
Rank	21	24	24	22	22	19
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	516	433	393	340	302	270
Rank	12	12	12	12	12	12
Cost per Auto Commuter (\$)	804	724	671	624	599	570
Rank	12	14	14	15	15	15
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	2,301	1,998	1,819	1,627	1,495	1,372
Rank	12	12	12	12	12	12
Annual Gallons of Wasted Fuel (000)	4,463	3,874	3,528	3,154	2,899	2,661
Rank	12	13	14	14	14	14
Annual Congestion Cost (\$ million)	54	46	43	38	34	31
Rank	12	12	12	12	13	12

\* Note: Zeroes in the table reflect values less than 0.5.