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 2020. 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 2020 (estimated at $20.17 per hour of person travel and $55.24 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.

Annual Greenhouse Gases (CO2) Produced -Tons of CO2 produced from all vehicle travel.

Excess Greenhouse Gases (CO2) Produced due to Congestion-Tons of CO2 produced due to congested portion of travel. The excess CO2 is a subset of the total CO2 produced.

Mobility Data for Beaumont TX

Inventory Measures	2020	2019	2018	2017	2016	2015
Urban Area Information						
Population (1000s)	150	150	150	150	148	145
Rank	100	100	100	100	100	100
Commuters (1000s)	82	82	82	82	81	79
Daily Vehicle-Miles of Travel (1000s)						
Freeway	1,956	2,272	2,241	2,236	2,432	2,094
Arterial Streets	1,502	1,745	1,827	1,854	1,850	1,850
Cost Components						
Value of Time ($/hour)	20.17	19.14	18.71	18.12	17.91	17.69
Commercial Cost ($/hour)	55.24	49.49	54.71	52.14	50.20	46.87
Gasoline ($/gallon)	2.05	2.37	2.63	2.17	1.97	2.11
Diesel ($/gallon)	2.51	2.73	2.99	2.31	2.10	2.36
System Performance	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**
Congested Travel (% of peak VMT)	--	--	--	12.8	--	--
Congested System (% of lane-miles)	--	--	--	1.7	--	--
Congested Time (number of "Rush Hours")	--	--	--	0.9	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	1,321	1,999	1,986	1,948	1,985	1,851
Rank	95	100	100	100	98	99
Fuel per Peak Auto Commuter (gallons)	11	16	16	16	17	16
Rank	51	81	79	77	68	73
Annual Delay						
Total Delay (1000s of person-hours)	3,154	4,772	4,707	4,671	4,670	4,282
Rank	96	101	100	99	99	99
Delay per Auto Commuter (pers-hrs)	28	42	41	41	40	39
Rank	36	71	72	70	72	71
Travel Time Index	1.10	1.12	1.12	1.13	1.13	1.13
Rank	29	91	91	83	83	83
Commuter Stress Index	1.12	1.14	1.14	1.13	--	--
Rank	24	86	84	90	--	--
Freeway Planning Time Index (95th Pctile)	--	1.19	1.25	1.25	--	--
Rank	--	89	76	84	--	--
Congestion Cost						
Total Cost ($ millions)	70	103	103	100	98	89
Rank	96	101	100	99	99	99
Cost per Auto Commuter ($)	535	779	783	757	765	694
Rank	53	76	75	76	72	78
Truck Congestion						
Annual Person-Hours of Delay (000)	140	210	226	200	200	183
Rank	97	100	97	98	98	98
Annual Gallons of Wasted Fuel (000)	246	369	382	379	386	360
Rank	97	99	99	99	98	99
Annual Congestion Cost ($ million)	7	10	12	11	10	9
Rank	97	100	97	97	98	98
Annual Greenhouse Gases (CO2) Produced						
Excess Due to Congestion (tons)	13,138	19,879	--	--	--	--
Rank	95	100	--	--	--	--
Due to All Travel (tons)	591,234	894,593	--	--	--	--
Rank	89	93	--	--	--	--
Truck Annual Greenhouse Gases (CO2) Produced						
Excess Due to Truck Congestion (tons)	3,388	5,074	--	--	--	--
Rank	93	96	--	--	--	--
Due to Truck Travel (tons)	152,485	228,355	--	--	--	--
Rank	87	95	--	--	--	--

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

Mobility Data for Beaumont TX

Inventory Measures	2014	2013	2012	2011	2010	2009
Urban Area Information						
Population (1000s)	143	140	138	135	133	130
Rank	100	100	100	100	100	100
Commuters (1000s)	78	76	75	74	72	71
Daily Vehicle-Miles of Travel (1000s)						
Freeway	2,119	1,985	2,013	2,000	1,992	1,970
Arterial Streets	1,616	1,593	1,573	1,600	1,594	1,568
Cost Components						
Value of Time ($/hour)	17.67	17.39	17.14	16.79	16.28	16.01
Commercial Cost ($/hour)	44.82	41.23	39.66	44.62	42.50	41.83
Gasoline ($/gallon)	3.12	3.37	3.33	3.29	2.56	2.13
Diesel ($/gallon)	3.47	3.76	3.75	3.56	2.83	2.43
System Performance	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**
Congested Travel (% of peak VMT)	--	--	--	--	--	--
Congested System (% of lane-miles)	--	--	--	--	--	--
Congested Time (number of "Rush Hours")	--	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	1,831	1,794	1,705	1,693	1,681	1,617
Rank	99	99	99	98	98	98
Fuel per Peak Auto Commuter (gallons)	15	16	14	14	15	14
Rank	81	71	82	79	73	71
Annual Delay						
Total Delay (1000s of person-hours)	4,161	3,971	3,740	3,679	3,585	3,385
Rank	99	99	99	99	98	98
Delay per Auto Commuter (pers-hrs)	38	37	34	34	33	32
Rank	71	71	79	78	77	80
Travel Time Index	1.13	1.14	1.13	1.13	1.13	1.13
Rank	86	76	84	83	82	82
Commuter Stress Index	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Congestion Cost						
Total Cost ($ millions)	88	83	77	75	70	64
Rank	99	99	99	99	98	98
Cost per Auto Commuter ($)	672	651	619	629	631	608
Rank	79	78	81	80	80	80
Truck Congestion						
Annual Person-Hours of Delay (000)	178	170	160	157	153	144
Rank	98	98	99	99	97	97
Annual Gallons of Wasted Fuel (000)	356	349	332	329	327	315
Rank	99	98	98	98	97	97
Annual Congestion Cost ($ million)	9	8	7	8	7	6
Rank	97	97	99	96	97	97
Annual Greenhouse Gases (CO2) Produced						
Excess Due to Congestion (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Due to All Travel (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Truck Annual Greenhouse Gases (CO2) Produced						
Excess Due to Truck Congestion (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Due to Truck Travel (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--

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

Mobility Data for Beaumont TX

Inventory Measures	2008	2007	2006	2005	2004	2003
Urban Area Information						
Population (1000s)	128	125	125	123	123	120
Rank	100	100	100	100	100	100
Commuters (1000s)	69	68	67	65	63	61
Daily Vehicle-Miles of Travel (1000s)						
Freeway	1,940	2,010	2,017	1,936	1,856	1,796
Arterial Streets	1,553	1,593	1,588	1,556	1,514	1,470
Cost Components						
Value of Time ($/hour)	16.07	15.47	15.06	14.58	14.10	13.73
Commercial Cost ($/hour)	40.77	39.30	37.88	36.51	35.19	33.92
Gasoline ($/gallon)	3.36	2.92	2.55	2.23	1.83	1.45
Diesel ($/gallon)	4.07	3.30	2.73	2.40	1.85	1.43
System Performance	**2008**	**2007**	**2006**	**2005**	**2004**	**2003**
Congested Travel (% of peak VMT)	--	--	--	--	--	--
Congested System (% of lane-miles)	--	--	--	--	--	--
Congested Time (number of "Rush Hours")	--	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	1,538	1,726	1,700	1,671	1,559	1,462
Rank	99	97	96	96	96	97
Fuel per Peak Auto Commuter (gallons)	12	14	14	15	14	13
Rank	90	81	78	64	71	74
Annual Delay						
Total Delay (1000s of person-hours)	3,067	3,442	3,390	3,331	3,108	2,915
Rank	99	98	97	97	97	97
Delay per Auto Commuter (pers-hrs)	29	33	33	32	31	29
Rank	83	73	73	75	78	81
Travel Time Index	1.12	1.14	1.14	1.13	1.13	1.12
Rank	90	77	75	81	80	81
Commuter Stress Index	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Congestion Cost						
Total Cost ($ millions)	60	65	61	58	52	47
Rank	99	98	97	96	96	97
Cost per Auto Commuter ($)	542	636	643	652	629	608
Rank	88	79	77	71	77	78
Truck Congestion						
Annual Person-Hours of Delay (000)	131	147	145	142	133	125
Rank	98	97	97	97	97	97
Annual Gallons of Wasted Fuel (000)	300	336	331	325	304	284
Rank	98	97	97	97	97	97
Annual Congestion Cost ($ million)	6	7	6	6	5	4
Rank	98	96	96	96	96	96
Annual Greenhouse Gases (CO2) Produced						
Excess Due to Congestion (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Due to All Travel (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Truck Annual Greenhouse Gases (CO2) Produced						
Excess Due to Truck Congestion (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Due to Truck Travel (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--

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

Mobility Data for Beaumont TX

Inventory Measures	2002	2001	2000	1999	1998	1997
Urban Area Information						
Population (1000s)	118	118	115	113	110	110
Rank	100	100	100	100	100	100
Commuters (1000s)	59	57	56	54	53	51
Daily Vehicle-Miles of Travel (1000s)						
Freeway	1,719	1,655	1,595	1,538	1,474	1,414
Arterial Streets	1,397	1,323	1,274	1,230	1,176	1,103
Cost Components						
Value of Time ($/hour)	13.43	13.22	12.85	12.43	12.17	11.98
Commercial Cost ($/hour)	32.69	31.51	30.38	29.28	28.89	28.50
Gasoline ($/gallon)	1.32	1.46	1.47	1.07	1.01	1.12
Diesel ($/gallon)	1.29	1.48	1.42	1.07	1.10	1.19
System Performance	**2002**	**2001**	**2000**	**1999**	**1998**	**1997**
Congested Travel (% of peak VMT)	--	--	--	--	--	--
Congested System (% of lane-miles)	--	--	--	--	--	--
Congested Time (number of "Rush Hours")	--	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	1,308	1,175	1,080	1,002	920	830
Rank	96	96	96	96	96	96
Fuel per Peak Auto Commuter (gallons)	12	11	10	9	9	8
Rank	78	78	80	85	79	79
Annual Delay						
Total Delay (1000s of person-hours)	2,609	2,344	2,154	1,997	1,835	1,653
Rank	97	96	96	96	97	97
Delay per Auto Commuter (pers-hrs)	27	25	23	22	20	19
Rank	84	87	89	91	91	91
Travel Time Index	1.11	1.10	1.10	1.09	1.08	1.08
Rank	83	87	85	86	89	87
Commuter Stress Index	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Congestion Cost						
Total Cost ($ millions)	41	36	32	29	26	23
Rank	96	96	96	96	95	97
Cost per Auto Commuter ($)	554	503	475	458	435	393
Rank	82	85	86	82	82	84
Truck Congestion						
Annual Person-Hours of Delay (000)	111	100	92	86	78	71
Rank	97	96	96	96	96	97
Annual Gallons of Wasted Fuel (000)	255	229	211	195	179	161
Rank	96	96	96	96	96	96
Annual Congestion Cost ($ million)	4	3	3	3	2	2
Rank	95	96	96	94	96	96
Annual Greenhouse Gases (CO2) Produced						
Excess Due to Congestion (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Due to All Travel (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Truck Annual Greenhouse Gases (CO2) Produced						
Excess Due to Truck Congestion (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Due to Truck Travel (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--

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

Mobility Data for Beaumont TX

Inventory Measures	1996	1995	1994	1993	1992	1991
Urban Area Information						
Population (1000s)	108	108	108	108	105	105
Rank	100	100	100	100	100	100
Commuters (1000s)	50	50	49	48	46	46
Daily Vehicle-Miles of Travel (1000s)						
Freeway	1,374	1,300	1,226	1,193	1,223	1,193
Arterial Streets	1,029	956	897	843	809	760
Cost Components						
Value of Time ($/hour)	11.71	11.37	11.06	10.78	10.47	10.17
Commercial Cost ($/hour)	28.12	27.75	27.38	27.02	26.66	26.30
Gasoline ($/gallon)	1.21	1.14	1.03	1.10	1.09	1.12
Diesel ($/gallon)	1.29	1.21	1.09	1.17	1.17	1.20
System Performance	**1996**	**1995**	**1994**	**1993**	**1992**	**1991**
Congested Travel (% of peak VMT)	--	--	--	--	--	--
Congested System (% of lane-miles)	--	--	--	--	--	--
Congested Time (number of "Rush Hours")	--	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	723	684	636	543	450	401
Rank	96	96	96	96	98	98
Fuel per Peak Auto Commuter (gallons)	6	6	6	5	4	4
Rank	85	85	84	82	87	85
Annual Delay						
Total Delay (1000s of person-hours)	1,442	1,363	1,268	1,082	897	800
Rank	97	97	97	98	98	98
Delay per Auto Commuter (pers-hrs)	16	16	15	13	11	10
Rank	92	91	91	93	93	94
Travel Time Index	1.07	1.07	1.06	1.05	1.05	1.04
Rank	90	87	91	93	92	94
Commuter Stress Index	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Congestion Cost						
Total Cost ($ millions)	20	18	16	14	11	10
Rank	97	97	97	97	98	98
Cost per Auto Commuter ($)	350	346	322	291	248	224
Rank	88	86	86	87	91	93
Truck Congestion						
Annual Person-Hours of Delay (000)	62	58	54	46	38	34
Rank	97	97	96	97	98	98
Annual Gallons of Wasted Fuel (000)	141	133	124	106	87	78
Rank	97	97	96	97	98	99
Annual Congestion Cost ($ million)	2	2	2	1	1	1
Rank	94	94	93	96	96	96
Annual Greenhouse Gases (CO2) Produced						
Excess Due to Congestion (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Due to All Travel (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Truck Annual Greenhouse Gases (CO2) Produced						
Excess Due to Truck Congestion (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Due to Truck Travel (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--

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

Mobility Data for Beaumont TX

Inventory Measures	1990	1989	1988	1987	1986	1985
Urban Area Information						
Population (1000s)	105	103	103	103	103	103
Rank	100	100	100	100	100	99
Commuters (1000s)	45	44	43	42	42	42
Daily Vehicle-Miles of Travel (1000s)						
Freeway	1,132	1,112	1,072	1,059	1,099	1,039
Arterial Streets	735	703	701	681	671	679
Cost Components						
Value of Time ($/hour)	9.75	9.25	8.83	8.48	8.18	8.03
Commercial Cost ($/hour)	25.95	25.60	25.26	24.93	24.60	24.27
Gasoline ($/gallon)	1.04	1.07	0.99	0.99	0.97	1.27
Diesel ($/gallon)	1.07	1.05	0.97	0.97	0.95	1.24
System Performance	**1990**	**1989**	**1988**	**1987**	**1986**	**1985**
Congested Travel (% of peak VMT)	--	--	--	--	--	--
Congested System (% of lane-miles)	--	--	--	--	--	--
Congested Time (number of "Rush Hours")	--	--	--	--	--	--
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	324	318	300	293	284	279
Rank	98	98	98	97	97	97
Fuel per Peak Auto Commuter (gallons)	3	3	2	2	2	2
Rank	90	85	87	86	84	84
Annual Delay						
Total Delay (1000s of person-hours)	646	635	598	584	565	557
Rank	99	99	98	98	97	97
Delay per Auto Commuter (pers-hrs)	8	8	8	7	7	7
Rank	95	95	92	94	94	92
Travel Time Index	1.03	1.03	1.03	1.03	1.03	1.03
Rank	96	95	94	92	91	89
Commuter Stress Index	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Freeway Planning Time Index (95th Pctile)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Congestion Cost						
Total Cost ($ millions)	7	7	6	6	6	5
Rank	99	98	98	97	96	97
Cost per Auto Commuter ($)	184	195	190	203	189	212
Rank	94	92	90	87	87	84
Truck Congestion						
Annual Person-Hours of Delay (000)	27	27	26	25	24	24
Rank	99	98	98	98	96	96
Annual Gallons of Wasted Fuel (000)	63	62	58	57	55	54
Rank	99	99	99	98	97	95
Annual Congestion Cost ($ million)	1	1	1	1	1	1
Rank	92	90	89	86	86	86
Annual Greenhouse Gases (CO2) Produced						
Excess Due to Congestion (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Due to All Travel (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Truck Annual Greenhouse Gases (CO2) Produced						
Excess Due to Truck Congestion (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--
Due to Truck Travel (tons)	--	--	--	--	--	--
Rank	--	--	--	--	--	--

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

Mobility Data for Beaumont TX

Inventory Measures	1984	1983	1982
Urban Area Information			
Population (1000s)	103	103	103
Rank	99	98	98
Commuters (1000s)	41	41	41
Daily Vehicle-Miles of Travel (1000s)			
Freeway	1,049	1,015	988
Arterial Streets	627	544	554
Cost Components			
Value of Time ($/hour)	7.75	7.43	7.20
Commercial Cost ($/hour)	23.94	23.63	23.31
Gasoline ($/gallon)	1.28	1.31	1.37
Diesel ($/gallon)	1.25	1.28	1.34
System Performance	**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)	276	265	157
Rank	96	94	98
Fuel per Peak Auto Commuter (gallons)	2	2	2
Rank	79	69	55
Annual Delay			
Total Delay (1000s of person-hours)	549	529	522
Rank	96	95	93
Delay per Auto Commuter (pers-hrs)	7	7	7
Rank	90	85	82
Travel Time Index	1.03	1.03	1.03
Rank	85	80	76
Commuter Stress Index	--	--	--
Rank	--	--	--
Freeway Planning Time Index (95th Pctile)	--	--	--
Rank	--	--	--
Congestion Cost			
Total Cost ($ millions)	5	5	5
Rank	96	94	93
Cost per Auto Commuter ($)	206	220	215
Rank	79	73	71
Truck Congestion			
Annual Person-Hours of Delay (000)	24	22	22
Rank	96	95	92
Annual Gallons of Wasted Fuel (000)	54	52	51
Rank	94	93	91
Annual Congestion Cost ($ million)	1	1	1
Rank	82	79	78
Annual Greenhouse Gases (CO2) Produced			
Excess Due to Congestion (tons)	--	--	--
Rank	--	--	--
Due to All Travel (tons)	--	--	--
Rank	--	--	--
Truck Annual Greenhouse Gases (CO2) Produced			
Excess Due to Truck Congestion (tons)	--	--	--
Rank	--	--	--
Due to Truck Travel (tons)	--	--	--
Rank	--	--	--

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