

# Performance Measure Summary - Akron OH

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 Akron OH

Inventory Measures	2017	2016	2015	2014	2013	2012
<b>Urban Area Information</b>						
Population (1000s)	570	570	570	570	570	570
Rank	74	74	74	73	73	71
Commuters (1000s)	298	298	298	298	298	298
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	6,191	5,923	5,611	5,703	5,660	5,480
Arterial Streets	4,498	4,453	4,521	4,460	4,475	4,400
<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)	2.29	2.17	2.18	3.16	3.48	3.58
Diesel (\$/gallon)	2.53	2.29	2.49	3.67	3.91	3.87
System Performance	2017	2016	2015	2014	2013	2012
<b>Congested Travel (% of peak VMT)</b>	12.1	--	--	--	--	--
<b>Congested System (% of lane-miles)</b>	7.9	--	--	--	--	--
<b>Congested Time (number of "Rush Hours")</b>	0.9	--	--	--	--	--
<b>Annual Excess Fuel Consumed</b>						
Total Fuel (1000 gallons)	6,949	6,930	6,831	6,744	6,558	6,450
Rank	72	71	70	70	72	71
Fuel per Peak Auto Commuter (gallons)	17	17	16	16	15	14
Rank	68	68	73	70	82	82
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	15,352	15,128	14,783	14,470	13,825	13,358
Rank	76	75	74	73	74	74
Delay per Auto Commuter (pers-hrs)	37	35	35	33	32	30
Rank	86	88	86	89	85	88
<b>Travel Time Index</b>						
Rank	1.10	1.10	1.10	1.11	1.11	1.11
Rank	99	99	99	97	96	94
<b>Commuter Stress Index</b>						
Rank	1.11	--	--	--	--	--
Rank	99	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	1.27	--	--	--	--	--
Rank	78	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	312	303	291	291	275	262
Rank	76	74	74	73	74	73
Cost per Auto Commuter (\$)	681	675	656	638	615	602
Rank	83	81	79	78	79	79
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	645	635	621	608	581	561
Rank	76	75	74	73	74	74
Annual Gallons of Wasted Fuel (000)	1,473	1,469	1,448	1,430	1,390	1,367
Rank	72	71	70	70	72	71
Annual Congestion Cost (\$ million)	33	31	29	29	26	25
Rank	74	73	73	72	73	72

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

# Mobility Data for Akron OH

Inventory Measures	2011	2010	2009	2008	2007	2006
<b>Urban Area Information</b>						
Population (1000s)	570	570	570	570	570	565
Rank	70	70	69	69	68	68
Commuters (1000s)	297	296	295	294	292	288
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	5,729	5,738	5,675	5,600	5,530	5,600
Arterial Streets	4,704	4,712	4,600	4,500	4,385	4,445
<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)	3.25	2.64	2.19	3.40	2.88	2.58
Diesel (\$/gallon)	3.69	2.96	2.58	4.17	3.35	2.83
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)	6,289	6,245	6,215	6,760	6,959	6,815
Rank	72	72	72	67	64	64
Fuel per Peak Auto Commuter (gallons)	14	14	13	15	15	15
Rank	79	80	80	75	73	73
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	12,906	12,467	12,059	12,612	12,984	12,714
Rank	75	76	75	73	69	69
Delay per Auto Commuter (pers-hrs)	28	27	26	27	28	28
Rank	88	89	89	86	85	85
<b>Travel Time Index</b>						
Rank	1.11	1.11	1.11	1.12	1.12	1.12
Rank	93	93	92	90	90	88
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	250	231	218	237	232	219
Rank	73	74	74	72	69	68
Cost per Auto Commuter (\$)	600	600	590	611	653	658
Rank	79	78	77	76	67	63
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	542	524	506	530	545	534
Rank	75	76	75	73	69	69
Annual Gallons of Wasted Fuel (000)	1,333	1,324	1,318	1,433	1,475	1,445
Rank	72	72	72	67	64	64
Annual Congestion Cost (\$ million)	26	23	22	25	24	22
Rank	73	73	73	71	68	65

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

# Mobility Data for Akron OH

Inventory Measures	2005	2004	2003	2002	2001	2000
<b>Urban Area Information</b>						
Population (1000s)	565	560	555	555	550	550
Rank	67	66	66	66	65	64
Commuters (1000s)	286	282	278	275	269	265
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	5,555	5,650	5,435	5,335	5,350	5,320
Arterial Streets	4,100	4,025	3,990	3,990	4,005	4,005
<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)	2.24	1.81	1.52	1.38	1.30	1.55
Diesel (\$/gallon)	2.48	1.94	1.49	1.36	1.49	1.53
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)	6,663	6,532	6,348	6,199	6,050	6,038
Rank	63	61	60	60	59	58
Fuel per Peak Auto Commuter (gallons)	15	14	14	13	13	13
Rank	64	71	69	71	63	56
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	12,431	12,188	11,844	11,566	11,288	11,265
Rank	69	68	68	67	66	63
Delay per Auto Commuter (pers-hrs)	28	27	27	26	26	26
Rank	85	86	86	86	84	81
<b>Travel Time Index</b>						
Rank	1.12	1.12	1.11	1.11	1.11	1.11
Rank	86	84	87	84	84	80
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	206	192	180	171	164	161
Rank	68	68	68	66	66	61
Cost per Auto Commuter (\$)	664	673	674	672	664	680
Rank	62	61	60	55	52	50
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	522	512	497	486	474	473
Rank	69	68	68	67	66	63
Annual Gallons of Wasted Fuel (000)	1,413	1,385	1,346	1,314	1,283	1,280
Rank	63	61	60	60	59	58
Annual Congestion Cost (\$ million)	20	18	17	16	15	15
Rank	68	68	64	61	62	59

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

# Mobility Data for Akron OH

Inventory Measures	1999	1998	1997	1996	1995	1994
<b>Urban Area Information</b>						
Population (1000s)	550	545	540	535	535	530
Rank	63	63	63	63	63	63
Commuters (1000s)	262	257	251	246	243	237
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	5,245	5,210	5,100	4,775	4,635	4,715
Arterial Streets	4,050	4,040	3,995	4,105	3,900	3,770
<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)	1.14	1.11	1.13	1.28	1.12	1.08
Diesel (\$/gallon)	1.15	1.17	1.25	1.39	1.22	1.17
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)	5,861	5,777	5,761	5,743	5,497	5,328
Rank	58	58	56	54	53	51
Fuel per Peak Auto Commuter (gallons)	13	13	13	14	12	13
Rank	51	42	38	18	35	15
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	10,935	10,778	10,749	10,714	10,256	9,940
Rank	61	60	58	55	54	53
Delay per Auto Commuter (pers-hrs)	26	26	26	27	26	25
Rank	78	72	69	63	61	61
<b>Travel Time Index</b>						
Rank	78	77	72	72	68	63
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	149	144	141	139	128	121
Rank	61	59	58	55	54	53
Cost per Auto Commuter (\$)	683	690	698	710	702	702
Rank	47	40	31	28	27	23
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	459	453	451	450	431	417
Rank	61	60	58	54	54	53
Annual Gallons of Wasted Fuel (000)	1,242	1,225	1,221	1,217	1,165	1,129
Rank	58	58	56	54	53	51
Annual Congestion Cost (\$ million)	13	13	13	13	12	11
Rank	60	58	57	54	52	53

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

# Mobility Data for Akron OH

Inventory Measures	1993	1992	1991	1990	1989	1988
<b>Urban Area Information</b>						
Population (1000s)	530	525	520	520	520	515
Rank	62	62	61	61	59	59
Commuters (1000s)	234	229	224	221	219	216
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	4,580	4,230	4,140	4,145	4,105	3,870
Arterial Streets	3,520	3,365	3,215	3,070	2,910	2,725
<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)	1.09	1.11	1.13	1.06	1.08	1.00
Diesel (\$/gallon)	1.19	1.19	1.25	1.10	1.05	0.97
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)	4,967	4,358	3,589	3,107	2,642	2,111
Rank	51	54	58	58	60	64
Fuel per Peak Auto Commuter (gallons)	13	11	9	8	8	6
Rank	12	16	27	35	26	45
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	9,267	8,131	6,697	5,797	4,929	3,938
Rank	53	54	58	60	62	67
Delay per Auto Commuter (pers-hrs)	24	21	18	16	13	11
Rank	58	65	72	81	84	86
<b>Travel Time Index</b>						
Rank	67	70	71	76	80	84
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	110	94	76	63	51	39
Rank	53	54	58	59	62	67
Cost per Auto Commuter (\$)	673	611	519	470	415	356
Rank	24	27	36	42	52	58
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	389	341	281	243	207	165
Rank	53	54	58	60	62	67
Annual Gallons of Wasted Fuel (000)	1,053	924	761	659	560	447
Rank	51	54	58	58	59	64
Annual Congestion Cost (\$ million)	10	9	7	6	5	4
Rank	53	52	58	59	60	64

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

# Mobility Data for Akron OH

Inventory Measures	1987	1986	1985	1984	1983	1982
<b>Urban Area Information</b>						
Population (1000s)	515	515	515	515	515	515
Rank	57	56	55	55	54	53
Commuters (1000s)	214	212	211	209	208	205
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	3,435	3,390	3,255	3,290	3,160	2,745
Arterial Streets	2,615	2,715	2,395	2,555	2,380	2,120
<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)	1.00	0.98	1.28	1.29	1.32	1.38
Diesel (\$/gallon)	0.97	0.95	1.24	1.26	1.29	1.34
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)	1,673	1,597	1,441	1,396	1,092	938
Rank	68	68	69	65	69	71
Fuel per Peak Auto Commuter (gallons)	4	3	3	4	2	2
Rank	61	74	66	41	69	55
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	3,121	2,980	2,689	2,604	2,037	1,751
Rank	71	69	68	67	70	71
Delay per Auto Commuter (pers-hrs)	9	8	7	7	6	5
Rank	88	90	92	90	94	95
<b>Travel Time Index</b>						
Rank	1.04	1.04	1.03	1.03	1.02	1.02
Rank	89	85	91	85	90	90
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	30	28	25	23	18	15
Rank	71	69	68	67	69	71
Cost per Auto Commuter (\$)	292	287	260	268	217	199
Rank	67	65	66	62	68	72
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	131	125	113	109	86	74
Rank	71	69	68	67	70	71
Annual Gallons of Wasted Fuel (000)	355	339	306	296	231	199
Rank	68	68	69	65	69	71
Annual Congestion Cost (\$ million)	3	3	3	3	2	2
Rank	69	67	65	61	66	65

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