

HOW FAR HAS CONGESTION SPREAD?

Traffic congestion affects a broader segment of the transportation system each year. Several dimensions are explored within this report. Congestion has spread to **more cities** to **more** of the **road system** and **trips** in cities to **more time** during the day and to **more days** of the week in some locations.

Conclusions

Congestion has spread significantly over the 20 years of the study. A few notable changes from 1982 to 2007 include:

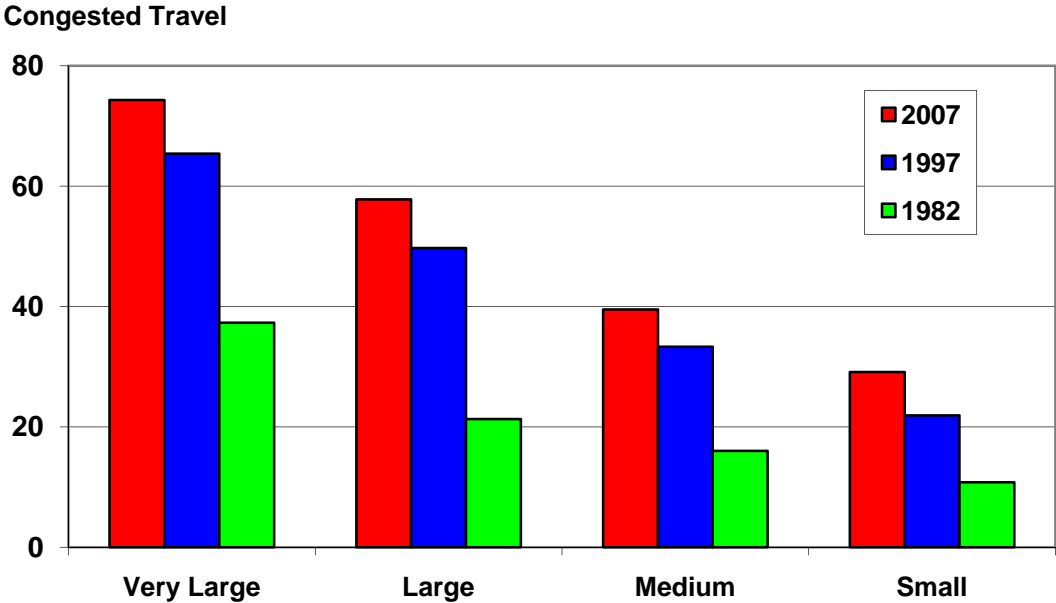
- Nineteen urban areas have a Travel Time Index above 1.30 compared with no areas in 1982.
- Sixty-three percent of the peak period travel is congested compared to 29 percent in 1982.
- Forty-eight percent of the major road system is congested compared to 29 percent in 1982.
- The number of hours of the day when congestion might be encountered has grown from about 4.2 hours to about 7.0 hours.

Most of the trend information indicates that the 2007 average values for each population group are above the 1997 value for the next highest population group. This is also the case for the 1997 and 1982 comparison. This suggests that congestion problems grow at about the rate of one population group every 10 or 15 years. So in the time it takes to enact solutions for one size of problem, congestion has worsened.

Congested Travel

The amount of traffic experiencing congested conditions in the peak travel periods (three hours in the morning and three hours in the afternoon) has doubled in 20 years of the study from 29 percent in 1982 to 63 percent in 2007. This means that two of every three cars experience congestion in their morning or evening trip. Exhibit B-4 provides more information on this trend.

Exhibit B-4. Percent of Travel in Congested Conditions

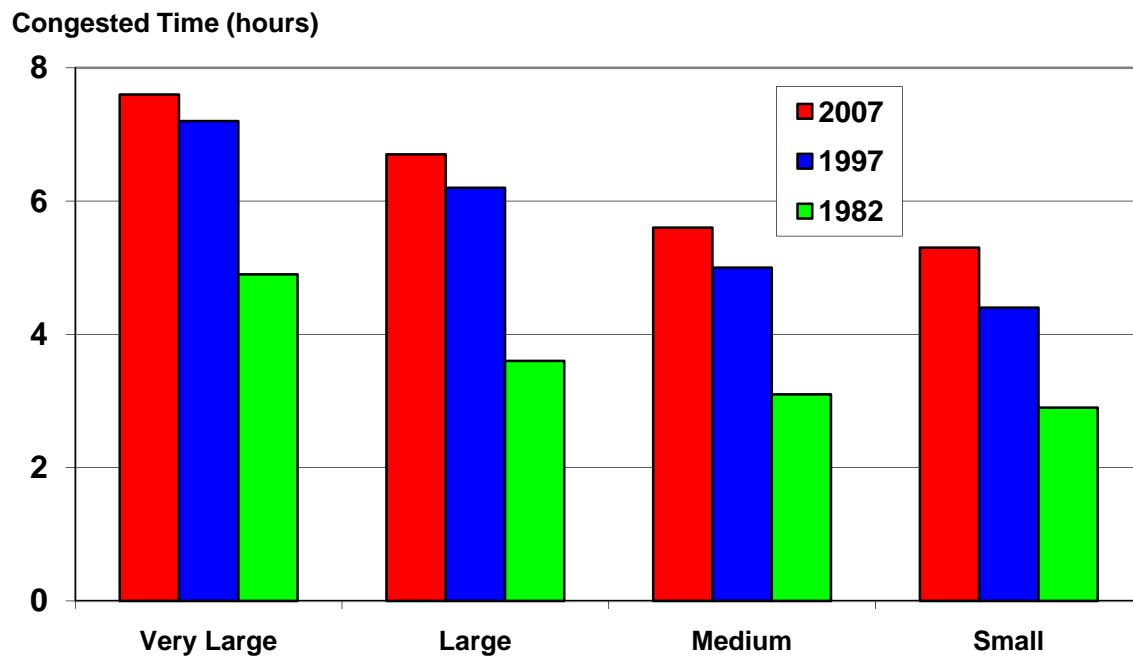


- The range of travel experiencing congestion grew from between 11 percent and 37 percent in 1982 to between 29 percent and 74 percent in 2007.
- The average percentage has increased to the next highest population group approximately each decade.

Congested Time

From the traffic database that is used for this study, it is uncertain exactly how long the congested periods last in each urban area. We can estimate, however, the amount of travel that occurs during times of the day when travelers **may** encounter congestion. This is not the amount of time when congestion occurs on a particular segment of road, but rather is the time when congestion occurs on some part of the road system. Exhibit B-5 shows the average length of the congested periods for each population group for 1982, 1997 and 2007.

Exhibit B-5. Hours of Day When Congestion May Occur

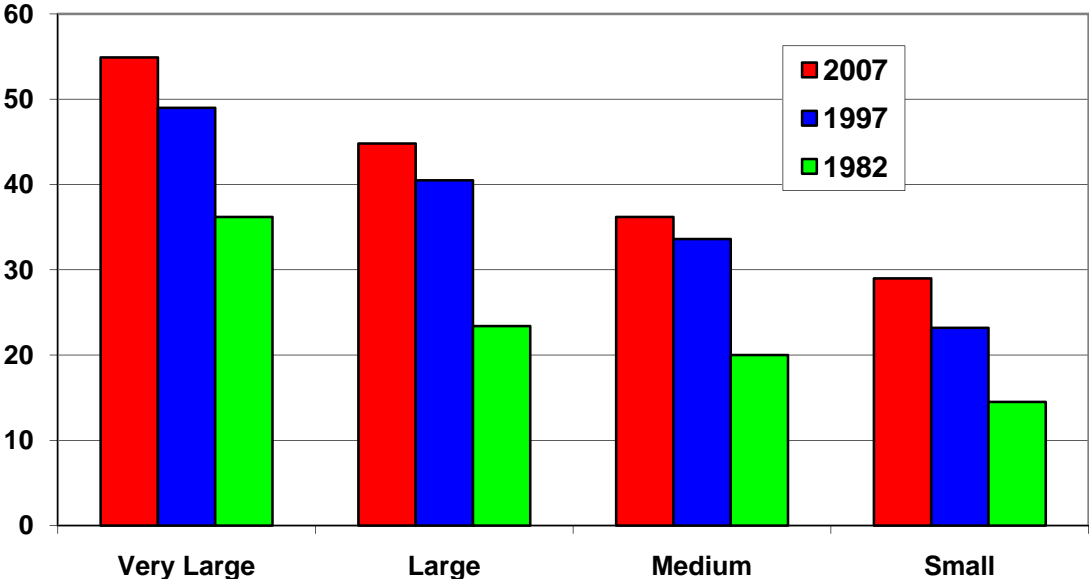


- The time when congestion might be encountered on major urban roads has grown in all population categories.
- The congested time in the morning and evening is near 3 hours in even the Small group—indicating that in many areas the term “rush hour” does not convey the length of time travelers may suffer slowdowns.
- Slow conditions might be encountered for 3 hours in each peak period in areas above 500,000. The amount of slowdown does not appear to be as great in the smaller areas.
- Three hours of congestion in each peak does not extend to the entire urban area, but some travelers must allow for extra time during a substantially longer portion of the day.

Congested Roads

The amount of roadways (freeways and principal arterial streets) that is congested during the peak period is shown in Exhibit B-6 for 1982, 1997 and 2007. The percentage of the major roadway system that is congested has risen from 29 percent in 1982 to 48 percent in 2007.

Exhibit B-6. Percentage of Roads that Experience Some Congestion During Peak Periods



- The percentage of roads where congestion might occur in the peak period has about doubled in the Small, and nearly doubled in the Medium and Large areas since 1982.
- The largest percentage point increase has occurred in the Large areas.
- Each of the population groups has a 2007 value close to the 1997 value for the next highest population group.

Growth in Delay and Congested Travel

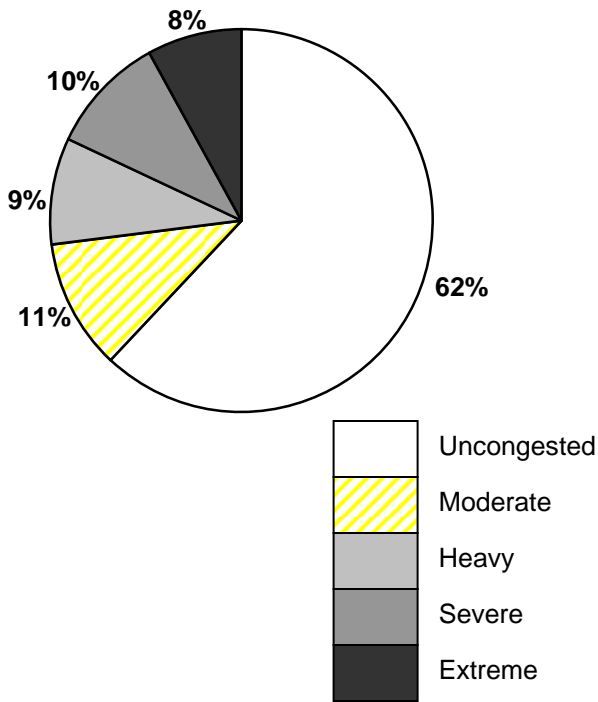
This section provides a graphical comparison for each of the four population groups in the Urban Mobility Report. There are two circles on each page representing conditions in 1982 and 2007.

- The growth in the area of the circle represents the growth in travel delay for all the cities in the group from 1982 to 2007.
- The amount of miles traveled during the peak period in each of five congestion levels is also displayed for each year to give a perspective on the change in conditions experienced by travelers.

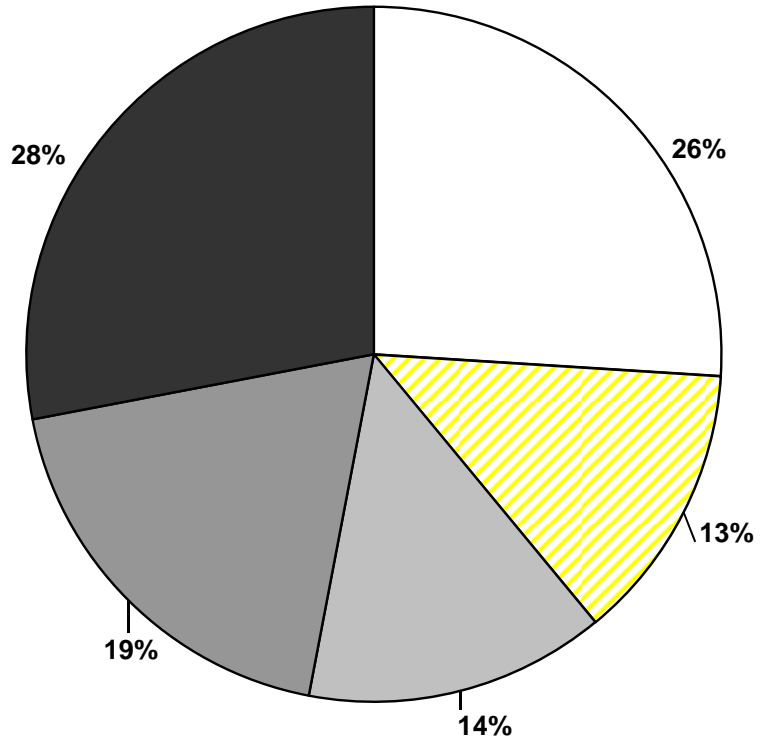
Exhibits B-7 through B-10 illustrates conditions for the four population groups.

Exhibit B-7. Very Large Urban Area Travel Conditions

1982 – 0.5 Billion Hours of Delay



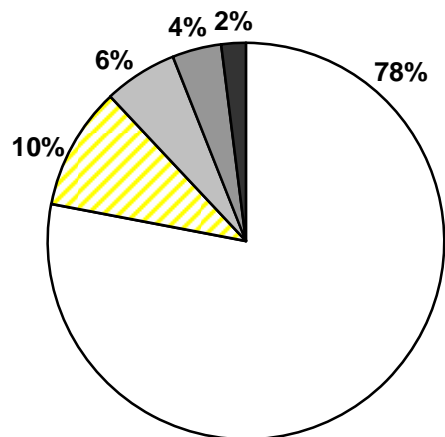
2007 – 2.3 Billion Hours of Delay



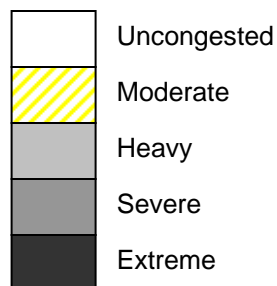
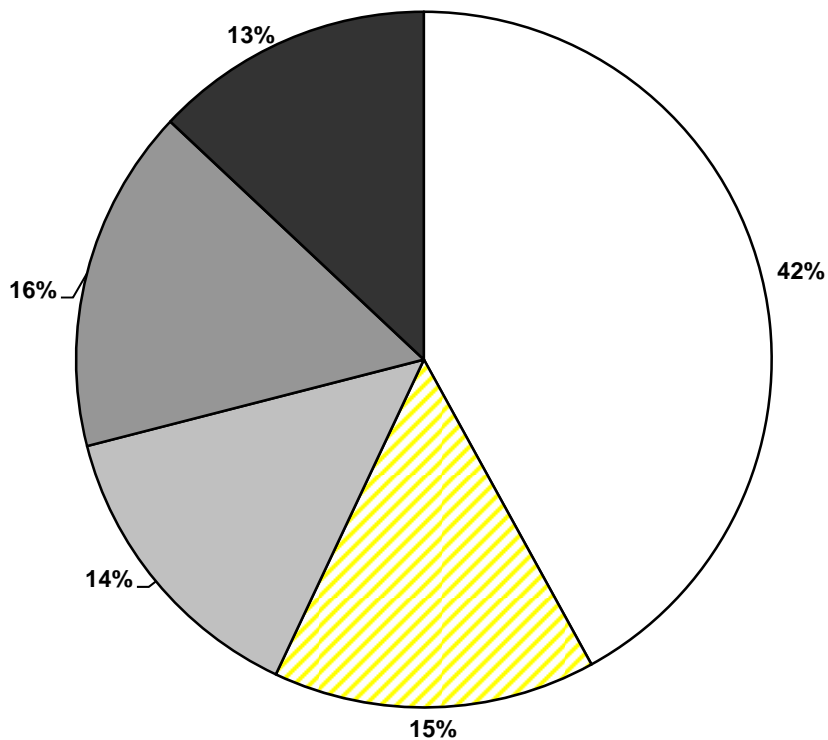
- Fourteen urban areas are included in this group representing 54 percent of the population and 65 percent of the travel delay in 2007.
- Delay grew approximately 340 percent from 1982 to 2007.
- There was significant growth in the severely and extremely congested volume ranges with travel increasing from about 18 percent to almost 50 percent.

Exhibit B-8. Large Urban Area Travel Conditions

1982 – 140 Million Hours of Delay



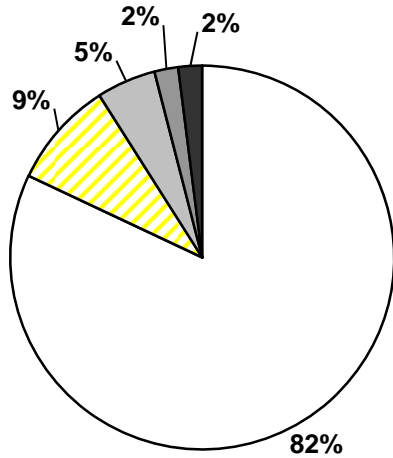
2007 – 922 Million Hours of Delay



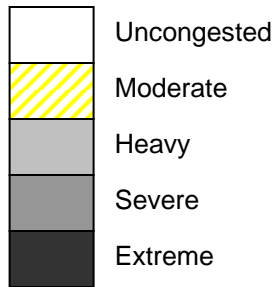
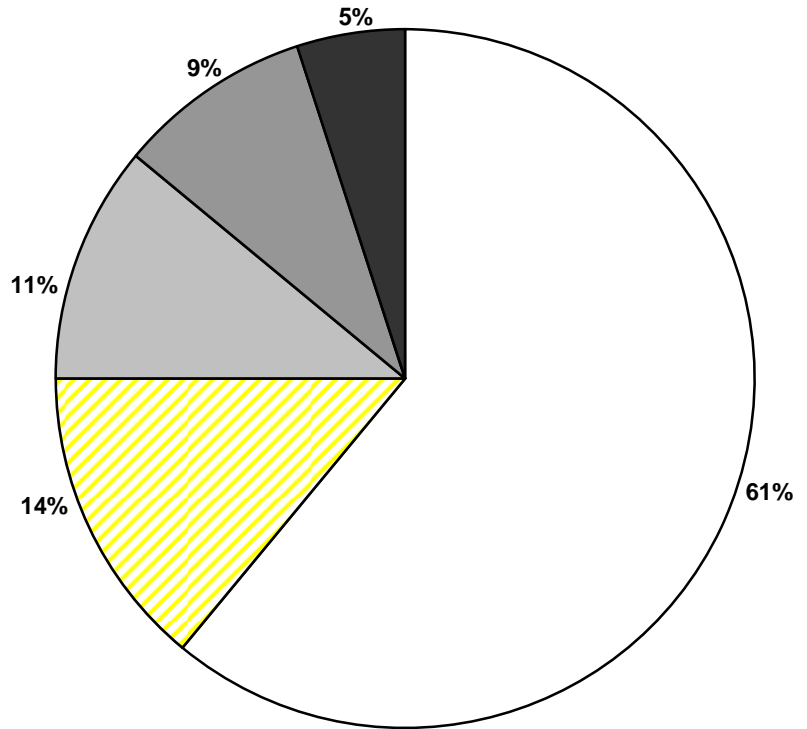
- Twenty-nine urban areas are included in this group representing 29 percent of the population and 26 percent of the travel delay in 2007.
- Delay grew 555 percent from 1982 to 2007.
- There was almost no travel in the two most congested categories in 1982, while those ranges now account for almost 1/3 of peak travel.

Exhibit B-9. Medium Urban Area Travel Conditions

1982 – 53 Million Hours of Delay



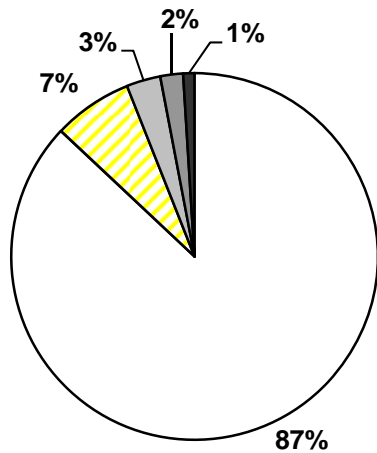
2007 – 279 Million Hours of Delay



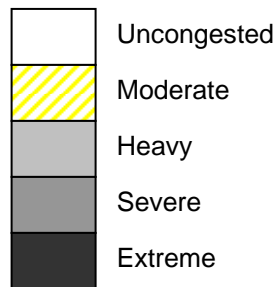
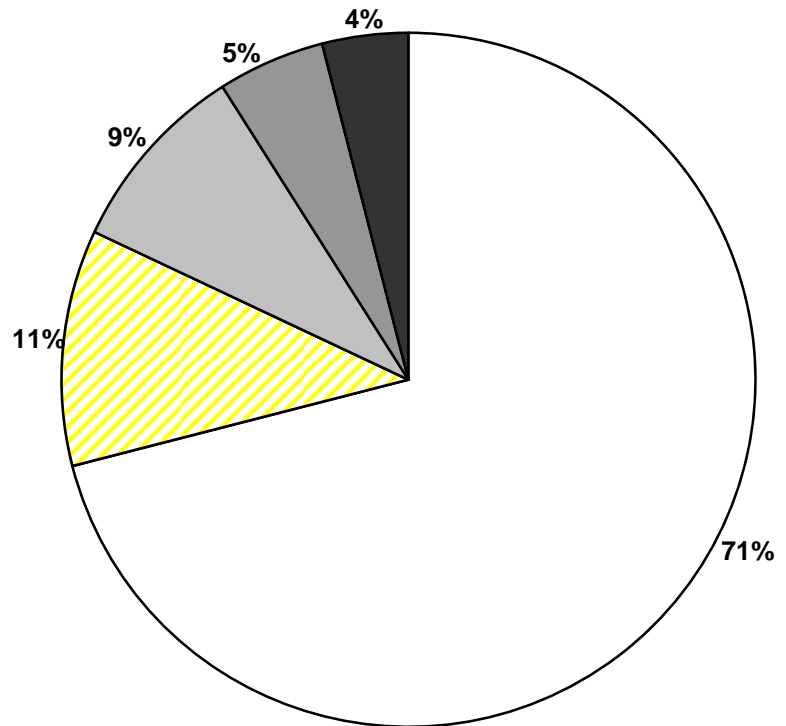
- Thirty urban areas are included in this group representing 14 percent of the population and 8 percent of the travel delay in 2007.
- Delay grew 425 percent from 1982 to 2007.
- Travel in the congested regions now accounts for almost 40 percent of travel during the peak, compared to less than half this amount in 1982.

Exhibit B-10. Small Urban Area Travel Conditions

1982 – 9 Million Hours of Delay



2007 – 55 Million Hours of Delay



- Sixteen urban areas are included in this group representing 3 percent of the population and 2 percent of the travel delay in 2007.
- Delay grew 510 percent from 1982 to 2007.
- Congestion, although not a significant problem for most peak period travel, has increased to about 30 percent of peak travel miles.