Performance Measure Summary - Poughkeepsie-Newburgh NY-NJ

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)	435	435	435	440	440	440
Rank	83	83	83	83	82	82
Commuters (1000s)	203	203	203	205	205	205
Daily Vehicle-Miles of Travel (1000s)						
Freeway	4,247	5,452	5,483	5,641	5,192	5,067
Arterial Streets	3,792	4,868	4,767	4,794	4,778	4,637
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)	2.55	2.76	3.00	2.48	2.33	2.51
Diesel (\$/gallon)	3.08	3.17	3.38	2.70	2.49	2.88
System Performance	2020	2019	2018	2017	2016	2015
Congested Travel (% of peak VMT)				6.6		
Congested System (% of lane-miles)				5.9		
Congested Time (number of "Rush Hours")				0.5		
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	2,580	3,611	3,789	3,908	3,781	3,640
Rank	84	89	87	86	86	86
Fuel per Peak Auto Commuter (gallons)	13	18	19	19	18	17
Rank	28	69	58	55	60	65
Annual Delay						
Total Delay (1000s of person-hours)	6,204	8,682	8,445	8,979	8,594	8,132
Rank	82	89	89	87	87	87
Delay per Auto Commuter (pers-hrs)	26	36	35	37	36	35
Rank	47	87	89	86	86	86
Travel Time Index	1.07	1.10	1.10	1.11	1.11	1.11
Rank	57	97	98	96	96	96
Commuter Stress Index	1.08	1.11	1.11	1.12		
Rank	58	98	99	96		
Freeway Planning Time Index (95th Pctile)		1.10	1.09	1.10		
Rank		96	99	100		
Congestion Cost						
Total Cost (\$ millions)	139	187	185	193	181	170
Rank	82	89	89	88	88	88
Cost per Auto Commuter (\$)	468	629	624	641	620	582
Rank	70	95	95	91	92	93
Truck Congestion						
Annual Person-Hours of Delay (000)	249	338	347	363	347	329
Rank	86	92	89	90	90	90
Annual Gallons of Wasted Fuel (000)	393	533	543	559	541	521
Rank	89	92	92	92	92	92
Annual Congestion Cost (\$ million)	13	17	19	19	18	16
Rank	85	91	89	90	90	90
Annual Greenhouse Gases (CO2) Produced					1	
Excess Due to Congestion (tons)	25,682	35,940				
Rank	84	90				
Due to All Travel (tons)	1,376,293	1,926,059				
Rank	68	81				
Truck Annual Greenhouse Gases (CO2) Produced		_			1	
Excess Due to Truck Congestion (tons)	4,261	5,785				
Rank	89	92				
Due to Truck Travel (tons)	311,969	423,574				
Rank	71	75				

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

Inventory Measures	2014	2013	2012	2011	2010	2009
Urban Area Information						
Population (1000s)	440	440	440	440	440	440
Rank	82	82	82	82	81	81
Commuters (1000s)	205	208	208	208	207	207
Daily Vehicle-Miles of Travel (1000s)						
Freeway	5,353	5,301	5,050	5,123	5,114	5,083
Arterial Streets	4,759	4,718	4,670	4,779	4,770	4,700
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)	3.63	3.79	3.75	3.65	2.95	2.47
Diesel (\$/gallon)	3.92	4.20	4.17	3.99	3.21	2.90
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)	3,568	3,555	3,485	3,415	3,367	3,227
Rank	86	86	87	87	87	87
Fuel per Peak Auto Commuter (gallons)	17	16	16	16	16	14
Rank	65	71	69	67	68	71
Annual Delay						
Total Delay (1000s of person-hours)	7,833	7,735	7,448	7,166	7,000	6,584
Rank	88	87	88	88	87	87
Delay per Auto Commuter (pers-hrs)	34	32	31	30	29	28
Rank	85	85	86	85	85	85
Travel Time Index	1.11	1.12	1.12	1.12	1.12	1.11
Rank	97	92	91	91	89	92
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost		1.60				101
Total Cost (\$ millions)	167	163	154	147	137	126
Rank	88	88	88	88 539	87	87 510
Cost per Auto Commuter (\$) Rank	559 93	556 93	542 93	538 93	544 93	519 92
	93	93	93	93	93	92
Truck Congestion	216	212	201	200	202	266
Annual Person-Hours of Delay (000) Rank	316	313 89	301 90	290 90	283 89	266 89
Annual Gallons of Wasted Fuel (000)	510	508	498	488	481	89 461
Rank	92	92	93	93	94	95
Annual Congestion Cost (\$ million)	15	14	13	14	13	12
Rank	90	89	91	90	88	88
Annual Greenhouse Gases (CO2) Produced		37	7.		00	
Excess Due to Congestion (tons)						
Rank	 		 			
Due to All Travel (tons)		<u></u>		<u></u>		
Rank						
Truck Annual Greenhouse Gases (CO2) Produced						
Excess Due to Truck Congestion (tons)						
Rank				<u></u>		
Due to Truck Travel (tons)		<u></u>		<u></u>		
Rank						

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

Inventory Measures	2008	2007	2006	2005	2004	2003
Urban Area Information						
Population (1000s)	435	430	425	415	410	400
Rank	81	81	81	80	80	80
Commuters (1000s)	204	200	197	191	187	182
Daily Vehicle-Miles of Travel (1000s)						
Freeway	5,240	5,340	5,480	5,200	5,010	4,750
Arterial Streets	4,720	4,715	4,690	4,380	4,160	3,925
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)	3.55	3.19	2.82	2.40	2.14	1.62
Diesel (\$/gallon)	4.52	3.71	3.03	2.66	2.14	1.73
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)	3,405	3,319	3,240	3,113	2,950	2,654
Rank	86	86	86	86	86	89
Fuel per Peak Auto Commuter (gallons)	16	15	16	15	16	13
Rank	68	73	64	64	56	74
Annual Delay						
Total Delay (1000s of person-hours)	6,614	6,448	6,295	6,048	5,731	5,155
Rank	86	87	87	87	87	89
Delay per Auto Commuter (pers-hrs)	28	28	28	28	27	27
Rank	85	85	85	85	86	86
Travel Time Index	1.12	1.12	1.12	1.11	1.11	1.10
Rank	90	90	88	92	91	91
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	131	122	115	106	96	83
Rank	86	87	87	87	87	90
Cost per Auto Commuter (\$)	518	525	526	523	511	472
Rank	93	91	91	91	91	91
Truck Congestion						
Annual Person-Hours of Delay (000)	267	261	255	245	231	208
Rank	88	89 475	89	88	90	91
Annual Gallons of Wasted Fuel (000)	487	475	463	445	421	380
Rank	93	95 11	94	93	92	92
Annual Congestion Cost (\$ million) Rank	12 90	11 89	10 90	10 88	8 91	7 91
	90	89	90	88	91	91
Annual Greenhouse Gases (CO2) Produced					I	
Excess Due to Congestion (tons)						
Rank						
Due to All Travel (tons) Rank						
Truck Annual Greenhouse Gases (CO2) Produced				1	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	2002	2001	2000	1999	1998	1997
Urban Area Information						
Population (1000s)	390	380	375	365	365	365
Rank	79	79	79	79	79	79
Commuters (1000s)	175	168	164	158	156	154
Daily Vehicle-Miles of Travel (1000s)						
Freeway	4,480	4,250	4,060	4,000	3,925	3,830
Arterial Streets	3,710	3,570	3,445	3,355	3,270	3,185
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)	1.49	1.72	1.64	1.19	1.15	1.31
Diesel (\$/gallon)	1.51	1.70	1.65	1.24	1.29	1.39
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)	2,453	2,150	2,062	2,000	1,888	1,753
Rank	89	89	88	88	86	87
Fuel per Peak Auto Commuter (gallons)	13	10	9	10	10	8
Rank	71	85	84	77	73	79
Annual Delay						
Total Delay (1000s of person-hours)	4,766	4,177	4,005	3,885	3,668	3,405
Rank	89	93	91	91	89	89
Delay per Auto Commuter (pers-hrs)	27	26	26	26	25	23
Rank	84	84	81	78	76	77
Travel Time Index	1.10	1.09	1.09	1.09	1.08	1.08
Rank	91	94	92	86	89	87
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	74	65	60	56	51	47
Rank	90	91	91	91	90	89
Cost per Auto Commuter (\$)	443	396	393	391	376	353
Rank	90	93	90	90	88	89
Truck Congestion	100	1.00	1/2	1.55	1.40	125
Annual Person-Hours of Delay (000)	192	169	162	157	148	137
Rank	91	93	93	91	91	91
Annual Gallons of Wasted Fuel (000) Rank	351	307 93	295 93	286 92	270 91	251 91
Rank Annual Congestion Cost (\$ million)	93	93 5	5	92 5	91	91
Rank	92	93	91	88	91	87
Annual Greenhouse Gases (CO2) Produced	92	73	71	00	71	67
Excess Due to Congestion (tons)				I		
Rank						
Due to All Travel (tons)						 -
Rank				<u></u>		
Truck Annual Greenhouse Gases (CO2) Produced						
Excess Due to Truck Congestion (tons)				I		
Rank (tons)						
Nank Due to Truck Travel (tons)						 -
Rank						 -
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)	360	360	355	355	355	345
Rank	78	77	76	74	74	74
Commuters (1000s)	150	148	144	142	141	135
Daily Vehicle-Miles of Travel (1000s)						
Freeway	3,720	3,615	3,570	3,440	3,350	3,280
Arterial Streets	3,105	3,030	2,965	2,900	2,835	2,795
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)	1.37	1.27	1.15	1.21	1.24	1.21
Diesel (\$/gallon)	1.28	1.19	1.07	1.13	1.00	1.35
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)	1,697	1,537	1,465	1,443	1,414	1,433
Rank	86	86	85	84	82	81
Fuel per Peak Auto Commuter (gallons)	9	7	7	7	7	7
Rank	69	77	73	67	59	57
Annual Delay						
Total Delay (1000s of person-hours)	3,296	2,986	2,845	2,802	2,748	2,784
Rank	86	88	87	85	81	81
Delay per Auto Commuter (pers-hrs)	23	21	20	20	20	21
Rank	74	78	80	74	67	61
Travel Time Index	1.08	1.07	1.07	1.07	1.07	1.07
Rank	86	87	87	83	82	80
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	45	40	37	35	34	33
Rank	86	87	87	85	81	81
Cost per Auto Commuter (\$)	353	326	319	329	326	346
Rank	87	89	88	83	82	75
Truck Congestion						
Annual Person-Hours of Delay (000)	133	121	115	113	111	112
Rank	89	89	88	86	85	84
Annual Gallons of Wasted Fuel (000)	243	220	210	206	202	205
Rank	91	91	91	90	88	87
Annual Congestion Cost (\$ million)	4	3	3	3	3	3
Rank	86	89	86	85	84	82
Annual Greenhouse Gases (CO2) Produced					I	
Excess Due to Congestion (tons)						
Rank						
Due to All Travel (tons)						
Rank						
Truck Annual Greenhouse Gases (CO2) Produced					I	
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	1990	1989	1988	1987	1986	1985
Urban Area Information						
Population (1000s)	340	330	315	305	295	285
Rank	74	74	76	77	78	79
Commuters (1000s)	131	126	120	115	110	106
Daily Vehicle-Miles of Travel (1000s)						
Freeway	3,230	3,120	3,040	2,950	2,815	2,700
Arterial Streets	2,720	2,640	2,590	2,450	2,375	2,250
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)	1.07	1.13	1.04	1.05	1.02	1.34
Diesel (\$/gallon)	1.09	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)	1,341	1,220	1,076	958	850	776
Rank	81	81	82	81	81	82
Fuel per Peak Auto Commuter (gallons)	7	7	6	5	4	4
Rank	50	39	45	48	54	50
Annual Delay						
Total Delay (1000s of person-hours)	2,605	2,370	2,089	1,862	1,651	1,508
Rank	81	81	82	82	82	82
Delay per Auto Commuter (pers-hrs)	20	19	18	16	15	14
Rank	59	55	52	55	55	54
Travel Time Index	1.07	1.06	1.06	1.05	1.05	1.05
Rank	74	79	73	79	74	64
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	30	26	22	19	16	15
Rank	80	81	81	81	82	81
Cost per Auto Commuter (\$)	333	321	295	288	255	247
Rank	74	73	74	73	76	73
Truck Congestion						
Annual Person-Hours of Delay (000)	105	96	84	75	67	61
Rank	84	84	84	84	84	84
Annual Gallons of Wasted Fuel (000)	192	175	154	137	121	111
Rank	86	86	86	86	86	86
Annual Congestion Cost (\$ million)	3	2	2	2	2	2
Rank	81	84	83	81	76	73
Annual Greenhouse Gases (CO2) Produced						
Excess Due to Congestion (tons)						
Rank Due to All Travel (tone)						
Due to All Travel (tons)						
Rank						
Truck Annual Greenhouse Gases (CO2) Produced						
Excess Due to Truck Congestion (tons)						
Rank Due to Truck Trough (tome)						
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)	280	270	265
Rank	80	80	80
Commuters (1000s)	103	99	96
Daily Vehicle-Miles of Travel (1000s)			
Freeway	2,570	2,450	2,385
Arterial Streets	2,130	2,080	2,000
Cost Components			
Value of Time (\$/hour)	7.75	7.43	7.20
Commercial Cost (\$/hour)	23.94	23.63	23.31
Gasoline (\$/gallon)	1.35	1.38	1.44
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)	700	630	567
Rank	80	79	80
Fuel per Peak Auto Commuter (gallons)	3	3	2
Rank	61	46	55
Annual Delay			
Total Delay (1000s of person-hours)	1,360	1,223	1,101
Rank	82	82	83
Delay per Auto Commuter (pers-hrs)	13	12	11
Rank	52	51	53
Travel Time Index	1.04	1.04	1.04
Rank	75	68	61
Commuter Stress Index			
Rank			
Freeway Planning Time Index (95th Pctile)			
Rank			
Congestion Cost			
Total Cost (\$ millions)	13	11	10
Rank	80	82	80
Cost per Auto Commuter (\$)	218	210	188
Rank	76	76	79
Truck Congestion			
Annual Person-Hours of Delay (000)	55	49	44
Rank	83	82	83
Annual Gallons of Wasted Fuel (000)	100	90	81
Rank	86	86	85
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 Travel (tons)			
Due to Truck Travel (tons)			
Rank			

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