

# Performance Measure Summary - Beaumont TX

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 Beaumont TX

Inventory Measures	2017	2016	2015	2014	2013	2012
<b>Urban Area Information</b>						
Population (1000s)	300	295	290	285	280	275
Rank	95	95	95	95	95	95
Commuters (1000s)	164	161	158	155	152	149
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	3,338	3,630	3,126	3,162	2,963	3,005
Arterial Streets	3,783	3,775	3,775	3,297	3,250	3,210
<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)	2.17	1.97	2.11	3.12	3.37	3.33
Diesel (\$/gallon)	2.31	2.10	2.36	3.47	3.76	3.75
System Performance	2017	2016	2015	2014	2013	2012
<b>Congested Travel (% of peak VMT)</b>	12.8	--	--	--	--	--
<b>Congested System (% of lane-miles)</b>	1.7	--	--	--	--	--
<b>Congested Time (number of "Rush Hours")</b>	0.9	--	--	--	--	--
<b>Annual Excess Fuel Consumed</b>						
Total Fuel (1000 gallons)	3,194	3,254	3,035	3,001	2,941	2,795
Rank	93	92	93	92	92	94
Fuel per Peak Auto Commuter (gallons)	16	17	16	15	16	14
Rank	77	68	73	81	71	82
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	8,493	8,491	7,786	7,566	7,220	6,800
Rank	92	90	92	92	91	93
Delay per Auto Commuter (pers-hrs)	41	40	39	38	37	34
Rank	70	72	71	71	71	79
<b>Travel Time Index</b>						
Rank	1.13	1.13	1.13	1.13	1.14	1.13
Rank	83	83	83	86	78	85
<b>Commuter Stress Index</b>						
Rank	1.13	--	--	--	--	--
Rank	92	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	1.25	--	--	--	--	--
Rank	84	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	171	168	152	150	141	131
Rank	92	92	92	92	92	93
Cost per Auto Commuter (\$)	718	725	658	637	617	587
Rank	76	72	78	79	78	81
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	357	357	327	318	303	286
Rank	92	90	92	92	91	93
Annual Gallons of Wasted Fuel (000)	677	690	643	636	624	593
Rank	93	92	93	92	92	94
Annual Congestion Cost (\$ million)	18	17	15	15	13	12
Rank	92	92	92	92	92	93

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

# Mobility Data for Beaumont TX

Inventory Measures	2011	2010	2009	2008	2007	2006
<b>Urban Area Information</b>						
Population (1000s)	270	265	260	255	250	250
Rank	95	95	95	95	95	95
Commuters (1000s)	147	144	141	138	136	133
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	2,985	2,973	2,940	2,895	3,000	3,010
Arterial Streets	3,266	3,253	3,200	3,170	3,250	3,240
<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)	3.29	2.56	2.13	3.36	2.92	2.55
Diesel (\$/gallon)	3.56	2.83	2.43	4.07	3.30	2.73
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)	2,775	2,755	2,650	2,522	2,830	2,787
Rank	94	92	92	94	92	92
Fuel per Peak Auto Commuter (gallons)	14	15	14	12	14	14
Rank	79	73	71	90	81	78
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	6,689	6,519	6,154	5,576	6,259	6,163
Rank	91	90	92	95	89	89
Delay per Auto Commuter (pers-hrs)	34	33	32	29	33	33
Rank	78	77	80	83	73	73
<b>Travel Time Index</b>						
Rank	1.13	1.13	1.13	1.12	1.14	1.14
Rank	84	83	84	90	80	78
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	128	119	110	103	110	105
Rank	91	90	91	95	89	89
Cost per Auto Commuter (\$)	596	598	576	514	603	610
Rank	80	80	80	88	79	77
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	281	274	258	234	263	259
Rank	91	90	92	95	89	89
Annual Gallons of Wasted Fuel (000)	588	584	562	535	600	591
Rank	94	92	92	94	92	92
Annual Congestion Cost (\$ million)	13	12	11	11	11	10
Rank	91	90	89	93	90	89

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

# Mobility Data for Beaumont TX

Inventory Measures	2005	2004	2003	2002	2001	2000
<b>Urban Area Information</b>						
Population (1000s)	245	245	240	235	235	230
Rank	95	95	95	96	95	95
Commuters (1000s)	129	126	122	118	114	111
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	2,890	2,770	2,680	2,565	2,470	2,380
Arterial Streets	3,175	3,090	3,000	2,850	2,700	2,600
<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	1.45	1.32	1.46	1.47
Diesel (\$/gallon)	2.40	1.85	1.43	1.29	1.48	1.42
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)	2,739	2,555	2,397	2,145	1,927	1,771
Rank	92	91	92	93	93	93
Fuel per Peak Auto Commuter (gallons)	15	14	13	12	11	10
Rank	64	71	74	78	78	80
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	6,057	5,650	5,300	4,743	4,261	3,917
Rank	88	89	90	91	94	94
Delay per Auto Commuter (pers-hrs)	32	31	29	27	25	23
Rank	75	78	81	84	87	89
<b>Travel Time Index</b>						
Rank	1.13	1.13	1.12	1.11	1.10	1.10
Rank	82	81	82	84	88	86
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	99	88	80	70	62	55
Rank	88	89	91	92	94	95
Cost per Auto Commuter (\$)	618	596	576	525	477	450
Rank	71	77	78	82	85	86
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	254	237	223	199	179	165
Rank	88	89	90	91	94	94
Annual Gallons of Wasted Fuel (000)	581	542	508	455	409	376
Rank	92	91	92	93	93	93
Annual Congestion Cost (\$ million)	10	8	7	6	6	5
Rank	88	89	92	92	87	89

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

# Mobility Data for Beaumont TX

Inventory Measures	1999	1998	1997	1996	1995	1994
<b>Urban Area Information</b>						
Population (1000s)	225	220	220	215	215	215
Rank	95	95	95	95	95	94
Commuters (1000s)	108	105	102	100	99	97
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	2,295	2,200	2,110	2,050	1,940	1,830
Arterial Streets	2,510	2,400	2,250	2,100	1,950	1,830
<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)	1.07	1.01	1.12	1.21	1.14	1.03
Diesel (\$/gallon)	1.07	1.10	1.19	1.29	1.21	1.09
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)	1,642	1,508	1,360	1,186	1,121	1,043
Rank	93	93	93	93	93	93
Fuel per Peak Auto Commuter (gallons)	9	9	8	6	6	6
Rank	85	79	79	85	85	84
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	3,631	3,336	3,006	2,622	2,478	2,306
Rank	93	93	93	94	94	94
Delay per Auto Commuter (pers-hrs)	22	20	19	16	16	15
Rank	91	91	91	92	91	91
<b>Travel Time Index</b>						
Rank	1.09	1.08	1.08	1.07	1.07	1.06
Rank	87	90	88	91	88	91
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	49	44	39	34	31	28
Rank	93	93	93	94	94	94
Cost per Auto Commuter (\$)	434	412	373	332	328	305
Rank	82	82	84	88	86	86
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	153	140	126	110	104	97
Rank	93	93	93	94	94	94
Annual Gallons of Wasted Fuel (000)	348	320	288	251	238	221
Rank	93	93	93	93	93	93
Annual Congestion Cost (\$ million)	4	4	3	3	3	3
Rank	93	88	94	93	88	85

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

# Mobility Data for Beaumont TX

Inventory Measures	1993	1992	1991	1990	1989	1988
<b>Urban Area Information</b>						
Population (1000s)	215	210	210	210	205	205
Rank	94	94	93	93	92	90
Commuters (1000s)	96	92	91	89	87	85
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	1,780	1,825	1,780	1,690	1,660	1,600
Arterial Streets	1,720	1,650	1,550	1,500	1,435	1,430
<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)	1.10	1.09	1.12	1.04	1.07	0.99
Diesel (\$/gallon)	1.17	1.17	1.20	1.07	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)	890	737	658	531	522	492
Rank	93	93	93	95	92	92
Fuel per Peak Auto Commuter (gallons)	5	4	4	3	3	2
Rank	82	87	85	90	85	87
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	1,967	1,630	1,455	1,175	1,155	1,087
Rank	94	94	94	96	95	95
Delay per Auto Commuter (pers-hrs)	13	11	10	8	8	8
Rank	93	93	94	95	95	92
<b>Travel Time Index</b>						
Rank	1.05	1.05	1.04	1.03	1.03	1.03
Rank	93	92	94	96	95	94
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	23	19	16	13	12	11
Rank	94	94	94	95	94	94
Cost per Auto Commuter (\$)	276	235	212	174	185	180
Rank	87	91	93	94	92	90
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	83	68	61	49	49	46
Rank	94	94	94	96	95	95
Annual Gallons of Wasted Fuel (000)	189	156	139	113	111	104
Rank	93	93	93	95	92	92
Annual Congestion Cost (\$ million)	2	2	2	1	1	1
Rank	92	90	85	93	91	90

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

# Mobility Data for Beaumont TX

Inventory Measures	1987	1986	1985	1984	1983	1982
<b>Urban Area Information</b>						
Population (1000s)	205	205	205	205	205	205
Rank	90	90	89	88	88	88
Commuters (1000s)	84	84	83	82	82	81
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	1,580	1,640	1,550	1,565	1,515	1,475
Arterial Streets	1,390	1,370	1,385	1,280	1,110	1,130
<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)	0.97	0.95	1.24	1.25	1.28	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)	480	465	458	452	435	429
Rank	91	91	91	88	87	86
Fuel per Peak Auto Commuter (gallons)	2	2	2	2	2	2
Rank	86	84	84	79	69	55
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	1,062	1,027	1,013	999	962	949
Rank	94	91	90	88	88	86
Delay per Auto Commuter (pers-hrs)	7	7	7	7	7	7
Rank	94	94	92	90	85	82
<b>Travel Time Index</b>						
Rank	93	93	91	85	80	76
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	10	9	9	9	8	8
Rank	93	91	91	88	88	85
Cost per Auto Commuter (\$)	192	179	201	195	209	204
Rank	87	87	84	79	73	71
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	45	43	43	42	40	40
Rank	93	91	90	88	88	86
Annual Gallons of Wasted Fuel (000)	102	98	97	96	92	91
Rank	91	91	91	88	87	86
Annual Congestion Cost (\$ million)	1	1	1	1	1	1
Rank	87	84	83	81	78	75

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