Performance Measure Summary - Milwaukee WI

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)	1,405	1,405	1,405	1,410	1,410	1,410
Rank	38	38	37	37	37	37
Commuters (1000s)	687	687	687	689	689	689
Daily Vehicle-Miles of Travel (1000s)						
Freeway	10,134	12,573	12,637	12,550	12,151	11,983
Arterial Streets	12,918	16,027	16,057	16,089	15,938	14,038
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)	2.25	2.54	2.81	2.33	2.18	2.33
Diesel (\$/gallon)	2.69	2.81	3.25	2.51	2.32	2.31
System Performance	2020	2019	2018	2017	2016	2015
Congested Travel (% of peak VMT)				18.0		
Congested System (% of lane-miles)				7.8		
Congested Time (number of "Rush Hours")				2.8		
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	11,419	18,582	18,347	18,847	18,740	18,540
Rank	32	38	38	38	38	38
Fuel per Peak Auto Commuter (gallons)	14	23	22	23	23	23
Rank	17	33	37	29	27	25
Annual Delay						
Total Delay (1000s of person-hours)	24,340	39,610	39,250	39,146	38,635	37,896
Rank	39	41	40	41	41	41
Delay per Auto Commuter (pers-hrs)	29	47	46	46	44	44
Rank	29	51	49	47	53	49
Travel Time Index	1.07	1.16	1.16	1.17	1.17	1.17
Rank	57	59	57	47	46	46
Commuter Stress Index	1.07	1.17	1.18	1.18		
Rank	75	67	63	56		
Freeway Planning Time Index (95th Pctile)		1.40	1.42	1.52		
Rank		53	49	45		
Congestion Cost						
Total Cost (\$ millions)	557	861	866	847	822	795
Rank	39	42	40	40	41	41
Cost per Auto Commuter (\$)	602	931	935	911	905	884
Rank	39	54	47	46	46	46
Truck Congestion						
Annual Person-Hours of Delay (000)	1,403	1,857	1,810	1,770	1,747	1,714
Rank	35	45	44	44	42	42
Annual Gallons of Wasted Fuel (000)	2,389	3,161	3,282	3,219	3,202	3,167
Rank	36	44	43	42	41	41
Annual Congestion Cost (\$ million)	74	91	100	94	89	82
Rank	35	46	44	43	42	42
Annual Greenhouse Gases (CO2) Produced						
Excess Due to Congestion (tons)	114,272	185,959				
Rank	33	38				
Due to All Travel (tons)	3,800,535	6,184,732				
Rank	25	34				
Truck Annual Greenhouse Gases (CO2) Produced						
		21 665				
Excess Due to Truck Congestion (tons)	26,196	34,665			I	
Rank	36	44				

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

Inventory Measures	2014	2013	2012	2011	2010	2009
Urban Area Information						
Population (1000s)	1,410	1,410	1,405	1,405	1,405	1,400
Rank	37	37	37	36	35	34
Commuters (1000s)	689	699	697	695	693	688
Daily Vehicle-Miles of Travel (1000s)						
Freeway	11,511	11,340	11,195	11,490	11,459	11,000
Arterial Streets	13,630	13,962	14,510	15,200	15,129	14,800
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)	3.32	3.63	3.60	3.42	2.71	2.29
Diesel (\$/gallon)	3.65	3.91	3.91	3.71	2.99	2.54
System Performance	2014	2013	2012	2011	2010	2009
Congested Travel (% of peak VMT)						
Congested Traver (% of lane-miles)						
Congested Time (number of "Rush Hours")						
Annual Excess Fuel Consumed						
	10.250	10 171	10.026	17.052	17.757	17.216
Total Fuel (1000 gallons)	18,250	18,171	18,036	17,853	17,757	17,216
Rank	38	38	37	37	35	34
Fuel per Peak Auto Commuter (gallons)	22	22	22	22	22	20
Rank	24	24	21	18	20	18
Annual Delay						
Total Delay (1000s of person-hours)	36,660	35,860	34,959	33,974	33,479	31,853
Rank	41	41	41	41	40	40
Delay per Auto Commuter (pers-hrs)	43	41	41	40	40	38
Rank	49	52	50	49	48	54
Travel Time Index	1.17	1.17	1.17	1.16	1.16	1.16
Rank	49	48	47	56	54	55
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
D 1			I	I		
Rank						
Rank Congestion Cost						
	786	760	731	703	660	612
Congestion Cost						612
Congestion Cost Total Cost (\$ millions)	786	760	731	703	660	
Congestion Cost Total Cost (\$ millions) Rank	786 41	760 41	731 41	703 40	660 40	40
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$)	786 41 849	760 41 841	731 41 829	703 40 831	660 40 845	40 817
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank	786 41 849	760 41 841	731 41 829	703 40 831	660 40 845	40 817
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion	786 41 849 46	760 41 841 46	731 41 829 46	703 40 831 46	660 40 845 46	40 817 45
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000)	786 41 849 46	760 41 841 46	731 41 829 46	703 40 831 46	660 40 845 46	40 817 45 1,440
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank	786 41 849 46 1,658 42	760 41 841 46 1,622 42	731 41 829 46 1,581 41	703 40 831 46 1,536 41	660 40 845 46 1,514 39	40 817 45 1,440 39
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000)	786 41 849 46 1,658 42 3,118	760 41 841 46 1,622 42 3,104	731 41 829 46 1,581 41 3,081	703 40 831 46 1,536 41 3,049	660 40 845 46 1,514 39 3,033	40 817 45 1,440 39 2,941
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank	786 41 849 46 1,658 42 3,118 41	760 41 841 46 1,622 42 3,104 40	731 41 829 46 1,581 41 3,081 39	703 40 831 46 1,536 41 3,049 38	660 40 845 46 1,514 39 3,033 36	40 817 45 1,440 39 2,941 38
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank Annual Congestion Cost (\$ million)	786 41 849 46 1,658 42 3,118 41 81	760 41 841 46 1,622 42 3,104 40 75	731 41 829 46 1,581 41 3,081 39 71	703 40 831 46 1,536 41 3,049 38 75	660 40 845 46 1,514 39 3,033 36 69	40 817 45 1,440 39 2,941 38 64
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank Annual Congestion Cost (\$ million) Rank	786 41 849 46 1,658 42 3,118 41 81	760 41 841 46 1,622 42 3,104 40 75	731 41 829 46 1,581 41 3,081 39 71	703 40 831 46 1,536 41 3,049 38 75	660 40 845 46 1,514 39 3,033 36 69	40 817 45 1,440 39 2,941 38 64
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank Annual Congestion Cost (\$ million) Rank Annual Greenhouse Gases (CO2) Produced	786 41 849 46 1,658 42 3,118 41 81 42	760 41 841 46 1,622 42 3,104 40 75 41	731 41 829 46 1,581 41 3,081 39 71 41	703 40 831 46 1,536 41 3,049 38 75	660 40 845 46 1,514 39 3,033 36 69	40 817 45 1,440 39 2,941 38 64
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank Annual Congestion Cost (\$ million) Rank Annual Greenhouse Gases (CO2) Produced Excess Due to Congestion (tons)	786 41 849 46 1,658 42 3,118 41 81 42	760 41 841 46 1,622 42 3,104 40 75 41	731 41 829 46 1,581 41 3,081 39 71 41	703 40 831 46 1,536 41 3,049 38 75	660 40 845 46 1,514 39 3,033 36 69 39	40 817 45 1,440 39 2,941 38 64
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank Annual Congestion Cost (\$ million) Rank Annual Greenhouse Gases (CO2) Produced Excess Due to Congestion (tons) Rank	786 41 849 46 1,658 42 3,118 41 81 42	760 41 841 46 1,622 42 3,104 40 75 41	731 41 829 46 1,581 41 3,081 39 71 41	703 40 831 46 1,536 41 3,049 38 75	660 40 845 46 1,514 39 3,033 36 69 39	40 817 45 1,440 39 2,941 38 64
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank Annual Congestion Cost (\$ million) Rank Annual Greenhouse Gases (CO2) Produced Excess Due to Congestion (tons) Rank Due to All Travel (tons) Rank	786 41 849 46 1,658 42 3,118 41 81 42	760 41 841 46 1,622 42 3,104 40 75 41	731 41 829 46 1,581 41 3,081 39 71 41	703 40 831 46 1,536 41 3,049 38 75 41	660 40 845 46 1,514 39 3,033 36 69 39	40 817 45 1,440 39 2,941 38 64
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank Annual Congestion Cost (\$ million) Rank Annual Greenhouse Gases (CO2) Produced Excess Due to Congestion (tons) Rank Due to All Travel (tons) Rank Truck Annual Greenhouse Gases (CO2) Produced	786 41 849 46 1,658 42 3,118 41 81 42	760 41 841 46 1,622 42 3,104 40 75 41	731 41 829 46 1,581 41 3,081 39 71 41	703 40 831 46 1,536 41 3,049 38 75 41	660 40 845 46 1,514 39 3,033 36 69 39	40 817 45 1,440 39 2,941 38 64
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank Annual Congestion Cost (\$ million) Rank Annual Greenhouse Gases (CO2) Produced Excess Due to Congestion (tons) Rank Truck Annual Greenhouse Gases (CO2) Produced Excess Due to Truck Congestion (tons)	786 41 849 46 1,658 42 3,118 41 81 42	760 41 841 46 1,622 42 3,104 40 75 41	731 41 829 46 1,581 41 3,081 39 71 41	703 40 831 46 1,536 41 3,049 38 75 41	660 40 845 46 1,514 39 3,033 36 69 39	40 817 45 1,440 39 2,941 38 64
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank Annual Congestion Cost (\$ million) Rank 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	786 41 849 46 1,658 42 3,118 41 81 42	760 41 841 46 1,622 42 3,104 40 75 41	731 41 829 46 1,581 41 3,081 39 71 41	703 40 831 46 1,536 41 3,049 38 75 41	660 40 845 46 1,514 39 3,033 36 69 39	40 817 45 1,440 39 2,941 38 64
Congestion Cost Total Cost (\$ millions) Rank Cost per Auto Commuter (\$) Rank Truck Congestion Annual Person-Hours of Delay (000) Rank Annual Gallons of Wasted Fuel (000) Rank Annual Congestion Cost (\$ million) Rank Annual Greenhouse Gases (CO2) Produced Excess Due to Congestion (tons) Rank Truck Annual Greenhouse Gases (CO2) Produced Excess Due to Truck Congestion (tons)	786 41 849 46 1,658 42 3,118 41 81 42	760 41 841 46 1,622 42 3,104 40 75 41	731 41 829 46 1,581 41 3,081 39 71 41	703 40 831 46 1,536 41 3,049 38 75 41	660 40 845 46 1,514 39 3,033 36 69 39	40 817 45 1,440 39 2,941 38 64

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

Inventory Measures	2008	2007	2006	2005	2004	2003
Urban Area Information						
Population (1000s)	1,400	1,395	1,395	1,390	1,390	1,385
Rank	34	34	33	33	33	33
Commuters (1000s)	685	682	680	674	671	664
Daily Vehicle-Miles of Travel (1000s)						
Freeway	10,645	11,055	10,950	10,750	10,940	10,465
Arterial Streets	14,455	14,545	14,520	14,400	14,800	14,230
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)	3.48	3.08	2.73	2.37	1.98	1.58
Diesel (\$/gallon)	4.15	3.41	2.90	2.53	1.98	1.53
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)	17,921	17,532	17,392	16,980	16,756	16,399
Rank	34	34	34	34	34	33
Fuel per Peak Auto Commuter (gallons)	21	21	22	20	20	21
Rank	24	23	18	25	21	13
Annual Delay						
Total Delay (1000s of person-hours)	31,579	30,894	30,647	29,920	29,524	28,896
Rank	40	39	39	39	39	38
Delay per Auto Commuter (pers-hrs)	37	37	36	36	35	35
Rank	54	54	56	53	56	53
Travel Time Index	1.17	1.16	1.16	1.16	1.16	1.16
Rank	51	59	58	57	55	52
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	633	590	564	528	498	468
Rank	40	39	39	38	38	38
Cost per Auto Commuter (\$)	803	817	833	841	858	862
Rank	45	46	44	43	41	40
Truck Congestion						
Annual Person-Hours of Delay (000)	1,428	1,397	1,386	1,353	1,335	1,307
Rank	40	40	39	39	39	38
Annual Gallons of Wasted Fuel (000)	3,062	2,995	2,971	2,901	2,862	2,801
Rank	37	37	37	37	37	35
Annual Congestion Cost (\$ million)	67	62	58	53	49	46
Rank	40	38	38	38	38	37
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	2002	2001	2000	1999	1998	1997
Urban Area Information						
Population (1000s)	1,380	1,370	1,365	1,330	1,300	1,285
Rank	33	33	33	33	32	32
Commuters (1000s)	656	646	639	618	598	587
Daily Vehicle-Miles of Travel (1000s)						
Freeway	10,000	9,800	9,700	9,325	8,860	8,750
Arterial Streets	13,380	13,365	13,515	13,405	13,325	13,225
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)	1.46	1.51	1.64	1.17	1.14	1.19
Diesel (\$/gallon)	1.40	1.58	1.57	1.16	1.16	1.26
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)	15,897	15,624	15,042	14,628	14,558	14,187
Rank	33	33	31	30	28	28
Fuel per Peak Auto Commuter (gallons)	19	20	19	18	18	17
Rank	18	11	11	12	10	9
Annual Delay						
Total Delay (1000s of person-hours)	28,012	27,531	26,505	25,775	25,652	24,999
Rank	38	37	35	35	35	35
Delay per Auto Commuter (pers-hrs)	34	34	33	33	34	34
Rank	54	51	56	51	40	38
Travel Time Index	1.15	1.15	1.15	1.15	1.15	1.15
Rank	58	55	53	50	43	41
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	442	428	403	372	363	349
Rank	37	36	35	35	35	33
Cost per Auto Commuter (\$)	852	850	843	848	863	852
Rank	37	35	32	29	22	20
Truck Congestion						
Annual Person-Hours of Delay (000)	1,267	1,245	1,198	1,165	1,160	1,130
Rank	37	34	34	32	30	30
Annual Gallons of Wasted Fuel (000)	2,716	2,669	2,569	2,499	2,487	2,424
Rank	33	33	32	31	31	31
Annual Congestion Cost (\$ million)	42	41	38	35	34	33
Rank	37	33	32	32	30	30
Annual Greenhouse Gases (CO2) Produced				ı	I	
Excess Due to Congestion (tons)						
Rank						
Due to All Travel (tons) Rank	 					
Truck Annual Greenhouse Gases (CO2) Produced				ı	I	
Excess Due to Truck Congestion (tons)						
Rank Due to Truck Travel (tons)						
Due to Truck Travel (tons)						
Rank						

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

Inventory Measures	1996	1995	1994	1993	1992	1991
Urban Area Information						
Population (1000s)	1,270	1,250	1,240	1,230	1,230	1,225
Rank	31	31	31	31	28	27
Commuters (1000s)	575	562	553	544	540	533
Daily Vehicle-Miles of Travel (1000s)					İ	
Freeway	8,600	8,000	7,600	7,500	7,775	7,800
Arterial Streets	13,205	13,100	12,910	12,705	12,550	12,075
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)	1.33	1.18	1.09	1.12	1.11	1.15
Diesel (\$/gallon)	1.42	1.26	1.16	1.20	1.19	1.25
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)	13,919	12,972	11,877	11,369	10,950	10,509
Rank	27	28	28	27	25	25
Fuel per Peak Auto Commuter (gallons)	18	17	15	15	14	14
Rank	9	9	9	9	8	8
Annual Delay						
Total Delay (1000s of person-hours)	24,526	22,857	20,928	20,033	19,295	18,517
Rank	32	33	33	32	30	29
Delay per Auto Commuter (pers-hrs)	34	32	30	29	28	27
Rank	33	34	38	33	32	30
Travel Time Index	1.15	1.14	1.13	1.13	1.13	1.12
Rank	40	41	43	40	38	39
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	338	305	271	254	238	223
Rank	31	31	32	32	30	29
Cost per Auto Commuter (\$)	855	824	776	763	758	749
Rank	20	21	21	20	20	20
Truck Congestion						
Annual Person-Hours of Delay (000)	1,109	1,034	946	906	872	837
Rank	29	29	29	27	27	27
Annual Gallons of Wasted Fuel (000)	2,378	2,216	2,029	1,942	1,871	1,795
Rank	30	30	29	28	26	26
Annual Congestion Cost (\$ million)	32	29	26	25	24	23
Rank	29	29	29	27	27	27
Annual Greenhouse Gases (CO2) Produced						
Excess Due to Congestion (tons)						
Rank						
Due to All Travel (tons)						
Rank						
Rank Truck Annual Greenhouse Gases (CO2) Produced						
Rank Truck Annual Greenhouse Gases (CO2) Produced Excess Due to Truck Congestion (tons)						
Rank Truck Annual Greenhouse Gases (CO2) Produced Excess Due to Truck Congestion (tons) Rank		 		 	 	
Rank Truck Annual Greenhouse Gases (CO2) Produced Excess Due to Truck Congestion (tons)		 		 	 	

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

Inventory Measures	1990	1989	1988	1987	1986	1985
Urban Area Information						
Population (1000s)	1,230	1,225	1,225	1,220	1,215	1,210
Rank	27	26	26	26	25	25
Commuters (1000s)	531	524	519	512	506	500
Daily Vehicle-Miles of Travel (1000s)						
Freeway	7,615	7,400	7,050	6,775	6,315	6,090
Arterial Streets	11,820	11,480	11,435	10,945	10,905	10,440
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)	1.11	1.13	1.04	1.05	1.02	1.34
Diesel (\$/gallon)	1.21	1.23	1.13	1.14	1.11	1.45
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)	9,964	9,331	8,728	8,119	7,233	6,240
Rank	25	23	22	22	23	23
Fuel per Peak Auto Commuter (gallons)	13	12	12	11	10	10
Rank	8	8	8	8	9	8
Annual Delay						
Total Delay (1000s of person-hours)	17,556	16,441	15,378	14,308	12,746	10,995
Rank	27	25	25	26	26	27
Delay per Auto Commuter (pers-hrs)	26	24	23	21	19	17
Rank	27	29	28	31	35	38
Travel Time Index	1.12	1.11	1.10	1.10	1.09	1.08
Rank	35	37	41	37	39	40
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	203	182	163	146	126	109
Rank	26	25	26	25	26	27
Cost per Auto Commuter (\$)	742	734	724	700	649	572
Rank	19	19	18	18	18	18
Truck Congestion						
Annual Person-Hours of Delay (000)	794	743	695	647	576	497
Rank	27	26	26	25	25	25
Annual Gallons of Wasted Fuel (000)	1,702	1,594	1,491	1,387	1,235	1,066
Rank	26	26	26	25	25	28
Annual Congestion Cost (\$ million)	21	20	18	17	15	13
Rank	27	25	25	25	25	25
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)						
Excess Due to Truck Congestion (tons) Rank	 	 	 	 	 	
Excess Due to Truck Congestion (tons)		 		 		

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

Inventory Measures	1984	1983	1982
Urban Area Information			
Population (1000s)	1,210	1,210	1,210
Rank	25	25	25
Commuters (1000s)	494	490	486
Daily Vehicle-Miles of Travel (1000s)			
Freeway	5,815	5,385	5,250
Arterial Streets	9,415	9,090	9,065
Cost Components			
Value of Time (\$/hour)	7.75	7.43	7.20
Commercial Cost (\$/hour)	23.94	23.63	23.31
Gasoline (\$/gallon)	1.35	1.38	1.44
Diesel (\$/gallon)	1.47	1.50	1.57
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)	5,158	4,774	4,551
Rank	24	23	23
Fuel per Peak Auto Commuter (gallons)	6	6	2
Rank	20	13	55
Annual Delay			
Total Delay (1000s of person-hours)	9,088	8,412	8,019
Rank	27	28	27
Delay per Auto Commuter (pers-hrs)	14	13	13
Rank	48	49	44
Travel Time Index	1.06	1.06	1.06
Rank	50	45	42
Commuter Stress Index			
Rank			
Freeway Planning Time Index (95th Pctile)			
Rank			
Congestion Cost			
Total Cost (\$ millions)	87	78	73
Rank	27	27	27
Cost per Auto Commuter (\$)	485	473	466
Rank	24	23	22
Truck Congestion			
Annual Person-Hours of Delay (000)	411	380	363
Rank	29	28	27
Annual Gallons of Wasted Fuel (000)	881	816	777
Rank	29	29	28
Annual Congestion Cost (\$ million)	10	10	9
Rank	28	26	26
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.