

Analysis of Historical Traffic Speeds in Chicago

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This analysis briefly summarizes geographic and temporal trends in arterial traffic speeds in Chicago. The analysis was carried out using traffic congestion data made available by the City of Chicago. The dataset reports traffic congestion or vehicle speeds by traffic region. Traffic regions are groupings of two or three adjacent community areas that are thought to have similar traffic conditions. The dataset summarizes average speeds for each traffic region over a five-year period beginning January 2013 through February 2018 (although seven months of data are missing for 2015).

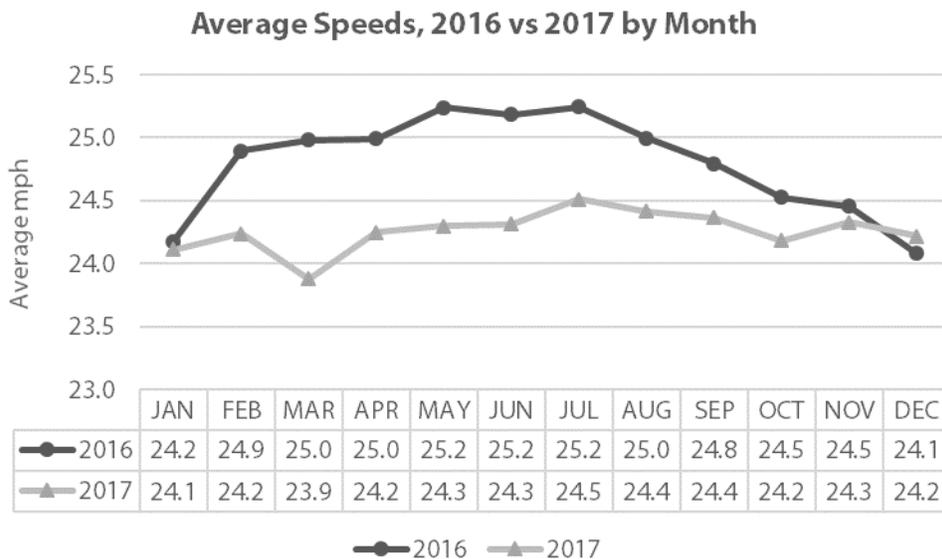
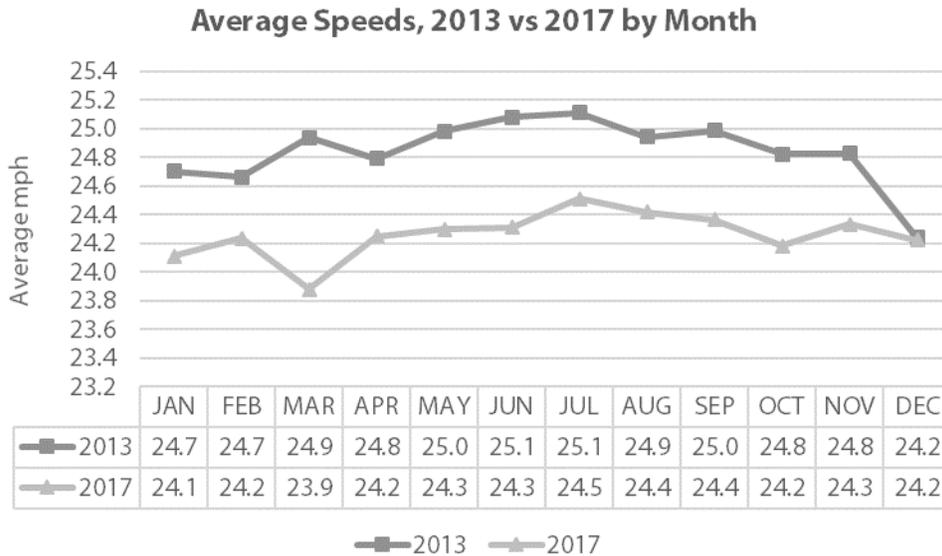
The speed data are logged as part of the City of Chicago Traffic Tracker program which estimates traffic congestion on Chicago's arterial or non-freeway streets continuously via GPS traces received from Chicago Transit Authority (CTA) buses. Congestion by traffic region provides average speeds for all arterial street segments within a region. The data must be interpreted with some caution given that there can be considerable volatility in traffic segment speed due to a broad number of factors including frequent transit stops, crashes and construction. The city emphasizes that, "[s]peed on individual arterial segments can fluctuate from heavily congested to no congestion and back in a few minutes" although, when averaged over a 24-hour period, the estimates likely provide an adequate representation of actual traffic patterns. The dataset used for the following analysis has a total of 6,275,764 records, each of which includes information on bus counts, reads, average daily speeds and traffic region. Records with reported speeds of 0mph or above 55mph were removed from the table.

General findings

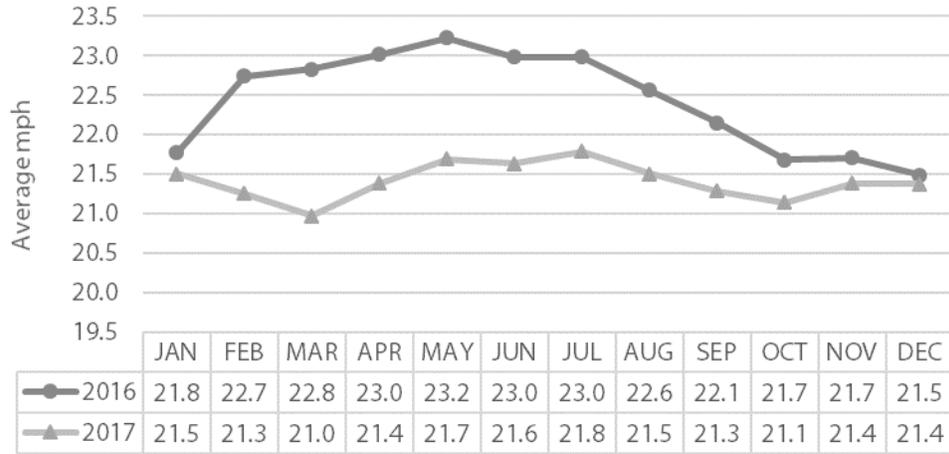
- Average speeds across the city have decreased between 2013 and 2017. Percentage decrease in CTA bus speeds averaged 2.4 percent for the city as a whole.
- The analysis found that 25 of the city's 29 traffic regions had lower speeds in 2017 compared to 2013, some experiencing greater drops than others. Traffic regions including the Near South-Douglas (-4.3% change; average 1.2mph drop), South Deering-East Side (-4.3% change; average 1.3mph drop), Rogers Park - West Ridge (-4.0% change; average 0.9mph drop), Bridgeport-McKinley-Lower West (-3.9% change; 1.0mph drop), West Town-Near West (-3.9% change; 0.9mph drop) and South West Side (-3.9% change; 0.9mph drop) reported the highest percentage reductions in average CTA bus speeds.
- In some traffic regions, average daily CTA bus speeds actually increased between 2013 and 2016, only to drop between 2016 and 2017. Between 2016 and 2017 average vehicle speeds dropped in 27 of the 29 traffic; a 2.2 percent drop in vehicle speeds occurred citywide over this one-year period.

Interpretation

It should be noted here that a wide variety of factors may play a role in vehicle speeds, including: traffic volumes; transportation mode shifts; weather; traffic accidents and related slow-downs; construction; freight traffic at-grade rail crossings; as well as poor signal timing and other special events (e.g., sports games, festivals) and other lesser factors.



Average Speeds, 2016 vs 2017 by Month (Region 11)



● 2016 ▲ 2017



