#### Performance Measure Summary - Albuquerque NM

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)	765	765	760	760	760	755
Rank	58	58	58	58	58	57
Commuters (1000s)	386	386	383	383	383	380
Daily Vehicle-Miles of Travel (1000s)						
Freeway	5,101	6,037	5,822	5,547	5,587	5,590
Arterial Streets	6,739	7,975	7,765	7,760	7,829	7,869
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)	2.43	2.61	2.78	2.25	2.08	2.39
Diesel (\$/gallon)	2.72	2.91	3.18	2.42	2.19	2.44
System Performance	2020	2019	2018	2017	2016	2015
Congested Travel (% of peak VMT)				18.2		
Congested System (% of lane-miles)				1.3		
Congested Time (number of "Rush Hours")				2.4		
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	4,273	9,099	8,907	9,061	9,156	9,038
Rank	65	61	59	58	56	56
Fuel per Peak Auto Commuter (gallons)	9	20	20	20	20	20
Rank	70	52	47	47	47	42
Annual Delay						
Total Delay (1000s of person-hours)	10,229	21,780	21,030	20,302	19,813	19,390
Rank	65	61	61	59	59	59
Delay per Auto Commuter (pers-hrs)	22	47	46	44	44	43
Rank	72	51	49	59	53	55
Travel Time Index	1.06	1.17	1.17	1.16	1.16	1.16
Rank	75	49	48	59	58	57
Commuter Stress Index	1.07	1.22	1.23	1.21		
Rank	75	41	40	41		
Freeway Planning Time Index (95th Pctile)		1.31	1.35	1.46		
Rank		67	58	47		
Congestion Cost						
Total Cost (\$ millions)	231	471	461	438	421	408
Rank	66	61	61	59	59	59
Cost per Auto Commuter (\$)	516	1,053	1,039	987	971	944
Rank	57	42	40	40	40	39
Truck Congestion	400	070	000	070	055	025
Annual Person-Hours of Delay (000)	489	979	988	979	955	935
Rank Annual Gallons of Wasted Fuel (000)	68 948	60 1,898	58	1 021	55	1 016
Rank	948 64	1,898	1,885 57	1,921 56	1,941 54	1,916 54
Annual Congestion Cost (\$ million)	26	49	55	52	49	45
Rank	68	61	58	55	55	55
Annual Greenhouse Gases (CO2) Produced	00	01	20	33	33	
, ,						
Excess Due to Congestion (tons)	42 660	90 852				
Excess Due to Congestion (tons)  Rank	42,669 65	90,852	 	 		
Rank	65	60		 		  
Rank Due to All Travel (tons)	65 1,258,135	60 2,678,868		  		  
Rank Due to All Travel (tons) Rank	65	60	 		 	   
Rank Due to All Travel (tons) Rank  Truck Annual Greenhouse Gases (CO2) Produced	65 1,258,135 72	60 2,678,868 63	 		 	   
Rank Due to All Travel (tons) Rank  Truck Annual Greenhouse Gases (CO2) Produced Excess Due to Truck Congestion (tons)	65 1,258,135 72 10,371	60 2,678,868	  			    
Rank Due to All Travel (tons) Rank  Truck Annual Greenhouse Gases (CO2) Produced	65 1,258,135 72	60 2,678,868 63 20,763	  			    

<sup>\*</sup> Note: Zeroes in the table reflect values less than 0.5.

Inventory Measures	2014	2013	2012	2011	2010	2009
Urban Area Information						
Population (1000s)	755	745	740	740	740	725
Rank	57	57	57	57	57	56
Commuters (1000s)	380	359	360	364	370	366
Daily Vehicle-Miles of Travel (1000s)						
Freeway	5,500	4,818	5,025	5,469	5,326	5,150
Arterial Streets	7,887	7,584	7,220	7,627	7,566	7,500
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)	3.20	3.42	3.24	3.31	2.71	2.32
Diesel (\$/gallon)	3.57	3.84	3.89	3.69	2.94	2.55
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)	8,950	8,842	8,740	8,652	8,534	8,548
Rank	57	57	57	55	56	55
Fuel per Peak Auto Commuter (gallons)	19	19	19	19	18	19
Rank	47	45	42	40	46	27
Annual Delay						
Total Delay (1000s of person-hours)	18,864	18,308	17,772	17,268	16,874	16,583
Rank	59	59	59	59	59	58
Delay per Auto Commuter (pers-hrs)	41	41	40	39	37	37
Rank	59	52	55	54	58	57
Travel Time Index	1.15	1.16	1.16	1.15	1.15	1.15
Rank	68	55	57	67	65	68
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	403	386	368	356	333	319
Rank	59	59	59	60	58	58
Cost per Auto Commuter (\$)	913	889	867	868	877	869
Rank	39	39	40	40	40	40
Truck Congestion						
Annual Person-Hours of Delay (000)	909	883	857	832	813	799
Rank	55	1 974	1 952	1 824	55	1 812
Annual Gallons of Wasted Fuel (000)	1,898	1,874	1,853	1,834	1,810	1,812
Rank Annual Congestion Cost (\$ million)	54 45	55   41	55   39	53 41	52 38	52 36
Rank	55	55	55	55	53	53
Annual Greenhouse Gases (CO2) Produced	J.J.	55	55	55	55	23
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				<u></u>		

<sup>\*</sup> Note: Zeroes in the table reflect values less than 0.5.

Inventory Measures	2008	2007	2006	2005	2004	2003
Urban Area Information						
Population (1000s)	710	705	700	695	685	675
Rank	57	57	57	57	57	57
Commuters (1000s)	357	353	348	343	337	330
Daily Vehicle-Miles of Travel (1000s)						
Freeway	4,925	4,875	4,750	4,665	4,515	4,285
Arterial Streets	7,460	7,470	7,445	7,335	7,240	7,050
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 (\$\frac{9}{2}\text{gallon})	3.43	3.24	2.65	2.36	1.92	1.52
Diesel (\$/gallon)	4.14	3.61	2.91	2.56	2.00	1.51
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)	8,687	8,779	8,677	8,659	8,503	8,363
Rank	55	54	52	52	52	52
Fuel per Peak Auto Commuter (gallons)	19	19	19	19	18	18
Rank	37	40	36	34	38	30
Annual Delay						
Total Delay (1000s of person-hours)	16,206	16,377	16,185	16,151	15,860	15,602
Rank	58	57	57	57	56	56
Delay per Auto Commuter (pers-hrs)	38	38	38	39	39	39
Rank	47	48	45	43	39	37
Travel Time Index	1.14	1.14	1.14	1.14	1.14	1.14
Rank	76	77	75	73	71	69
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile) Rank			 			
Congestion Cost	-					
Total Cost (\$ millions)	324	314	297	285	267	252
Rank	58	57	57	56	56	56
Cost per Auto Commuter (\$)	839	867	866	864	803	765
Rank	41	40	39	41	44	52
Truck Congestion						
Annual Person-Hours of Delay (000)	781	789	780	779	765	752
Rank	55	54	53	53	53	53
Annual Gallons of Wasted Fuel (000)	1,842	1,861	1,839	1,836	1,803	1,773
Rank	53	52	52	51	50	49
Annual Congestion Cost (\$ million)	38	36	33	31	29	26
Rank	54	53	53	53	53	52
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						
					i I	
Due to Truck Travel (tons) Rank						

<sup>\*</sup> Note: Zeroes in the table reflect values less than 0.5.

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Inventory Measures	2002	2001	2000	1999	1998	1997
Urban Area Information						
Population (1000s)	655	670	660	660	660	650
Rank	59	55	55	55	54	54
Commuters (1000s)	317	319	311	307	303	295
Daily Vehicle-Miles of Travel (1000s)						
Freeway	4,100	3,980	3,875	3,825	3,720	3,585
Arterial Streets	6,785	6,670	6,600	6,500	6,500	6,650
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)	1.37	1.55	1.52	1.20	1.12	1.25
Diesel (\$\(\frac{9}{gallon}\)	1.34	1.61	1.48	1.20	1.18	1.29
System Performance	2002	2001	2000	1999	1998	1997
Congested Travel (% of peak VMT)						1991
Congested Travel (% of lane-miles)						
Congested Time (number of "Rush Hours")						
Annual Excess Fuel Consumed						
Total Fuel (1000 gallons)	8,281	8,206	8,130	8,021	7,556	6,906
Rank	51	51	51	49	48	48
Fuel per Peak Auto Commuter (gallons)	18	18	18	18	18	17
Rank	27	23	16	12	10	9
Annual Delay						
Total Delay (1000s of person-hours)	15,447	15,309	15,165	14,962	14,095	12,882
Rank	54	52	51	51	51	50
Delay per Auto Commuter (pers-hrs)	40	39	39	39	37	35
Rank	30	32	30	27	31	36
Travel Time Index	1.15	1.14	1.14	1.14	1.13	1.12
Rank	58	66	62	58	63	67
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	243	238	229	216	199	180
Rank	53	52	51	50	51	50
Cost per Auto Commuter (\$)	686	644	620	572	554	490
Rank	62	64	63	72	71	73
Truck Congestion						
Annual Person-Hours of Delay (000)	745	738	731	721	679	621
Rank	52	50	48	48	47	47
Annual Gallons of Wasted Fuel (000)	1,756	1,740	1,723	1,701	1,602	1,464
Rank	48	47	47	45	46	46
Annual Congestion Cost (\$ million)	25	24	23	22	20	18
Rank	51	49	48	46	46	47
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	I	l			l l	

<sup>\*</sup> Note: Zeroes in the table reflect values less than 0.5.

Inventory Measures	1996	1995	1994	1993	1992	1991
Urban Area Information						
Population (1000s)	645	620	595	580	570	560
Rank	55	56	57	58	57	56
Commuters (1000s)	289	274	260	250	243	235
Daily Vehicle-Miles of Travel (1000s)						
Freeway	3,505	3,255	3,100	2,940	2,670	2,480
Arterial Streets	6,490	6,425	6,335	6,300	6,275	6,150
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)	1.31	1.23	1.18	1.21	1.20	1.10
Diesel (\$/gallon)	1.31	1.23	1.17	1.20	1.15	1.14
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)	6,178	5,489	4,941	4,546	3,956	3,681
Rank	49	52	52	54	55	54
Fuel per Peak Auto Commuter (gallons)	15	13	12	11	10	9
Rank	13	19	21	22	24	27
Annual Delay						
Total Delay (1000s of person-hours)	11,525	10,238	9,217	8,481	7,378	6,867
Rank	51	53	54	54	54	53
Delay per Auto Commuter (pers-hrs)	31	29	28	26	24	22
Rank	46	48	48	49	53	53
Travel Time Index	1.12	1.11	1.10	1.10	1.08	1.08
Rank	65	66	69	64	75	68
Commuter Stress Index						
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	158	137	120	108	91	82
Rank	50	52	54	54	54	53
Cost per Auto Commuter (\$)	473	459	450	421	423	412
Rank	74	74	72	73	66	63
Truck Congestion		40.4	444	400	256	221
Annual Person-Hours of Delay (000)	556	494	444	409	356	331
Rank Annual Gallons of Wasted Fuel (000)	1,309	51   1,163	51 1,047	52 964	52 838	52 781
Rank	47	1,103	1,047	49	52	50
Annual Congestion Cost (\$ million)	16	14	13	11	$\begin{vmatrix} 32 \\ 10 \end{vmatrix}$	9
Rank	48	50	48	52	52	51
Annual Greenhouse Gases (CO2) Produced	1 70	30	70	32	32	31
Excess Due to Congestion (tons)						_
Rank		<u></u>				
Due to All Travel (tons)	 					
Rank						
Truck Annual Greenhouse Gases (CO2) Produced						
Excess Due to Truck Congestion (tons)						
Rank	 				 	
	·					- <del>-</del>
Due to Truck Travel (tons) Rank		 	 	 	 	

<sup>\*</sup> Note: Zeroes in the table reflect values less than 0.5.

Inventory Measures	1990	1989	1988	1987	1986	1985
Urban Area Information						
Population (1000s)	545	530	520	505	495	485
Rank	56	56	56	58	58	59
Commuters (1000s)	226	218	212	204	199	194
Daily Vehicle-Miles of Travel (1000s)						
Freeway	2,430	2,310	2,225	2,100	1,980	1,865
Arterial Streets	6,100	6,050	5,900	5,750	5,650	5,500
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	1.15	1.06	1.06	1.04	1.36
Diesel (\$/gallon)	1.05	0.99	0.91	0.91	0.89	1.17
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)	3,353	3,124	2,846	2,717	2,617	2,349
Rank	53	53	52	51	47	48
Fuel per Peak Auto Commuter (gallons)	8	8	6	6	7	5
Rank	35	26	45	32	21	32
Annual Delay						
Total Delay (1000s of person-hours)	6,255	5,828	5,309	5,070	4,882	4,382
Rank	54	54	55	54	51	51
Delay per Auto Commuter (pers-hrs)	21	20	19	19	19	17
Rank	52	48	49	43	35	38
Travel Time Index	1.07	1.07	1.07	1.07	1.07	1.07
Rank	74	65	59	54	49	48
Commuter Stress Index	/4	03	39	34	49	40
Rank						
Freeway Planning Time Index (95th Pctile)						
Rank						
Congestion Cost						
Total Cost (\$ millions)	72	64	56	52	48	43
Rank	54	53	54	53	51	50
Cost per Auto Commuter (\$)	406	352	343	307	287	274
Rank	61	68	68	69	68	66
Truck Congestion	- 01			0,		
Annual Person-Hours of Delay (000)	302	281	256	244	235	211
Rank	52	52	51	48	48	46
Annual Gallons of Wasted Fuel (000)	711	662	604	576	555	498
Rank	48	49	48	47	46	46
Annual Congestion Cost (\$ million)	8	7	7	6	6	5
Rank	51	51	46	48	46	46
Annual Greenhouse Gases (CO2) Produced	- 31	J 1	10	10	10	10
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 Troyal (tons)						
Due to Truck Travel (tons)						
Rank						

<sup>\*</sup> Note: Zeroes in the table reflect values less than 0.5.

Inventory Measures	1984	1983	1982
Urban Area Information			
Population (1000s)	480	480	470
Rank	58	59	59
Commuters (1000s)	190	189	183
Daily Vehicle-Miles of Travel (1000s)			
Freeway	1,870	1,885	1,735
Arterial Streets	5,400	5,200	5,000
Cost Components			
Value of Time (\$/hour)	7.75	7.43	7.20
Commercial Cost (\$/hour)	23.94	23.63	23.31
Gasoline (\$/gallon)	1.37	1.41	1.47
Diesel (\$/gallon)	1.18	1.21	1.26
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)	2,316	2,175	1,959
Rank	47	46	46
Fuel per Peak Auto Commuter (gallons)	5	6	40
Rank	27	13	19
	21	13	17
Annual Delay	4 220	4.057	2.654
Total Delay (1000s of person-hours)	4,320	4,057	3,654
Rank	49	48	48
Delay per Auto Commuter (pers-hrs)	17	16	15
Rank	35	33	33
Travel Time Index	1.07	1.06	1.06
Rank	42	45	42
Commuter Stress Index			
Rank			
Freeway Planning Time Index (95th Pctile)			
Rank			
Congestion Cost			
Total Cost (\$ millions)	41	38	33
Rank	47	46	46
Cost per Auto Commuter (\$)	236	227	229
Rank	70	69	67
Truck Congestion			
Annual Person-Hours of Delay (000)	208	196	176
Rank	46	45	46
Annual Gallons of Wasted Fuel (000)	491	461	416
Rank	44	44	44
Annual Congestion Cost (\$ million)	5	5	4
Rank	46	45	46
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)	<u> </u>		
Rank			
Due to Truck Travel (tons)			
Rank	<u> </u>		 -
Nauk			

<sup>\*</sup> Note: Zeroes in the table reflect values less than 0.5.