Performance Measure Summary - Sarasota-Bradenton FL

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.

Inventory Measures	2020	2019	2018	2017	2016	2015
Urban Area Information						
Population (1000s)	725	725	720	715	700	685
Rank	61	61	62	62	62	62
Commuters (1000s)	364	364	362	359	351	343
Daily Vehicle-Miles of Travel (1000s)						
Freeway	3,211	3,416	3,376	3,288	3,251	3,146
Arterial Streets	6,687	7,114	7,021	6,977	7,079	6,900
Cost Components						
Value of Time (\$/hour)	20.17	19.14	18.71	18.12	17.91	17.69
Commercial Cost (\$/hour)	55.24	61.03	54.71	52.14	50.20	46.87
Gasoline (\$/gallon)	2.26	2.48	2.77	2.28	2.12	2.23
Diesel (\$/gallon)	2.71	2.85	3.15	2.48	2.31	2.55
System Performance	2020	2019	2018	2017	2016	2015
Congested Travel (% of peak VMT)				2.8		
Congested System (% of lane-miles)				12.3		
Congested Time (number of "Rush Hours")				1.9		
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	2,587	7,403	7,081	6,520	6,250	6,086
Rank	83	67	68	72	72	72
Fuel per Peak Auto Commuter (gallons)	5	16	15	14	13	12
Rank	98	81	86	90	92	96
Annual Delay						
Total Delay (1000s of person-hours)	6,122	17,519	17,116	16,286	15,550	15,088
Rank	83	67	67	69	69	69
Delay per Auto Commuter (pers-hrs)	12	35	34	33	32	30
Rank	98	91	92	92	92	92
Travel Time Index	1.05	1.18	1.17	1.17	1.16	1.16
Rank	85	41	48	47	58	57
Commuter Stress Index	1.07	1.25	1.24	1.20		
Rank	75	39	38	47		
Freeway Planning Time Index (95th Pctile)		1.83	1.72	1.53		
Rank		25	28	43		
Congestion Cost						
Total Cost (\$ millions)	136	384	372	347	326	312
Rank	83	67	68	68	69	69
Cost per Auto Commuter (\$)	247	695	679	638	627	607
Rank	99	89	91	92	91	91
Truck Congestion						
Annual Person-Hours of Delay (000)	243	726	717	687	649	634
Rank	87	66	65	67	67	67
Annual Gallons of Wasted Fuel (000)	464	1,385	1,342	1,327	1,310	1,290
Rank	84	64	65	65	65	65
Annual Congestion Cost (\$ million)	13	43	40	37	33	31
Rank	85	65	65	67	67	67
Annual Greenhouse Gases (CO2) Produced					ı	
Excess Due to Congestion (tons)	25,766	73,732				
Rank	83	67				
Due to All Travel (tons)	564,615	1,615,712				
Rank	90	83				
Truck Annual Greenhouse Gases (CO2) Produced					ı	
Excess Due to Truck Congestion (tons)	5,041	15,057				
Rank	83	64				
Due to Truck Travel (tons)	119,570	357,180				
Rank	92	83				

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

Inventory Measures	2014	2013	2012	2011	2010	2009
Urban Area Information						
Population (1000s)	670	660	650	645	640	640
Rank	63	63	63	63	63	63
Commuters (1000s)	336	337	332	329	325	324
Daily Vehicle-Miles of Travel (1000s)						
Freeway	2,975	2,623	2,405	2,517	2,491	2,400
Arterial Streets	6,588	6,235	6,295	6,308	6,244	6,492
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)	3.27	3.47	3.50	3.24	2.74	2.33
Diesel (\$/gallon)	3.60	3.90	3.87	3.65	2.96	2.59
System Performance	2014	2013	2012	2011	2010	2009
Congested Travel (% of peak VMT)						
Congested Travel (% of lane-miles)			 			
Congested Time (number of "Rush Hours")						
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	5,999	5,874	5 616	5 571	5 460	5,216
Rank	73	73	5,616	5,571 73	5,469 73	5,216 74
Fuel per Peak Auto Commuter (gallons)	12	13	$\begin{vmatrix} 73 \\ 12 \end{vmatrix}$	12	12	10
Rank	95	89	93	89	89	93
	75	67	73	67	67	73
Annual Delay	14,617	14,061	13,323	12,860	12 507	11,705
Total Delay (1000s of person-hours) Rank	69	70	73	12,860 74	12,507 73	74
Delay per Auto Commuter (pers-hrs)	30	29	28	27	27	25
Rank	91	90	90	90	89	90
Travel Time Index	1.16	1.16	1.16	1.16	1.15	1.15
Rank Commuter Stress Index	58	55	57	56	65	68
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank		 	 			
Congestion Cost	+					
Total Cost (\$ millions)	308	292	273	260	242	222
Rank	69	70	73	73	74	74
Cost per Auto Commuter (\$)	586	569	545	544	545	518
Rank	92	92	92	92	92	93
Truck Congestion	1		72	72	72	
Annual Person-Hours of Delay (000)	614	591	560	540	525	492
Rank	67	69	74	72	72	74
Annual Gallons of Wasted Fuel (000)	1,272	1,245	1,191	1,181	1,159	1,106
Rank	65	65	65	65	66	68
Annual Congestion Cost (\$ million)	30	28	25	27	24	22
Rank	68	67	71	68	71	74
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						
капк Due to Truck Travel (tons)			 			
Rank						
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^{*} Note: Zeroes in the table reflect values less than 0.5.

Inventory Measures	2008	2007	2006	2005	2004	2003
Urban Area Information						
Population (1000s)	640	635	630	625	620	590
Rank	62	62	62	61	61	64
Commuters (1000s)	323	319	315	310	306	289
Daily Vehicle-Miles of Travel (1000s)						
Freeway	2,335	2,575	2,645	2,510	2,325	2,100
Arterial Streets	6,525	6,545	6,750	6,575	6,400	6,110
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)	3.47	2.98	2.66	2.34	1.99	1.53
Diesel (\$/gallon)	4.15	3.36	2.85	2.53	2.01	1.61
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)	5,712	5,688	5,613	5,416	5,181	4,970
Rank	73	73	72	72	72	72
Fuel per Peak Auto Commuter (gallons)	12	12	12	11	11	10
Rank	90	90	86	88	88	89
Annual Delay						
Total Delay (1000s of person-hours)	12,209	12,156	11,997	11,575	11,072	10,622
Rank	72	72	69	70	70	70
Delay per Auto Commuter (pers-hrs)	26	27	27	26	25	25
Rank	89	88	88	88	88	89
Travel Time Index	1.16	1.16	1.16	1.16	1.15	1.16
Rank	61	59	58	57	64	52
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	239	227	216	201	184	169
Rank	72	72	69	71	72	71
Cost per Auto Commuter (\$)	535	554	563	559	555	547
Rank	89	89	88	88	87	85
Truck Congestion						
Annual Person-Hours of Delay (000)	513	511	504	486	465	446
Rank	70	69	68	68	69	68
Annual Gallons of Wasted Fuel (000)	1,211	1,206	1,190	1,148	1,098	1,054
Rank	63	63	63	64	65	64
Annual Congestion Cost (\$ million)	25	23	21	19	17	16
Rank	66	68	67	68	67	65
Annual Greenhouse Gases (CO2) Produced				1	, ,	
Excess Due to Congestion (tons)						
Rank						
Due to All Travel (tons)						
Rank						
Truck Annual Greenhouse Gases (CO2) Produced				1	, ,	
Excess Due to Truck Congestion (tons)						
Rank						
			· I		, I	
Due to Truck Travel (tons) Rank						

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

Inventory Measures	2002	2001	2000	1999	1998	1997
Urban Area Information						
Population (1000s)	570	550	535	525	515	505
Rank	64	65	66	65	65	65
Commuters (1000s)	276	263	253	245	237	230
Daily Vehicle-Miles of Travel (1000s)						
Freeway	1,900	1,700	1,500	1,300	1,100	850
Arterial Streets	5,815	5,525	5,385	5,200	5,000	4,850
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)	1.41	1.51	1.54	1.14	1.07	1.17
Diesel (\$/gallon)	1.41	1.58	1.55	1.19	1.20	1.27
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)	4,734	4,608	4,572	4,421	4,048	3,772
Rank	72	72	70	70	70	71
Fuel per Peak Auto Commuter (gallons)	10	10	9	10	9	8
Rank	87	85	84	77	79	79
Annual Delay						
Total Delay (1000s of person-hours)	10,118	9,849	9,772	9,449	8,652	8,063
Rank	69	69	67	67	68	68
Delay per Auto Commuter (pers-hrs)	25	26	26	26	25	23
Rank	89	84	81	78	76	77
Travel Time Index	1.15	1.16	1.16	1.16	1.15	1.14
Rank	58	48	43	39	43	46
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	157	151	146	135	121	111
Rank	70	69	67	66	68	68
Cost per Auto Commuter (\$)	532	524	536	534	503	474
Rank	86	82	78	76	76	77
Truck Congestion						
Annual Person-Hours of Delay (000)	425	414	410	397	363	339
Rank	68	69	68	67	68	67
Annual Gallons of Wasted Fuel (000)	1,004	977	969	937	858	800
Rank	64	64	63	63	63	63
Annual Congestion Cost (\$ million)	14	14	13	12	11	10
Rank	67	66	67	65	64	66
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						
	1				1	
Due to Truck Travel (tons)						

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

Inventory Measures	1996	1995	1994	1993	1992	1991
Urban Area Information						
Population (1000s)	505	500	490	475	465	455
Rank	65	65	66	67	67	67
Commuters (1000s)	227	222	215	206	199	192
Daily Vehicle-Miles of Travel (1000s)						
Freeway	650	500	400	370	345	350
Arterial Streets	4,710	4,600	4,450	4,385	4,300	4,275
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)	1.30	1.20	1.08	1.13	1.12	1.10
Diesel (\$/gallon)	1.40	1.30	1.17	1.22	1.20	1.24
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)	3,586	3,305	3,208	3,098	2,749	2,730
Rank	70	70	68	65	66	62
Fuel per Peak Auto Commuter (gallons)	8	70	7	7	6	7
Rank	76	77	73	67	69	57
Annual Delay	70	, , , , , , , , , , , , , , , , , , ,	7.5	07	07	31
Total Delay (1000s of person-hours)	7,665	7,063	6,856	6,620	5,875	5,834
Rank	67	67	66	64	65	63
Delay per Auto Commuter (pers-hrs)	23	21	21	21	19	20
Rank	74	78	75	71	74	65
Travel Time Index						1.12
Rank	1.14	1.13	1.13	1.13	1.12	39
Commuter Stress Index	45	47	43	40	41	39
Rank			 		 	
Freeway Planning Time Index (95th Pctile)			 		 	
Rank						
Congestion Cost						
Total Cost (\$ millions)	104	93	88	83	72	69
Rank	67	67	66	64	65	63
Cost per Auto Commuter (\$)	460	439	440	434	398	407
Rank	76	76	74	70	70	64
Truck Congestion						
Annual Person-Hours of Delay (000)	322	297	288	278	247	245
Rank	67	69	65	65	66	63
Annual Gallons of Wasted Fuel (000)	760	701	680	657	583	579
Rank	63	63	63	60	61	59
Annual Congestion Cost (\$ million)	10	9	8	8	7	7
Rank	63	64	64	60	62	57
Annual Greenhouse Gases (CO2) Produced	1					
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			 			
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^{*} Note: Zeroes in the table reflect values less than 0.5.

Inventory Measures	1990	1989	1988	1987	1986	1985
Urban Area Information						
Population (1000s)	430	405	390	380	370	360
Rank	69	69	69	69	69	69
Commuters (1000s)	179	167	160	154	149	144
Daily Vehicle-Miles of Travel (1000s)						
Freeway	340	320	300	270	260	250
Arterial Streets	4,085	3,815	3,650	3,545	3,420	3,550
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)	1.05	1.08	1.00	1.00	0.98	1.28
Diesel (\$/gallon)	1.11	1.07	0.99	0.99	0.97	1.27
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)	2,392	2,068	2,023	1,994	1,901	1,771
Rank	64	65	63	61	61	61
Fuel per Peak Auto Commuter (gallons)	6	4	4	4	4	4
Rank	60	76	71	61	54	50
Annual Delay						
Total Delay (1000s of person-hours)	5,112	4,421	4,323	4,262	4,062	3,786
Rank	64	65	62	60	60	59
Delay per Auto Commuter (pers-hrs)	18	17	17	18	17	17
Rank	66	62	58	48	47	38
Travel Time Index	1.11	1.10	1.11	1.11	1.11	1.10
Rank	42	44	33	30	27	27
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	58	48	45	43	39	37
Rank	64	66	62	60	60	57
Cost per Auto Commuter (\$)	374	344	347	357	353	342
Rank	68	70	66	60	59	55
Truck Congestion						
Annual Person-Hours of Delay (000)	215	186	182	179	171	159
Rank	65	67	64	60	59	58
Annual Gallons of Wasted Fuel (000)	507	439	429	423	403	376
Rank	60	61	60	56	56	55
Annual Congestion Cost (\$ million)	6	5	5	5	4	4
Rank	59	61	59	54	58	53
Annual Greenhouse Gases (CO2) Produced					ı	
Excess Due to Congestion (tons)						
Rank						
Due to All Travel (tons)						
Rank						
Truck Annual Greenhouse Gases (CO2) Produced					ı	
Excess Due to Truck Congestion (tons)						
Rank						
Due to Truck Travel (tons)						
Rank						

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

Inventory Measures	1984	1983	1982
Urban Area Information			
Population (1000s)	350	340	325
Rank	70	71	72
Commuters (1000s)	139	134	127
Daily Vehicle-Miles of Travel (1000s)			
Freeway	240	240	240
Arterial Streets	3,485	3,345	3,000
Cost Components			
Value of Time (\$/hour)	7.75	7.43	7.20
Commercial Cost (\$/hour)	23.94	23.63	23.31
Gasoline (\$/gallon)	1.29	1.32	1.38
Diesel (\$/gallon)	1.28	1.31	1.37
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)	1,702	1,564	1,386
Rank	57	56	57
Fuel per Peak Auto Commuter (gallons)	4	30	3
Rank	41	46	34
Annual Delay	11	10	31
Total Delay (1000s of person-hours)	3,638	3,343	2,962
Rank	55	53	2,902
Delay per Auto Commuter (pers-hrs)	17	16	15
Rank	35	33	33
Travel Time Index	1.10	1.10	1.09
Rank	27	23	26
Commuter Stress Index			
Rank			
Freeway Planning Time Index (95th Pctile)			
Rank			
Congestion Cost			
Total Cost (\$ millions)	34	30	26
Rank	55	54	57
Cost per Auto Commuter (\$)	341	323	301
Rank	45	47	47
Truck Congestion			
Annual Person-Hours of Delay (000)	153	140	124
Rank	55	53	56
Annual Gallons of Wasted Fuel (000)	361	332	294
Rank	52	52	52
Annual Congestion Cost (\$ million)	4	4	3
Rank	50	47	50
Annual Greenhouse Gases (CO2) Produced			
Excess Due to Congestion (tons)			
Rank			
Due to All Travel (tons)			
Rank			
Truck Annual Greenhouse Gases (CO2) Produced			
	1 1		
Excess Due to Truck Congestion (tons)			
Excess Due to Truck Congestion (tons) Rank			

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