2023
Urban Mobility
REPORT

2023 URBAN MOBILITY REPORT

Published by The Texas A&M Transportation Institute
with cooperation from INRIX

David Schrank
Senior Research Scientist

Luke Albert
Associate Research Engineer

Kartikeya Jha
Assistant Research Scientist

Bill Eisele
Senior Research Engineer

Table of Contents

List of Exhibits

List of Tables

A Quick Summary

It's the same but different . . . 2022 congestion is looking more and more like 2019, but not completely.

1. Overall, 2022 congestion numbers are still lower than 2019, but they are inching up fast.
2. Travel patterns have changed — throughout the day-of-the-week and hour-of the-day.
3. The transportation industry was still witnessing a transition back to a "new normal" in 2022. The definition of a commuter in this new normal is still a work in progress. Hybrid work arrangements have made it challenging to identify "regular commuters."

The trends were different at the regional level, but most areas witnessed a comeback of congestion. Congestion levels in most areas were likely influenced by the level of hybrid work flexibility.

It is not yet clear what the lasting effect of the COVID-19 pandemic will be on U.S. urban transportation systems. The mix of strategies that are deployed in urban America will be different for each region — better traffic operations; more travel options; new land development styles; more highways, streets, and public transportation; and advanced technology will all play a role. Working from home, long an underappreciated solution, has assumed a much bigger role in the post-pandemic normal.

The trends from 1982 to 2022 (see Exhibit 1) show that congestion was a persistently growing problem until 2020, when congestion was different from city to city, road to road, and hour to hour. Post-pandemic America has seen a comeback of traffic congestion — now touching 2019 levels at the individual commuter level — but the nature of congestion and its timing of occurrence have seen a shift too. The following are some key findings of this report:

- Overall at the national transportation system level, Mondays and Fridays are carrying a lower proportion of weekly traffic than they did pre-COVID.

- Truck traffic volume has continued to grow thanks to the increase in at-home delivery of goods and services, and passenger car traffic has rebounded.

- The detailed speed data from INRIX *(1)*, a leading private-sector provider of travel time information for travelers and shippers, has never been more important in understanding congestion.

Exhibit 1. Major Findings of the *2023 Urban Mobility Report* (494 U.S. Urban Areas)

Measures of…	1982	2000	2019	2020	2022	3-Yr Change
… Individual Congestion						
Yearly delay per auto commuter (hours)	20	38	54	27	54	0%
Travel Time Index	1.10	1.19	1.23	1.09	1.21	−2 points
"Wasted" fuel per auto commuter (gallons)	5	15	22	11	21	−5%
Congestion cost per auto commuter (in 2022 $)	$712	$1,071	$1,314	$677	$1,259	−4%
… The Nation's Congestion Problem						
Travel delay (billion hours)	1.8	5.1	8.9	4.5	8.5	−5%
"Wasted" fuel (billion gallons)	0.8	2.4	3.6	1.8	3.3	−8%
Excess greenhouse gas emissions (million tons)	8	25	36	18	34	−6%
Truck congestion cost (billions of 2022 dollars)	$2.1	$7.7	$23.4	$12.9	$27.1	+16%
Congestion cost (billions of 2022 dollars)	$17	$86	$217	$113	$224	+3%
Travel volume (billion miles traveled)	670	1,160	1,600	1,380	1,515	−5%

Yearly delay per auto commuter — The extra time spent during the year traveling at congested speeds rather than free-flow speeds by private vehicle drivers and passengers who typically travel in the peak periods.

Travel Time Index (TTI) — The ratio of travel time in the peak period to travel time at free-flow conditions. A Travel Time Index of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

Excess fuel and greenhouse gas emissions — The amount beyond what would have been expected at free-flow speeds.

Congestion cost — The yearly value of delay time and wasted fuel by all vehicles.

Travel volume — Miles traveled by all vehicles during the year.

Areawide Congestion Changes — 2019 to 2022

Rush-hour traffic jams are expected in big cities. When a large percentage of workers are on an 8 a.m. or 9 a.m. to 5 p.m. schedule, there will be travel delays on freeways, streets, and even public transportation. This results in several "rush hours" in the morning and afternoon. While traffic congestion and delay in 2022 were nearing 2019 levels, their distribution throughout the day underwent changes compared to the pre-pandemic period.

As congestion returned, the patterns are different, and the insight into the problems has also changed the solutions that are being considered.

The comeback of congestion was most evident in the travel delay per auto commuter statistic. There were only five of the 101 intensively studied urban areas with **less than** 30 hours of extra annual travel time for a commuter in 2019. There were 73 such regions in 2020 (Exhibit 2). The number of such regions in 2022 was five again.

Exhibit 2. Number of Urban Areas with Less Than 30 Hours Delay per Auto Commuter

See data for your city at https://mobility.tamu.edu/umr/congestion-data/.
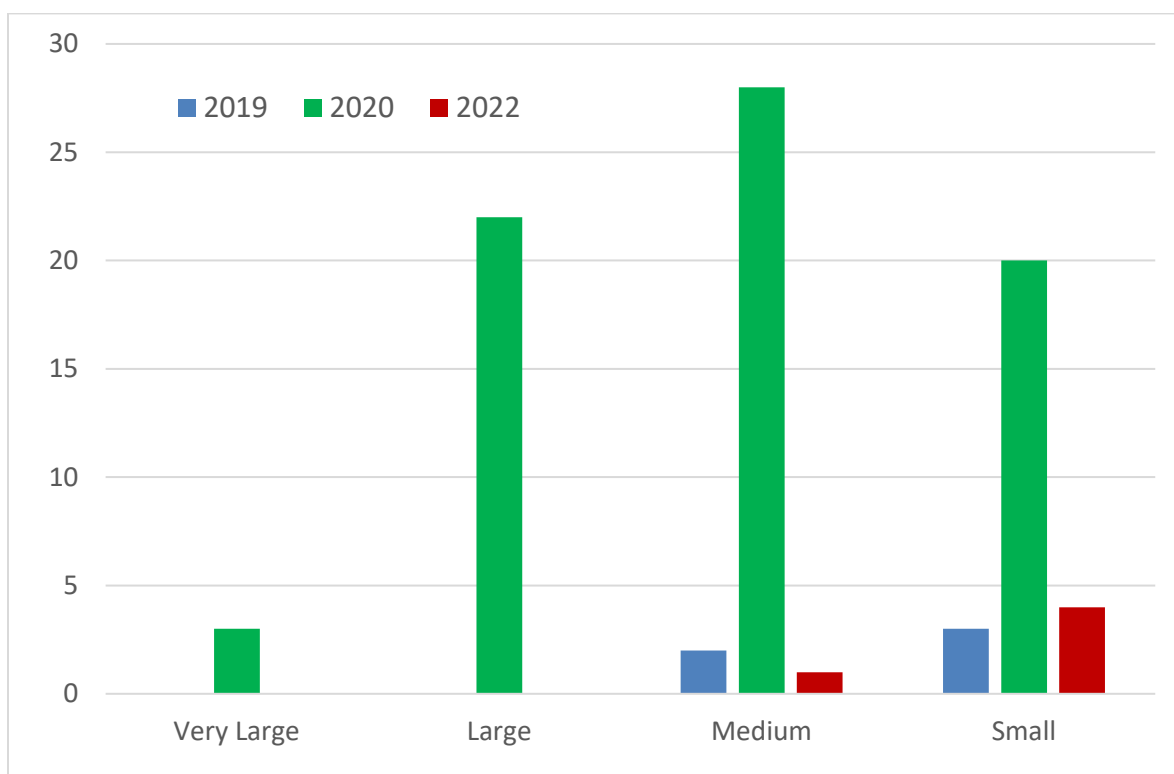
Looking at the return of congestion from the other side, Exhibit 3 shows the number of urban areas with greater than 55 hours of delay per commuter. These numbers are slightly higher than in 2019, and they have recovered noticeably from the pandemic shock.

Exhibit 3. Number of Urban Areas with More Than 55 Hours Delay per Auto Commuter
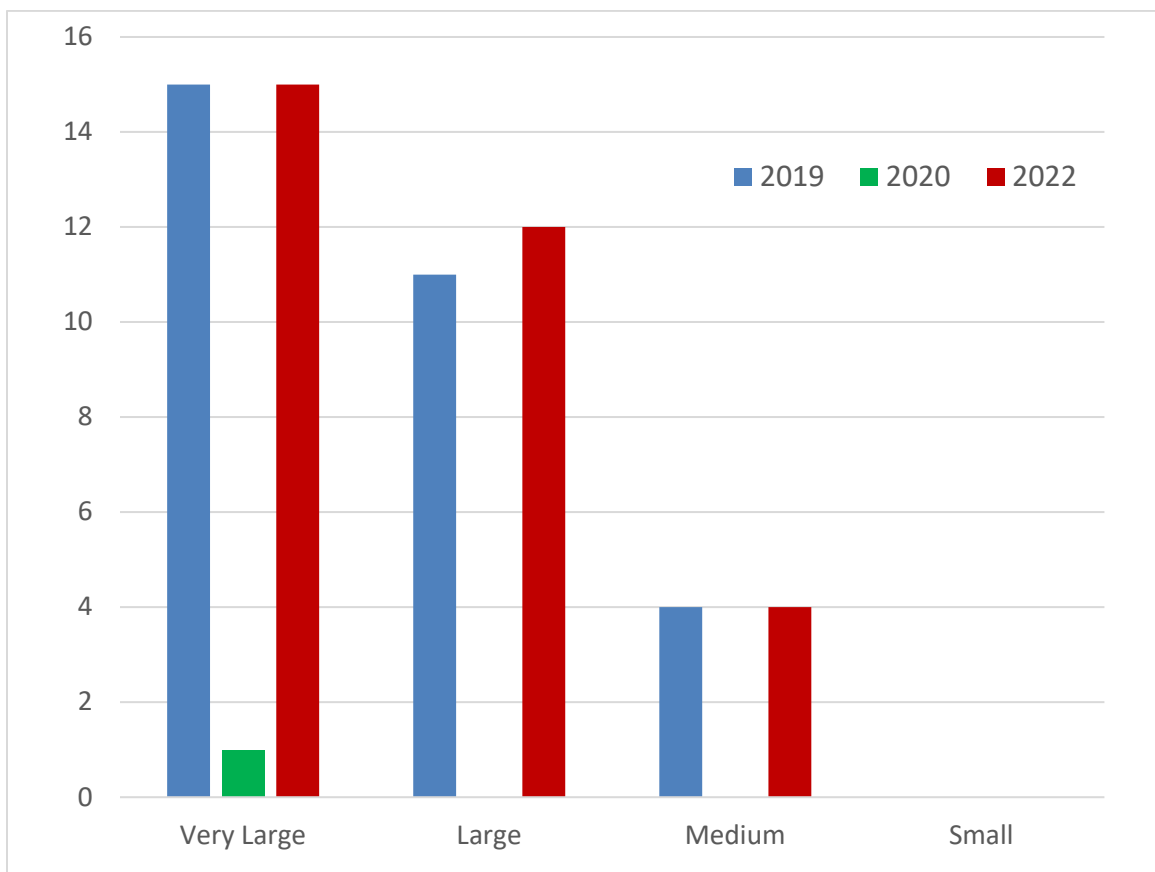
The 2022 congestion problem was only slightly less than 2019 — and also slightly flatter. Some of the potential traffic from the typical rush hours was absorbed by mid-day travel, as shown in a later section on pages 8 through 10.

Exhibit 4 shows the historical congestion trend. It was a story of growing congestion until 2019. Even during the economic recession of 2008/2009 there was no drop in total national travel delay. But 2020 congestion dropped by half — back to 1997 levels. Those numbers have inched back up again toward the long-term trend of increasing congestion and an uptrend is jobs numbers (*2,3*).

For more information and congestion data on your city, see: https://mobility.tamu.edu/umr/

Exhibit 4. National Congestion Measures, 1982 to 2022

Year	U.S. Jobs (Millions)	Delay Hours/ Commuter	Total Delay (Billion Hours)	Fuel Wasted (Billion Gallons)	Total Cost (Billions of 2022 Dollars)
2022	158.3	54	8.5	3.3	224
2021	152.6	47	7.2	2.9	193
2020	143.8	27	4.5	1.8	113
2019	157.6	54	8.9	3.6	217
2018	156.2	54	8.8	3.5	215
2017	153.5	53	8.7	3.4	208
2016	151.4	52	8.4	3.4	199
2015	148.8	51	8.2	3.3	192
2014	146.3	49	8.0	3.3	190
2013	143.9	48	7.7	3.2	179
2012	142.5	46	7.5	3.1	171
2011	139.9	45	7.2	3.1	163
2010	139.1	44	6.9	3.0	151
2009	139.9	43	6.7	3.0	142
2008	145.4	42	6.6	3.1	144
2007	146.1	42	6.6	3.1	138
2006	144.4	42	6.5	3.0	131
2005	141.7	42	6.3	2.9	122
2004	139.2	41	6.1	2.8	114
2003	137.7	41	5.9	2.7	105
2002	136.5	40	5.6	2.6	98
2001	136.9	39	5.4	2.5	93
2000	136.9	38	5.1	2.4	86
1999	133.5	37	4.9	2.3	78
1998	131.5	36	4.6	2.1	72
1997	129.6	35	4.4	2.0	68
1996	126.7	34	4.2	1.9	63
1995	124.9	33	3.9	1.8	58
1994	123.1	32	3.7	1.7	53
1993	120.3	31	3.5	1.6	49
1992	118.5	30	3.3	1.5	45
1991	117.7	29	3.1	1.4	41
1990	118.8	28	2.9	1.3	37
1989	117.3	27	2.7	1.3	33
1988	115.0	26	2.6	1.2	30
1987	112.4	25	2.4	1.1	27
1986	109.6	24	2.3	1.1	25
1985	107.2	23	2.2	1.0	23
1984	105.0	22	2.0	0.9	21
1983	100.8	21	1.9	0.9	19
1982	99.5	20	1.7	0.8	17

Note: See Exhibit 1 for explanation of measures. For more congestion information see Tables 1 to 9.
For congestion information on your city, see https://mobility.tamu.edu/umr/.

The "Work from Home" Situation

The COVID-19 pandemic had a profound impact on travel behavior and patterns. While on one hand the rise of telecommuting options and work-from-home (WFH) trends have cushioned the burden on the transportation system on at least some days of the work week, the evolving impacts on public transportation and increased work schedule flexibility have resulted in more traffic during mid-day periods and more non-transit traffic on the road in general. The complex dynamics resulting from increased vehicle miles traveled, auto ownership, and shift in transit ridership pose significant challenges for traffic congestion. Some highlights are discussed below:

- The increased prevalence of remote work (Exhibits 5 and 6) has led to a reevaluation of commuting patterns and transportation preferences. Despite the high cost of ownership, there has been an increase in the sales of automobiles and vehicle miles traveled, indicating a shift towards private vehicles and on-demand micro-transit (i.e., ride sharing, electric bikes and scooters, etc.) as individuals seek greater flexibility and perceived safety in their travel arrangements (*4*).

- This increase in remote work has not only influenced transit ridership but has also prompted a reevaluation of commuting patterns and transportation preferences. In larger urban areas, this resulted in an increased use of alternatives to transit modes, notably private vehicles. This shift is evident in the rising sales of automobiles (Exhibit 7), as people seem to seek greater flexibility, control, and perceived safety in their travel arrangements.

- The rising cost of car ownership, including insurance, fuel, maintenance, and other expenses, has not deterred the increasing sales of automobiles. Despite these escalating costs, and while still below pre-pandemic levels, the demand for cars has remained robust. In fact, the average new-vehicle transaction price has seen a significant surge, reaching $48,763 (28 percent increase) according to Kelley Blue Book, compared to the pre-pandemic average of $37,876. Furthermore, the annual cost of owning a car in 2022 rose to $10,728 from $9,666 in 2021. The long-term sustainability of increased vehicle miles traveled (VMT) and auto ownership raises concerns about traffic congestion. It is therefore vital to understand the impact of reduced transit use on the overall efficiency of the transportation roadway system, particularly in dense urban areas.

Exhibit 5. National Estimate of People Working from Home (*4*)

Source: https://www.bts.gov/covid-19/week-in-transportation
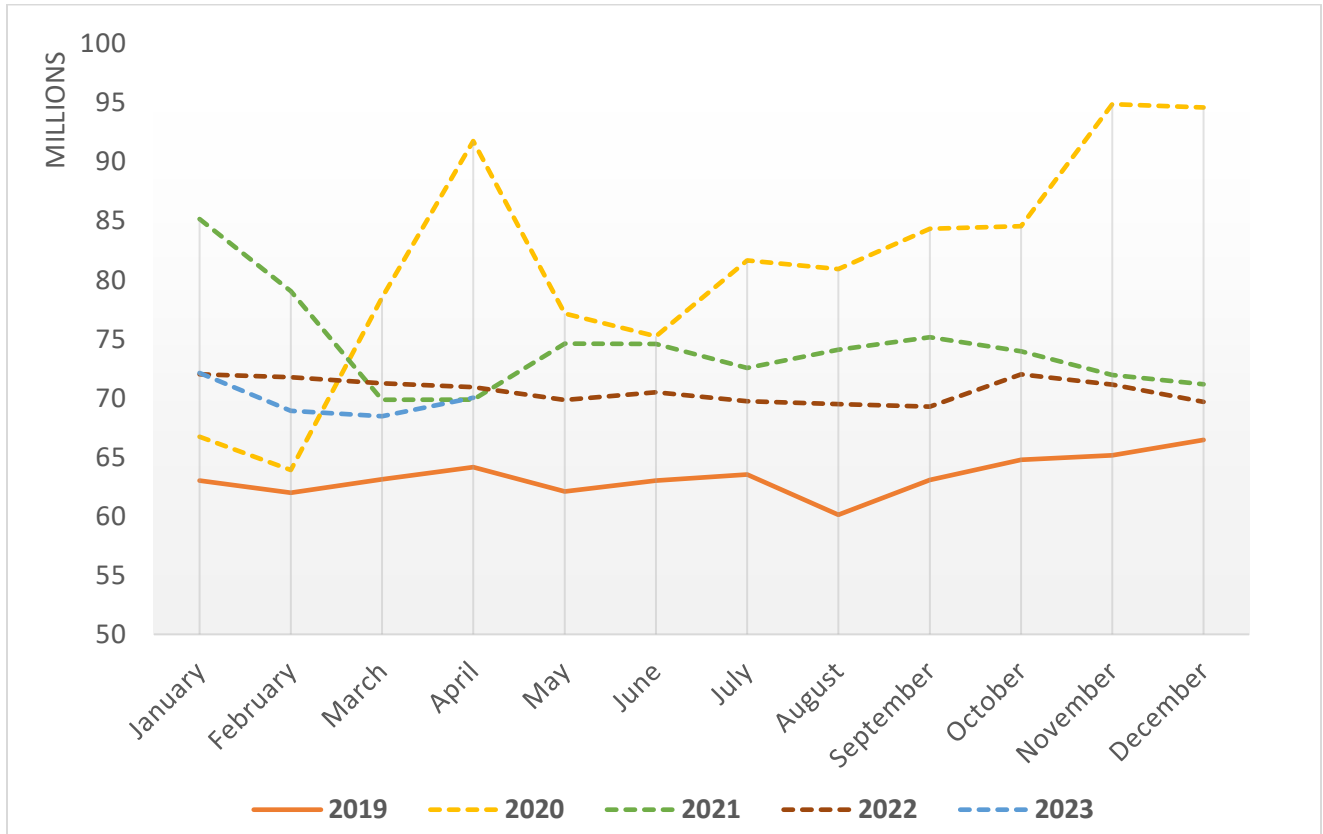
Exhibit 6. Growth Rate of Work-from-Home in Selected U.S. Urban Areas (4)

Urban area	Urban Area Size	WFH CAGR* (2019 to 2021)
New York, NY	Very Large	116%
Los Angeles, CA	Very Large	79%
Chicago, IL	Very Large	93%
Miami, FL	Very Large	57%
Philadelphia, PA	Very Large	103%
Atlanta, GA	Very Large	68%
Washington, DC	Very Large	134%
Boston, MA	Very Large	122%
Seattle, WA	Very Large	119%
San Francisco, CA	Very Large	120%
San Diego, CA	Very Large	67%
Minneapolis, MN	Large	106%
Denver, CO	Large	76%
Baltimore, MD	Large	106%
Portland, OR	Large	101%
San Jose, CA	Large	167%
Pittsburgh, PA	Large	98%
Salt Lake City, UT	Large	88%
Hartford, CT	Medium	95%

CAGR (Compounded Annual Growth Rate) is a geometric growth rate valuable in situations where the growth or decline of a variable is not linear but follows a compounding or exponential pattern.

Exhibit 7. Monthly Car Sales in the United States (4)

Source: https://fred.stlouisfed.org
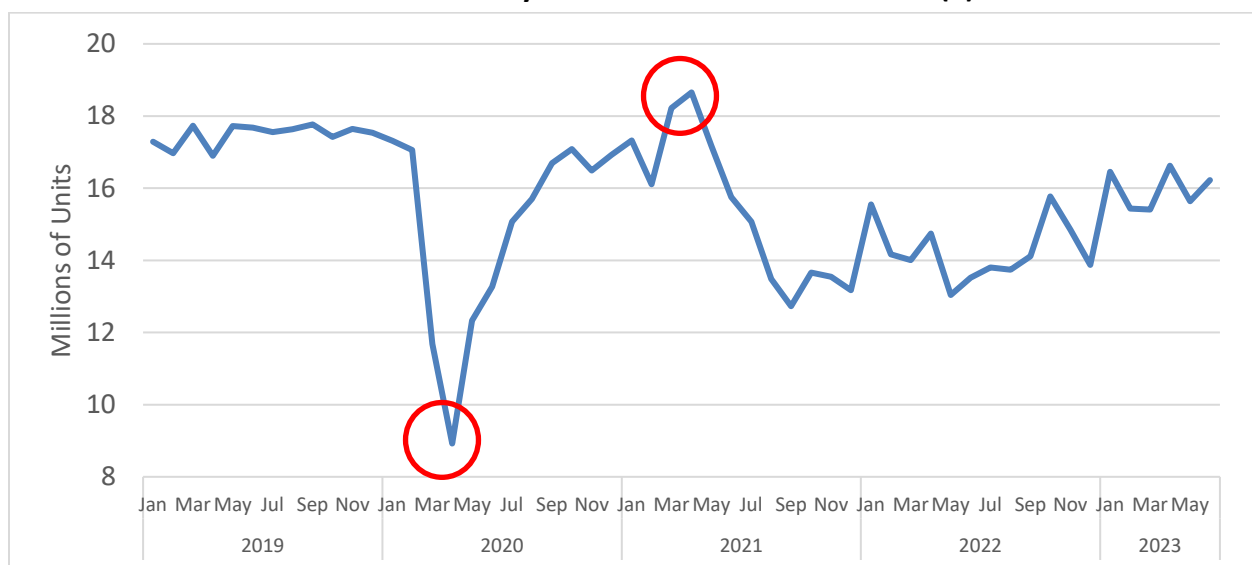
Daily Congestion Peaks Are Returning

A familiar pattern of morning rush hours followed by less delay in the midday and then several hours of bad evening congestion seems to be making a comeback. However, although there is increasing resemblance between 2019 and 2022 daily congestion patterns, there is a difference too. Since the relief from the pandemic, there has been a noticeable rise in midday congestion, and weekends are now experiencing higher levels of travel compared to the pre-pandemic period.

Generally speaking, congestion is still more "spread out" throughout the day than it used to be pre-pandemic. Exhibits 8 and 9 show that the percentage of delay during the morning and evening hours was lower in 2022 compared to 2019 but higher than in 2021. Compared to 2019, delay shifted to midday hours and later in the day, but compared to 2021, there is more traffic delay during traditional rush hours.

Exhibit 8. Percent of Freeway Delay for Hours of Day — 2019, 2021, and 2022

(a) Weekday Only
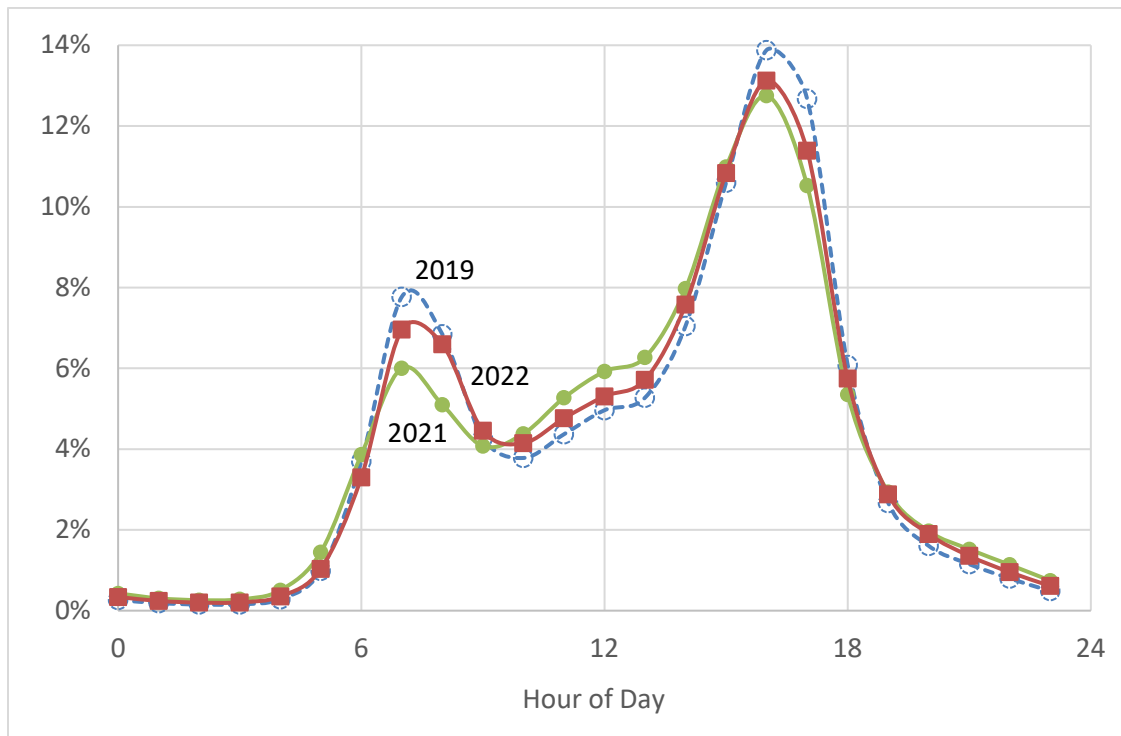
(b) Weekend Only
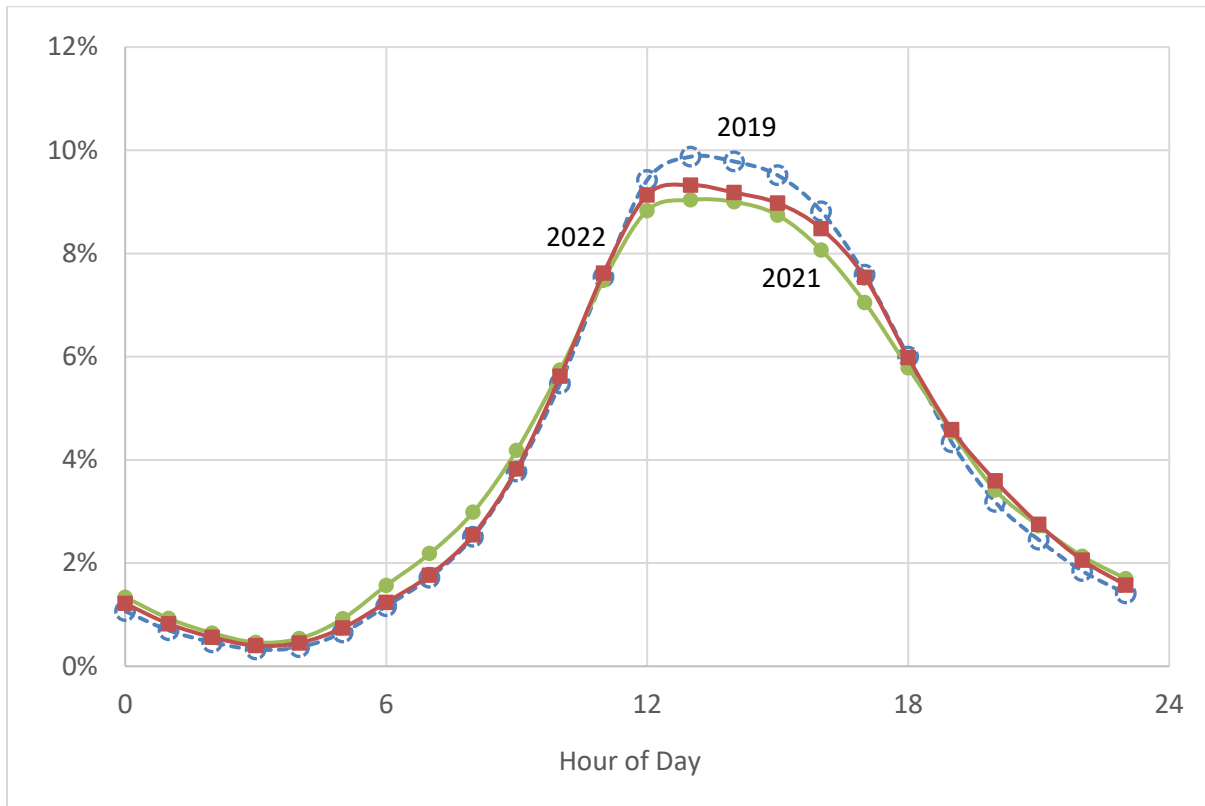
The observation applies to arterial streets as well, but to a much less extent. The traffic patterns are slightly different in nature on streets compared to freeways. As shown in Exhibit 9, there is more peak period traffic on arterial streets too in 2022 compared to 2021. But this is not as drastic of a change as on freeways, especially in smaller urban areas.

Exhibit 9. Percent of Street Delay for Hours of Day — 2019, 2021, and 2022

(a) Weekday Only

(b) Weekend Only

Figure showing weekend traffic distribution by hour of day, comparing years 2019, 2021, and 2022. The y-axis shows percentage from 0% to 14%. The x-axis shows Hour of Day from 0 to 24. The curves labeled 2019, 2021, and 2022 peak at around 11% near 12 hours.
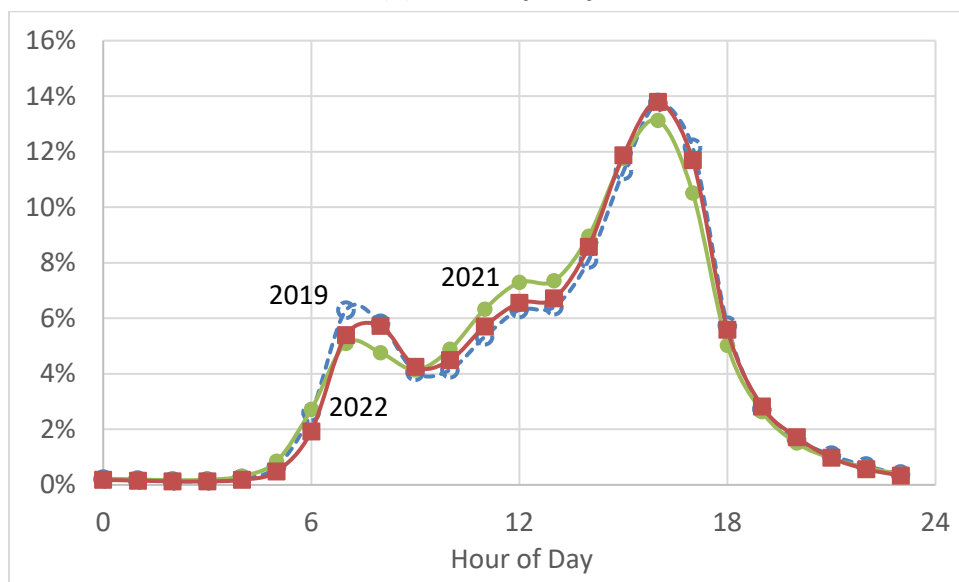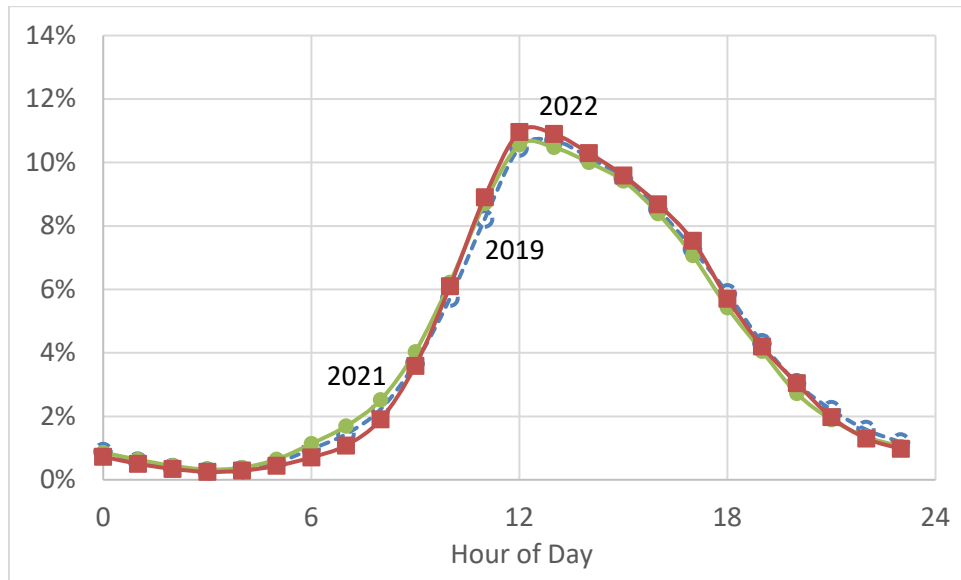
But the Week Has Stayed Flatter

Congestion builds through the week from Monday to Friday in regions of all sizes. Although this pattern still holds more or less, the clear dominance of Friday in weekly traffic is now seen shared by Thursday as well. Monday and Friday are carrying a lesser share of the weekly traffic than they used to in 2019 and even 2021. The mid-week (Tuesday through Thursday) is carrying a higher share than in 2021 and is close to its 2019 share. There was a slight decline in delay percentage on each 2022 weekday compared to 2019, except Thursday, whose contribution increased marginally. Weekends carried a higher share than in 2019 but slightly lower than in 2021, meaning weekend days represented more of the 2022 travel delay than they did in 2019 (Exhibit 10).

Exhibit 10. Percent of Delay for Each Day — 2019, 2021, and 2022
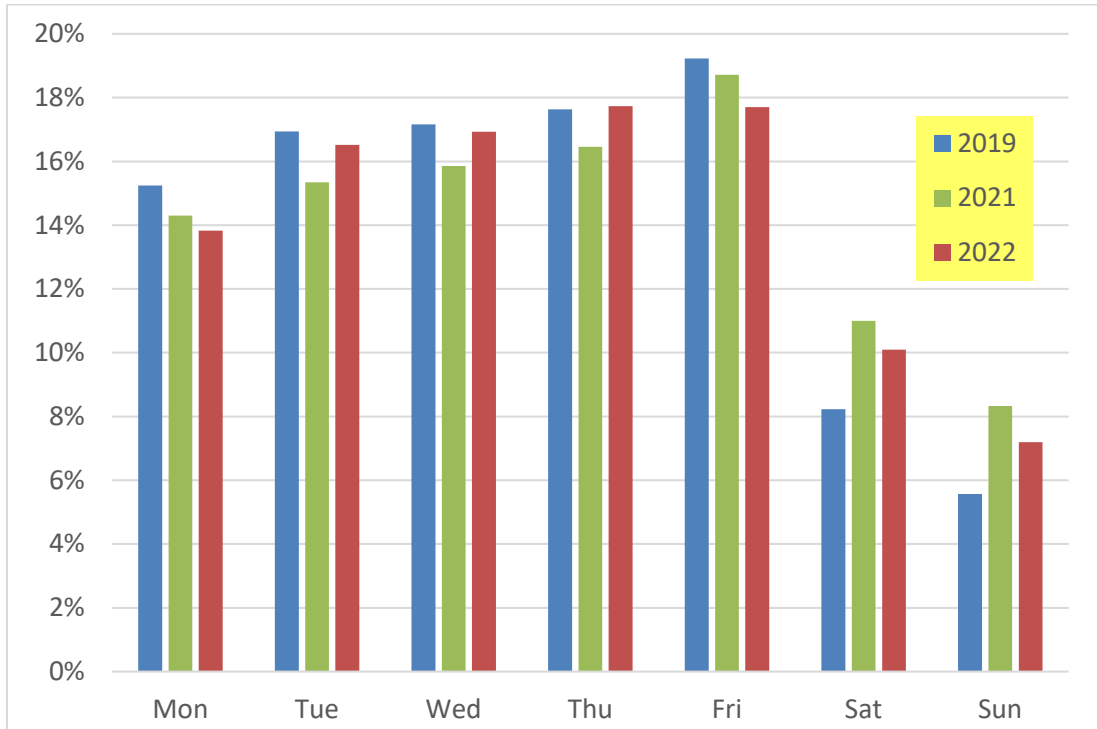
Congestion Changes Were Not "Flat"

Travel delay in the 101 intensively studied urban areas was between 10 percent higher and 30 percent lower in 2022 than 2019 (Exhibit 11). Compared with the typical changes of a few percentage points up or down seen over the previous 40 years of the *Urban Mobility Report* (shown in the dashed area in blue shading), these are relatively high changes. Even the economic recession of 2008/2009 only saw a few urban area congestion declines of 10 percent.

Exhibit 11. 2022 Delay as a Percentage of 2019 Delay in 101 Urban Areas
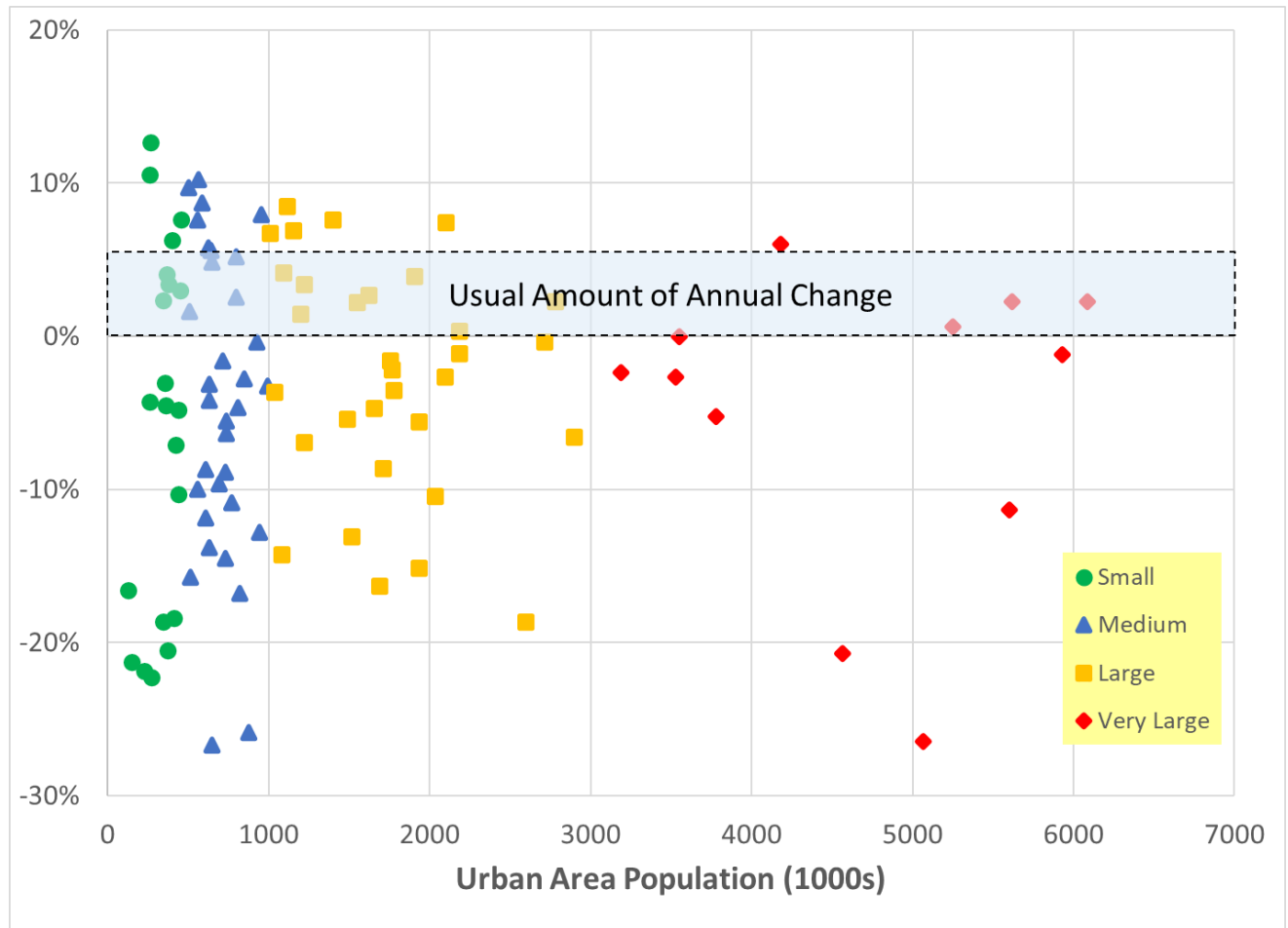
More Detail about Congestion Problems

Congestion, by every measure, increased substantially over the period from 1982 to 2019. But even with the dramatic decline in 2020 congestion levels, the trends over the last two years point to a return of congestion problems in 2022. It will likely take some regions a couple years to exceed the 2019 congestion levels, but other regions that have had growing population and job markets could bounce back very quickly. The underlying causes of traffic problems — too many car trips, too much rush hour roadwork, crashes, stalled vehicles, and weather issues — have not really receded so much as they have been eclipsed by the traffic volume decline.

Where the speed of congestion "recovery" after the 2008/2009 economic recession depended on the return of local economies, the COVID-19 pandemic has highlighted the role of WFH and telework solutions. The type of jobs that can be done from home, and the acceptance of this mode by employees and employers, will be a significant determinant of congestion levels through the middle of this decade. Regions with many jobs that require on-site work — assembly lines, warehouses, tourism centers, and distribution centers, etc. — will probably see faster congestion increases than areas with more remote working.

Congestion has been growing in areas of every size. The *Urban Mobility Report* series shows consistent congestion growth across the entire urban area size spectrum until a significant drop in 2020 and a "reversion to the normal" in 2022 (Exhibit 12). The average annual delay per commuter has either almost reached year 2019 levels (in small and medium areas) or exceeded 2019 levels (in large and very large areas).

Exhibit 12. Congestion Growth Trend — Hours of Delay per Auto Commuter

Small = less than 500,000
Medium = 500,000 to 1 million
Large = 1 million to 3 million
Very Large = more than 3 million
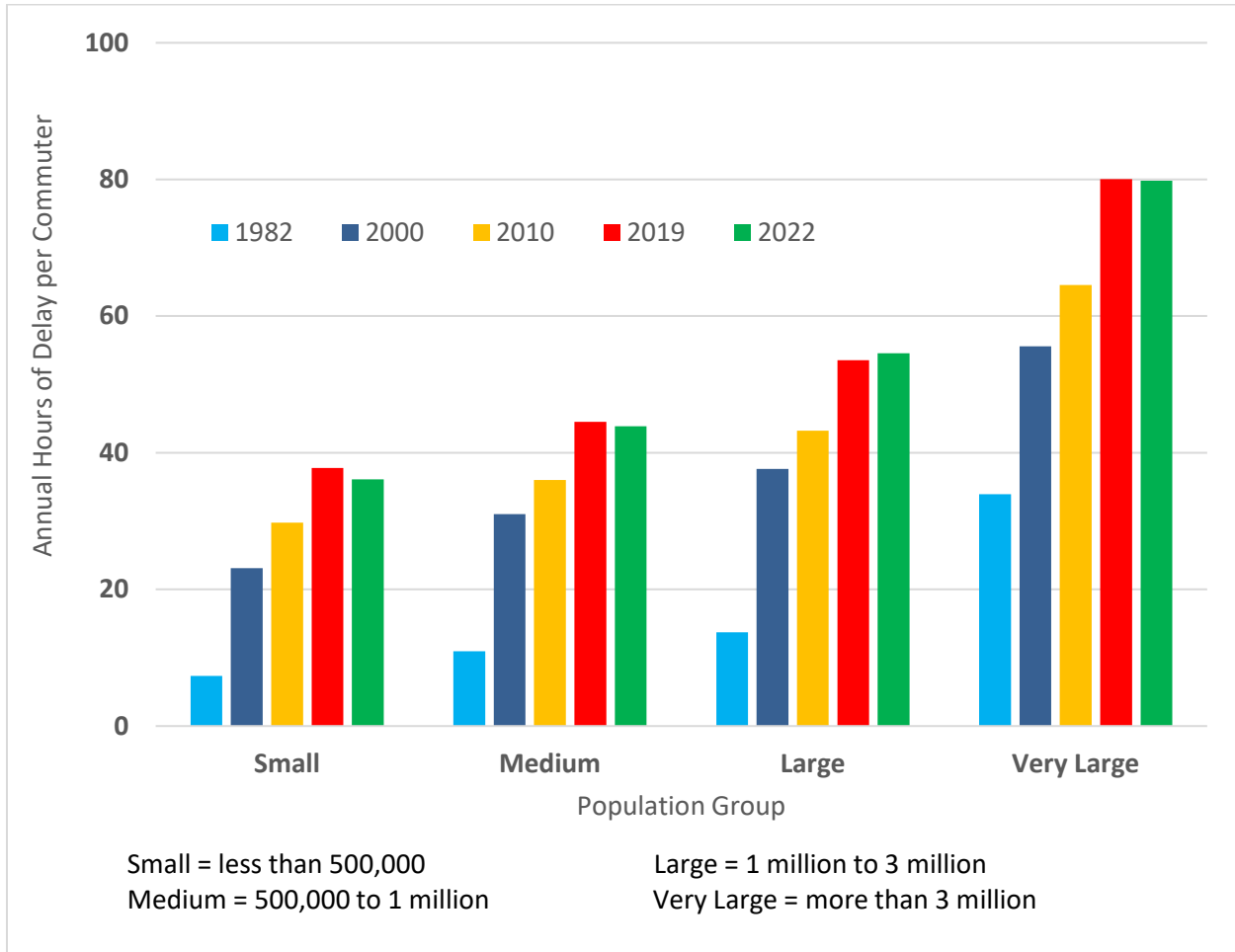
Changing Congestion on Freeways and Streets

Congestion patterns in areas with populations under 1 million have been different from those with populations over 1 million (Exhibit 13). In 2022 those different relationships held, but the percentage of delay on streets and freeways changed dramatically throughout the years from 2019 to 2022.

- The 2022 delay crept up to 2019 delay levels in both population groups. The 2022 delay is only slightly lower than the 2019 delay in smaller urban areas but has exceeded the 2019 delay in larger urban areas.

- Travel delay continued to move toward freeways in urban areas of both sizes.

- In both large and small urban areas, proportion of delay on streets was down and proportion of delay on freeways increased between 2019 and 2022.

- Areas with populations over 1 million saw the greatest increase in peak freeway delay, while areas with populations under 1 million saw the greatest increase in off-peak freeway delay.

- There was more delay during off-peak periods in 2022 than in 2019, but less than in 2021.

Exhibit 13. Percent of Delay — Road Type and Time of Day

2019 Urban Areas Under 1 Million Popn

Off Peak Street, 29%
Peak Freeway, 18%
Off Peak Freeway, 10%
Peak Street, 43%

2019 Urban Areas Over 1 Million Popn

Off Peak Street, 17%
Peak Freeway, 38%
Peak Street, 30%
Off Peak Freeway, 15%

2021 Urban Areas Under 1 Million Popn

Off Peak Street, 28%
Peak Freeway, 19%
Off Peak Freeway, 16%
Peak Street, 37%

2021 Urban Areas Over 1 Million Popn

Off Peak Street, 16%
Peak Freeway, 36%
Peak Street, 22%
Off Peak Freeway, 26%

2022 Urban Areas Under 1 Million Popn

Off Peak Street, 24%
Peak Freeway, 24%
Off Peak Freeway, 13%
Peak Street, 39%

2022 Urban Areas Over 1 Million Popn

Off Peak Street, 15%
Peak Freeway, 41%
Peak Street, 22%
Off Peak Freeway, 22%

Urban Area Congestion Changes — 2019 to 2022

The delay per auto commuter statistic shows the most telling comeback of traffic congestion since the sunset of the pandemic. Exhibit 14 shows the individual urban area changes in delay per auto commuter and total urban area delay from 2019 to 2022 in the 101 intensively studied urban areas. The green shading indicates urban areas with fewer than 30 hours of extra travel time for the average auto commuter. The orange shading indicates urban areas with more than 55 hours of extra travel time for the average auto commuter. Shading also illustrates areas with large changes (declines or increases) in regional delay totals — yellow with between 10 and 20 percent, and pink with greater than a 20 percent change.

- While there were only five areas with less than 30 hours of extra travel time for a commuter in 2019, there were 73 such regions in 2020 and five such regions again in 2022.

- Contrarily, while there were 30 areas with more than 55 hours of extra travel time for a commuter in 2019, there was only one such region in 2020, and there were 31 such regions again in 2022.

- While a majority of urban areas of all sizes have shown a modest increase or fall in total delay (within 10 percent) compared to 2019, there are still more than just a handful of areas with greater than that amount of change. Several such areas have exhibited the ability for a significant portion of their workforce to work from home — primarily because of the nature of prevalent industry in those areas — and are still witnessing noticeable reduction in congestion with current congestion much lower than 2019 levels (but higher than 2021 levels).

Exhibit 14. Area Delay and Delay per Auto Commuter Values — 2019 and 2022

Urban Area	Delay/Commuter (Person-Hours)				Total Annual Delay (1000 Hours)			
	2022	2019	Change	Rank	2022	2019	Change	Rank
Very Large Average (15 areas)	84	84	0		294,177	312,680	−6%	
LA-Long Beach-Anaheim CA	122	119	3	1	905,556	952,183	−5%	1
San Francisco-Oakland CA	109	103	6	2	248,889	255,724	−3%	5
New York-Newark NY-NJ-CT	92	96	−4	3	781,553	846,704	−8%	2
Washington DC-VA-MD	85	105	−20	4	188,563	256,476	−26%	9
Atlanta GA	82	78	4	5	232,272	230,899	1%	7
Seattle WA	82	77	5	5	168,916	168,998	0%	12
Miami FL	79	74	5	7	315,984	309,019	2%	3
Boston MA-NH-RI	73	86	−13	9	165,890	209,231	−21%	13
Chicago IL-IN	72	74	−2	10	306,001	331,657	−8%	4
Houston TX	69	76	−7	14	233,366	263,239	−11%	6
Phoenix-Mesa AZ	69	61	8	14	178,541	168,382	6%	10
Dallas-Fort Worth-Arlington TX	68	65	3	16	217,105	219,759	−1%	8
Philadelphia PA-NJ-DE-MD	68	63	5	16	176,742	172,804	2%	11
San Diego CA	66	64	2	19	142,070	145,568	−2%	15
Detroit MI	61	60	1	26	151,205	159,551	−5%	14
Large Average (32 areas)	56	55	+1		59,527	61,751	−4%	
San Jose CA	77	80	−3	8	100,700	118,687	−15%	20
Nashville-Davidson TN	72	66	6	10	61,536	59,525	3%	29
Portland OR-WA	70	68	2	12	76,232	78,309	−3%	22
Riverside-San Bernardino CA	70	64	6	12	107,279	99,863	7%	17
Denver-Aurora CO	66	62	4	19	110,908	111,366	0%	16
Austin TX	62	68	−6	24	81,069	81,069	0%	27
Orlando FL	62	61	1	24	68,736	71,267	−4%	26
Sacramento CA	61	56	5	26	73,841	71,079	4%	23
Minneapolis-St. Paul MN-WI	59	59	0	29	103,024	110,297	−7%	18
Memphis TN-MS-AR	58	54	4	30	33,115	31,809	4%	47
Tampa-St. Petersburg FL	57	53	4	31	101,021	98,821	2%	19
San Juan PR	56	57	−1	32	72,679	77,006	−6%	24
Baltimore MD	54	63	−9	35	83,763	102,994	−19%	21
Jacksonville FL	54	53	1	35	41,318	40,733	1%	42
Kansas City MO-KS	54	50	4	35	52,696	51,326	3%	32
Louisville-Jefferson County KY-IN	54	48	6	35	33,204	30,610	8%	46
Milwaukee WI	54	47	7	35	42,607	39,610	8%	40
Columbus OH	53	49	4	41	47,611	46,578	2%	35
Oklahoma City OK	52	47	5	44	43,749	41,004	7%	39
Salt Lake City-West Valley City UT	52	46	6	44	31,614	29,571	7%	49
Indianapolis IN	51	52	−1	48	45,367	47,617	−5%	36
Las Vegas-Henderson NV	50	50	0	50	60,080	60,761	−1%	30
Cincinnati OH-KY-IN	49	52	−3	52	52,750	57,734	−9%	31
St. Louis MO-IL	49	46	3	52	71,765	71,517	0%	25
Charlotte NC-SC	48	53	−5	54	44,957	51,737	−13%	37
Cleveland OH	48	47	1	54	51,997	53,157	−2%	33
San Antonio TX	48	52	−4	54	64,395	71,905	−10%	28
Pittsburgh PA	47	45	2	58	43,830	44,556	−2%	38
Providence RI-MA	45	47	−2	60	34,831	37,425	−7%	45
Virginia Beach VA	42	43	−1	72	36,300	38,378	−5%	44
Raleigh NC	37	40	−3	97	22,473	26,220	−14%	58
Richmond VA	35	35	0	110	22,642	23,510	−4%	57

Exhibit 14. Area Delay and Delay per Auto Commuter Values — 2019 and 2022, Continued

Urban Area	Delay/Commuter (Person-Hours)				Total Annual Delay (1000 Hours)			
	2022	2019	Change	Rank	2022	2019	Change	Rank
Medium Average (33 areas)	45	45	0		20,248	21,251	−5%	
Honolulu HI	67	68	−1	18	37,456	38,532	−3%	43
Bridgeport-Stamford CT-NY	66	58	8	19	42,523	39,387	8%	41
Baton Rouge LA	65	61	4	22	26,723	25,307	6%	52
Charleston-North Charleston SC	63	58	5	23	25,978	24,780	5%	53
Hartford CT	55	52	3	33	28,475	28,583	0%	51
Birmingham AL	54	51	3	35	29,520	28,789	3%	50
Colorado Springs CO	53	48	5	41	21,162	20,010	6%	61
New Orleans LA	53	54	−1	41	49,631	51,289	−3%	34
New Haven CT	50	44	6	50	16,566	15,397	8%	68
Omaha NE-IA	48	44	4	54	23,559	22,404	5%	55
Albany-Schenectady NY	47	49	−2	58	14,255	15,617	−9%	76
Albuquerque NM	44	47	−3	62	19,417	21,780	−11%	64
Buffalo NY	44	49	−5	62	23,837	27,343	−13%	54
Knoxville TN	43	45	−2	69	17,016	17,570	−3%	67
Grand Rapids MI	41	41	0	75	16,521	17,240	−4%	69
Toledo OH-MI	41	39	2	75	11,221	11,042	2%	98
Tulsa OK	41	41	0	75	20,658	21,870	−6%	63
Columbia SC	40	44	−4	80	14,890	16,893	−12%	74
Fresno CA	40	40	0	80	19,022	19,335	−2%	65
McAllen TX	40	42	−2	80	21,501	22,555	−5%	60
Wichita KS	40	36	4	80	11,836	10,790	10%	92
Rochester NY	39	41	−2	88	15,026	16,489	−9%	72
Tucson AZ	39	50	−11	88	23,388	31,552	−26%	56
El Paso TX-NM	38	45	−7	93	20,767	24,967	−17%	62
Akron OH	36	38	−2	102	14,255	15,835	−10%	76
Springfield MA-CT	36	40	−4	102	13,113	15,218	−14%	82
Worcester MA-CT	36	42	−6	102	11,024	13,085	−16%	100
Allentown PA-NJ	35	37	−2	110	13,512	14,953	−10%	81
Cape Coral FL	33	45	−12	122	15,674	21,377	−27%	70
Dayton OH	31	32	−1	139	13,561	14,481	−6%	80
Sarasota-Bradenton FL	31	35	−4	139	14,976	17,519	−15%	73
Provo-Orem UT	30	27	3	144	10,456	9,621	9%	103
Bakersfield CA	29	26	3	149	10,672	9,684	10%	102
Small Average (21 areas)	37	38	−1		8,411	8,855	−5%	
Little Rock AR	51	46	5	48	21,802	20,266	8%	59
Madison WI	45	42	3	60	12,420	12,064	3%	87
Eugene OR	44	38	6	62	7,326	6,504	13%	129
Jackson MS	44	44	0	62	12,256	12,836	−5%	89
Spokane WA	44	47	−3	62	11,335	11,913	−5%	97
Boulder CO	43	48	−5	69	4,057	4,865	−17%	201
Salem OR	40	40	0	80	6,481	6,772	−4%	140
Laredo TX	39	35	4	88	8,273	7,487	10%	120
Pensacola FL-AL	39	48	−9	88	8,374	10,537	−21%	119
Greensboro NC	38	36	2	93	7,876	7,697	2%	125
Oxnard CA	37	34	3	97	6,716	6,499	3%	137
Boise ID	36	44	−8	102	10,214	12,525	−18%	106
Stockton CA	36	34	2	102	11,471	10,797	6%	95
Anchorage AK	35	43	−8	110	5,675	7,304	−22%	152
Beaumont TX	33	42	−9	122	3,754	4,772	−21%	212
Poughkeepsie-Newburgh NY-NJ	33	36	−3	122	7,786	8,682	−10%	126
Corpus Christi TX	32	39	−7	128	7,979	9,813	−19%	124
Brownsville TX	28	36	−8	156	4,642	5,944	−22%	179
Winston-Salem NC	25	26	−1	178	7,202	7,752	−7%	132
Lancaster-Palmdale CA	21	21	0	240	4,933	5,089	−3%	171
Indio-Cathedral City CA	15	14	1	346	6,067	5,832	4%	146
101 Area Average	67	67	0		70,914	74,787	−5%	
Remaining Areas Average	22	23	−1		3,261	3,497	−7%	
All 494 Area Average	54	54	0		17,115	18,072	−5%	

2023 Urban Mobility Report

Truckers Kept on Trucking in 2022

The pandemic brought significant attention to trucking, transportation logistics, and the global supply chain. We all found ourselves asking why basic grocery items, including toilet paper, water, and disinfecting wipes, were not on store shelves. The pandemic impacted supply chains, but through it all, truckers — among the most essential of workers — kept on delivering the goods in our time of need. The data suggest that trucking has stayed strong through 2022.

In 2022, the price tag for truck congestion was about $27.1 billion in wasted time and fuel. Truck congestion was 12 percent of the total congestion cost. About 46 percent of the $27 billion truck congestion cost is in the largest 15 urban areas – this share of the total truck congestion cost for the largest areas has been in consistent decline over several years, illustrating that the effect of truck congestion is a growing problem in all urban areas, not just the larger ones. The share of truck cost to the total congestion cost has gone up from 11 percent in 2019 to 12 percent in 2022.

While truckers shifted to the typically off-peak periods to supply the entire United States with essential goods in 2020 and 2021, data show that truck delay is moving back to the typical peak periods in 2022. A few 2022 trucking highlights include:

- More truck delay is occurring during peak periods in 2022 than in 2021. Over half (57 percent) of the truck delay occurred in the peak period in 2022, in comparison to 51 percent in 2021 and 60 percent in 2019.
- In cities under 1 million in population, there was a 15 percent increase in truck delay over 2021 in the freeway peak period.
- In cities over 1 million in population, the largest percentage of truck delay (42 percent) occurs in the freeway peak period.
- Less of the truck delay occurred on weekends in 2022 (17 percent) than in 2021 (20 percent) but still more than in 2019 (15 percent) in all city sizes.
- There was 112 percent more truck delay between 7 p.m. and 10 p.m. in cities over 1 million in population in 2022 than 2021. The increase in truck delay during the same period for cities under 1 million in population was only 6 percent.
- In 2022, 76 percent more truck delay occurred between midnight and 3 a.m. in cities over 1 million in population than in 2021, but 9 percent less in cities under 1 million in population.
- While Thursday carries the highest share of overall vehicular traffic in 2022 (see Exhibit 10), it also carries the highest share of truck-only traffic and delay in 2022, particularly in larger port areas.
- Very large port cities known for their freight traffic top the list in person-hours of truck delay and truck delay congestion, including NYC (#1), LA (#2), Chicago (#3) and Houston (#4).

Trucking infrastructure investments are critically important (for example, adding capacity to roadways and improvements to last-mile connectors to ports, intermodal facilities, and airports). In dense, urban settings, curb management to effectively balance curb use by numerous users is vital. Incorporating all solutions to facilitate goods movement is imperative, particularly given the rise in e-commerce, which only increased following the pandemic and looks to be at "new normal" levels.

How Did We Estimate Congestion?

We started with very detailed traffic speed data from INRIX (*1*). The analysis required vehicle and person-volume estimates for the delay calculations; these were obtained from the Federal Highway Administration's (FHWA's) Highway Performance Monitoring System (HPMS) dataset *(5)*. Those two datasets were combined to get estimates of the extra travel time to make a trip. The *2023 Urban Mobility Report* uses hundreds of speed data points for every 15 minutes of the average day of the week for almost every mile of major roadway in urban America. More than a billion speeds across 1.5 million miles of U.S. streets and highways means congestion trends and problems can be described in detail and solutions targeted to community goals.

Key methodological aspects of the *2023 Urban Mobility Report* are summarized below.

- The 2021 HPMS dataset from FHWA provided the source for traffic volume data. The INRIX road network was chosen as the base network for the *2023 Urban Mobility Report*, and the volume estimates from HPMS were applied to each INRIX segment. The INRIX vehicle speed data and traffic volume estimates were combined to create the 2022 mobility estimates.

- Traffic volumes for 2022 had to be estimated because 2022 HPMS traffic volume data were not available during this effort. Vehicle-miles traveled for 2022 was estimated from 2021 VMT using a combination of four growth rates.

- Previous reports had estimated many speeds, especially on minor roads and in non-peak periods. The greatly expanded INRIX traffic speed dataset, however, meant that more than 97 percent of the 2022 travel delay was based on a measured traffic speed. INRIX speed data cover approximately 98 percent of arterial streets across the United States, while the freeway match percentage is more than 97 percent.

- More detail on the methodologies and analytical components are in the appendices at: https://mobility.tamu.edu/umr/report/#methodology
  - The methodology is described in Appendix A on the mobility study website (*6*).
  - An updated average vehicle occupancy value is used to reflect travel changes in Appendix B (*7*). (Appendix B)
  - The value of congested travel time is measured by the median hourly wage for all job classifications in the Occupational Employment Statistics series by the U.S. Bureau of Labor Statistics (*8*). (Appendix C)
  - Commercial truck operating cost estimates are drawn from the American Transportation Research Institute's annual survey of its membership (*8*). (Appendix C)

- Key performance measures used in the *2023 Urban Mobility Report* are:
  - Yearly delay per auto commuter — The extra travel time during the year due to congested speeds rather than free-flow speeds by private vehicle drivers and passengers who typically travel in the peak periods.
  - Travel Time Index (TTI) — The ratio of travel time in the peak period to the travel time at free-flow conditions. A Travel Time Index of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.
  - Congestion cost — The yearly value of delay time and wasted fuel by all vehicles.
  - Traffic volume — Miles traveled by all vehicles during the year.

More information on INRIX can be found at www.inrix.com.

Congestion Relief — An Overview of the Strategies

We still recommend a ***balanced and diversified approach*** to reduce congestion — one that focuses on more of everything: more policies, programs, projects, flexibility, options, and understanding. The massive drop in 2020 congestion has been evidently followed by a return of congestion problems during the following few years. Through 2019, investments in solutions did not keep pace with the growing problem. On the hopeful side, state departments of transportation, urban planners, employers, and employees now see the strength of telework programs, bike, and walk modes, as well as the social benefits of providing workers with more job location flexibility.

The right solution to a mobility issue, however, is not the same everywhere all the time. Every solution is targeted to accomplish a specific goal, but every solution is not right for every location, opportunity, or problem. Context is the important starting point for identifying mobility solutions. ***Anyone who tells you there is a single solution that can solve congestion, be supported, and be implemented everywhere (or even in most locations) is exaggerating the effect of their idea.***

Some solutions need more congestion before they are fully effective, and some can be very useful in mitigating congestion before it becomes a big problem. There is almost always a role for providing more travel options and operating the system more efficiently. The effects of these solutions are important but, especially in growing regions, are not usually enough to meet community mobility goals. The private sector, economy, and government regulations all play a role. Some cities have growth near downtowns that provide good home and work options but rarely determine regional growth trends. Governments have been streamlining regulations to make near-downtown development as easy to accomplish as suburban development.

More information on the possible solutions, places they have been implemented, and their effects can be found on the website: https://mobility.tamu.edu/project/mobility-improvement-strategies/

None of these ideas are the entire mobility solution, but they can all play a role.

- **Get as much as possible from what we have** — "Get the best bang for the buck" is the theme here. Many low-cost improvements have broad public support and can be rapidly deployed. Operations improvement programs require innovation, new monitoring technologies and staffing plans, constant attention, and adjustment, but they pay dividends in faster, safer, and more reliable travel. Rapidly removing crashed vehicles, timing the traffic signals so that more vehicles see green lights, and improving road and intersection designs are relatively simple actions. More complex changes such as traffic signals that rapidly adapt to different traffic patterns, systems that smooth traffic flow and reduce traffic collisions, and communication technologies that assist travelers (in all modes) also play a role.

- **Provide choices** — "Customize your trip" might involve different travel routes, departure times, travel modes, or lanes that require a toll for high-speed and reliable service. These options allow travelers and shippers to make trips when, where, and in a form that best suits their needs and wants. There are many sources of travel information involving displays of existing travel times, locations of roadwork or crashes, transit ridership and arrival information, and a variety of trip planner resources. The solutions also involve changes in the way employers and travelers conduct business to avoid traveling in the traditional rush hours. The COVID-19 pandemic response demonstrated that flexible work hours and good internet connections allow employees to choose work schedules that meet family needs *and* the needs of their jobs.

- **Technology advances** — While we are not yet at the "meet George Jetson" level of technology, the technology disruptors coming to market every week will alter the urban mobility landscape. The depth and breadth of the detailed crowdsourced data from INRIX has improved this report, and an increasingly connected world will offer more opportunities to understand and improve the movement of people and goods. Connected vehicles "talking" to each other as well as traffic signals and other systems — and providing this information to decision-makers — will provide unprecedented data and insights to identify and fix mobility problems. Newer vehicles sense and adjust to their surroundings, increasing safety and efficient movement of goods and people. Other technologies, such as the Internet of Things (connected devices), 3D printers, blockchain, and artificial intelligence will affect transportation systems of the future. Will the mobility improvements of these technologies offset induced trips or other unforeseen mobility consequences? In many cases, it will. Again, *context* is the key, and the jury is still out on the evolving impacts.

- **Add capacity in critical corridors** — We just need "more" in some places. Increases in freight and person movement often require new or expanded facilities. Important corridors or growing regions can benefit from more street and highway lanes, new or expanded public transportation facilities, and larger bus and rail fleets. Some of the "more" will be better paths and routes for bicyclists and pedestrians. Some of the "more" will also be in the form of advancements in connected and autonomous vehicles that reduce crashes and congestion — cars, trucks, buses, and trains that communicate with each other and with the transportation network.

- **Diversify the development patterns** — "Everyone doesn't want to live in <fill in the blank>" is a discussion in most urban regions. It is always true — because there is no one-size-fits-all home type. The market is diverse for the same reasons the U.S. culture, economy, and society are varied. The "real market" includes denser developments with a mix of jobs, shops, and homes (so that more people can walk, bike, or take transit to more and closer destinations). Also, urban residential patterns of moderate density single-family and multi-family buildings, and suburban residential and commercial developments are popular. Sustaining a good quality-of-life and gaining economic opportunity without the typical increment of congestion in each of these sub-regions appears to be part, but not all, of the mobility solution. Recognizing that many home and job location choices are the result of choices about family needs, education preferences, and entertainment and cultural sites allows planners to adjust projects and policies to meet these varied markets.

- **Realistic expectations** — Large urban areas will be congested. Some locations near key activity centers in smaller urban areas will also be congested. Identifying solutions and funding sources that are equitable and meet a variety of community goals is challenging enough without attempting to always eliminate congestion in all locations. Congestion, however, does not have to be an all-day event. In many cases, improving travel time awareness and predictability can be a positive first step toward improving urban mobility.

Case studies, analytical methods, and data — and now the experience with adjustments to the COVID-19 pandemic — are available to support development of these strategies and monitor the effectiveness of deployments. There are also many good state and regional mobility reports that provide ideas for communicating the findings of the data analysis.

What Does 2022 Mean?

The year 2022 has marked a period of inflection where congestion has almost reached or in some cases exceeded pre-pandemic congestion levels. Although this comeback of congestion has some resemblances to past patterns, some things have changed markedly too. With the 2022 national total congestion cost already surpassing the 2019 level, the "congestion recovery" is well underway, if not complete, but it also seems clear that some aspects of the problem and the solutions may have changed forever.

It is evident that the transition from full-time remote work to a hybrid model is already impacting commuter travel behavior and the overall transportation landscape. Hybrid WFH involves a combination of in-office work and remote work, where employees are required to attend physical offices only on certain days of the week, rather than adhering strictly to the traditional 9 am to 5 pm working hours.

This flexible work schedule gives employees the freedom to manage their time more efficiently and avoid peak-hour rushes, resulting in some reduced pressure on the transportation system during traditional rush hours. The adoption of hybrid WFH has the potential to reshape traffic patterns in the future. With employees commuting on different days and at varying times, the predictable peak hours may become less pronounced, and there may be a redistribution of travel demand throughout the day.

Early signs over the two years following the initial pandemic shock point to the following changes in congestion dynamics:

- **Congestion is more "spread-out" throughout the day** — The middle-of-the-day traffic is contributing a lower proportion of total delay in 2022 than in 2021, but a higher proportion than in 2019. This phenomenon is more noticeable on freeways than on arterial streets.

- **Congestion is more "spread-out" throughout the week** — Friday used to carry the highest share of the weekly traffic till 2021. Now it's Thursday, although Friday is a very close second. Monday and Friday carried a lesser share of the weekly traffic in 2022 than they used to in 2019 and even 2021. The mid-week (Tue–Thu) carried a higher share than in 2021 and was close to its 2019 share. Weekends carried a higher share than in 2019 but slightly lower share than in 2021.

- **Weekend plans have changed** — Weekend traffic used more of the midday period in 2022 than in 2021, which had some early risers, but still a little less than the midday traffic in 2019.

- **Truck-related congestion is up everywhere**, indicating a sustained growth in e-commerce and consumer preferences for home delivery of a wide range of goods. The nation is still adjusting to supply chain problems that created shortages and higher prices that were exacerbated by the pandemic.

- **More truck delay is occurring during peak periods in 2022 than in 2021**. Over half (57 percent) of the truck delay occurred in the peak period in 2022, in comparison to 51 percent in 2021 and 60 percent in 2019.

However, there are still some unknowns in this new regime of operations as different industry types try to look for an optimum balance between worker satisfaction, productivity, and cost competitiveness:

- To what extent will office workers continue to work from home or in a hybrid arrangement?

- How does the type of jobs in the travel corridor affect the congestion patterns, and which mobility solutions will work best for that job mix?

- Will trip departure times remain similar — fewer auto trips in the normal rush hours, and more travel in the midday and early evening?

- Will public transportation ridership rebound?

- What are the effects of transportation and land use changes given where people choose to work, live, shop, go to school, and recreate?

- How will the shift in where businesses and people locate affect how, where, and when goods are moved?

Congestion is back — there is no hiding from it. The average annual delay per commuter has either reached 2019 levels (small and medium areas) or exceeded 2019 levels (large and very large areas). The years 2021 and 2022 suggest that the economy and congestion have rebounded, but the answers to the above questions will go a long way toward determining the mobility problems and solutions in the next decade. All the potential congestion-reducing strategies should be considered, and there is a role and location for most of the strategies:

- The COVID-19 pandemic reaction has convinced employers and workers that many more tasks can be accomplished remotely. ***This will not be the same everywhere for every job.*** Some employers might require in-person attendance. Some may allow full-time, not-in-an-office work schedule. Some will encourage telework for a few days each week or even just a few hours each day.

- Efficiently timing the traffic signals and getting reliable information to travelers so that they can plan their trip are all ways to get the "best bang for the buck" productivity out of the existing road and public transportation systems.

- In growth corridors, there also may be a role for additional road and public transportation capacity to move people and freight more rapidly and reliably.

- Some areas are seeing renewed interest in higher density living in neighborhoods with a mix of residential, office, shopping, and other developments. These places can promote shorter trips that are more amenable to walking, cycling, or public transportation modes.

References

1. INRIX. National Average Speed Database, 2009 to 2022. Accessed 2023. http://www.inrix.com/.

2. U.S. Census Bureau, U.S. Department of Commerce. Household Pulse Survey Data Tables. Accessed 2023. https://www.census.gov/programs-surveys/household-pulse-survey/data.html.

3. U.S. Bureau of Labor Statistics, U.S. Department of Labor. Current Employment Statistics—CES (National). Accessed 2023. http://www.bls.gov/ces/home.htm.

4. Predicting Travel and Congestion in a Post-Pandemic America Phase 2: Implications for Urban Mobility. National Institute for Congestion Reduction. Accessed 2023. https://nicr.usf.edu/2022/05/18/1-10_predictiontravelandcongestionpostpandemic/

5. Federal Highway Administration. Highway Performance Monitoring System (HPMS), 1982 to 2021 Data. December 2022. Accessed 2023. http://www.fhwa.dot.gov/policyinformation/hpms.cfm.

6. David Schrank, Kartikeya Jha, Luke Albert, and Bill Eisele. Appendix A: Methodology. *2023 Urban Mobility Report*, Texas A&M Transportation Institute, May 2024. Accessed 2024. https://mobility.tamu.edu/umr/report/#methodology.

7. Phil Lasley. Appendix B: Change in Vehicle Occupancy Used in Mobility Monitoring Efforts. *2023 Urban Mobility Report*, Texas A&M Transportation Institute, August 2023. Accessed 2023. https://mobility.tamu.edu/umr/report/#appx-b.

8. Brianne A. Glover. Appendix C: Value of Delay Time for Use in Mobility Monitoring Efforts. *2023 Urban Mobility Report*, Texas A&M Transportation Institute, February 2023. Accessed 2023. https://mobility.tamu.edu/umr/report/#appx-c

Comparison Tables — Congestion in 2021 and 2022
Additional Information for Urban Areas

Table 1. What Congestion Means to You

Urban Area	Annual Person-Hours of Delay per Commuter				Travel Time Index			
	2022		**2021**		**2022**		**2021**	
	Hours	Rank	Hours	Rank	Index	Rank	Index	Rank
Very Large Average (15 areas)	**84**		**73**		**1.31**		**1.23**	
Los Angeles-Long Beach-Anaheim CA	122	1	107	1	1.50	1	1.34	1
San Francisco-Oakland CA	109	2	95	2	1.48	2	1.32	2
New York-Newark NY-NJ-CT	92	3	79	3	1.32	8	1.23	9
Washington DC-VA-MD	85	4	64	10	1.25	19	1.14	34
Atlanta GA	82	5	70	4	1.25	19	1.17	24
Seattle WA	82	5	61	13	1.32	8	1.28	4
Miami FL	79	7	62	12	1.34	6	1.23	9
Boston MA-NH-RI	73	9	63	11	1.22	28	1.16	28
Chicago IL-IN	72	10	66	7	1.30	11	1.23	9
Houston TX	69	14	65	8	1.27	16	1.22	12
Phoenix-Mesa AZ	69	14	56	18	1.22	28	1.18	22
Dallas-Fort Worth-Arlington TX	68	16	69	5	1.23	24	1.21	13
Philadelphia PA-NJ-DE-MD	68	16	67	6	1.23	24	1.17	24
San Diego CA	66	19	55	20	1.29	13	1.16	28
Detroit MI	61	26	50	26	1.20	36	1.17	24

Very Large Urban Areas — Over 3 million population.
Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.
Small Urban Areas — Less than 500,000 population.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Travel Time Index — The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 1. What Congestion Means to You, Continued

Urban Area	Annual Person-Hours of Delay per Commuter				Travel Time Index			
	2022		**2021**		**2022**		**2021**	
	Hours	Rank	Hours	Rank	Index	Rank	Index	Rank
Large Average (32 areas)	**56**		**48**		**1.21**		**1.16**	
San Jose CA	77	8	56	18	1.35	5	1.20	15
Nashville-Davidson TN	72	10	55	20	1.23	24	1.13	50
Portland OR-WA	70	12	59	14	1.33	7	1.28	4
Riverside-San Bernardino CA	70	12	65	8	1.37	4	1.29	3
Denver-Aurora CO	66	19	58	15	1.28	15	1.21	13
Austin TX	62	24	58	15	1.27	16	1.19	19
Orlando FL	62	24	50	26	1.22	28	1.14	34
Sacramento CA	61	26	52	22	1.25	19	1.17	24
Minneapolis-St. Paul MN-WI	59	28	48	32	1.24	22	1.19	19
Memphis TN-MS-AR	58	29	50	26	1.13	71	1.11	72
Tampa-St. Petersburg FL	57	30	44	42	1.24	22	1.14	34
San Juan PR	56	31	51	24	1.30	11	1.26	7
Baltimore MD	54	33	45	39	1.19	37	1.11	72
Jacksonville FL	54	33	50	26	1.19	37	1.14	34
Kansas City MO-KS	54	33	44	42	1.15	54	1.14	34
Louisville-Jefferson County KY-IN	54	33	49	31	1.18	40	1.16	28
Milwaukee WI	54	33	45	39	1.16	50	1.14	34
Columbus OH	53	39	44	42	1.18	40	1.13	50
Oklahoma City OK	52	42	46	38	1.19	37	1.16	28
Salt Lake City-West Valley City UT	52	42	48	32	1.18	40	1.14	34
Indianapolis IN	51	44	50	26	1.17	44	1.12	62
Las Vegas-Henderson NV	50	46	42	52	1.22	28	1.18	22
Cincinnati OH-KY-IN	49	48	44	42	1.15	54	1.13	50
St. Louis MO-IL	49	48	45	39	1.14	64	1.13	50
Charlotte NC-SC	48	50	47	35	1.17	44	1.15	32
Cleveland OH	48	50	41	54	1.13	71	1.12	62
San Antonio TX	48	50	47	35	1.21	33	1.14	34
Pittsburgh PA	47	54	43	49	1.16	50	1.12	62
Providence RI-MA	45	56	40	57	1.15	54	1.14	34
Virginia Beach VA	42	65	38	62	1.14	64	1.11	72
Raleigh NC	37	80	28	92	1.13	71	1.07	100
Richmond VA	35	87	33	80	1.10	89	1.09	90

Large Urban Areas — Over 1 million and less than 3 million population.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Travel Time Index — The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 1. What Congestion Means to You, Continued

Urban Area	Annual Person-Hours of Delay per Commuter				Travel Time Index			
	2022		2021		2022		2021	
	Hours	Rank	Hours	Rank	Index	Rank	Index	Rank
Medium Average (33 areas)	**45**		**38**		**1.16**		**1.13**	
Honolulu HI	67	18	43	49	1.41	3	1.24	8
Bridgeport-Stamford CT-NY	66	19	52	22	1.32	8	1.28	4
Baton Rouge LA	65	22	57	17	1.23	24	1.19	19
Charleston-North Charleston SC	63	23	51	24	1.26	18	1.20	15
Hartford CT	55	32	44	42	1.15	54	1.12	62
Birmingham AL	54	33	48	32	1.13	71	1.10	82
Colorado Springs CO	53	39	47	35	1.17	44	1.14	34
New Orleans LA	53	39	43	49	1.29	13	1.20	15
New Haven CT	50	46	44	42	1.16	50	1.14	34
Omaha NE-IA	48	50	39	60	1.18	40	1.14	34
Albany-Schenectady NY	47	54	44	42	1.12	81	1.12	62
Albuquerque NM	44	58	38	62	1.16	50	1.14	34
Buffalo NY	44	58	42	52	1.13	71	1.12	62
Knoxville TN	43	63	38	62	1.14	64	1.12	62
Grand Rapids MI	41	66	34	76	1.13	71	1.10	82
Toledo OH-MI	41	66	41	54	1.10	89	1.10	82
Tulsa OK	41	66	39	60	1.12	81	1.12	62
Columbia SC	40	69	35	71	1.10	89	1.08	97
Fresno CA	40	69	32	85	1.17	44	1.13	50
McAllen TX	40	69	33	80	1.14	64	1.13	50
Wichita KS	40	69	38	62	1.15	54	1.14	34
Rochester NY	39	74	35	71	1.11	88	1.11	72
Tucson AZ	39	74	33	80	1.14	64	1.10	82
El Paso TX-NM	38	78	36	68	1.13	71	1.13	50
Akron OH	36	82	35	71	1.12	81	1.11	72
Springfield MA-CT	36	82	31	86	1.09	94	1.08	97
Worcester MA-CT	36	82	36	68	1.10	89	1.09	90
Allentown PA-NJ	35	87	35	71	1.12	81	1.10	82
Cape Coral FL	33	90	27	94	1.15	54	1.11	72
Dayton OH	31	94	28	92	1.12	81	1.09	90
Sarasota-Bradenton FL	31	94	24	98	1.13	71	1.10	82
Provo-Orem UT	30	96	26	95	1.12	81	1.11	72
Bakersfield CA	29	97	25	97	1.15	54	1.12	62

Medium Urban Areas — Over 500,000 and less than 1 million population.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Travel Time Index — The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 1. What Congestion Means to You, Continued

Urban Area	Annual Person-Hours of Delay per Commuter				Travel Time Index			
	2022		2021		2022		2021	
	Hours	Rank	Hours	Rank	Index	Rank	Index	Rank
Small Average (21 areas)	**36**		**32**		**1.13**		**1.12**	
Little Rock AR	51	44	41	54	1.15	54	1.13	50
Madison WI	45	56	37	66	1.17	44	1.14	34
Eugene OR	44	58	35	71	1.14	64	1.13	50
Jackson MS	44	58	40	57	1.10	89	1.09	90
Spokane WA	44	58	36	68	1.15	54	1.13	50
Boulder CO	43	63	34	76	1.21	33	1.13	50
Salem OR	40	69	34	76	1.13	71	1.10	82
Laredo TX	39	74	37	66	1.21	33	1.11	72
Pensacola FL-AL	39	74	40	57	1.13	71	1.14	34
Greensboro NC	38	78	33	80	1.12	81	1.11	72
Oxnard CA	37	80	34	76	1.17	44	1.15	32
Boise ID	36	82	33	80	1.15	54	1.12	62
Stockton CA	36	82	31	86	1.22	28	1.20	15
Anchorage AK	35	87	31	86	1.14	64	1.11	72
Beaumont TX	33	90	30	90	1.08	97	1.09	90
Poughkeepsie-Newburgh NY-NJ	33	90	31	86	1.08	97	1.09	90
Corpus Christi TX	32	93	30	90	1.09	94	1.13	50
Brownsville TX	28	98	26	95	1.09	94	1.10	82
Winston-Salem NC	25	99	24	98	1.07	101	1.07	100
Lancaster-Palmdale CA	21	100	19	100	1.08	97	1.09	90
Indio-Cathedral City CA	15	101	15	101	1.08	97	1.08	97
101 Area Average	**67**		**58**		**1.25**		**1.19**	
Remaining Areas Average	**22**		**21**		**1.11**		**1.10**	
All 494 Area Average	**54**		**47**		**1.21**		**1.16**	

Very Large Urban Areas — Over 3 million population.

Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.

Small Urban Areas — Less than 500,000 population.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Travel Time Index — The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 2. Annual Extra Travel Time for Each Urban Area and Auto Commuter

Urban Area	Annual Person-Hours of Delay per Commuter				Annual Person-Hours of Travel Delay (1,000 Hours)			
	2022		2021		2022		2021	
	Hours	Rank	Hours	Rank	Hours	Rank	Hours	Rank
Very Large Average (15 areas)	**84**		**73**		**294,177**		**246,643**	
Los Angeles-Long Beach-Anaheim CA	122	1	107	1	905,556	1	777,389	1
San Francisco-Oakland CA	109	2	95	2	248,889	5	208,561	6
New York-Newark NY-NJ-CT	92	3	79	3	781,553	2	654,315	2
Washington DC-VA-MD	85	4	64	10	188,563	9	136,630	12
Atlanta GA	82	5	70	4	232,272	7	190,813	8
Seattle WA	82	5	61	13	168,916	12	120,212	13
Miami FL	79	7	62	12	315,984	3	243,526	4
Boston MA-NH-RI	73	9	63	11	165,890	13	138,524	11
Chicago IL-IN	72	10	66	7	306,001	4	271,088	3
Houston TX	69	14	65	8	233,366	6	208,429	7
Phoenix-Mesa AZ	69	14	56	18	178,541	10	139,268	10
Dallas-Fort Worth-Arlington TX	68	16	69	5	217,105	8	210,010	5
Philadelphia PA-NJ-DE-MD	68	16	67	6	176,742	11	166,027	9
San Diego CA	66	19	55	20	142,070	15	114,993	15
Detroit MI	61	26	50	26	151,205	14	119,861	14

Very Large Urban Areas — Over 3 million population.

Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.

Small Urban Areas — Less than 500,000 population.

Yearly Delay — Extra travel time during the year.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 2. Annual Extra Travel Time for Each Urban Area and Auto Commuter, Continued

Urban Area	Annual Person-Hours of Delay per Commuter				Annual Person-Hours of Travel Delay (1,000 Hours)			
	2022		2021		2022		2021	
	Hours	Rank	Hours	Rank	Hours	Rank	Hours	Rank
Large Average (32 areas)	**56**		**48**		**59,527**		**49,603**	
San Jose CA	77	8	56	18	100,700	20	68,269	20
Nashville-Davidson TN	72	10	55	20	61,536	29	45,455	30
Portland OR-WA	70	12	59	14	76,232	22	62,173	24
Riverside-San Bernardino CA	70	12	65	8	107,279	17	97,966	16
Denver-Aurora CO	66	19	58	15	110,908	16	93,749	17
Austin TX	62	24	58	15	67,840	27	60,001	26
Orlando FL	62	24	50	26	68,736	26	53,623	28
Sacramento CA	61	26	52	22	73,841	23	59,501	27
Minneapolis-St. Paul MN-WI	59	28	48	32	103,024	18	80,432	18
Memphis TN-MS-AR	58	29	50	26	33,115	47	27,602	47
Tampa-St. Petersburg FL	57	30	44	42	101,021	19	75,589	19
San Juan PR	56	31	51	24	72,679	24	65,672	22
Baltimore MD	54	33	45	39	83,763	21	67,052	21
Jacksonville FL	54	33	50	26	41,318	42	36,312	40
Kansas City MO-KS	54	33	44	42	52,696	32	41,120	35
Louisville-Jefferson County KY-IN	54	33	49	31	33,204	46	29,248	45
Milwaukee WI	54	33	45	39	42,607	40	4,597	41
Columbus OH	53	39	44	42	47,611	35	38,108	39
Oklahoma City OK	52	42	46	38	43,749	39	38,147	38
Salt Lake City-West Valley City UT	52	42	48	32	31,614	48	27,973	46
Indianapolis IN	51	44	50	26	45,367	36	42,263	33
Las Vegas-Henderson NV	50	46	42	52	60,080	30	49,720	29
Cincinnati OH-KY-IN	49	48	44	42	52,750	31	44,963	31
St. Louis MO-IL	49	48	45	39	71,765	25	63,719	23
Charlotte NC-SC	48	50	47	35	44,957	37	41,720	34
Cleveland OH	48	50	41	54	51,997	33	44,158	32
San Antonio TX	48	50	47	35	64,395	28	60,938	25
Pittsburgh PA	47	54	43	49	43,830	38	39,001	37
Providence RI-MA	45	56	40	57	34,831	45	30,413	44
Virginia Beach VA	42	65	38	62	36,300	44	31,734	43
Raleigh NC	37	80	28	92	22,473	57	15,896	63
Richmond VA	35	87	33	80	22,642	56	20,192	54

Very Large Urban Areas — Over 3 million population.
Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.
Small Urban Areas — Less than 500,000 population.

Yearly Delay — Extra travel time during the year.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 2. Annual Extra Travel Time for Each Urban Area and Auto Commuter, Continued

Urban Area	Annual Person-Hours of Delay per Commuter				Annual Person-Hours of Travel Delay (1,000 Hours)			
	2022		2021		2022		2021	
	Hours	Rank	Hours	Rank	Hours	Rank	Hours	Rank
Medium Average (33 areas)	**45**		**38**		**20,248**		**16,843**	
Honolulu HI	67	18	43	49	37,456	43	23,763	49
Bridgeport-Stamford CT-NY	66	19	52	22	42,523	41	32,641	42
Baton Rouge LA	65	22	57	17	26,723	51	23,490	50
Charleston-North Charleston SC	63	23	51	24	25,978	52	20,472	53
Hartford CT	55	32	44	42	28,475	50	21,702	52
Birmingham AL	54	33	48	32	29,520	49	25,416	48
Colorado Springs CO	53	39	47	35	21,162	60	18,270	58
New Orleans LA	53	39	43	49	49,631	34	39,102	36
New Haven CT	50	46	44	42	16,566	66	13,978	66
Omaha NE-IA	48	50	39	60	23,559	54	18,236	59
Albany-Schenectady NY	47	54	44	42	14,255	72	12,747	72
Albuquerque NM	44	58	38	62	19,417	63	16,312	62
Buffalo NY	44	58	42	52	23,837	53	22,001	51
Knoxville TN	43	63	38	62	17,016	65	14,387	65
Grand Rapids MI	41	66	34	76	16,521	67	13,388	69
Toledo OH-MI	41	66	41	54	11,221	82	10,958	78
Tulsa OK	41	66	39	60	20,658	62	19,384	55
Columbia SC	40	69	35	71	14,890	71	12,840	71
Fresno CA	40	69	32	85	19,022	64	15,127	64
McAllen TX	40	69	33	80	21,501	59	17,140	61
Wichita KS	40	69	38	62	11,836	79	10,856	79
Rochester NY	39	74	35	71	15,026	69	13,490	68
Tucson AZ	39	74	33	80	23,388	55	19,311	56
El Paso TX-NM	38	78	36	68	20,767	61	19,020	57
Akron OH	36	82	35	71	14,255	72	13,747	67
Springfield MA-CT	36	82	31	86	13,113	76	11,042	76
Worcester MA-CT	36	82	36	68	11,024	83	10,762	80
Allentown PA-NJ	35	87	35	71	13,512	75	13,026	70
Cape Coral FL	33	90	27	94	15,674	68	12,339	73
Dayton OH	31	94	28	92	13,561	74	11,714	74
Sarasota-Bradenton FL	31	94	24	98	14,976	70	11,390	75
Provo-Orem UT	30	96	26	95	10,456	85	8,719	86
Bakersfield CA	29	97	25	97	10,672	84	9,034	83

Very Large Urban Areas — Over 3 million population.

Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.

Small Urban Areas — Less than 500,000 population.

Yearly Delay — Extra travel time during the year.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 2. Annual Extra Travel Time for Each Urban Area and Auto Commuter, Continued

Urban Area	Annual Person-Hours of Delay per Commuter				Annual Person-Hours of Travel Delay (1,000 Hours)			
	2022		**2021**		**2022**		**2021**	
	Hours	**Rank**	**Hours**	**Rank**	**Hours**	**Rank**	**Hours**	**Rank**
Small Average (21 areas)	**36**		**32**		**8,411**		**7,270**	
Little Rock AR	51	44	41	54	21,802	58	17,195	60
Madison WI	45	56	37	66	12,420	77	9,753	81
Eugene OR	44	58	35	71	7,326	92	5,764	95
Jackson MS	44	58	40	57	12,256	78	11,013	77
Spokane WA	44	58	36	68	11,335	81	8,874	84
Boulder CO	43	63	34	76	4,057	100	3,033	101
Salem OR	40	69	34	76	6,481	95	5,343	96
Laredo TX	39	74	37	66	8,273	88	7,755	88
Pensacola FL-AL	39	74	40	57	8,374	87	8,515	87
Greensboro NC	38	78	33	80	7,876	90	6,708	91
Oxnard CA	37	80	34	76	6,716	94	6,028	93
Boise ID	36	82	33	80	10,214	86	8,824	85
Stockton CA	36	82	31	86	11,471	80	9,709	82
Anchorage AK	35	87	31	86	5,675	97	4,830	97
Beaumont TX	33	90	30	90	3,754	101	3,396	100
Poughkeepsie-Newburgh NY-NJ	33	90	31	86	7,786	91	7,298	90
Corpus Christi TX	32	93	30	90	7,979	89	7,485	89
Brownsville TX	28	98	26	95	4,642	99	4,244	99
Winston-Salem NC	25	99	24	98	7,202	93	6,699	92
Lancaster-Palmdale CA	21	100	19	100	4,933	98	4,395	98
Indio-Cathedral City CA	15	101	15	101	6,067	96	5,809	94
101 Area Average	**67**		**58**		**70,914**		**59,361**	
Remaining Areas Average	**22**		**21**		**3,288**		**3,098**	
All 494 Area Average	**54**		**47**		**17,115**		**14,601**	

Very Large Urban Areas — Over 3 million population.

Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.

Small Urban Areas — Less than 500,000 population.

Yearly Delay — Extra travel time during the year.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 3. Extra Travel Time and Vehicle Travel, 2021 and 2022

Urban Area	Annual Person-Hours of Delay				Daily Vehicle-Miles of Travel (Freeway & Arterial)			
	2022		2021		2022		2021	
	Hours (000)	Rank	Hours (000)	Rank	Miles (000)	Rank	Miles (000)	Rank
Very Large Average (15 areas)	**294,177**		**246,643**		**104,617**		**101,862**	
Los Angeles-Long Beach-Anaheim CA	905,556	1	777,389	1	221,454	1	216,053	1
New York-Newark NY-NJ-CT	781,553	2	654,315	2	209,679	2	204,565	2
Miami FL	315,984	3	243,526	4	98,903	7	95,558	7
Chicago IL-IN	306,001	4	271,088	3	125,087	4	121,444	4
San Francisco-Oakland CA	248,889	5	208,561	6	51,963	16	50,696	16
Houston TX	233,366	6	208,429	7	108,772	5	105,604	5
Atlanta GA	232,272	7	190,813	8	108,281	6	105,127	6
Dallas-Fort Worth-Arlington TX	217,105	8	210,010	5	127,214	3	122,913	3
Washington DC-VA-MD	188,563	9	136,630	12	80,984	11	79,788	10
Phoenix-Mesa AZ	178,541	10	139,268	10	81,767	10	79,386	11
Philadelphia PA-NJ-DE-MD	176,742	11	166,027	9	87,454	8	85,740	8
Seattle WA	168,916	12	120,212	13	53,274	15	52,577	15
Boston MA-NH-RI	165,890	13	138,524	11	82,566	9	80,552	9
Detroit MI	151,205	14	119,861	14	75,079	12	72,540	12
San Diego CA	142,070	15	114,993	15	56,782	13	55,397	13

Very Large Urban Areas — Over 3 million population.
Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.
Small Urban Areas — Less than 500,000 population.

Yearly Delay — Extra travel time during the year.

Travel Volume — Miles traveled by all vehicles during the year.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 3. Extra Travel Time and Vehicle Travel, 2021 and 2022, Continued

Urban Area	Annual Person-Hours of Delay				Daily Vehicle-Miles of Travel (Freeway & Arterial)			
	2022		2021		2022		2021	
	Hours (000)	Rank	Hours (000)	Rank	Miles (000)	Rank	Miles (000)	Rank
Large Average (32 areas)	**59,527**		**49,603**		**32,058**		**31,308**	
Denver-Aurora CO	110,908	16	93,749	17	50,521	17	49,049	17
Riverside-San Bernardino CA	107,279	17	97,966	16	41,559	22	40,545	22
Minneapolis-St. Paul MN-WI	103,024	18	80,432	18	53,702	14	52,649	14
Tampa-St. Petersburg FL	101,021	19	75,589	19	48,823	19	47,172	19
San Jose CA	100,700	20	68,269	20	27,615	37	26,941	38
Baltimore MD	83,763	21	67,052	21	47,309	20	46,382	20
Portland OR-WA	76,232	22	62,173	24	29,131	33	28,402	34
Sacramento CA	73,841	23	59,501	27	30,340	31	29,745	30
San Juan PR	72,679	24	65,672	22	18,777	47	18,499	47
St. Louis MO-IL	71,765	25	63,719	23	49,621	18	48,888	18
Orlando FL	68,736	26	53,623	28	35,315	25	33,957	25
Austin TX	67,840	27	60,001	26	32,756	26	31,496	26
San Antonio TX	64,395	28	60,938	25	44,331	21	42,832	21
Nashville-Davidson TN	61,536	29	45,455	30	35,370	24	34,174	24
Las Vegas-Henderson NV	60,080	30	49,720	29	29,541	32	29,288	32
Cincinnati OH-KY-IN	52,750	31	44,963	31	31,906	27	31,434	27
Kansas City MO-KS	52,696	32	41,120	35	37,897	23	37,154	23
Cleveland OH	51,997	33	44,158	32	31,502	28	30,885	28
Columbus OH	47,611	35	38,108	39	29,098	34	28,555	33
Indianapolis IN	45,367	36	42,263	33	31,214	29	30,602	29
Charlotte NC-SC	44,957	37	41,720	34	30,342	30	29,582	31
Pittsburgh PA	43,830	38	39,001	37	28,376	35	27,819	35
Oklahoma City OK	43,749	39	38,147	38	20,650	45	20,445	45
Milwaukee WI	42,607	40	34,597	41	27,901	36	27,699	36
Jacksonville FL	41,318	42	36,312	40	23,335	42	22,546	42
Virginia Beach VA	36,300	44	31,734	43	25,335	39	24,838	39
Providence RI-MA	34,831	45	30,413	44	18,239	48	17,707	48
Louisville-Jefferson County KY-IN	33,204	46	29,248	45	20,953	44	20,542	44
Memphis TN-MS-AR	33,115	47	27,602	47	27,588	38	26,944	37
Salt Lake City-West Valley City UT	31,614	48	27,973	46	19,958	46	19,377	46
Richmond VA	22,642	56	20,192	54	23,518	40	23,057	40
Raleigh NC	22,473	57	15,896	63	23,340	41	22,660	41

Very Large Urban Areas — Over 3 million population.

Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.

Small Urban Areas — Less than 500,000 population.

Yearly Delay — Extra travel time during the year.

Travel Volume — Miles traveled by all vehicles during the year.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 3. Extra Travel Time and Vehicle Travel, 2021 and 2022, Continued

Urban Area	Annual Person-Hours of Delay				Daily Vehicle-Miles of Travel (Freeway & Arterial)			
	2022		2021		2022		2021	
	Hours (000)	Rank	Hours (000)	Rank	Miles (000)	Rank	Miles (000)	Rank
Medium Average (33 areas)	**20,248**		**16,843**		**12,468**		**12,194**	
New Orleans LA	49,631	34	39,102	36	15,334	52	15,034	52
Bridgeport-Stamford CT-NY	42,523	41	32,641	42	16,081	50	15,689	50
Honolulu HI	37,456	43	23,763	49	9,045	80	8,781	80
Birmingham AL	29,520	49	25,416	48	21,590	43	21,271	43
Hartford CT	28,475	50	21,702	52	18,034	49	17,594	49
Baton Rouge LA	26,723	51	23,490	50	14,293	55	14,082	55
Charleston-North Charleston SC	25,978	52	20,472	53	12,289	65	11,958	65
Buffalo NY	23,837	53	22,001	51	14,075	58	13,732	58
Omaha NE-IA	23,559	54	18,236	59	13,651	60	13,449	61
Tucson AZ	23,388	55	19,311	56	14,158	56	13,888	56
McAllen TX	21,501	59	17,140	61	10,762	74	10,348	74
Colorado Springs CO	21,162	60	18,270	58	11,334	67	11,057	68
El Paso TX-NM	20,767	61	19,020	57	13,346	63	13,021	63
Tulsa OK	20,658	62	19,384	55	14,710	54	14,564	54
Albuquerque NM	19,417	63	16,312	62	13,359	62	13,518	59
Fresno CA	19,022	64	15,127	64	8,783	83	8,569	83
Knoxville TN	17,016	65	14,387	65	15,614	51	15,159	51
New Haven CT	16,566	66	13,978	66	11,206	68	10,933	70
Grand Rapids MI	16,521	67	13,388	69	13,499	61	13,170	62
Cape Coral FL	15,674	68	12,339	73	10,872	73	10,454	73
Rochester NY	15,026	69	13,490	68	10,937	72	10,670	71
Sarasota-Bradenton FL	14,976	70	11,390	75	11,067	70	10,641	72
Columbia SC	14,890	71	12,840	71	13,795	59	13,510	60
Akron OH	14,255	72	13,747	67	10,426	75	10,232	75
Albany-Schenectady NY	14,255	72	12,747	72	10,227	76	9,977	76
Dayton OH	13,561	74	11,714	74	14,134	57	13,857	57
Allentown PA-NJ	13,512	75	13,026	70	11,203	69	10,983	69
Springfield MA-CT	13,113	76	11,042	76	11,411	66	11,133	66
Wichita KS	11,836	79	10,856	79	7,364	87	7,220	87
Toledo OH-MI	11,221	82	10,958	78	9,143	79	8,964	79
Worcester MA-CT	11,024	83	10,762	80	12,342	64	12,041	64
Bakersfield CA	10,672	84	9,034	83	7,502	86	7,355	85
Provo-Orem UT	10,456	85	8,719	86	9,858	77	9,571	77

Very Large Urban Areas — Over 3 million population.

Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.

Small Urban Areas — Less than 500,000 population.

Yearly Delay — Extra travel time during the year.

Travel Volume — Miles traveled by all vehicles during the year.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Urban Area	Annual Person-Hours of Delay				Daily Vehicle-Miles of Travel (Freeway & Arterial)			
	2022		2021		2022		2021	
	Hours (000)	Rank	Hours (000)	Rank	Miles (000)	Rank	Miles (000)	Rank
Small Average (21 areas)	**8,411**		**7,270**		**6,334**		**6,199**	
Little Rock AR	21,802	58	17,195	60	15,069	53	14,847	53
Madison WI	12,420	77	9,753	81	7,615	84	7,404	84
Jackson MS	12,256	78	11,013	77	11,006	71	11,109	67
Stockton CA	11,471	80	9,709	82	5,908	92	5,792	92
Spokane WA	11,335	81	8,874	84	6,797	88	6,533	88
Boise ID	10,214	86	8,824	85	6,564	90	6,468	89
Pensacola FL-AL	8,374	87	8,515	87	7,553	85	7,298	86
Laredo TX	8,273	88	7,755	88	3,041	98	2,924	98
Corpus Christi TX	7,979	89	7,485	89	6,605	89	6,443	90
Greensboro NC	7,876	90	6,708	91	9,779	78	9,540	78
Poughkeepsie-Newburgh NY-NJ	7,786	91	7,298	90	8,949	81	8,731	81
Eugene OR	7,326	92	5,764	95	3,831	97	3,719	97
Winston-Salem NC	7,202	93	6,699	92	8,785	82	8,570	82
Oxnard CA	6,716	94	6,028	93	4,577	94	4,478	94
Salem OR	6,481	95	5,343	96	4,120	96	4,000	96
Indio-Cathedral City CA	6,067	96	5,809	94	6,536	91	6,396	91
Anchorage AK	5,675	97	4,830	97	2,770	100	2,803	99
Lancaster-Palmdale CA	4,933	98	4,395	98	4,686	93	4,586	93
Brownsville TX	4,642	99	4,244	99	2,808	99	2,700	100
Boulder CO	4,057	100	3,033	101	1,795	101	1,746	101
Beaumont TX	3,754	101	3,396	100	4,214	95	4,091	95
101 Area Average	**70,914**		**59,361**		**31,084**		**30,321**	
Remaining Areas Average	**3,288**		**3,098**		**2,922**		**2,488**	
All 494 Area Average	**17,115**		**14,601**		**8,681**		**8,178**	

Very Large Urban Areas — Over 3 million population.
Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.
Small Urban Areas — Less than 500,000 population.

Yearly Delay — Extra travel time during the year.

Travel Volume — Miles traveled by all vehicles during the year.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

<div align="center">**Table 4. Excess Fuel Consumption Due to Congestion**</div>

Urban Area	Excess Fuel Consumed per Commuter				Annual Excess Fuel Consumed (000)			
	2022		**2021**		**2022**		**2021**	
	Gallons	**Rank**	**Gallons**	**Rank**	**Gallons**	**Rank**	**Gallons**	**Rank**
Very Large Average (15 areas)	31		28		110,319		93,503	
Miami FL	37	1	30	4	114,655	4	91,788	4
San Francisco-Oakland CA	37	1	33	1	78,938	8	67,852	9
New York-Newark NY-NJ-CT	36	3	31	3	299,412	2	250,539	2
Los Angeles-Long Beach-Anaheim CA	35	4	32	2	322,395	1	282,440	1
San Diego CA	35	4	30	4	47,031	15	38,801	15
Seattle WA	31	6	23	22	61,950	13	44,088	14
Washington DC-VA-MD	31	6	25	14	68,093	12	51,389	12
Boston MA-NH-RI	30	9	27	8	71,812	9	60,870	10
Houston TX	30	9	27	8	94,104	5	80,799	5
Chicago IL-IN	29	16	27	8	126,751	3	115,383	3
Dallas-Fort Worth-Arlington TX	28	17	27	8	85,430	7	79,058	6
Philadelphia PA-NJ-DE-MD	28	17	28	7	70,698	11	67,982	8
Phoenix-Mesa AZ	28	17	23	22	70,787	10	54,784	11
Atlanta GA	23	32	19	39	85,729	6	70,826	7
Detroit MI	23	32	19	39	57,007	14	45,942	13

Very Large Urban Areas — Over 3 million population.

Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.

Small Urban Areas — Less than 500,000 population.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Excess Fuel per Auto Commuter — Extra fuel consumed during the year divided by the number of people who commute in private vehicles in the urban area.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 4. Excess Fuel Consumption Due to Congestion, Continued

Urban Area	Excess Fuel Consumed per Commuter				Annual Excess Fuel Consumed (000)			
	2022		**2021**		**2022**		**2021**	
	Gallons	Rank	Gallons	Rank	Gallons	Rank	Gallons	Rank
Large Average (32 areas)	**23**		**20**		**23,397**		**20,003**	
San Jose CA	31	6	24	16	35,375	20	25,296	23
Nashville-Davidson TN	30	9	24	16	24,323	31	19,001	33
Portland OR-WA	30	9	26	13	32,723	21	26,424	21
Sacramento CA	28	17	25	14	26,971	24	22,674	25
San Juan PR	27	22	24	16	26,449	27	23,406	24
Denver-Aurora CO	25	23	23	22	41,879	16	37,424	16
Orlando FL	25	23	21	27	26,767	25	21,777	28
Salt Lake City-West Valley City UT	25	23	24	16	14,579	44	13,572	41
Austin TX	24	27	21	27	26,356	28	22,069	27
Indianapolis IN	24	27	24	16	21,148	34	20,333	31
Milwaukee WI	24	27	20	32	18,276	38	14,989	39
Cincinnati OH-KY-IN	23	32	21	27	22,187	32	19,970	32
Columbus OH	23	32	20	32	20,297	36	16,679	37
Minneapolis-St. Paul MN-WI	23	32	19	39	40,480	17	31,919	18
San Antonio TX	23	32	20	32	26,008	29	22,631	26
Louisville-Jefferson County KY-IN	22	40	21	27	14,498	45	13,260	43
Memphis TN-MS-AR	22	40	18	53	15,002	43	12,504	46
Riverside-San Bernardino CA	22	40	22	26	37,972	19	36,807	17
Tampa-St. Petersburg FL	22	40	18	53	39,647	18	31,333	19
Las Vegas-Henderson NV	21	48	18	53	25,852	30	21,394	29
Oklahoma City OK	21	48	20	32	15,931	42	14,857	40
Pittsburgh PA	21	48	20	32	18,520	37	16,989	36
St. Louis MO-IL	21	48	19	39	30,337	23	27,621	20
Charlotte NC-SC	20	54	20	32	17,165	39	15,929	38
Baltimore MD	19	57	16	60	30,544	22	25,476	22
Cleveland OH	18	61	16	60	20,299	35	17,387	34
Jacksonville FL	18	61	17	56	14,215	46	13,036	44
Richmond VA	18	61	17	56	8,741	58	7,909	56
Kansas City MO-KS	17	70	15	74	21,470	33	17,293	35
Providence RI-MA	17	70	16	60	13,849	48	12,446	47
Raleigh NC	15	84	11	94	8,045	61	5,862	66
Virginia Beach VA	14	90	13	86	12,810	49	11,842	48

Very Large Urban Areas — Over 3 million population.

Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.

Small Urban Areas — Less than 500,000 population.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Excess Fuel per Auto Commuter — Extra fuel consumed during the year divided by the number of people who commute in private vehicles in the urban area.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 4. Excess Fuel Consumption Due to Congestion, Continued

Urban Area	Excess Fuel Consumed per Commuter				Annual Excess Fuel Consumed (000)			
	2022		2021		2022		2021	
	Gallons	Rank	Gallons	Rank	Gallons	Rank	Gallons	Rank
Medium Average (33 areas)	**19**		**17**		**8,608**		**7,265**	
Baton Rouge LA	30	9	27	8	14,173	47	12,594	45
Honolulu HI	30	9	19	39	16,146	41	10,313	50
New Orleans LA	30	9	24	16	26,453	26	20,994	30
Toledo OH-MI	28	17	29	6	5,245	77	5,421	70
Bridgeport-Stamford CT-NY	25	23	20	32	17,090	40	13,422	42
Charleston-North Charleston SC	24	27	19	39	9,295	56	7,325	59
Hartford CT	24	27	19	39	12,394	50	9,589	51
Albany-Schenectady NY	23	32	23	22	6,224	70	5,906	65
Birmingham AL	22	40	19	39	11,757	51	10,336	49
Colorado Springs CO	21	48	19	39	7,940	62	7,030	60
New Haven CT	21	48	19	39	7,022	65	6,101	64
Buffalo NY	20	54	19	39	9,462	54	9,140	52
Fresno CA	19	57	16	60	7,637	64	6,226	63
Springfield MA-CT	19	57	16	60	6,310	68	5,337	71
Albuquerque NM	18	61	15	74	7,718	63	6,484	62
Omaha NE-IA	18	61	15	74	8,664	59	6,956	61
Akron OH	17	70	16	60	6,247	69	5,841	67
Allentown PA-NJ	17	70	16	60	5,744	74	5,281	73
El Paso TX-NM	17	70	15	74	9,143	57	8,136	54
Rochester NY	17	70	16	60	5,636	75	5,158	74
Grand Rapids MI	16	77	13	86	6,683	66	5,562	69
Knoxville TN	16	77	14	82	6,388	67	5,601	68
Wichita KS	16	77	15	74	4,133	88	3,922	85
Worcester MA-CT	16	77	16	60	5,075	80	4,962	76
Columbia SC	15	84	14	82	5,530	76	4,769	78
McAllen TX	15	84	12	88	10,034	52	7,614	57
Provo-Orem UT	15	84	14	82	5,205	79	4,397	80
Tulsa OK	15	84	16	60	8,193	60	8,097	55
Sarasota-Bradenton FL	14	90	11	94	6,142	71	4,920	77
Tucson AZ	14	90	12	88	9,921	53	8,192	53
Bakersfield CA	13	94	11	94	4,451	85	3,854	87
Dayton OH	13	94	12	88	5,887	73	5,296	72
Cape Coral FL	12	97	10	98	6,121	72	4,966	75

Very Large Urban Areas — Over 3 million population.

Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.

Small Urban Areas — Less than 500,000 population.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Excess Fuel per Auto Commuter — Extra fuel consumed during the year divided by the number of people who commute in private vehicles in the urban area.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 4. Excess Fuel Consumption Due to Congestion, Continued

Urban Area	Excess Fuel Consumed per Commuter				Annual Excess Fuel Consumed (000)			
	2022		2021		2022		2021	
	Gallons	Rank	Gallons	Rank	Gallons	Rank	Gallons	Rank
Small Average (21 areas)	**16**		**15**		**3,625**		**3,165**	
Spokane WA	23	32	19	39	5,241	78	4,103	83
Laredo TX	22	40	19	39	4,464	84	3,886	86
Salem OR	22	40	19	39	3,066	92	2,561	94
Stockton CA	22	40	21	27	4,734	83	4,420	79
Eugene OR	20	54	16	60	3,428	90	2,751	91
Boulder CO	19	57	16	60	1,637	101	1,259	101
Anchorage AK	18	61	16	60	2,225	98	1,894	98
Boise ID	18	61	17	56	4,445	86	4,232	82
Corpus Christi TX	18	61	15	74	4,366	87	3,649	89
Madison WI	18	61	15	74	5,057	81	3,971	84
Poughkeepsie-Newburgh NY-NJ	17	70	16	60	3,291	91	3,086	90
Greensboro NC	16	77	14	82	3,015	93	2,651	92
Jackson MS	16	77	15	74	4,831	82	4,341	81
Pensacola FL-AL	16	77	17	56	3,510	89	3,674	88
Little Rock AR	15	84	12	88	9,419	55	7,578	58
Beaumont TX	14	90	12	88	1,699	100	1,412	100
Brownsville TX	13	94	12	88	2,254	97	2,074	97
Oxnard CA	11	98	11	94	2,371	96	2,198	96
Lancaster-Palmdale CA	9	99	8	100	1,918	99	1,709	99
Winston-Salem NC	9	99	10	98	2,576	95	2,604	93
Indio-Cathedral City CA	8	101	7	101	2,588	94	2,415	95
101 Area Average	**26**		**23**		**27,363**		**23,265**	
Remaining Areas Average	**9**		**9**		**186**		**1,330**	
All 494 Area Average	**21**		**19**		**6,697**		**5,813**	

Very Large Urban Areas — Over 3 million population.
Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.
Small Urban Areas — Less than 500,000 population.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Excess Fuel per Auto Commuter — Extra fuel consumed during the year divided by the number of people who commute in private vehicles in the urban area.

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 5. Annual Congestion Cost

Urban Area	Annual Congestion Cost per Commuter (2022 $)				Annual Congestion Cost (2022 $millions)			
	2022		2021		2022		2021	
	Dollars	Rank	Dollars	Rank	Dollars	Rank	Dollars	Rank
Very Large Average (15 areas)	2,028		1,780		7,736		6,548	
Los Angeles-Long Beach-Anaheim CA	3,214	1	2,839	1	24,103	1	20,720	1
San Francisco-Oakland CA	3,148	2	2,743	2	6,492	5	5,451	7
New York-Newark NY-NJ-CT	2,239	3	1,937	3	20,387	2	17,196	2
Atlanta GA	1,953	4	1,702	4	5,982	7	5,007	8
San Diego CA	1,927	5	1,615	5	3,718	15	3,020	15
Washington DC-VA-MD	1,903	6	1,470	12	4,854	9	3,568	12
Seattle WA	1,874	7	1,404	15	4,475	12	3,198	13
Miami FL	1,852	8	1,492	10	8,127	4	6,393	4
Chicago IL-IN	1,675	12	1,545	7	8,264	3	7,428	3
Boston MA-NH-RI	1,664	13	1,474	11	4,303	13	3,665	11
Houston TX	1,645	14	1,564	6	6,204	6	5,625	5
Philadelphia PA-NJ-DE-MD	1,528	18	1,521	9	4,653	11	4,449	9
Dallas-Fort Worth-Arlington TX	1,523	19	1,543	8	5,785	8	5,585	6
Phoenix-Mesa AZ	1,441	22	1,180	24	4,766	10	3,768	10
Detroit MI	1,277	32	1,058	36	3,932	14	3,146	14

Very Large Urban Areas — Over 3 million population.   Medium Urban Areas — Over 500,000 and less than 1 million
Large Urban Areas — Over 1 million and less than 3 million   population.
population.   Small Urban Areas — Less than 500,000 population.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Travel Time Index — The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Congestion Cost — The value of 2022 travel time delay (estimated at $23.12 per hour of person travel and $64.68 per hour of truck time) and excess fuel consumption (estimated using the state average cost per gallon for gasoline and diesel).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 5. Annual Congestion Cost, Continued

Urban Area	Annual Congestion Cost per Commuter (2022 $)				Annual Congestion Cost (2022 $millions)			
	2022		**2021**		**2022**		**2021**	
	Dollars	**Rank**	**Dollars**	**Rank**	**Dollars**	**Rank**	**Dollars**	**Rank**
Large Average (32 areas)	1,241		1,084		1,579		1,333	
San Jose CA	1,790	9	1,301	19	2,637	19	1,796	20
Nashville-Davidson TN	1,685	11	1,304	17	1,613	30	1,214	31
Portland OR-WA	1,616	15	1,366	16	2,082	22	1,691	24
Riverside-San Bernardino CA	1,559	16	1,452	13	2,908	16	2,673	16
Austin TX	1,533	17	1,429	14	1,792	27	1,585	27
Denver-Aurora CO	1,454	21	1,301	19	2,881	17	2,486	17
San Juan PR	1,419	24	1,300	21	1,894	25	1,725	23
Sacramento CA	1,403	25	1,188	23	1,972	24	1,593	26
Orlando FL	1,392	26	1,145	26	1,793	26	1,428	28
Columbus OH	1,316	29	1,118	31	1,270	36	1,035	38
Tampa-St. Petersburg FL	1,285	31	1,013	40	2,624	20	2,003	19
Cincinnati OH-KY-IN	1,257	33	1,129	28	1,419	33	1,229	30
Charlotte NC-SC	1,226	34	1,214	22	1,162	38	1,095	36
Jacksonville FL	1,217	35	1,128	29	1,067	42	953	40
Minneapolis-St. Paul MN-WI	1,208	36	993	43	2,701	18	2,133	18
Salt Lake City-West Valley City UT	1,169	37	1,113	32	896	47	811	44
Milwaukee WI	1,163	38	979	46	1,133	41	926	41
Kansas City MO-KS	1,156	39	956	49	1,434	32	1,138	35
St. Louis MO-IL	1,152	40	1,065	35	1,983	23	1,787	21
Baltimore MD	1,145	43	960	47	2,179	21	1,777	22
Cleveland OH	1,125	44	989	44	1,340	34	1,153	34
Las Vegas-Henderson NV	1,103	45	933	52	1,643	29	1,354	29
Pittsburgh PA	1,082	47	1,014	39	1,163	37	1,058	37
San Antonio TX	1,078	48	1,040	38	1,721	28	1,627	25
Indianapolis IN	1,067	49	1,041	37	1,275	35	1,197	32
Oklahoma City OK	1,026	51	937	51	1,159	39	1,033	39
Louisville-Jefferson County KY-IN	1,017	53	926	54	905	46	808	45
Memphis TN-MS-AR	926	61	812	61	906	45	775	47
Providence RI-MA	883	69	811	63	895	48	798	46
Raleigh NC	818	76	627	92	575	58	414	63
Virginia Beach VA	798	78	729	75	918	44	818	43
Richmond VA	746	84	708	82	582	57	528	54

Large Urban Areas — Over 1 million and less than 3 million population.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Congestion Cost — The value of 2022 travel time delay (estimated at $23.12 per hour of person travel and $64.68 per hour of truck time) and excess fuel consumption (estimated using the state average cost per gallon for gasoline and diesel).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 5. Annual Congestion Cost, Continued

Urban Area	Annual Congestion Cost per Commuter (2022 $)				Annual Congestion Cost (2022 $millions)			
	2022		**2021**		**2022**		**2021**	
	Dollars	**Rank**	**Dollars**	**Rank**	**Dollars**	**Rank**	**Dollars**	**Rank**
Medium Average (33 areas)	975		843		545		459	
Honolulu HI	1,741	10	1,125	30	1,051	43	673	49
Baton Rouge LA	1,458	20	1,302	18	755	51	670	50
New Orleans LA	1,422	23	1,145	26	1,504	31	1,184	33
Bridgeport-Stamford CT-NY	1,346	27	1,087	34	1,147	40	900	42
Charleston-North Charleston SC	1,324	28	1,090	33	665	52	532	53
Birmingham AL	1,291	30	1,157	25	780	49	681	48
Hartford CT	1,150	42	933	52	769	50	598	51
Colorado Springs CO	1,101	46	994	42	548	61	480	59
Albuquerque NM	1,065	50	938	50	508	64	432	62
New Haven CT	1,021	52	906	55	449	65	386	65
Buffalo NY	1,012	55	982	45	614	54	580	52
Omaha NE-IA	977	57	795	66	600	56	472	60
Toledo OH-MI	944	60	960	47	311	80	312	75
Knoxville TN	926	61	822	60	442	66	381	66
Fresno CA	917	63	746	72	518	63	413	64
El Paso TX-NM	903	64	812	61	564	60	501	57
McAllen TX	886	67	719	79	572	59	458	61
Rochester NY	841	72	788	67	384	71	352	69
Grand Rapids MI	822	74	690	83	436	67	356	68
Albany-Schenectady NY	819	75	773	68	375	73	343	71
Columbia SC	799	77	715	81	385	70	337	72
Akron OH	789	79	773	68	382	72	370	67
Worcester MA-CT	789	79	809	64	291	85	289	79
Tulsa OK	756	82	734	74	547	62	521	56
Bakersfield CA	748	83	643	88	297	84	252	84
Cape Coral FL	742	85	614	95	405	68	325	73
Tucson AZ	741	86	629	91	634	53	527	55
Springfield MA-CT	739	87	649	87	346	76	297	77
Allentown PA-NJ	714	90	725	78	359	75	351	70
Dayton OH	707	91	636	90	367	74	323	74
Sarasota-Bradenton FL	651	95	514	99	389	69	301	76
Provo-Orem UT	649	96	584	97	301	83	256	83
Wichita KS	641	97	05	96	306	82	285	80

Medium Urban Areas — Over 500,000 and less than 1 million population.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Congestion Cost — The value of 2022 travel time delay (estimated at $23.12 per hour of person travel and $64.68 per hour of truck time) and excess fuel consumption (estimated using the state average cost per gallon for gasoline and diesel).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 5. Annual Congestion Cost, Continued

Urban Area	Annual Congestion Cost per Commuter (2022 $)				Annual Congestion Cost (2022 $millions)			
	2022		**2021**		**2022**		**2021**	
	Dollars	**Rank**	**Dollars**	**Rank**	**Dollars**	**Rank**	**Dollars**	**Rank**
Small Average (21 areas)	**796**		**712**		**227**		**198**	
Anchorage AK	1,151	41	998	41	149	97	126	97
Little Rock AR	1,014	54	826	58	607	55	488	58
Stockton CA	993	56	881	56	330	77	285	80
Spokane WA	977	57	797	65	308	81	241	85
Eugene OR	945	59	755	71	204	92	161	93
Laredo TX	901	65	831	57	240	87	220	88
Oxnard CA	892	66	825	59	177	95	159	95
Salem OR	886	67	743	73	180	94	147	96
Madison WI	859	70	718	80	328	78	263	82
Boulder CO	856	71	679	84	103	100	79	101
Jackson MS	833	73	771	70	317	79	290	78
Corpus Christi TX	777	81	726	77	225	88	209	89
Greensboro NC	736	88	660	86	207	91	180	91
Boise ID	729	89	664	85	268	86	236	86
Beaumont TX	707	91	638	89	103	100	93	100
Pensacola FL-AL	689	93	728	76	217	89	226	87
Brownsville TX	663	94	616	94	123	99	113	99
Poughkeepsie-Newburgh NY-NJ	638	98	617	93	208	90	199	90
Indio-Cathedral City CA	574	99	560	98	166	96	160	94
Winston-Salem NC	523	100	508	100	185	93	176	92
Lancaster-Palmdale CA	471	101	436	101	131	98	116	98
101 Area Average	**1,561**		**1,366**		**1,875**		**1,586**	
Remaining Areas Average	**520**		**505**		**88**		**84**	
All 494 Area Average	**1,259**		**1,114**		**453**		**391**	

Very Large Urban Areas — Over 3 million population.
Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.
Small Urban Areas — Less than 500,000 population.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Congestion Cost — The value of 2022 travel time delay (estimated at $23.12 per hour of person travel and $64.68 per hour of truck time) and excess fuel consumption (estimated using the state average cost per gallon for gasoline and diesel).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 6. Excess Truck Travel Time and Congestion Cost

Urban Area	Annual Person-Hours of Truck Delay				Annual Truck Congestion Cost (2022 $millions)			
	2022		2021		2022		2021	
	Hours (000)	Rank	Hours (000)	Rank	Dollars	Rank	Dollars	Rank
Very Large Average (15 areas)	**12,729**		**10,436**		**832**		**684**	
New York-Newark NY-NJ-CT	34,668	1	24,070	2	2,231	1	1,566	2
Los Angeles-Long Beach-Anaheim CA	33,091	2	28,594	1	2,229	2	1,928	1
Chicago IL-IN	18,769	3	17,669	3	1,237	3	1,156	3
Houston TX	14,402	4	13,150	4	926	4	846	4
Dallas-Fort Worth-Arlington TX	13,979	5	11,132	5	898	5	715	5
Miami FL	12,444	6	9,650	6	803	6	627	6
Phoenix-Mesa AZ	9,341	8	7,672	9	611	7	507	8
Atlanta GA	9,427	7	7,812	8	608	8	506	9
Philadelphia PA-NJ-DE-MD	8,396	9	7,891	7	546	9	517	7
Seattle WA	7,129	11	5,287	13	468	11	345	14
San Francisco-Oakland CA	6,981	12	5,736	10	465	12	382	10
Washington DC-VA-MD	6,714	13	4,563	17	437	13	298	17
Boston MA-NH-RI	6,029	15	5,180	15	388	15	334	15
Detroit MI	5,597	16	4,766	16	369	17	311	16
San Diego CA	3,971	24	3,365	23	268	23	226	22

Very Large Urban Areas — Over 3 million population.
Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.
Small Urban Areas — Less than 500,000 population.

Yearly Delay per Auto Commuter — Extra travel time during the year.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Congestion Cost — The value of 2022 travel time delay (estimated at $23.12 per hour of person travel and $64.68 per hour of truck time) and excess fuel consumption (estimated using the state average cost per gallon for gasoline and diesel).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 6. Excess Truck Travel Time and Congestion Cost, Continued

Urban Area	Annual Person-Hours of Truck Delay				Annual Truck Congestion Cost (2022 $millions)			
	2022		**2021**		**2022**		**2021**	
	Hours (000)	Rank	Hours (000)	Rank	Dollars	Rank	Dollars	Rank
Large Average (32 areas)	**3,031**		**2,571**		**198**		**169**	
St. Louis MO-IL	6,204	14	5,611	11	403	14	363	11
Riverside-San Bernardino CA	5,540	17	5,195	14	374	16	350	13
Minneapolis-St. Paul MN-WI	4,793	18	3,742	19	311	18	243	20
Denver-Aurora CO	4,590	19	4,129	18	299	19	270	18
Tampa-St. Petersburg FL	4,391	20	3,236	25	286	20	213	24
Portland OR-WA	4,212	22	3,440	21	280	21	227	21
San Antonio TX	4,221	21	3,428	22	271	22	221	23
Indianapolis IN	3,956	25	3,741	20	262	24	246	19
Kansas City MO-KS	3,999	23	3,248	24	260	25	210	25
Austin TX	3,951	26	2,935	27	255	26	190	27
Baltimore MD	3,837	27	3,062	26	247	27	199	26
Las Vegas-Henderson NV	3,378	28	2,711	30	223	28	179	30
Cincinnati OH-KY-IN	3,279	29	2,908	28	215	29	190	27
Orlando FL	3,213	30	2,526	31	209	30	169	31
Nashville-Davidson TN	3,113	31	2,326	34	204	31	153	34
Salt Lake City-West Valley City UT	3,013	32	2,817	29	196	32	187	29
Sacramento CA	2,766	35	2,243	37	188	35	152	35
Columbus OH	2,643	36	,301	35	172	36	150	36
Oklahoma City OK	2,600	37	2,509	32	168	38	161	32
San Jose CA	2,482	40	1,774	43	168	38	120	43
Memphis TN-MS-AR	2,553	38	2,385	33	167	40	156	33
Louisville-Jefferson County KY-IN	2,451	41	2,165	38	160	41	140	39
Pittsburgh PA	2,234	42	2,108	40	146	42	139	40
San Juan PR	2,158	44	1,989	41	143	43	132	41
Milwaukee WI	2,183	43	1,773	44	142	44	116	44
Charlotte NC-SC	1,821	48	1,690	45	118	47	110	45
Jacksonville FL	1,826	47	1,499	48	118	47	97	48
Cleveland OH	1,754	49	1,565	47	116	49	103	47
Providence RI-MA	1,199	54	1,046	53	78	54	68	53
Virginia Beach VA	1,016	59	867	59	66	59	57	58
Richmond VA	823	67	727	66	53	68	47	66
Raleigh NC	790	70	578	75	52	70	38	76

Large Urban Areas — Over 1 million and less than 3 million population.

Yearly Delay per Auto Commuter — Extra travel time during the year.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Congestion Cost — The value of 2022 travel time delay (estimated at $23.12 per hour of person travel and $64.68 per hour of truck time) and excess fuel consumption (estimated using the state average cost per gallon for gasoline and diesel).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 6. Excess Truck Travel Time and Congestion Cost, Continued

Urban Area	Annual Person-Hours of Truck Delay				Annual Truck Congestion Cost (2022 $millions)			
	2022		2021		2022		2021	
	Hours (000)	Rank	Hours (000)	Rank	Hours (000)	Rank	Hours (000)	Rank
Medium Average (33 areas)	**1,276**		**1,025**		**84**		**67**	
New Orleans LA	7,604	10	5,490	12	492	10	357	12
Bridgeport-Stamford CT-NY	2,948	33	2,298	36	193	33	150	36
Honolulu HI	2,867	34	1,859	42	191	34	124	42
Baton Rouge LA	2,545	39	2,137	39	170	37	142	38
Hartford CT	1,919	46	1,458	49	126	46	95	49
Birmingham AL	1,661	50	1,391	50	107	50	90	50
El Paso TX-NM	1,561	51	789	61	100	51	51	62
Tucson AZ	1,405	52	1,111	52	93	52	74	51
McAllen TX	1,217	53	879	58	80	53	57	58
New Haven CT	1,172	55	963	56	76	55	63	57
Tulsa OK	1,170	56	1,129	51	76	55	73	52
Provo-Orem UT	1,093	57	962	57	72	57	64	56
Charleston-North Charleston SC	935	61	737	65	61	61	48	65
Fresno CA	894	62	742	64	60	62	50	63
Toledo OH-MI	891	63	1,004	54	59	63	66	55
Dayton OH	884	64	837	60	58	64	55	60
Albuquerque NM	861	65	715	67	56	65	47	66
Akron OH	818	68	767	63	54	66	50	63
Colorado Springs CO	829	66	710	68	54	66	46	68
Buffalo NY	806	69	789	61	53	68	52	61
Knoxville TN	770	71	666	71	50	71	43	71
Grand Rapids MI	732	73	609	72	49	72	40	72
Allentown PA-NJ	697	74	692	70	45	74	46	68
Bakersfield CA	659	76	574	76	44	75	39	73
Omaha NE-IA	681	75	549	79	44	75	35	79
Columbia SC	639	77	551	78	42	77	36	78
Albany-Schenectady NY	627	78	597	73	41	78	39	73
Cape Coral FL	610	80	485	82	40	79	32	82
Sarasota-Bradenton FL	614	79	436	85	40	79	29	85
Springfield MA-CT	564	82	498	81	37	82	33	80
Wichita KS	504	85	474	84	33	85	31	83
Worcester MA-CT	501	86	501	80	33	85	33	80
Rochester NY	444	89	420	88	29	89	27	88

Medium Urban Areas — Over 500,000 and less than 1 million population.

Yearly Delay — Extra travel time during the year.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Congestion Cost — The value of 2022 travel time delay (estimated at $23.12 per hour of person travel and $64.68 per hour of truck time) and excess fuel consumption (estimated using the state average cost per gallon for gasoline and diesel).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 6. Excess Truck Travel Time and Congestion Cost, Continued

Urban Area	Annual Person-Hours of Truck Delay				Annual Truck Congestion Cost (2022 $millions)			
	2022		2021		2022		2021	
	Hours (000)	Rank	Hours (000)	Rank	Dollars	Rank	Dollars	Rank
Small Average (21 areas)	**506**		**437**		**33**		**29**	
Little Rock AR	2011	45	1669	46	131	45	108	46
Stockton CA	1036	58	983	55	70	58	67	54
Laredo TX	968	60	707	69	62	60	45	70
Corpus Christi TX	751	72	597	73	49	72	39	73
Madison WI	610	80	572	77	40	79	37	77
Spokane WA	550	83	431	86	36	83	29	85
Jackson MS	531	84	482	83	35	84	31	83
Eugene OR	485	87	398	89	32	87	26	89
Poughkeepsie-Newburgh NY-NJ	459	88	430	87	30	88	28	87
Greensboro NC	424	90	361	90	28	90	24	90
Salem OR	406	91	301	94	27	91	20	94
Boise ID	362	92	343	92	24	92	23	91
Pensacola FL-AL	326	93	359	91	22	93	23	91
Beaumont TX	310	94	232	96	20	94	15	96
Indio-Cathedral City CA	290	95	317	93	20	94	21	93
Winston-Salem NC	288	96	283	95	19	96	19	95
Brownsville TX	240	97	201	97	16	97	13	97
Oxnard CA	185	98	165	98	13	98	11	98
Anchorage AK	165	99	140	99	11	99	9	99
Lancaster-Palmdale CA	131	100	123	100	9	100	8	100
Boulder CO	98	101	77	101	6	101	5	101
101 Area Average	**3,373**		**2,790**		**221**		**183**	
Remaining Areas Average	**186**		**177**		**12**		**12**	
All 494 Area Average	**838**		**711**		**55**		**47**	

Very Large Urban Areas — Over 3 million population.
Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.
Small Urban Areas — Less than 500,000 population.

Yearly Delay — Extra travel time during the year.

Excess Fuel Consumed — Increased fuel consumption due to travel in congested conditions rather than free-flow conditions.

Congestion Cost — The value of 2022 travel time delay (estimated at $23.12 per hour of person travel and $64.68 per hour of truck time) and excess fuel consumption (estimated using the state average cost per gallon for gasoline and diesel).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 7. Travel Time Index and Commuter Stress Index

Urban Area	Travel Time Index				Commuter Stress Index			
	2022		2021		2022		2021	
	Hours	Rank	Hours	Rank	Hours	Rank	Hours	Rank
Very Large Average (15 areas)	**1.31**		**1.23**		**1.37**		**1.26**	
Los Angeles-Long Beach-Anaheim CA	1.50	1	1.34	1	1.55	1	1.37	3
San Francisco-Oakland CA	1.48	2	1.32	2	1.50	2	1.41	1
Miami FL	1.34	6	1.23	9	1.44	4	1.27	9
New York-Newark NY-NJ-CT	1.32	8	1.23	9	1.37	9	1.27	9
Seattle WA	1.32	8	1.28	4	1.45	3	1.40	2
Chicago IL-IN	1.30	11	1.23	9	1.35	12	1.24	16
San Diego CA	1.29	13	1.16	28	1.33	18	1.18	29
Houston TX	1.27	16	1.22	12	1.31	20	1.24	16
Atlanta GA	1.25	19	1.17	24	1.34	15	1.22	20
Washington DC-VA-MD	1.25	19	1.14	34	1.34	15	1.19	25
Dallas-Fort Worth-Arlington TX	1.23	24	1.21	13	1.30	21	1.27	9
Philadelphia PA-NJ-DE-MD	1.23	24	1.17	24	1.25	29	1.18	29
Boston MA-NH-RI	1.22	28	1.16	28	1.24	33	1.17	35
Phoenix-Mesa AZ	1.22	28	1.18	22	1.27	24	1.25	14
Detroit MI	1.20	36	1.17	24	1.21	38	1.18	29

Very Large Urban Areas — Over 3 million population.

Large Urban Areas — Over 1 million and less than 3 million population.

Medium Urban Areas — Over 500,000 and less than 1 million population.

Small Urban Areas — Less than 500,000 population.

Travel Time Index — The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

Commuter Stress Index — The travel time index calculated for only the most congested direction in each peak period (modeling an individual commuter's experience).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 7. Travel Time Index and Commuter Stress Index, Continued

Urban Area	Travel Time Index				Commuter Stress Index			
	2022		2021		2022		2021	
	Hours	Rank	Hours	Rank	Hours	Rank	Hours	Rank
Large Average (32 areas)	**1.21**		**1.16**		**1.25**		**1.19**	
Riverside-San Bernardino CA	1.37	4	1.29	3	1.38	7	1.31	5
San Jose CA	1.35	5	1.20	15	1.39	6	1.21	23
Portland OR-WA	1.33	7	1.28	4	1.35	12	1.30	6
San Juan PR	1.30	11	1.26	7	1.35	12	1.30	6
Denver-Aurora CO	1.28	15	1.21	13	1.34	15	1.25	14
Austin TX	1.27	16	1.19	19	1.33	18	1.24	16
Sacramento CA	1.25	19	1.17	24	1.27	24	1.19	25
Minneapolis-St. Paul MN-WI	1.24	22	1.19	19	1.26	27	1.22	20
Tampa-St. Petersburg FL	1.24	22	1.14	34	1.29	22	1.18	29
Nashville-Davidson TN	1.23	24	1.13	50	1.29	22	1.18	29
Las Vegas-Henderson NV	1.22	28	1.18	22	1.27	24	1.23	19
Orlando FL	1.22	28	1.14	34	1.25	29	1.17	35
San Antonio TX	1.21	33	1.14	34	1.26	27	1.19	25
Baltimore MD	1.19	37	1.11	72	1.25	29	1.14	62
Jacksonville FL	1.19	37	1.14	34	1.22	37	1.16	45
Oklahoma City OK	1.19	37	1.16	28	1.20	43	1.17	35
Columbus OH	1.18	40	1.13	50	1.21	38	1.16	45
Louisville-Jefferson County KY-IN	1.18	40	1.16	28	1.20	43	1.17	35
Salt Lake City-West Valley City UT	1.18	40	1.14	34	1.19	45	1.16	45
Charlotte NC-SC	1.17	44	1.15	32	1.19	45	1.17	35
Indianapolis IN	1.17	44	1.12	62	1.18	50	1.14	62
Milwaukee WI	1.16	50	1.14	34	1.19	45	1.17	35
Pittsburgh PA	1.16	50	1.12	62	1.21	38	1.16	45
Cincinnati OH-KY-IN	1.15	54	1.13	50	1.18	50	1.16	45
Kansas City MO-KS	1.15	54	1.14	34	1.17	57	1.17	35
Providence RI-MA	1.15	54	1.14	34	1.17	57	1.18	29
St. Louis MO-IL	1.14	64	1.13	50	1.17	57	1.14	62
Virginia Beach VA	1.14	64	1.11	72	1.18	50	1.14	62
Cleveland OH	1.13	71	1.12	62	1.15	72	1.14	62
Memphis TN-MS-AR	1.13	71	1.11	72	1.14	77	1.12	85
Raleigh NC	1.13	71	1.07	100	1.17	57	1.09	98
Richmond VA	1.10	89	1.09	90	1.12	90	1.10	94

Large Urban Areas — Over 1 million and less than 3 million population.

Travel Time Index — The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

Commuter Stress Index — The travel time index calculated for only the most congested direction in each peak period (modeling an individual commuter's experience).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 7. Travel Time Index and Commuter Stress Index, Continued

Urban Area	Travel Time Index				Commuter Stress Index			
	2022		2021		2022		2021	
	Hours	Rank	Hours	Rank	Hours	Rank	Hours	Rank
Medium Average (33 areas)	**1.16**		**1.13**		**1.19**		**1.16**	
Honolulu HI	1.41	3	1.24	8	1.44	4	1.27	9
Bridgeport-Stamford CT-NY	1.32	8	1.28	4	1.38	7	1.32	4
New Orleans LA	1.29	13	1.20	15	1.36	11	1.26	13
Charleston-North Charleston SC	1.26	18	1.20	15	1.37	9	1.30	6
Baton Rouge LA	1.23	24	1.19	19	1.25	29	1.22	20
Omaha NE-IA	1.18	40	1.14	34	1.19	45	1.17	35
Colorado Springs CO	1.17	44	1.14	34	1.21	38	1.17	35
Fresno CA	1.17	44	1.13	50	1.18	50	1.14	62
Albuquerque NM	1.16	50	1.14	34	1.21	38	1.19	25
New Haven CT	1.16	50	1.14	34	1.18	50	1.16	45
Bakersfield CA	1.15	54	1.12	62	1.17	57	1.15	55
Cape Coral FL	1.15	54	1.11	72	1.16	65	1.13	75
Hartford CT	1.15	54	1.12	62	1.16	65	1.14	62
Wichita KS	1.15	54	1.14	34	1.17	57	1.16	45
Knoxville TN	1.14	64	1.12	62	1.16	65	1.14	62
McAllen TX	1.14	64	1.13	50	1.18	50	1.15	55
Tucson AZ	1.14	64	1.10	82	1.16	65	1.14	62
Birmingham AL	1.13	71	1.10	82	1.16	65	1.13	75
Buffalo NY	1.13	71	1.12	62	1.14	77	1.15	55
El Paso TX-NM	1.13	71	1.13	50	1.17	57	1.16	45
Grand Rapids MI	1.13	71	1.10	82	1.15	72	1.13	75
Sarasota-Bradenton FL	1.13	71	1.10	82	1.14	77	1.12	85
Akron OH	1.12	81	1.11	72	1.13	86	1.12	85
Albany-Schenectady NY	1.12	81	1.12	62	1.13	86	1.13	75
Allentown PA-NJ	1.12	81	1.10	82	1.15	72	1.13	75
Dayton OH	1.12	81	1.09	90	1.14	77	1.11	92
Provo-Orem UT	1.12	81	1.11	72	1.14	77	1.13	75
Tulsa OK	1.12	81	1.12	62	1.14	77	1.14	62
Rochester NY	1.11	88	1.11	72	1.13	86	1.13	75
Columbia SC	1.10	89	1.08	97	1.11	95	1.09	98
Toledo OH-MI	1.10	89	1.10	82	1.12	90	1.12	85
Worcester MA-CT	1.10	89	1.09	90	1.12	90	1.12	85
Springfield MA-CT	1.09	94	1.08	97	1.10	97	1.10	94

Medium Urban Areas — Over 500,000 and less than 1 million population.

Travel Time Index — The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

Commuter Stress Index — The travel time index calculated for only the most congested direction in each peak period (modeling an individual commuter's experience).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 7. Travel Time Index and Commuter Stress Index, Continued

Urban Area	Travel Time Index				Commuter Stress Index			
	2022		2021		2022		2021	
	Hours	Rank	Hours	Rank	Hours	Rank	Hours	Rank
Small Average (21 areas)	**1.13**		**1.12**		**1.15**		**1.13**	
Stockton CA	1.22	28	1.20	15	1.24	33	1.21	23
Boulder CO	1.21	33	1.13	50	1.23	36	1.14	62
Laredo TX	1.21	33	1.11	72	1.24	33	1.13	75
Madison WI	1.17	44	1.14	34	1.18	50	1.16	45
Oxnard CA	1.17	44	1.15	32	1.19	45	1.17	35
Boise ID	1.15	54	1.12	62	1.17	57	1.14	62
Little Rock AR	1.15	54	1.13	50	1.14	77	1.15	55
Spokane WA	1.15	54	1.13	50	1.16	65	1.15	55
Anchorage AK	1.14	64	1.11	72	1.13	86	1.10	94
Eugene OR	1.14	64	1.13	50	1.16	65	1.16	45
Pensacola FL-AL	1.13	71	1.14	34	1.15	72	1.15	55
Salem OR	1.13	71	1.10	82	1.15	72	1.13	75
Greensboro NC	1.12	81	1.11	72	1.14	77	1.13	75
Jackson MS	1.10	89	1.09	90	1.09	100	1.08	100
Brownsville TX	1.09	94	1.10	82	1.14	77	1.14	62
Corpus Christi TX	1.09	94	1.13	50	1.12	90	1.15	55
Beaumont TX	1.08	97	1.09	90	1.12	90	1.12	85
Indio-Cathedral City CA	1.08	97	1.08	97	1.10	97	1.10	94
Lancaster-Palmdale CA	1.08	97	1.09	90	1.10	97	1.12	85
Poughkeepsie-Newburgh NY-NJ	1.08	97	1.09	90	1.11	95	1.11	92
Winston-Salem NC	1.07	101	1.07	100	1.08	101	1.08	100
101 Area Average	**1.25**		**1.19**		**1.29**		**1.22**	
Remaining Areas Average	**1.11**		**1.10**		**1.13**		**1.12**	
All 494 Area Average	**1.21**		**1.16**		**1.24**		**1.19**	

Very Large Urban Areas — Over 3 million population.
Large Urban Areas — Over 1 million and less than 3 million population.
Medium Urban Areas — Over 500,000 and less than 1 million population.
Small Urban Areas — Less than 500,000 population.

Travel Time Index — The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.

Commuter Stress Index — The travel time index calculated for only the most congested direction in each peak period (modeling an individual commuter's experience).

Note: Please do not place too much emphasis on small differences in the rankings. There may be little difference in congestion between areas ranked (for example) 6th and 12th. The actual measure values should also be examined. The best congestion comparisons are made between similar urban areas.

Table 8. Excess Travel Time and Congestion Cost per Auto Commuter

Urban Area	Annual Delay per Auto Commuter (Person-Hours)		Annual Congestion Cost per Auto Commuter (2022 $)	
	2022	2021	2022	2021
Aberdeen-Bel Air S-Bel Air N MD	25	21	599	492
Abilene TX	20	17	523	431
Aguadilla-Isabela-San Sebastián PR	17	17	462	456
Albany GA	14	13	336	312
Albany OR	9	9	236	248
Alexandria LA	32	28	815	728
Alton IL-MO	2	1	—	—
Altoona PA	15	16	339	376
Amarillo TX	21	15	544	382
Ames IA	7	6	163	152
Anderson IN	14	15	332	355
Anderson SC	16	14	369	334
Ann Arbor MI	18	14	422	340
Anniston-Oxford AL	17	19	382	422
Antioch CA	25	21	582	499
Appleton WI	18	17	425	400
Arecibo PR	29	30	747	789
Arroyo Grande-Grover Beach CA	18	19	—	—
Asheville NC	34	33	789	785
Athens-Clarke County GA	29	27	658	646
Atlantic City NJ	25	23	561	533
Auburn AL	28	28	640	648
Augusta-Richmond County GA-SC	28	25	629	565
Avondale-Goodyear AZ	38	31	964	771
Bangor ME	23	22	522	522
Barnstable Town MA	23	20	544	483
Battle Creek MI	15	14	401	397
Bay City MI	16	14	351	327
Beckley WV	14	14	344	338
Bellingham WA	23	20	557	481
Beloit WI-IL	8	6	177	150
Bend OR	21	22	510	529
Benton Harbor-St. Joseph-Fair Plain MI	13	12	296	283
Billings MT	18	21	420	497
Binghamton NY-PA	19	19	485	501
Bismarck ND	12	12	278	270
Blacksburg VA	14	15	304	351
Bloomington IN	13	12	316	296
Bloomington-Normal IL	9	8	213	189
Bloomsburg-Berwick PA	9	9	237	243
Bonita Springs FL	23	22	540	520
Bowling Green KY	32	32	769	790
Bremerton WA	23	18	531	431
Bristol TN-VA	25	29	636	764
Brunswick GA	19	20	447	487
Burlington NC	16	17	370	387
Burlington VT	27	26	637	635
Camarillo CA	40	35	945	828
Canton OH	19	22	469	539
Cape Girardeau MO-IL	17	18	376	415

Table 8. Excess Travel Time and Congestion Cost per Auto Commuter, Continued

Urban Area	Annual Delay per Auto Commuter (Person-Hours)		Annual Congestion Cost per Auto Commuter (2022 $)	
	2022	2021	2022	2021
Carbondale IL	9	10	195	222
Carson City NV	12	11	311	273
Cartersville GA	24	24	578	580
Casa Grande AZ	8	7	183	167
Casper WY	16	17	385	415
Cedar Rapids IA	13	15	292	355
Chambersburg PA	8	10	206	279
Champaign IL	10	10	230	253
Charleston WV	25	23	663	601
Charlottesville VA	37	32	843	743
Chattanooga TN-GA	32	32	739	765
Cheyenne WY	22	22	571	600
Chico CA	15	15	370	365
Clarksville TN-KY	22	20	519	495
Cleveland TN	20	22	473	538
Coeur d'Alene ID	25	20	572	459
College Station-Bryan TX	36	28	855	665
Columbia MO	25	23	623	622
Columbus GA-AL	17	19	381	441
Columbus IN	12	14	339	383
Concord CA	39	30	898	690
Concord NC	16	15	381	351
Conroe-The Woodlands TX	44	36	1065	884
Conway AR	25	29	607	700
Corvallis OR	9	9	227	221
Cumberland MD-WV-PA	30	30	723	736
Dalton GA	19	22	422	500
Danbury CT-NY	24	22	577	520
Danville IL	8	9	201	238
Daphne-Fairhope AL	20	26	428	576
Davenport IA-IL	15	16	346	379
Davis CA	32	30	752	703
DeKalb IL	7	8	156	183
Decatur AL	25	24	606	590
Decatur IL	8	9	188	211
Delano CA	12	14	312	358
Deltona FL	14	14	331	338
Denton-Lewisville TX	30	25	718	591
Des Moines IA	13	14	318	345
Dothan AL	28	30	656	738
Dover DE	20	19	472	452
Dover-Rochester NH-ME	17	17	410	413
Dubuque IA-IL	13	12	323	300
Duluth MN-WI	19	16	455	381
Durham NC	34	29	763	678
East Stroudsburg PA-NJ	15	14	376	347
Eau Claire WI	15	12	366	287
El Centro-Calexico CA	12	12	293	312
El Paso de Robles-Atascadero CA	34	40	887	1042
Elizabethtown-Radcliff KY	14	14	333	329

Table 8. Excess Travel Time and Congestion Cost per Auto Commuter, Continued

Urban Area	Annual Delay per Auto Commuter (Person-Hours)		Annual Congestion Cost per Auto Commuter (2022 $)	
	2022	2021	2022	2021
Elkhart IN-MI	13	16	356	448
Elmira NY	14	16	344	394
Erie PA	16	16	371	388
Evansville IN-KY	13	14	321	354
Fairbanks AK	15	15	388	370
Fairfield CA	32	32	731	752
Fajardo PR	24	16	518	353
Fargo ND-MN	12	11	260	245
Farmington NM	9	9	228	219
Fayetteville NC	22	22	495	509
Fayetteville-Springdale-Rogers AR-MO	33	30	766	711
Flagstaff AZ	20	18	542	482
Flint MI	13	17	301	398
Florence AL	22	26	499	590
Florence SC	25	23	588	557
Florida-Imbery-Barceloneta PR	15	13	345	301
Fond du Lac WI	10	9	231	212
Fort Collins CO	25	25	569	583
Fort Smith AR-OK	24	27	563	645
Fort Walton Beach-Navarre-Wright FL	23	27	532	620
Fort Wayne IN	14	15	345	360
Frederick MD	28	30	654	727
Fredericksburg VA	31	36	744	875
Gadsden AL	26	31	635	765
Gainesville FL	25	22	585	536
Gainesville GA	25	23	586	558
Gastonia NC-SC	21	18	491	427
Gilroy-Morgan Hill CA	36	30	857	713
Glens Falls NY	21	20	492	477
Goldsboro NC	16	17	378	407
Grand Forks ND-MN	17	15	400	343
Grand Island NE	7	6	143	132
Grand Junction CO	13	14	283	310
Grants Pass OR	15	16	375	417
Great Falls MT	12	16	270	385
Greeley CO	23	28	527	668
Green Bay WI	18	14	420	346
Greenville NC	22	20	507	461
Greenville SC	29	27	684	639
Guayama PR	12	12	240	242
Gulfport MS	21	18	478	412
Hagerstown MD-WV-PA	17	20	439	537
Hammond LA	18	21	412	483
Hanford CA	12	11	269	248
Hanover PA	14	15	355	390
Harlingen TX	10	9	254	234
Harrisburg PA	38	40	930	1000
Harrisonburg VA	20	22	472	533
Hattiesburg MS	26	22	596	526
Hazleton PA	19	21	476	554

Table 8. Excess Travel Time and Congestion Cost per Auto Commuter, Continued

Urban Area	Annual Delay per Auto Commuter (Person-Hours)		Annual Congestion Cost per Auto Commuter (2022 $)	
	2022	2021	2022	2021
Hemet CA	8	8	206	193
Hickory NC	16	20	367	476
High Point NC	11	11	266	278
Hilton Head Island SC	23	21	547	521
Hinesville GA	9	10	206	243
Holland MI	15	14	363	335
Homosassa Spr-Beverly Hills-Citrus Spr FL	15	16	338	372
Hot Springs AR	26	23	574	522
Houma LA	17	16	435	407
Huntington WV-KY-OH	14	17	325	409
Huntsville AL	26	26	588	587
Idaho Falls ID	14	12	333	291
Iowa City IA	15	18	345	450
Ithaca NY	19	17	462	424
Jackson MI	17	18	405	435
Jackson TN	16	17	410	437
Jacksonville NC	15	16	344	367
Janesville WI	16	15	414	388
Jefferson City MO	24	27	576	638
Johnson City TN	17	17	407	399
Johnstown PA	12	14	279	350
Jonesboro AR	27	26	612	584
Joplin MO	19	22	456	534
Juana Díaz PR	19	14	195	147
Kahului HI	20	17	517	427
Kailua (Honolulu County)-Kaneohe HI	18	15	477	389
Kalamazoo MI	15	16	379	397
Kankakee IL	13	15	325	377
Kennewick-Pasco WA	14	11	335	276
Kenosha WI-IL	28	21	753	585
Killeen TX	11	11	282	263
Kingsport TN-VA	17	18	387	435
Kingston NY	20	22	455	529
Kissimmee FL	31	26	742	641
Kokomo IN	7	7	176	173
La Crosse WI-MN	17	15	267	230
Lady Lake-The Villages FL	12	12	264	260
Lafayette IN	15	15	362	382
Lafayette LA	32	31	820	821
Lafayette-Louisville-Erie CO	14	13	316	291
Lake Charles LA	42	47	1174	1321
Lake Havasu City AZ	4	3	103	87
Lake Jackson-Angleton TX	15	15	378	378
Lakeland FL	17	16	423	412
Lancaster PA	20	20	483	486
Lansing MI	16	14	380	347
Las Cruces NM	16	13	398	330
Lawrence KS	11	13	269	306
Lawton OK	6	7	143	171
Lebanon PA	9	9	208	223

Urban Area	Annual Delay per Auto Commuter (Person-Hours)		Annual Congestion Cost per Auto Commuter (2022 $)	
	2022	2021	2022	2021
Leesburg-Eustis-Tavares FL	12	14	296	341
Leominster-Fitchburg MA	17	17	392	408
Lewiston ID-WA	8	6	189	158
Lewiston ME	17	15	406	370
Lexington Park-Cal-Ches Ranch Est MD	21	24	490	558
Lexington-Fayette KY	34	30	810	709
Lima OH	12	14	315	402
Lincoln NE	17	14	408	344
Livermore CA	60	59	1383	1373
Lodi CA	36	40	952	1040
Logan UT	10	9	261	244
Lompoc CA	7	6	154	142
Longmont CO	25	23	581	560
Longview TX	33	27	785	648
Longview WA-OR	22	20	545	495
Lorain-Elyria OH	12	15	291	366
Los Lunas NM	7	6	176	164
Lubbock TX	21	17	515	406
Lynchburg VA	23	25	528	594
Macon GA	23	27	509	623
Madera CA	19	16	524	441
Manchester NH	22	25	535	607
Mandeville-Covington LA	43	42	1042	1028
Manhattan KS	10	12	217	254
Mankato MN	14	16	358	434
Mansfield OH	15	17	404	443
Manteca CA	40	40	1021	1043
Marysville WA	24	22	597	546
Mauldin-Simpsonville SC	34	29	808	691
Mayaguez PR	52	49	1329	1269
McKinney TX	28	18	714	457
Medford OR	18	17	451	443
Merced CA	22	18	598	483
Michigan City-La Porte IN-MI	8	10	196	231
Middletown OH	13	16	334	414
Midland MI	10	13	238	310
Midland TX	24	22	578	525
Mission Viejo-Lake Forest-San Clem CA	31	27	726	629
Missoula MT	23	25	534	585
Mobile AL	32	35	753	828
Modesto CA	24	23	607	569
Monessen-California PA	17	18	408	440
Monroe LA	26	23	710	639
Monroe MI	11	14	291	382
Montgomery AL	29	26	699	641
Morgantown WV	15	15	360	379
Morristown TN	19	20	457	502
Mount Vernon WA	25	22	596	532
Muncie IN	10	12	235	267
Murrieta-Temecula-Menifee CA	32	25	757	590

Table 8. Excess Travel Time and Congestion Cost per Auto Commuter, Continued

Urban Area	Annual Delay per Auto Commuter (Person-Hours)		Annual Congestion Cost per Auto Commuter (2022 $)	
	2022	**2021**	**2022**	**2021**
Muskegon MI	14	13	321	303
Myrtle Beach-Socastee SC-NC	34	31	776	733
Nampa ID	17	14	397	317
Napa CA	40	34	956	811
Nashua NH-MA	16	17	401	427
New Bedford MA	17	18	397	435
New Bern NC	12	12	279	301
Newark OH	13	13	277	294
Norman OK	42	41	1041	998
North Port-Port Charlotte FL	15	13	349	311
Norwich-New London CT-RI	25	26	597	638
Ocala FL	26	28	614	677
Odessa TX	34	32	834	783
Ogden-Layton UT	19	18	520	484
Olympia-Lacey WA	22	19	544	476
Oshkosh WI	12	10	294	246
Owensboro KY	12	14	310	357
Palm Bay-Melbourne FL	18	20	426	471
Palm Coast-Daytona Bch-Port Orange FL	18	18	446	444
Panama City FL	29	33	660	772
Parkersburg WV-OH	12	13	271	310
Pascagoula MS	13	12	310	283
Peoria IL	12	10	280	260
Petaluma CA	29	31	666	702
Pine Bluff AR	10	11	257	280
Pittsfield MA	12	12	289	298
Pocatello ID	11	10	266	245
Ponce PR	23	22	670	626
Port Arthur TX	18	17	453	413
Port Huron MI	13	14	307	345
Port St. Lucie FL	20	19	487	461
Porterville CA	6	5	127	120
Portland ME	23	20	527	484
Portsmouth NH-ME	25	27	592	653
Pottstown PA	12	15	291	362
Prescott Valley-Prescott AZ	23	21	568	538
Pueblo CO	30	29	718	701
Racine WI	17	14	421	373
Rapid City SD	21	21	498	513
Reading PA	23	25	532	601
Redding CA	17	17	430	443
Reno NV-CA	34	29	902	745
Roanoke VA	18	21	438	504
Rochester MN	25	21	619	524
Rock Hill SC	20	18	485	447
Rockford IL	13	13	330	346
Rocky Mount NC	15	16	343	384
Rome GA	20	21	476	514
Round Lake Bch-McHenry-Grayslake IL-WI	1	1	24	21
Saginaw MI	14	18	339	430

Table 8. Excess Travel Time and Congestion Cost per Auto Commuter, Continued

Urban Area	Annual Delay per Auto Commuter (Person-Hours)		Annual Congestion Cost per Auto Commuter (2022 $)	
	2022	**2021**	**2022**	**2021**
Salinas CA	25	24	628	589
Salisbury MD-DE	17	18	406	451
San Angelo TX	17	13	410	319
San German-Cabo Rojo-Sabana Grande PR	13	12	359	323
San Luis Obispo CA	14	14	355	345
San Marcos TX	22	13	577	356
Santa Barbara CA	55	54	1369	1331
Santa Clarita CA	30	24	756	602
Santa Cruz CA	41	35	939	815
Santa Fe NM	28	22	667	527
Santa Maria CA	12	13	301	319
Santa Rosa CA	41	38	968	897
Saratoga Springs NY	20	18	480	447
Savannah GA	34	29	777	659
Scranton PA	16	17	380	430
Seaside-Monterey CA	37	29	862	677
Sebastian-Vero Bch S-Florida Ridge FL	12	11	278	275
Sebring-Avon Park FL	10	9	237	220
Sheboygan WI	8	7	192	160
Sherman TX	13	11	319	268
Shreveport LA	32	32	911	933
Sierra Vista AZ	6	5	153	131
Simi Valley CA	18	21	437	509
Sioux City IA-NE-SD	14	14	322	319
Sioux Falls SD	17	18	409	428
Slidell LA	21	19	613	574
South Bend IN-MI	13	14	300	341
South Lyon-Howell MI	19	19	503	488
Spartanburg SC	23	20	569	504
Spring Hill FL	10	9	220	213
Springfield IL	14	15	329	379
Springfield MO	33	33	795	809
Springfield OH	8	10	213	265
St. Augustine FL	21	22	487	526
St. Cloud MN	14	16	342	393
St. George UT	19	23	469	577
St. Joseph MO-KS	15	18	375	471
State College PA	9	8	225	200
Staunton-Waynesboro VA	11	11	242	265
Sumter SC	16	14	391	351
Syracuse NY	17	19	406	466
Tallahassee FL	28	27	670	654
Temple TX	28	23	707	565
Terre Haute IN	16	19	490	575
Texarkana TX-AR	14	13	348	330
Texas City TX	15	14	380	339
Thousand Oaks CA	52	51	1204	1188
Titusville FL	10	10	270	252
Topeka KS	19	22	449	540
Tracy CA	27	25	708	677

Urban Area	Annual Delay per Auto Commuter (Person-Hours)		Annual Congestion Cost per Auto Commuter (2022 $)	
	2022	2021	2022	2021
Trenton NJ	25	22	601	542
Turlock CA	24	27	638	702
Tuscaloosa AL	27	26	619	626
Twin Rivers-Hightstown NJ	24	22	573	521
Tyler TX	32	25	801	615
Uniontown-Connellsville PA	14	17	329	404
Utica NY	18	19	431	463
Vacaville CA	25	23	611	568
Valdosta GA	21	22	475	505
Vallejo CA	44	44	1052	1059
Victoria TX	25	21	631	540
Victorville-Hesperia CA	13	15	332	375
Villas NJ	19	18	417	410
Vineland NJ	11	11	278	272
Visalia CA	14	17	344	400
Waco TX	22	24	537	619
Waldorf MD	23	22	528	520
Walla Walla-WA-OR	8	7	187	166
Warner Robins GA	15	16	351	380
Waterbury CT	26	27	643	684
Waterloo IA	7	8	194	219
Watertown NY	9	12	223	288
Watsonville CA	17	16	396	380
Wausau WI	18	14	456	358
Weirton-Steubenville WV-OH-PA	20	21	508	538
Wenatchee WA	20	17	518	435
West Bend WI	8	7	195	174
Westminster-Eldersburg MD	15	17	353	420
Wheeling WV-OH	37	37	953	974
Wichita Falls TX	11	11	288	273
Williamsburg VA	14	16	316	360
Williamsport PA	21	26	528	657
Wilmington NC	28	21	613	465
Winchester VA	22	25	572	672
Winter Haven FL	17	16	417	386
Woodland CA	7	9	171	214
Yakima WA	16	13	404	327
Yauco PR	13	9	281	210
York PA	20	20	500	508
Youngstown OH-PA	14	17	321	392
Yuba City CA	19	21	451	491
Yuma AZ-CA	15	13	395	349
Zephyrhills FL	20	17	476	395

Note: A dash indicates the value rounds to zero.

Yearly Delay — Extra travel time during the year.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Congestion Cost — The value of 2022 travel time delay (estimated at $23.12 per hour of person travel and $64.68 per hour of truck time) and excess fuel consumption (estimated using the state average cost per gallon for gasoline and diesel).

Table 9. Urban Area Excess Travel Time and Congestion Cost

Urban Area	Annual Person-Hours of Delay (000)		Annual Congestion Cost (2022 $millions)	
	2022	2021	2022	2021
Aberdeen-Bel Air S-Bel Air N MD	5760	4596	153	122
Abilene TX	2600	2111	74	59
Aguadilla-Isabela-San Sebastián PR	5085	4858	137	133
Albany GA	1450	1304	38	35
Albany OR	1028	1061	29	30
Alexandria LA	2863	2483	83	73
Alton IL-MO	10	5	—	—
Altoona PA	1178	1261	30	33
Amarillo TX	4800	3395	134	93
Ames IA	816	745	21	19
Anderson IN	1284	1336	35	37
Anderson SC	1342	1190	36	32
Ann Arbor MI	5603	4449	148	117
Anniston-Oxford AL	1448	1554	37	41
Antioch CA	7019	5869	183	154
Appleton WI	4141	3841	110	103
Arecibo PR	3877	3996	102	107
Arroyo Grande-Grover Beach CA	1875	1910	52	54
Asheville NC	10426	9830	270	262
Athens-Clarke County GA	4154	3898	108	103
Atlantic City NJ	5823	5352	151	142
Auburn AL	2442	2390	63	63
Augusta-Richmond County GA-SC	8960	7762	230	204
Avondale-Goodyear AZ	11461	8724	322	246
Bangor ME	1314	1276	34	34
Barnstable Town MA	5919	5038	158	137
Battle Creek MI	1281	1219	36	35
Bay City MI	1098	1005	28	26
Beckley WV	1347	1264	38	37
Bellingham WA	2889	2437	77	65
Beloit WI-IL	497	412	13	11
Bend OR	2330	2320	65	64
Benton Harbor-St. Joseph-Fair Plain MI	702	664	19	18
Billings MT	2269	2631	60	70
Binghamton NY-PA	3321	3294	88	90
Bismarck ND	1157	1104	30	28
Blacksburg VA	1249	1381	33	37
Bloomington IN	1498	1381	41	38
Bloomington-Normal IL	1252	1081	33	29
Bloomsburg-Berwick PA	675	659	18	18
Bonita Springs FL	8120	7540	209	198
Bowling Green KY	2738	2759	75	76
Bremerton WA	4581	3647	121	97
Bristol TN-VA	1852	2142	53	63
Brunswick GA	1323	1402	35	37
Burlington NC	2164	2162	57	58
Burlington VT	3233	3103	85	83
Camarillo CA	3076	2613	79	67
Canton OH	5470	6153	149	169
Cape Girardeau MO-IL	1124	1203	30	33

Table 9. Urban Area Excess Travel Time and Congestion Cost, Continued

Urban Area	Annual Person-Hours of Delay (000)		Annual Congestion Cost (2022 $millions)	
	2022	2021	2022	2021
Carbondale IL	593	659	16	18
Carson City NV	1140	979	32	28
Cartersville GA	1578	1536	42	41
Casa Grande AZ	657	587	18	16
Casper WY	1164	1238	31	33
Cedar Rapids IA	2462	2883	65	77
Chambersburg PA	851	1069	24	31
Champaign IL	1443	1546	39	42
Charleston WV	3829	3406	115	103
Charlottesville VA	3848	3288	97	84
Chattanooga TN-GA	12602	12560	327	334
Cheyenne WY	1786	1812	50	52
Chico CA	1588	1551	43	42
Clarksville TN-KY	3927	3613	103	96
Cleveland TN	1487	1649	39	44
Coeur d'Alene ID	2928	2274	77	60
College Station-Bryan TX	6318	4815	167	127
Columbia MO	3429	3161	95	93
Columbus GA-AL	4519	5084	117	134
Columbus IN	1066	1192	34	38
Concord CA	32147	24248	841	635
Concord NC	3619	3231	95	86
Conroe-The Woodlands TX	12016	9804	323	263
Conway AR	1807	2031	50	57
Corvallis OR	717	694	20	19
Cumberland MD-WV-PA	1924	1910	54	55
Dalton GA	1584	1827	41	48
Danbury CT-NY	4174	3645	111	99
Danville IL	453	528	13	15
Daphne-Fairhope AL	1875	2439	48	64
Davenport IA-IL	4185	4436	113	122
Davis CA	2468	2279	66	61
DeKalb IL	473	550	12	14
Decatur AL	1926	1803	52	50
Decatur IL	792	855	21	23
Delano CA	857	958	26	29
Deltona FL	2936	2877	76	76
Denton-Lewisville TX	11527	9373	310	250
Des Moines IA	6591	6917	176	187
Dothan AL	2371	2582	62	69
Dover DE	2557	2332	66	62
Dover-Rochester NH-ME	1566	1532	41	41
Dubuque IA-IL	1093	999	29	27
Duluth MN-WI	2405	1987	63	52
Durham NC	12316	10532	312	273
East Stroudsburg PA-NJ	2420	2182	70	63
Eau Claire WI	1673	1271	44	34
El Centro-Calexico CA	1407	1481	38	40
El Paso de Robles-Atascadero CA	2480	2867	70	82
Elizabethtown-Radcliff KY	1322	1267	35	34

Table 9. Urban Area Excess Travel Time and Congestion Cost, Continued

Urban Area	Annual Person-Hours of Delay (000)		Annual Congestion Cost (2022 $millions)	
	2022	**2021**	**2022**	**2021**
Elkhart IN-MI	2109	2457	59	73
Elmira NY	1034	1139	28	32
Erie PA	3168	3203	83	86
Evansville IN-KY	3330	3618	92	100
Fairbanks AK	1062	1020	29	27
Fairfield CA	6142	6211	159	162
Fajardo PR	1962	1331	51	35
Fargo ND-MN	2225	2043	57	53
Farmington NM	737	694	20	19
Fayetteville NC	7325	7286	187	190
Fayetteville-Springdale-Rogers AR-MO	10773	9651	283	256
Flagstaff AZ	1759	1522	51	45
Flint MI	4700	6115	122	160
Florence AL	1827	2112	48	56
Florence SC	2459	2272	66	61
Florida-Imbery-Barceloneta PR	1069	912	28	24
Fond du Lac WI	742	672	20	18
Fort Collins CO	7223	7139	186	189
Fort Smith AR-OK	3112	3448	81	92
Fort Walton Beach-Navarre-Wright FL	5249	5862	135	154
Fort Wayne IN	4664	4748	129	132
Frederick MD	4336	4496	115	121
Fredericksburg VA	5369	6111	141	163
Gadsden AL	1719	1987	47	56
Gainesville FL	5231	4538	138	123
Gainesville GA	3545	3268	93	87
Gastonia NC-SC	3822	3174	100	85
Gilroy-Morgan Hill CA	3989	3271	105	87
Glens Falls NY	1497	1402	39	38
Goldsboro NC	1068	1125	28	30
Grand Forks ND-MN	1709	1432	45	38
Grand Island NE	535	482	14	12
Grand Junction CO	1724	1830	45	48
Grants Pass OR	1331	1476	38	41
Great Falls MT	834	1153	22	31
Greeley CO	2798	3452	72	91
Green Bay WI	3960	3172	105	86
Greenville NC	2916	2575	75	67
Greenville SC	12988	11743	340	312
Guayama PR	906	900	24	24
Gulfport MS	4819	4021	123	105
Hagerstown MD-WV-PA	3563	4130	102	121
Hammond LA	1382	1524	41	46
Hanford CA	1100	1007	31	28
Hanover PA	1353	1398	37	38
Harlingen TX	2017	1824	55	50
Harrisburg PA	12455	12869	343	363
Harrisonburg VA	1406	1515	37	41
Hattiesburg MS	2194	1874	57	50
Hazleton PA	919	1008	26	29

Table 9. Urban Area Excess Travel Time and Congestion Cost, Continued

Urban Area	Annual Person-Hours of Delay (000)		Annual Congestion Cost (2022 $millions)	
	2022	2021	2022	2021
Hemet CA	1294	1212	36	33
Hickory NC	3615	4525	95	122
High Point NC	2197	2217	57	58
Hilton Head Island SC	2138	1984	54	51
Hinesville GA	571	655	15	17
Holland MI	1712	1574	46	42
Homosassa Spr-Beverly Hills-Citrus Spr FL	1497	1569	40	43
Hot Springs AR	1762	1558	44	40
Houma LA	2636	2393	74	68
Huntington WV-KY-OH	2839	3412	75	94
Huntsville AL	9912	9468	251	244
Idaho Falls ID	1816	1532	48	41
Iowa City IA	1805	2182	49	63
Ithaca NY	1127	1002	29	27
Jackson MI	1526	1616	42	44
Jackson TN	1509	1569	40	42
Jacksonville NC	1875	1943	48	51
Janesville WI	1244	1153	34	31
Jefferson City MO	1679	1839	45	49
Johnson City TN	2526	2409	66	64
Johnstown PA	771	943	20	25
Jonesboro AR	2052	1920	54	51
Joplin MO	1611	1814	43	50
Juana Díaz PR	790	584	21	15
Kahului HI	1717	1423	47	38
Kailua (Honolulu County)-Kaneohe HI	2402	1914	68	54
Kalamazoo MI	3400	3518	91	94
Kankakee IL	1107	1281	31	36
Kennewick-Pasco WA	3419	2742	96	78
Kenosha WI-IL	3664	2734	105	81
Killeen TX	2971	2704	80	72
Kingsport TN-VA	1952	2132	51	56
Kingston NY	1784	1988	46	53
Kissimmee FL	14187	11464	373	310
Kokomo IN	681	658	18	17
La Crosse WI-MN	1890	1643	51	44
Lady Lake-The Villages FL	1482	1427	39	38
Lafayette IN	2293	2309	65	68
Lafayette LA	8021	7896	234	232
Lafayette-Louisville-Erie CO	1387	1214	35	31
Lake Charles LA	6742	7494	216	240
Lake Havasu City AZ	339	275	9	8
Lake Jackson-Angleton TX	1438	1450	41	40
Lakeland FL	5708	5396	154	148
Lancaster PA	8479	8158	227	222
Lansing MI	5150	4675	136	123
Las Cruces NM	2460	1993	66	54
Lawrence KS	1305	1447	34	38
Lawton OK	873	1020	23	27
Lebanon PA	741	773	19	21

Table 9. Urban Area Excess Travel Time and Congestion Cost, Continued

Urban Area	Annual Person-Hours of Delay (000)		Annual Congestion Cost (2022 $millions)	
	2022	**2021**	**2022**	**2021**
Leesburg-Eustis-Tavares FL	2074	2275	55	61
Leominster-Fitchburg MA	2012	2020	52	54
Lewiston ID-WA	526	432	14	12
Lewiston ME	1182	1042	31	28
Lexington Park-Cal-Ches Ranch Est MD	1084	1191	28	31
Lexington-Fayette KY	10295	8755	271	234
Lima OH	961	1173	27	34
Lincoln NE	5197	4261	134	111
Livermore CA	5064	4941	131	129
Lodi CA	2637	2852	77	83
Logan UT	1049	958	31	28
Lompoc CA	427	393	12	11
Longmont CO	2563	2403	65	62
Longview TX	3340	2774	91	74
Longview WA-OR	1420	1284	40	36
Lorain-Elyria OH	2223	2680	59	74
Los Lunas NM	641	579	17	16
Lubbock TX	5242	4151	145	113
Lynchburg VA	2943	3214	74	83
Macon GA	3331	3935	87	105
Madera CA	1836	1546	56	47
Manchester NH	4058	4417	108	120
Mandeville-Covington LA	4787	4639	135	132
Manhattan KS	748	858	19	22
Mankato MN	1024	1222	28	34
Mansfield OH	1262	1394	38	41
Manteca CA	3449	3412	97	98
Marysville WA	4214	3742	113	101
Mauldin-Simpsonville SC	4648	3804	122	102
Mayaguez PR	5204	4974	135	130
McKinney TX	6496	3831	174	104
Medford OR	3414	3309	97	94
Merced CA	3406	2761	103	81
Michigan City-La Porte IN-MI	588	692	17	19
Middletown OH	1040	1239	29	35
Midland MI	814	1048	21	27
Midland TX	4144	3705	116	104
Mission Viejo-Lake Forest-San Clem CA	18469	15763	492	421
Missoula MT	2130	2244	56	60
Mobile AL	12817	13728	335	364
Modesto CA	9236	8482	254	234
Monessen-California PA	1083	1136	32	34
Monroe LA	3143	2758	99	88
Monroe MI	823	1011	23	30
Montgomery AL	7997	7140	211	191
Morgantown WV	1346	1342	36	37
Morristown TN	1098	1162	29	31
Mount Vernon WA	1487	1319	41	36
Muncie IN	968	1081	25	28
Murrieta-Temecula-Menifee CA	14572	11186	389	298

Table 9. Urban Area Excess Travel Time and Congestion Cost, Continued

Urban Area	Annual Person-Hours of Delay (000)		Annual Congestion Cost (2022 $millions)	
	2022	**2021**	**2022**	**2021**
Muskegon MI	2328	2131	61	56
Myrtle Beach-Socastee SC-NC	9060	8221	231	212
Nampa ID	3231	2465	86	66
Napa CA	3579	2995	98	82
Nashua NH-MA	3963	4108	106	111
New Bedford MA	2680	2826	70	75
New Bern NC	872	913	22	24
Newark OH	1879	1959	48	51
Norman OK	4250	3991	116	109
North Port-Port Charlotte FL	2904	2476	75	65
Norwich-New London CT-RI	4068	4153	107	113
Ocala FL	4584	4772	125	133
Odessa TX	4094	3877	116	107
Ogden-Layton UT	11721	10560	345	314
Olympia-Lacey WA	4417	3741	120	102
Oshkosh WI	984	812	27	22
Owensboro KY	964	1074	27	31
Palm Bay-Melbourne FL	8855	9276	235	253
Palm Coast-Daytona Bch-Port Orange FL	6365	6072	168	164
Panama City FL	4378	4976	115	133
Parkersburg WV-OH	1054	1161	27	31
Pascagoula MS	758	672	19	17
Peoria IL	3324	2735	87	80
Petaluma CA	2400	2517	63	66
Pine Bluff AR	764	799	21	22
Pittsfield MA	967	970	25	26
Pocatello ID	855	777	23	21
Ponce PR	3482	3202	91	84
Port Arthur TX	2681	2475	75	68
Port Huron MI	1157	1288	32	35
Port St. Lucie FL	8830	8031	239	220
Porterville CA	396	366	11	10
Portland ME	4626	4112	121	110
Portsmouth NH-ME	2535	2711	67	73
Pottstown PA	1313	1586	35	43
Prescott Valley-Prescott AZ	2265	2104	62	58
Pueblo CO	4554	4332	119	115
Racine WI	2331	2014	65	57
Rapid City SD	2022	2036	53	54
Reading PA	5964	6429	159	176
Redding CA	2298	2324	64	65
Reno NV-CA	15030	12314	437	351
Roanoke VA	4038	4502	106	120
Rochester MN	2972	2485	80	67
Rock Hill SC	2326	2082	60	54
Rockford IL	3945	4036	105	109
Rocky Mount NC	979	1063	25	28
Rome GA	1674	1732	44	46
Round Lake Bch-McHenry-Grayslake IL-WI	310	274	8	7
Saginaw MI	1782	2223	46	58

Table 9. Urban Area Excess Travel Time and Congestion Cost, Continued

Urban Area	Annual Person-Hours of Delay (000)		Annual Congestion Cost (2022 $millions)	
	2022	2021	2022	2021
Salinas CA	5069	4646	139	127
Salisbury MD-DE	1710	1852	46	50
San Angelo TX	2197	1721	60	46
San German-Cabo Rojo-Sabana Grande PR	1536	1355	40	36
San Luis Obispo CA	1121	1074	31	29
San Marcos TX	3179	1919	86	52
Santa Barbara CA	12024	11500	335	320
Santa Clarita CA	7405	5871	204	160
Santa Cruz CA	10015	8576	263	226
Santa Fe NM	2745	2122	72	56
Santa Maria CA	1758	1845	48	50
Santa Rosa CA	14041	12783	367	336
Saratoga Springs NY	1461	1323	38	35
Savannah GA	9522	7856	249	208
Scranton PA	6230	6792	164	184
Seaside-Monterey CA	4640	3591	121	94
Sebastian-Vero Bch S-Florida Ridge FL	2164	2086	58	56
Sebring-Avon Park FL	896	805	24	22
Sheboygan WI	622	509	16	14
Sherman TX	1426	1177	39	32
Shreveport LA	9646	9493	299	303
Sierra Vista AZ	452	379	12	10
Simi Valley CA	2263	2606	61	70
Sioux City IA-NE-SD	1532	1509	42	41
Sioux Falls SD	3159	3185	83	85
Slidell LA	1948	1783	64	59
South Bend IN-MI	3553	3950	96	107
South Lyon-Howell MI	2644	2471	71	67
Spartanburg SC	4991	4227	131	112
Spring Hill FL	2068	1894	53	50
Springfield IL	2378	2660	64	73
Springfield MO	10182	10060	269	271
Springfield OH	814	986	21	26
St. Augustine FL	1692	1768	43	46
St. Cloud MN	1780	1939	46	51
St. George UT	2455	2899	72	87
St. Joseph MO-KS	1284	1545	35	44
State College PA	898	768	23	21
Staunton-Waynesboro VA	940	981	24	25
Sumter SC	1257	1094	33	29
Syracuse NY	7015	7787	183	208
Tallahassee FL	6160	5838	160	155
Temple TX	2841	2255	79	61
Terre Haute IN	1670	1948	53	62
Texarkana TX-AR	1509	1467	41	39
Texas City TX	2217	2050	63	55
Thousand Oaks CA	11040	10740	285	277
Titusville FL	792	736	22	20
Topeka KS	2889	3373	76	91
Tracy CA	2537	2375	72	68

Table 9. Urban Area Excess Travel Time and Congestion Cost, Continued

Urban Area	Annual Person-Hours of Delay (000)		Annual Congestion Cost (2022 $millions)	
	2022	**2021**	**2022**	**2021**
Trenton NJ	7563	6541	196	173
Turlock CA	2632	2843	75	82
Tuscaloosa AL	4311	4137	111	110
Twin Rivers-Hightstown NJ	1794	1534	46	40
Tyler TX	5613	4305	157	118
Uniontown-Connellsville PA	719	857	20	24
Utica NY	2177	2261	57	61
Vacaville CA	2574	2323	69	63
Valdosta GA	1704	1756	44	46
Vallejo CA	8690	8631	235	233
Victoria TX	1661	1400	45	38
Victorville-Hesperia CA	4962	5387	134	145
Villas NJ	1122	1059	29	28
Vineland NJ	1193	1129	31	30
Visalia CA	3581	3985	99	111
Waco TX	4170	4565	113	127
Waldorf MD	2851	2718	73	71
Walla Walla-WA-OR	589	504	16	14
Warner Robins GA	2170	2221	56	60
Waterbury CT	5231	5377	140	147
Waterloo IA	1192	1319	32	36
Watertown NY	808	1000	22	28
Watsonville CA	1287	1229	35	33
Wausau WI	1495	1142	41	31
Weirton-Steubenville WV-OH-PA	1401	1446	39	41
Wenatchee WA	1598	1322	43	35
West Bend WI	575	504	15	13
Westminster-Eldersburg MD	1143	1298	30	35
Wheeling WV-OH	3013	2982	87	88
Wichita Falls TX	1588	1521	43	41
Williamsburg VA	1384	1533	35	39
Williamsport PA	1096	1311	30	37
Wilmington NC	6843	5047	174	131
Winchester VA	1874	2090	51	59
Winter Haven FL	4663	3938	124	107
Woodland CA	570	713	16	19
Yakima WA	2503	1972	69	55
Yauco PR	1119	811	29	21
York PA	5012	4898	138	137
Youngstown OH-PA	5118	6095	135	163
Yuba City CA	2470	2649	67	71
Yuma AZ-CA	2138	1842	60	52
Zephyrhills FL	1369	1110	37	30

Note: A dash indicates the value rounds to zero.

Yearly Delay — Extra travel time during the year.

Yearly Delay per Auto Commuter — Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.

Congestion Cost — The value of 2022 travel time delay (estimated at $23.12 per hour of person travel and $64.68 per hour of truck time) and excess fuel consumption (estimated using the state average cost per gallon for gasoline and diesel).

David Schrank
Senior Research Scientist

Luke Albert
Associate Research Engineer

Bill Eisele
Senior Research Engineer

Kartikeya Jha
Assistant Research Scientist

2023

Urban Mobility
REPORT

Texas A&M Transportation Institute

INRIX

Texas Department of Transportation™

Texas A&M Transportation Institute
The Texas A&M University System

mobility.tamu.edu/umr