

# Performance Measure Summary - Tampa-St. Petersburg FL

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 Tampa-St. Petersburg FL

Inventory Measures	2017	2016	2015	2014	2013	2012
<b>Urban Area Information</b>						
Population (1000s)	2,650	2,610	2,570	2,540	2,500	2,470
Rank	18	19	19	19	19	19
Commuters (1000s)	1,325	1,305	1,285	1,270	1,277	1,282
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	17,361	17,153	15,789	14,980	14,318	14,155
Arterial Streets	31,509	30,534	29,598	29,024	27,108	27,185
<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)	2.28	2.12	2.23	3.27	3.47	3.50
Diesel (\$/gallon)	2.48	2.31	2.55	3.60	3.90	3.87
System Performance	2017	2016	2015	2014	2013	2012
<b>Congested Travel (% of peak VMT)</b>	22.3	--	--	--	--	--
<b>Congested System (% of lane-miles)</b>	14.9	--	--	--	--	--
<b>Congested Time (number of "Rush Hours")</b>	2.4	--	--	--	--	--
<b>Annual Excess Fuel Consumed</b>						
Total Fuel (1000 gallons)	31,952	31,786	31,515	31,330	31,092	30,473
Rank	22	22	22	21	21	21
Fuel per Peak Auto Commuter (gallons)	20	19	19	18	18	19
Rank	47	53	50	57	54	42
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	85,860	84,151	82,008	80,817	78,796	76,538
Rank	23	22	22	21	22	22
Delay per Auto Commuter (pers-hrs)	50	48	47	47	46	44
Rank	37	39	39	34	34	38
<b>Travel Time Index</b>						
Rank	1.22	1.22	1.22	1.22	1.22	1.21
Rank	33	33	34	33	31	34
<b>Commuter Stress Index</b>						
Rank	1.27	--	--	--	--	--
Rank	27	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	1.83	--	--	--	--	--
Rank	23	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	1,730	1,668	1,604	1,606	1,543	1,478
Rank	23	23	22	22	22	22
Cost per Auto Commuter (\$)	987	974	945	925	911	897
Rank	34	34	33	33	33	33
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	3,606	3,534	3,444	3,394	3,309	3,215
Rank	23	22	22	21	22	22
Annual Gallons of Wasted Fuel (000)	6,774	6,739	6,681	6,642	6,591	6,460
Rank	22	22	22	21	21	21
Annual Congestion Cost (\$ million)	182	171	159	157	145	137
Rank	23	23	23	23	23	22

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

# Mobility Data for Tampa-St. Petersburg FL

Inventory Measures	2011	2010	2009	2008	2007	2006
<b>Urban Area Information</b>						
Population (1000s)	2,440	2,395	2,355	2,330	2,320	2,295
Rank	18	18	18	18	18	18
Commuters (1000s)	1,264	1,237	1,212	1,195	1,181	1,160
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	14,360	14,174	13,800	13,600	14,100	13,585
Arterial Streets	28,370	28,002	27,681	27,820	28,915	29,000
<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)	3.24	2.74	2.33	3.47	2.98	2.66
Diesel (\$/gallon)	3.65	2.96	2.59	4.15	3.36	2.85
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)	29,635	29,098	28,843	30,892	31,250	30,451
Rank	21	21	21	21	20	21
Fuel per Peak Auto Commuter (gallons)	17	17	16	18	18	19
Rank	60	61	54	49	49	36
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	72,423	70,452	68,528	69,903	70,712	68,903
Rank	21	21	21	21	21	21
Delay per Auto Commuter (pers-hrs)	42	42	42	43	44	44
Rank	42	38	35	31	30	29
<b>Travel Time Index</b>						
Rank	1.21	1.21	1.21	1.23	1.23	1.23
Rank	33	33	33	30	31	31
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	1,383	1,290	1,225	1,293	1,246	1,172
Rank	22	21	21	21	21	21
Cost per Auto Commuter (\$)	875	878	869	878	924	924
Rank	33	32	30	30	28	28
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	3,042	2,959	2,878	2,936	2,970	2,894
Rank	21	21	21	21	21	21
Annual Gallons of Wasted Fuel (000)	6,283	6,169	6,115	6,549	6,625	6,456
Rank	21	21	21	21	20	21
Annual Congestion Cost (\$ million)	142	129	121	132	125	115
Rank	22	21	21	21	21	21

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

# Mobility Data for Tampa-St. Petersburg FL

Inventory Measures	2005	2004	2003	2002	2001	2000
<b>Urban Area Information</b>						
Population (1000s)	2,250	2,215	2,050	2,025	2,000	1,945
Rank	18	18	20	21	21	20
Commuters (1000s)	1,129	1,105	1,017	990	962	921
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	13,050	12,980	12,000	11,100	10,400	9,700
Arterial Streets	28,000	27,340	24,675	24,200	22,605	21,000
<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)	2.34	1.99	1.53	1.41	1.51	1.54
Diesel (\$/gallon)	2.53	2.01	1.61	1.41	1.58	1.55
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)	28,862	27,847	24,568	23,642	21,940	20,146
Rank	21	21	23	23	25	25
Fuel per Peak Auto Commuter (gallons)	18	18	15	15	14	13
Rank	43	38	58	53	54	56
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	65,307	63,012	55,592	53,496	49,647	45,586
Rank	21	21	21	21	22	22
Delay per Auto Commuter (pers-hrs)	42	42	40	39	37	36
Rank	31	30	32	36	40	40
<b>Travel Time Index</b>						
Rank	1.22	1.22	1.21	1.21	1.20	1.19
Rank	32	32	32	31	32	34
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	1,069	988	839	786	720	643
Rank	21	21	21	21	21	22
Cost per Auto Commuter (\$)	905	903	819	805	758	715
Rank	30	32	39	38	40	43
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	2,743	2,646	2,335	2,247	2,085	1,915
Rank	21	21	21	21	22	22
Annual Gallons of Wasted Fuel (000)	6,119	5,904	5,208	5,012	4,651	4,271
Rank	21	21	23	23	25	25
Annual Congestion Cost (\$ million)	103	94	78	72	65	58
Rank	21	21	21	21	21	22

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

# Mobility Data for Tampa-St. Petersburg FL

Inventory Measures	1999	1998	1997	1996	1995	1994
<b>Urban Area Information</b>						
Population (1000s)	1,895	1,865	1,845	1,840	1,830	1,780
Rank	20	20	20	20	20	20
Commuters (1000s)	882	854	832	816	798	765
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	9,100	8,500	8,110	7,845	7,615	7,165
Arterial Streets	19,550	18,700	17,730	16,840	16,205	15,405
<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	1.07	1.17	1.30	1.20	1.08
Diesel (\$/gallon)	1.19	1.20	1.27	1.40	1.30	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)	18,778	18,233	17,916	17,745	17,074	16,234
Rank	25	25	24	21	20	20
Fuel per Peak Auto Commuter (gallons)	11	11	10	10	11	10
Rank	72	65	66	57	41	45
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	42,490	41,257	40,541	40,153	38,636	36,734
Rank	22	22	22	19	19	19
Delay per Auto Commuter (pers-hrs)	34	34	35	35	34	33
Rank	45	40	36	25	24	22
<b>Travel Time Index</b>						
Rank	35	30	28	26	26	23
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	573	545	529	515	481	444
Rank	22	22	23	19	19	19
Cost per Auto Commuter (\$)	689	684	682	692	686	672
Rank	46	43	35	31	29	28
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	1,785	1,733	1,703	1,686	1,623	1,543
Rank	22	22	22	19	19	19
Annual Gallons of Wasted Fuel (000)	3,981	3,865	3,798	3,762	3,620	3,442
Rank	25	25	24	21	20	20
Annual Congestion Cost (\$ million)	51	49	47	47	44	41
Rank	22	22	23	19	19	19

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

# Mobility Data for Tampa-St. Petersburg FL

Inventory Measures	1993	1992	1991	1990	1989	1988
<b>Urban Area Information</b>						
Population (1000s)	1,755	1,730	1,725	1,720	1,670	1,635
Rank	22	22	22	22	22	22
Commuters (1000s)	742	720	706	693	668	648
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	6,825	6,300	5,850	5,315	5,000	4,885
Arterial Streets	14,785	14,225	13,960	12,980	12,390	12,010
<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)	1.13	1.12	1.10	1.05	1.08	1.00
Diesel (\$/gallon)	1.22	1.20	1.24	1.11	1.07	0.99
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)	15,371	14,753	14,263	12,554	11,413	10,821
Rank	18	18	17	17	17	17
Fuel per Peak Auto Commuter (gallons)	9	9	9	8	7	6
Rank	49	45	27	35	39	45
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	34,782	33,384	32,275	28,408	25,824	24,485
Rank	19	19	18	18	18	18
Delay per Auto Commuter (pers-hrs)	33	32	31	28	26	26
Rank	18	17	17	21	23	20
<b>Travel Time Index</b>						
Rank	1.17	1.17	1.16	1.15	1.14	1.13
Rank	23	22	21	21	23	23
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	411	384	362	306	266	241
Rank	19	19	18	18	18	18
Cost per Auto Commuter (\$)	653	647	644	592	571	569
Rank	26	24	23	24	22	21
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	1,461	1,402	1,356	1,193	1,085	1,028
Rank	19	19	18	18	18	18
Annual Gallons of Wasted Fuel (000)	3,259	3,128	3,024	2,662	2,419	2,294
Rank	18	18	17	17	17	17
Annual Congestion Cost (\$ million)	39	37	35	30	27	25
Rank	19	18	18	18	18	18

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

# Mobility Data for Tampa-St. Petersburg FL

Inventory Measures	1987	1986	1985	1984	1983	1982
<b>Urban Area Information</b>						
Population (1000s)	1,610	1,565	1,520	1,485	1,455	1,420
Rank	22	22	22	22	22	22
Commuters (1000s)	634	610	589	571	555	536
<b>Daily Vehicle-Miles of Travel (1000s)</b>						
Freeway	4,590	3,985	3,700	3,545	3,230	2,985
Arterial Streets	11,655	11,420	11,115	10,855	10,500	10,300
<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)	0.99	0.97	1.27	1.28	1.31	1.37
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)	10,272	9,597	8,995	8,321	7,520	7,086
Rank	17	19	18	18	18	17
Fuel per Peak Auto Commuter (gallons)	6	6	5	6	4	4
Rank	32	28	32	20	35	19
<b>Annual Delay</b>						
Total Delay (1000s of person-hours)	23,242	21,716	20,354	18,828	17,016	16,035
Rank	18	18	17	18	18	16
Delay per Auto Commuter (pers-hrs)	25	24	23	22	21	20
Rank	18	18	17	17	14	15
<b>Travel Time Index</b>						
Rank	1.13	1.13	1.12	1.12	1.11	1.11
Rank	21	19	20	19	18	17
<b>Commuter Stress Index</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Freeway Planning Time Index (95th Pctile)</b>						
Rank	--	--	--	--	--	--
Rank	--	--	--	--	--	--
<b>Congestion Cost</b>						
Total Cost (\$ millions)	220	199	186	167	146	134
Rank	18	18	17	18	18	17
Cost per Auto Commuter (\$)	564	545	521	499	472	462
Rank	20	21	20	19	20	19
<b>Truck Congestion</b>						
Annual Person-Hours of Delay (000)	976	912	855	791	715	673
Rank	18	18	17	18	18	16
Annual Gallons of Wasted Fuel (000)	2,178	2,035	1,907	1,764	1,594	1,502
Rank	17	19	18	18	18	17
Annual Congestion Cost (\$ million)	23	22	21	19	17	16
Rank	18	17	17	17	18	16

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