

Performance Measure Summary - Albany-Schenectady NY

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 Albany-Schenectady NY

Inventory Measures	2017	2016	2015	2014	2013	2012
Urban Area Information						
Population (1000s)	610	610	610	610	610	610
Rank	70	69	68	68	68	67
Commuters (1000s)	297	297	297	300	300	300
Daily Vehicle-Miles of Travel (1000s)						
Freeway	6,470	6,405	6,416	7,273	7,068	7,060
Arterial Streets	5,523	5,525	5,546	5,623	5,513	5,490
Cost Components						
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)	2.48	2.33	2.51	3.63	3.79	3.75
Diesel (\$/gallon)	2.70	2.49	2.88	3.92	4.20	4.17
System Performance	2017	2016	2015	2014	2013	2012
Congested Travel (% of peak VMT)	16.0	--	--	--	--	--
Congested System (% of lane-miles)	13.8	--	--	--	--	--
Congested Time (number of "Rush Hours")	1.2	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	7,341	7,281	7,193	7,109	6,977	6,840
Rank	68	68	68	68	68	68
Fuel per Peak Auto Commuter (gallons)	21	21	21	21	21	20
Rank	41	37	36	30	30	33
Annual Delay						
Total Delay (1000s of person-hours)	17,489	17,258	16,907	16,422	15,838	15,389
Rank	69	68	68	68	69	70
Delay per Auto Commuter (pers-hrs)	49	48	48	47	46	45
Rank	41	39	35	34	34	36
Travel Time Index						
Rank	1.17	1.17	1.17	1.17	1.16	1.16
Rank	49	49	49	52	58	60
Commuter Stress Index						
Rank	1.18	--	--	--	--	--
Rank	56	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)						
Rank	1.28	--	--	--	--	--
Rank	75	--	--	--	--	--
Congestion Cost						
Total Cost (\$ millions)	356	345	334	331	315	301
Rank	69	68	68	68	68	68
Cost per Auto Commuter (\$)	736	732	713	688	670	659
Rank	71	70	66	69	69	67
Truck Congestion						
Annual Person-Hours of Delay (000)	735	725	710	690	665	646
Rank	69	68	68	68	69	70
Annual Gallons of Wasted Fuel (000)	1,556	1,543	1,525	1,507	1,479	1,450
Rank	68	68	68	68	68	68
Annual Congestion Cost (\$ million)	38	36	34	33	30	29
Rank	66	65	64	64	66	64

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

Mobility Data for Albany-Schenectady NY

Inventory Measures	2011	2010	2009	2008	2007	2006
Urban Area Information						
Population (1000s)	610	610	605	605	600	590
Rank	66	67	66	66	65	66
Commuters (1000s)	299	298	294	293	289	283
Daily Vehicle-Miles of Travel (1000s)						
Freeway	7,173	7,161	7,000	6,970	7,005	6,755
Arterial Streets	5,501	5,429	5,300	5,115	5,260	5,205
Cost Components						
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)	3.65	2.95	2.47	3.55	3.19	2.82
Diesel (\$/gallon)	3.99	3.21	2.90	4.52	3.71	3.03
System Performance	2011	2010	2009	2008	2007	2006
Congested Travel (% of peak VMT)	--	--	--	--	--	--
Congested System (% of lane-miles)	--	--	--	--	--	--
Congested Time (number of "Rush Hours")	--	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	6,749	6,682	6,630	6,717	6,687	6,503
Rank	68	68	67	68	67	67
Fuel per Peak Auto Commuter (gallons)	20	20	20	20	21	20
Rank	32	29	18	31	23	28
Annual Delay						
Total Delay (1000s of person-hours)	14,913	14,362	13,851	13,494	13,433	13,064
Rank	67	69	68	69	67	67
Delay per Auto Commuter (pers-hrs)	43	42	41	40	41	41
Rank	38	38	38	38	36	34
Travel Time Index						
Rank	1.16	1.16	1.16	1.16	1.16	1.16
Rank	59	58	58	63	63	62
Commuter Stress Index						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Congestion Cost						
Total Cost (\$ millions)	290	267	251	253	241	225
Rank	67	67	67	68	66	66
Cost per Auto Commuter (\$)	659	654	644	620	641	641
Rank	66	68	67	70	69	67
Truck Congestion						
Annual Person-Hours of Delay (000)	626	603	582	567	564	549
Rank	67	69	68	69	67	67
Annual Gallons of Wasted Fuel (000)	1,431	1,417	1,406	1,424	1,418	1,379
Rank	68	68	67	68	67	67
Annual Congestion Cost (\$ million)	30	27	25	27	25	22
Rank	67	67	66	65	64	65

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

Mobility Data for Albany-Schenectady NY

Inventory Measures	2005	2004	2003	2002	2001	2000
Urban Area Information						
Population (1000s)	575	560	545	530	520	515
Rank	66	66	67	68	68	68
Commuters (1000s)	274	265	257	247	239	234
Daily Vehicle-Miles of Travel (1000s)						
Freeway	6,400	6,210	6,000	5,820	5,730	5,500
Arterial Streets	4,800	4,660	4,475	4,450	4,400	4,375
Cost Components						
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)	2.40	2.14	1.62	1.49	1.72	1.64
Diesel (\$/gallon)	2.66	2.14	1.73	1.51	1.70	1.65
System Performance	2005	2004	2003	2002	2001	2000
Congested Travel (% of peak VMT)	--	--	--	--	--	--
Congested System (% of lane-miles)	--	--	--	--	--	--
Congested Time (number of "Rush Hours")	--	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	6,278	5,640	5,222	4,588	4,247	3,981
Rank	67	72	73	74	74	74
Fuel per Peak Auto Commuter (gallons)	21	18	17	15	14	13
Rank	20	38	45	53	54	56
Annual Delay						
Total Delay (1000s of person-hours)	12,611	11,330	10,489	9,216	8,531	7,996
Rank	67	71	72	73	73	74
Delay per Auto Commuter (pers-hrs)	40	37	36	32	31	29
Rank	38	47	50	67	68	71
Travel Time Index						
Rank	1.16	1.15	1.14	1.13	1.12	1.12
Rank	61	66	71	75	78	77
Commuter Stress Index						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Congestion Cost						
Total Cost (\$ millions)	209	180	160	137	125	114
Rank	67	71	72	73	73	74
Cost per Auto Commuter (\$)	638	595	564	509	477	458
Rank	67	79	80	84	85	83
Truck Congestion						
Annual Person-Hours of Delay (000)	530	476	441	387	358	336
Rank	67	71	72	73	73	74
Annual Gallons of Wasted Fuel (000)	1,331	1,196	1,107	973	900	844
Rank	67	72	73	74	74	74
Annual Congestion Cost (\$ million)	21	17	15	13	11	10
Rank	64	71	71	72	73	74

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

Mobility Data for Albany-Schenectady NY

Inventory Measures	1999	1998	1997	1996	1995	1994
Urban Area Information						
Population (1000s)	510	505	500	495	495	495
Rank	68	68	67	66	66	65
Commuters (1000s)	229	224	218	214	211	208
Daily Vehicle-Miles of Travel (1000s)						
Freeway	5,330	5,150	4,975	4,850	4,625	4,605
Arterial Streets	4,350	4,280	4,100	3,950	3,900	3,800
Cost Components						
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)	1.19	1.15	1.31	1.37	1.27	1.15
Diesel (\$/gallon)	1.24	1.29	1.39	1.28	1.19	1.07
System Performance	1999	1998	1997	1996	1995	1994
Congested Travel (% of peak VMT)	--	--	--	--	--	--
Congested System (% of lane-miles)	--	--	--	--	--	--
Congested Time (number of "Rush Hours")	--	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	3,554	3,356	2,939	2,768	2,605	2,491
Rank	75	75	76	76	76	76
Fuel per Peak Auto Commuter (gallons)	12	11	10	8	8	8
Rank	64	65	66	76	72	65
Annual Delay						
Total Delay (1000s of person-hours)	7,140	6,742	5,905	5,560	5,234	5,003
Rank	75	75	75	76	76	76
Delay per Auto Commuter (pers-hrs)	27	26	23	22	21	20
Rank	74	72	77	79	78	80
Travel Time Index						
Rank	1.11	1.10	1.09	1.09	1.08	1.08
Rank	78	80	83	79	84	80
Commuter Stress Index						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Congestion Cost						
Total Cost (\$ millions)	97	90	78	72	66	61
Rank	75	75	75	75	75	76
Cost per Auto Commuter (\$)	425	407	362	351	341	334
Rank	84	83	86	84	84	84
Truck Congestion						
Annual Person-Hours of Delay (000)	300	283	248	234	220	210
Rank	75	75	75	76	76	76
Annual Gallons of Wasted Fuel (000)	754	711	623	587	552	528
Rank	75	75	76	76	76	76
Annual Congestion Cost (\$ million)	9	8	7	7	6	6
Rank	74	75	75	74	75	73

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Mobility Data for Albany-Schenectady NY

Inventory Measures	1993	1992	1991	1990	1989	1988
Urban Area Information						
Population (1000s)	490	490	490	490	490	485
Rank	65	64	64	64	63	64
Commuters (1000s)	204	201	199	196	194	191
Daily Vehicle-Miles of Travel (1000s)						
Freeway	4,520	4,405	4,260	4,160	3,990	3,800
Arterial Streets	3,750	3,700	3,500	3,300	3,105	3,000
Cost Components						
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)	1.21	1.24	1.21	1.07	1.13	1.04
Diesel (\$/gallon)	1.13	1.00	1.35	1.09	1.05	0.97
System Performance	1993	1992	1991	1990	1989	1988
Congested Travel (% of peak VMT)	--	--	--	--	--	--
Congested System (% of lane-miles)	--	--	--	--	--	--
Congested Time (number of "Rush Hours")	--	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	2,262	2,194	2,064	1,955	1,601	1,488
Rank	76	76	76	75	76	75
Fuel per Peak Auto Commuter (gallons)	7	6	6	7	5	5
Rank	67	69	67	50	63	58
Annual Delay						
Total Delay (1000s of person-hours)	4,544	4,407	4,146	3,928	3,215	2,990
Rank	76	76	76	76	76	76
Delay per Auto Commuter (pers-hrs)	19	18	17	17	14	13
Rank	78	80	78	70	80	80
Travel Time Index						
Rank	83	82	81	86	87	84
Commuter Stress Index						
Rank	--	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)						
Rank	--	--	--	--	--	--
Congestion Cost						
Total Cost (\$ millions)	54	51	47	43	33	30
Rank	76	76	76	75	76	74
Cost per Auto Commuter (\$)	310	311	303	298	262	252
Rank	84	81	81	79	80	81
Truck Congestion						
Annual Person-Hours of Delay (000)	191	185	174	165	135	126
Rank	76	76	76	76	76	76
Annual Gallons of Wasted Fuel (000)	480	465	438	415	339	316
Rank	76	76	76	75	76	75
Annual Congestion Cost (\$ million)	5	5	5	4	3	3
Rank	75	73	70	71	76	73

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Mobility Data for Albany-Schenectady NY

Inventory Measures	1987	1986	1985	1984	1983	1982
Urban Area Information						
Population (1000s)	480	480	475	475	495	500
Rank	64	61	60	59	57	54
Commuters (1000s)	187	186	183	181	188	187
Daily Vehicle-Miles of Travel (1000s)						
Freeway	3,645	3,270	3,040	2,740	2,495	2,450
Arterial Streets	2,980	2,950	2,920	2,900	2,840	2,750
Cost Components						
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)	1.05	1.02	1.34	1.35	1.38	1.44
Diesel (\$/gallon)	0.97	0.95	1.24	1.25	1.28	1.34
System Performance	1987	1986	1985	1984	1983	1982
Congested Travel (% of peak VMT)	--	--	--	--	--	--
Congested System (% of lane-miles)	--	--	--	--	--	--
Congested Time (number of "Rush Hours")	--	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	1,268	1,148	1,075	885	832	798
Rank	77	75	74	77	74	74
Fuel per Peak Auto Commuter (gallons)	4	3	4	3	2	1
Rank	61	74	50	61	69	82
Annual Delay						
Total Delay (1000s of person-hours)	2,546	2,307	2,160	1,777	1,672	1,604
Rank	76	75	75	78	74	73
Delay per Auto Commuter (pers-hrs)	11	10	10	8	7	7
Rank	82	83	80	83	85	82
Travel Time Index						
Rank	89	85	81	85	80	76
Commuter Stress Index						
Rank	--	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)						
Rank	--	--	--	--	--	--
Congestion Cost						
Total Cost (\$ millions)	24	21	20	16	14	14
Rank	76	75	75	78	73	72
Cost per Auto Commuter (\$)	226	215	203	178	170	171
Rank	83	81	82	83	82	81
Truck Congestion						
Annual Person-Hours of Delay (000)	107	97	91	75	70	67
Rank	76	75	75	78	73	73
Annual Gallons of Wasted Fuel (000)	269	243	228	188	176	169
Rank	77	75	74	77	74	74
Annual Congestion Cost (\$ million)	3	2	2	2	2	2
Rank	69	75	73	70	66	65

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