COVID19 IMPACTS ON TRANSPORTATION

Produced by the NYC Department of City Planning's Transportation Division

July 21, 2020





Introduction

- The NYC Department of City Planning's Transportation Division is compiling data to help understand the effects of COVID19 on the transportation network. This is our seventeenth weekly report.
- This week's report includes the following information:
 - 1. Executive Summary
 - Citywide Trends
 - MTA: Subway and Bus
 - MTA: Metro North Railroad, Long Island Rail Road, Access-A-Ride
 - Ferry
 - Traffic
 - Citi Bike
 - 8. Airports
 - Cell Phone-based Mobility
 - 10. Timeline
- We continue to expand the content of these weekly reports as new data become available to us, and are prioritizing work around understanding how mobility trends relate to the economic and employment landscape.
- This report may serve to help in pandemic response and longer-term recovery. We are eager for feedback in how to make this more useful. Feel free to reach out to Laura Smith (Ismith@planning.nyc.gov) with questions or comments.



Executive Summary

- New York City entered Phase 4 on Monday, July 20. All modes of travel are up substantially over early June.
- As of the week of July 12, subway ridership was up 75 percent, and bus ridership up 54 percent, from early June.
- Total weekday subway ridership the week of July 13 was up 8 percent over the previous week. Total weekday bus ridership was up 11 percent over the previous week.
- Weekday Metro North ridership for the week of July 13 was up 8 percent over the previous week; weekday LIRR ridership was up 7 percent.
- The week of July 13 saw over **122,000 Staten Island Ferry riders**. This represents a 7 percent increase compared to the week of July 6. Ridership of NYC Ferry for the week of July 13 was the highest weekly total for 2020, with 97,000 riders.
- After a steep decline in total inbound vehicles into the Manhattan CBD in the week leading up to the PAUSE, entries have been increasing since mid-April. Over the same time period, weekday daytime speeds in Midtown have been declining.
- Citi Bike trip destinations vary substantially by time of day. While hub-bound trips represent only a small share of total trips, daily hub bound trips by hour show an increase in AM peak hour trips during Phase 3. Manhattan destinations (from any point of origin) predominate during the morning and evening hours.
- Air passenger traffic is beginning to recover, but is still significantly reduced from its 2019 levels. Since mid-April 2020, national air passenger volumes have rebounded somewhat more quickly than New York City area airports
- Tracking cell-phone based mobility, the majority of devices remain at home, but that **share has been declining since** mid-April.



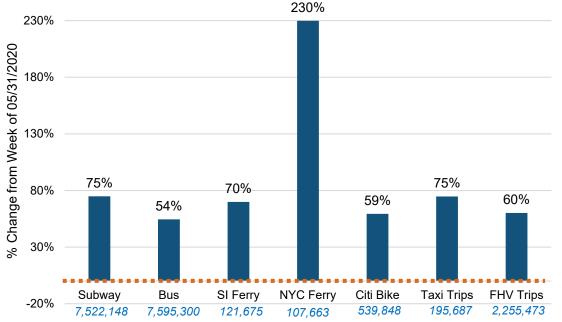
Citywide Trends



Citywide Trends

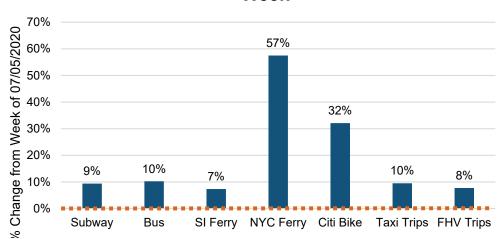
- New York City entered Phase 4 on Monday, July 20. Use of all modes of travel was up substantially over early June.
- As of the week of July 12, subway ridership was up 75 percent, and bus ridership up 54 percent, from early June.

Week of 07/12/2020 Compared to Week of 05/31/2020



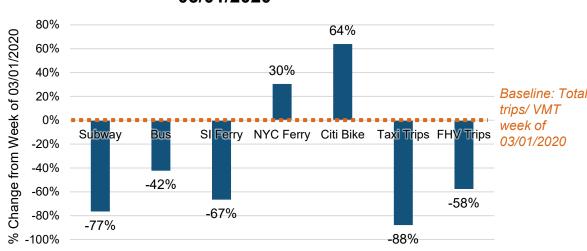
Baseline: Total trips week of 05/31/2020 (Last Week before Phase 1 Reopening)

Week of 07/12/2020 Compared to Previous Week



Baseline: Total trips/ VMT week of 07/05/2020

Week of 07/12/2020 Compared to Week of 03/01/2020

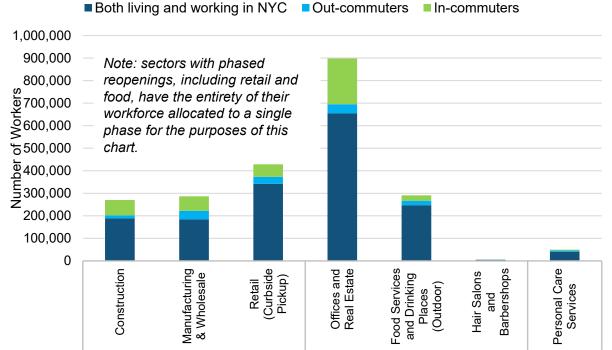




Data sources: MTA (Subway, Bus), EDC (NYC Ferry), DOT (Citi Bike, SI Ferry), TLC (Taxi, FHV).

Reopening Analysis Introduction

- On June 8, New York City entered Phase 1 of its economic reopening, followed by Phase 2 on June 22, Phase 3 on July 6, and a limited version of Phase 4 on July 20.
- Workers associated with each phase may join essential workers across all industries who have been permitted to work through the PAUSE, with certain limitations around occupancy.
- Pre-COVID19 Census data indicate that approximately 1 million workers who either live or work in NYC were allowed to return to work in Phase 1, and 1.7 million in Phase 2. These phases are not mutually exclusive, as retail workers appear in both. An additional 50,000 workers associated with personal care services not included in prior phases may be added as part of Phase 3.
- These are not estimates of who might be commuting to work as a result of the phased reopening.



Phase One

June 8

Construction

Manufacturing

Wholesale Trade

Retail - (Limited to curbside or in-store pickup or drop off)

Agriculture, Forestry, Fishing and Hunting (n/a in NYC)

Phase Two

June 22

Offices

Real Estate

Commercial Building Management

Food and Dining (outdoor)

Retail (in-store)

Vehicle Sales, Leases, and Rentals

Retail Rental, Repair, and Cleaning

Hair Salons and Barbershops

Phase Three

July 6

Beauty Salons

Nail Salons and Other Personal Care Services

Phase Four

July 20

Low-Risk Outdoor Arts & Entertainment

Low-Risk Indoor Arts & Entertainment

Media Production

Professional Sports Competitions With No Fans

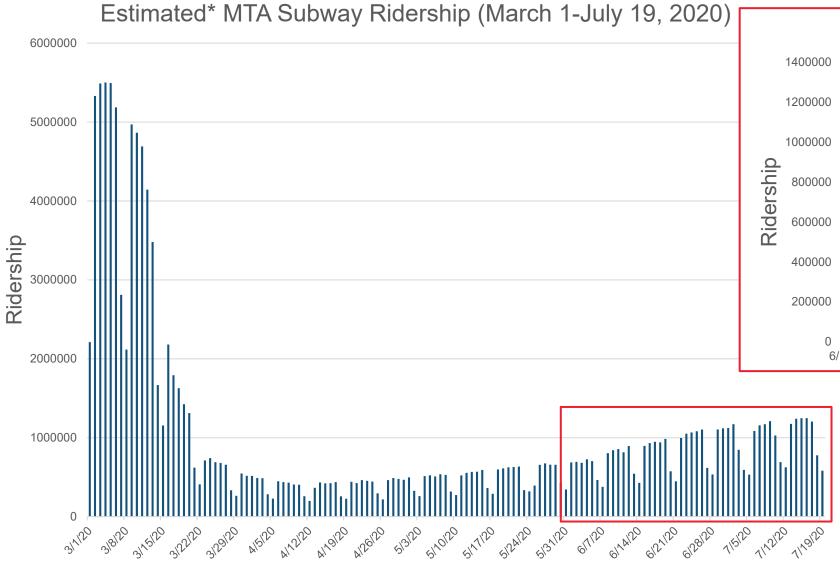
Source: NY Forward. https://forward.ny.gov

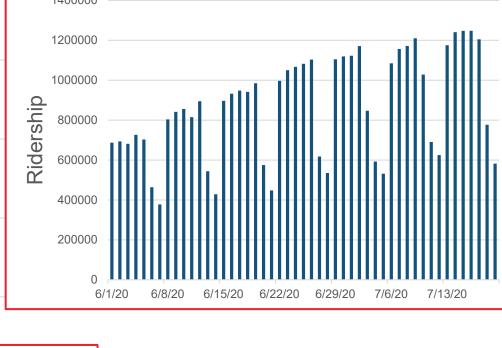


MTA data: **Subway and Bus**



Subway System-wide Ridership Changes





For the week of July 13, weekday

the previous week, while weekend

ridership was up 3 percent.

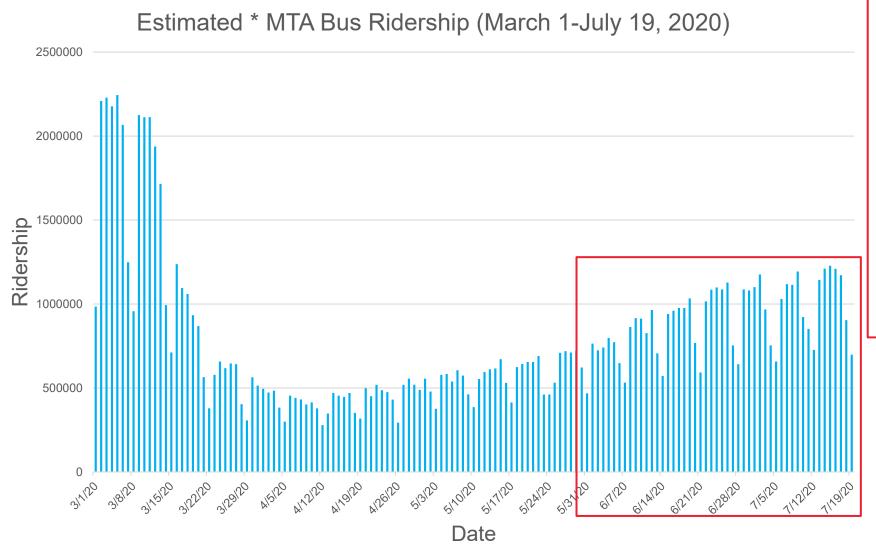
subway ridership was up 8 percent over

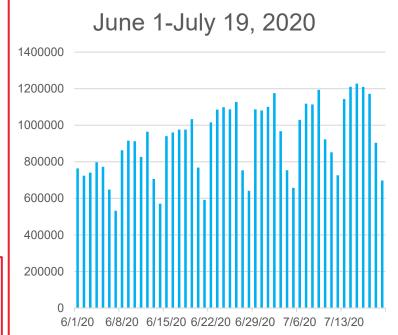
June 1-July 19, 2020

*From the MTA: Subway ridership figures are determined from MetroCard and OMNY swipes and taps. Figures from recent days may be revised as data reconciliation processes are carried out. Data sources: MTA (https://new.mta.info/coronavirus/ridership)

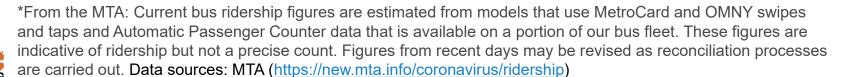


MTA Bus System-wide Ridership Changes





 For the week of July 13, weekday bus ridership was up 11 percent over the previous week, while weekend ridership remained steady.

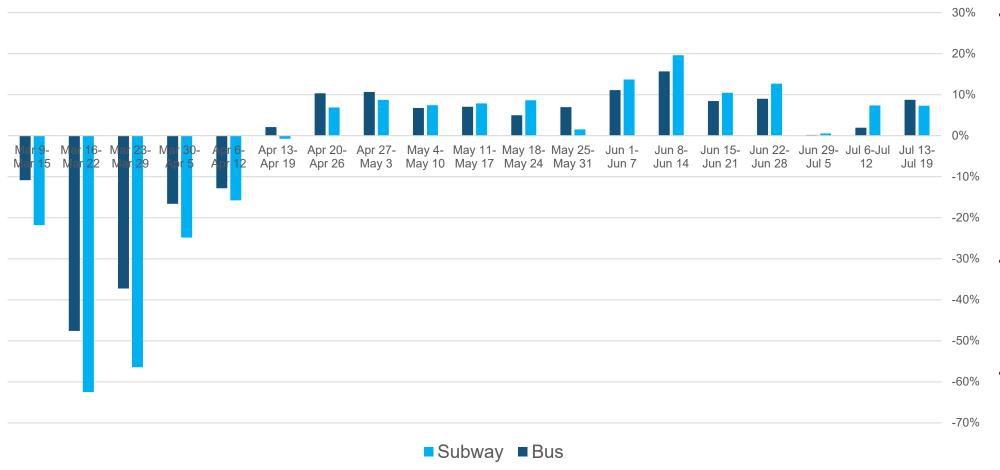




MTA Subway & Bus System-wide Ridership Changes



Percent Change of Estimated* MTA Subway & Bus Weekly Ridership (March 1- July 19, 2020)



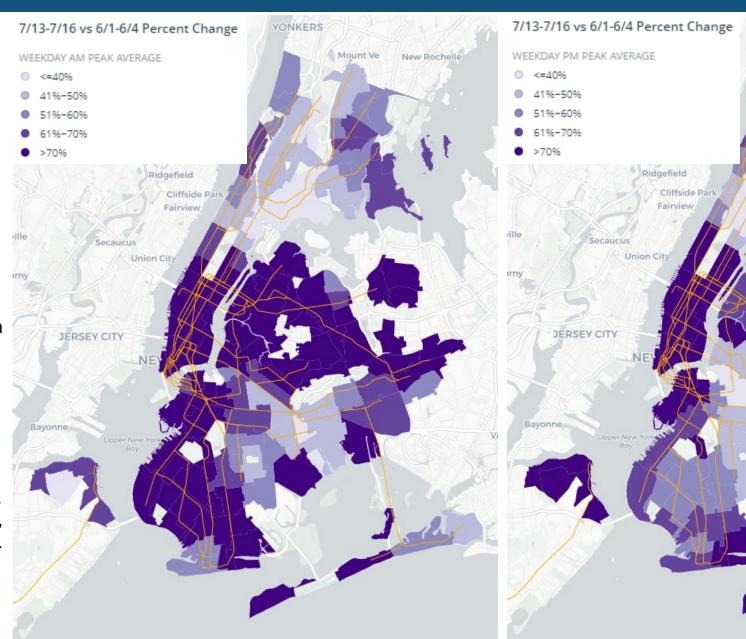
- ridership have been increasing week-over-week since mid-April. The greatest percent increase in ridership for both modes over the previous week occurred the week of June 8th, the first week of Phase 1.
- Total subway ridership for the week of July 13 was up 7 percent over the previous week.
- Total bus ridership for the week of July 13 was up 8 percent over the previous week.

*From the MTA: Current bus ridership figures are estimated from models that use MetroCard and OMNY swipes and taps and Automatic Passenger Counter data that is available on a portion of our bus fleet. These figures are indicative of ridership but not a precise count. Figures from recent days may be revised as reconciliation processes are carried out. Data sources: MTA (https://new.mta.info/coronavirus/ridership)



Weekday AM and PM Peak Turnstile Data – Comparisons with early June

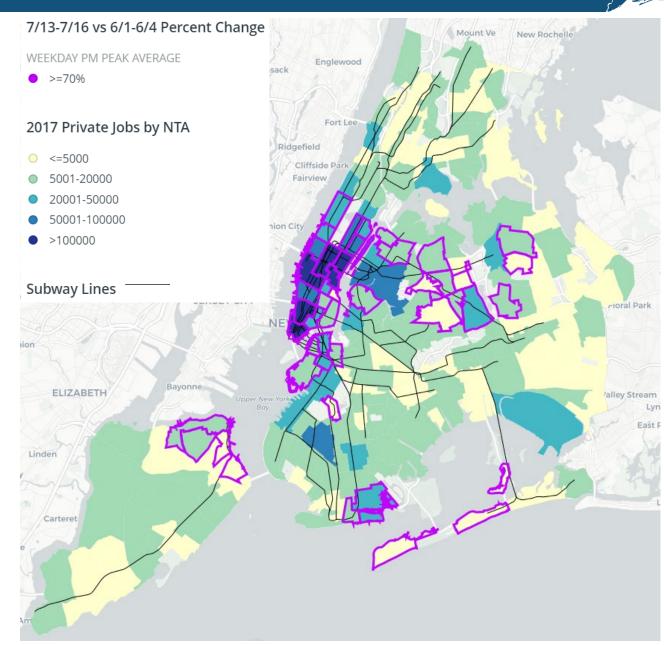
- The maps on the right illustrate changes in AM and PM peak ridership by neighborhood during the week of July 13 compared to the first week in June.
- AM peak ridership has increased by more than 70 percent since the start of June in some neighborhoods, including the Manhattan CBD, much of Queens, and western and southern Brooklyn.
- PM peak ridership an indicator of where people are commuting home from increased by more than 70 percent in the Manhattan CBD, Downtown Brooklyn, St. George Staten Island, Astoria, Flushing, and central Queens.





Comparing Weekday PM Peak Turnstile Data and Employment Locations

- As shown on the previous slide, and as outlined in purple area, PM peak ridership – an indicator of where people are commuting home from – increased by more than 70 percent in the Manhattan CBD, Downtown Brooklyn, St. George Staten Island, Astoria, Flushing, and central Queens.
- The underlying map illustrates total private sector jobs by Neighborhood Tabulation Area (NTA) in 2017.
- The areas of the city showing the greatest increases in PM peak ridership since the start of Phase 1 are only somewhat aligned with the areas with the greatest concentration of private sector jobs pre-COVID.
- Pre-COVID, workers in the Manhattan Core, Long Island City, and downtown Brooklyn were very likely to commute by subway.



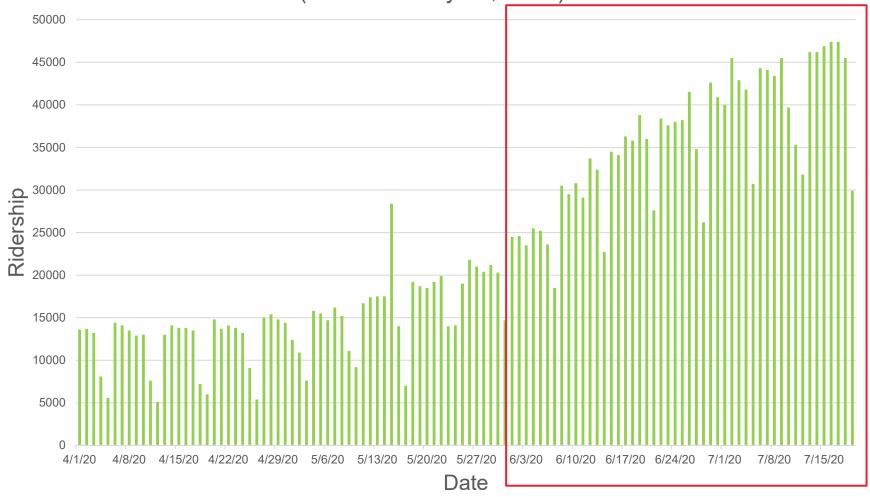


MTA data: Metro North Railroad, Long Island Rail Road, Access-A-Ride

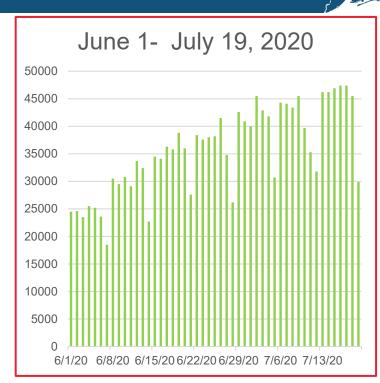


Metro-North Railroad Ridership Changes





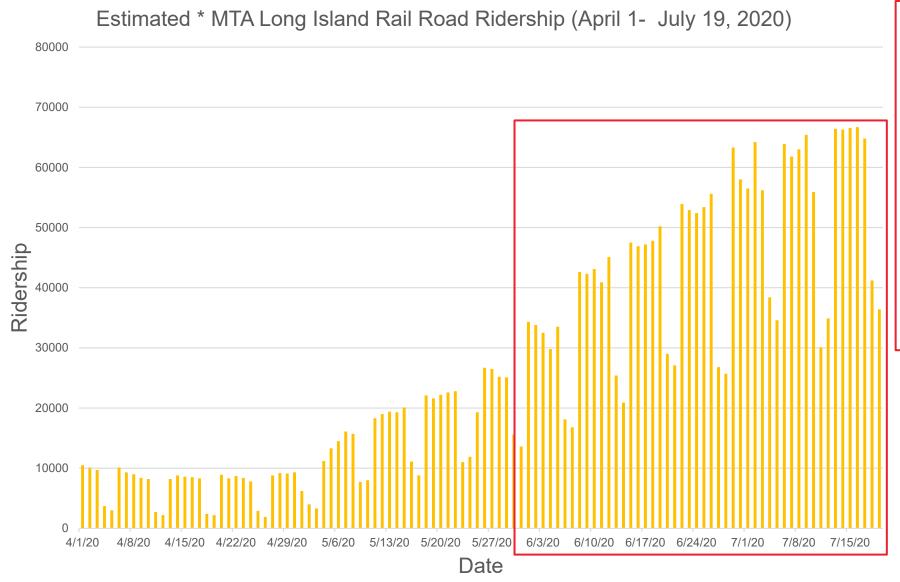
*From the MTA: Metro-North ridership is estimated by a model using monthly, weekly, ten-trip, and daily ticket sales. Percent change is calculated based on 2019 monthly average weekday/Saturday/Sunday ridership figures. Data sources: MTA (https://new.mta.info/coronavirus/ridership)



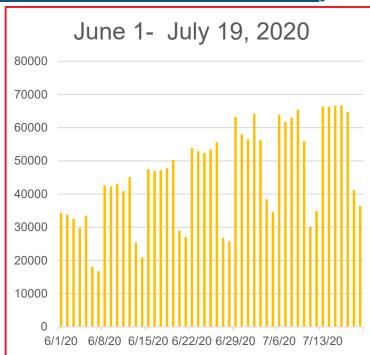
- The MTA recently started posting ridership summaries for Metro-North Railroad, from April 1, 2020.
- Weekday MNR ridership for the week of July 13 was up 8 percent over the previous week, while weekend ridership was up 12 percent.



Long Island Rail Road Ridership Changes



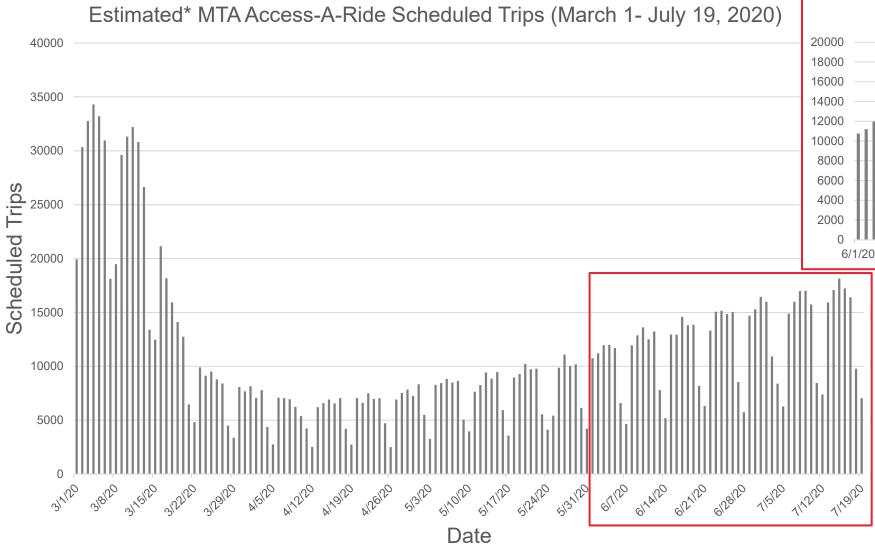
*From the MTA: LIRR ridership is estimated by a model using monthly, weekly, ten-trip, and daily ticket sales. Percent change is calculated based on 2019 monthly average weekday/Saturday/Sunday ridership figures. Data sources: MTA (https://new.mta.info/coronavirus/ridership)

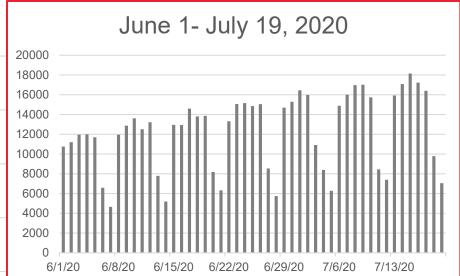


- The MTA recently started posting ridership summaries for Long Island Rail Road, from April 1, 2020.
- Weekday LIRR ridership for the week of July 13 was up 7 percent over the previous week, while weekend ridership was up 19 percent.



Access-A-Ride Scheduled Trip Changes





- The MTA recently started posting ridership summaries for their Access-A-Ride service, since March 1 2020.
- Weekday Access-A-Ride scheduled trips for the week of July 13 were up 5 percent over the previous week, while the weekend scheduled trips were up 6 percent.

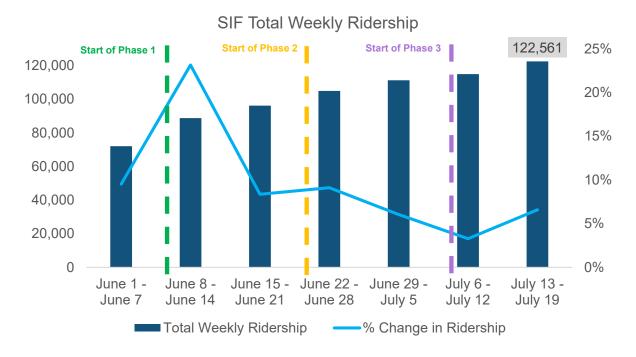
*From the MTA: To provide timely updates, this data presents scheduled Access-A-Ride trips as an indicator of demand, rather than completed trips. The process to reflect completed trips, including adjusting for on-demand trips, cancelations, no shows, and on-street issues, would delay release of data for several weeks.. Data sources: MTA (https://new.mta.info/coronavirus/ridership)



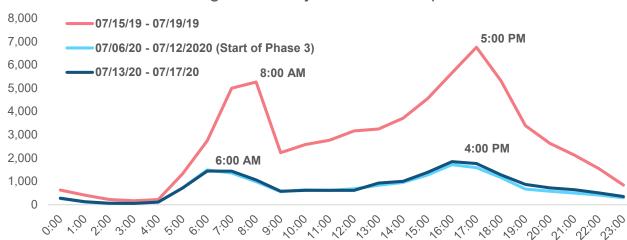
Ferry



The Staten Island Ferry and NYC Ferry

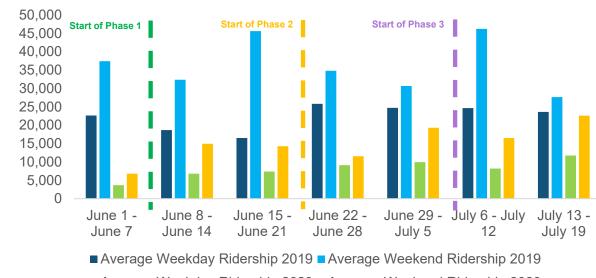


SIF Average Weekday Total Ridership Per Hour



- The week of July 13 saw over 122,000 Staten Island Ferry riders.
 This represents a 7 percent increase, or about 7,600 additional riders, compared to the week of July 6.
- For SIF, weekday peak hour ridership remained at 6:00 am for the morning and 4:00 pm in the afternoon. Although 6:00 am remained as the morning peak hour, 7:00 am average ridership was almost equal to 6:00 am average ridership.
- NYC Ferry weekly ridership increased by 40 percent, or by about 30,000 riders, compared to the week of July 6.
- Ridership of NYC Ferry for the week of July 13 was the highest weekly total for 2020, with 97,000 riders.

NYC Ferry Weekly Ridership Weekday vs. Weekend Averages



■ Average Weekday Ridership 2020 ■ Average Weekend Ridership 2020

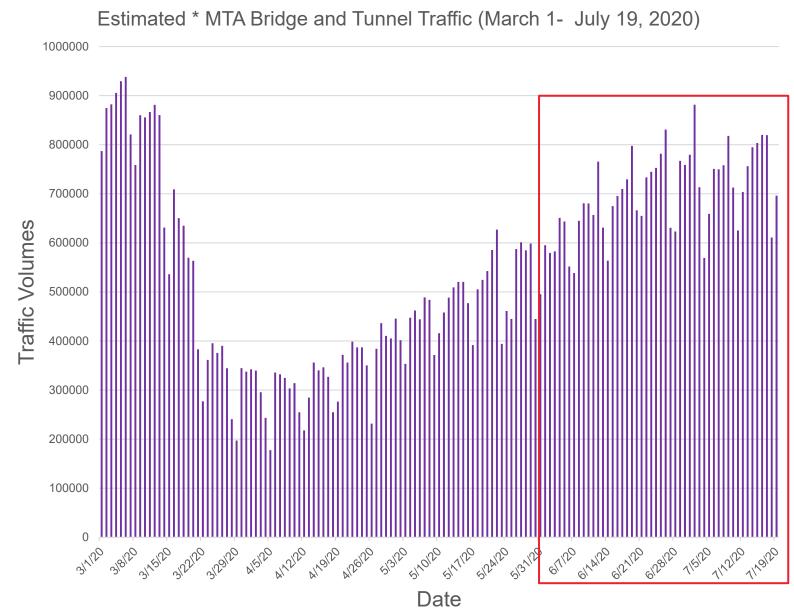


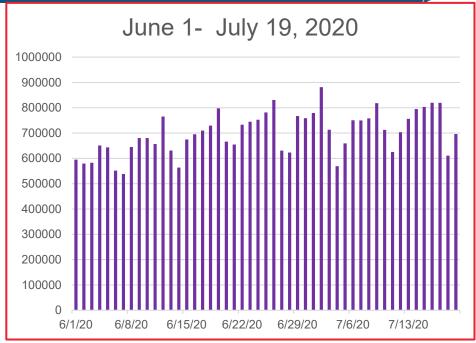
Data sources: NYCDOT: EDC

Traffic



MTA Bridge and Tunnel Traffic Volumes





 Total weekday traffic counts during the week of July 13 were up 5 percent over the previous week. Weekend traffic counts were down 1 percent.

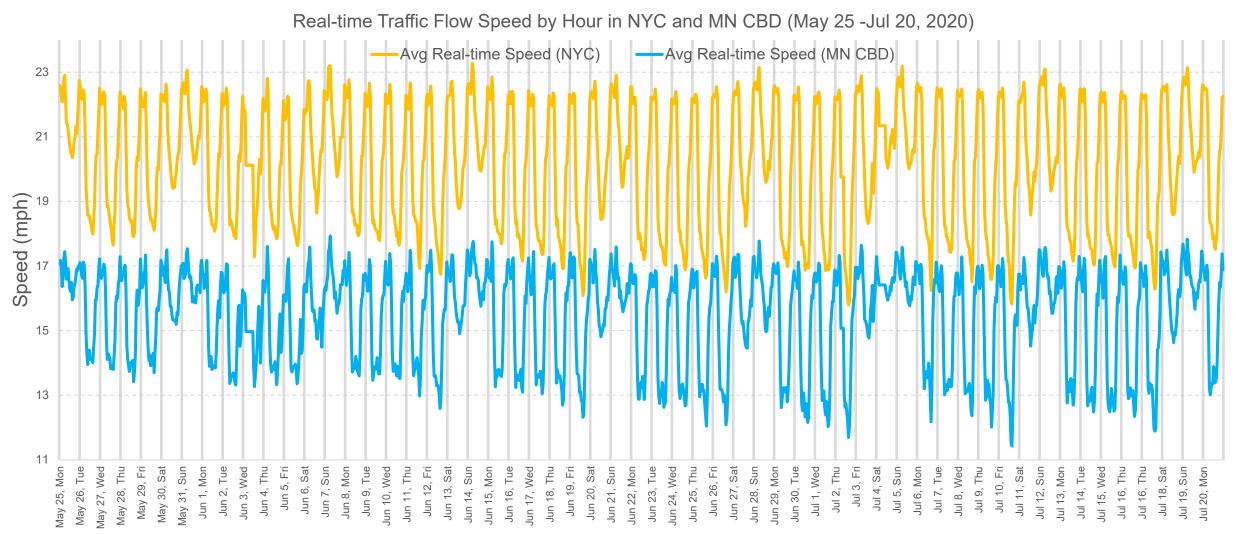
MTA crossings include:

- Bridges: Robert F. Kennedy, Throgs Neck, Verrazzano Narrows, Bronx-Whitestone, Henry Hudson, Marine Parkway-Gil Hodges Memorial, and Cross Bay Veterans Memorial bridges.
- Tunnels: the Hugh L. Carey Tunnel and the Queens Midtown Tunnel.



NYC Traffic Speeds





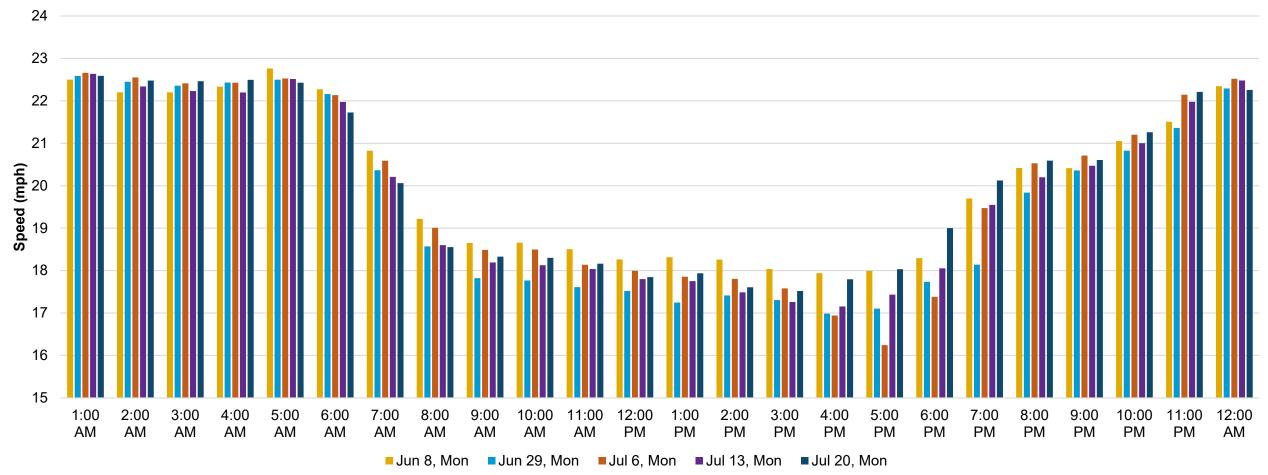
- Average traffic speeds across NYC and within the Manhattan CBD have declined since May, but have been steady through July.
- Since June 8th, weekday traffic speeds have followed a consistent trend of slowing as the week progressed.



NYC Traffic Speeds





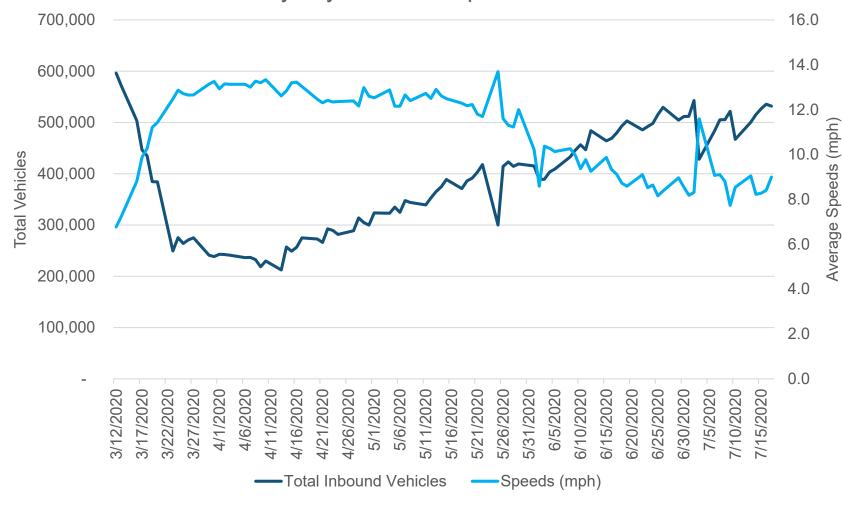


• Compared to earlier weeks, average hourly traffic flow speeds on Monday, July 20 were generally consistent with the previous week, with increases in travel speed occurring during the afternoon hours in recent weeks.



Manhattan Inbound Traffic

Average vehicles entering CBD via river crossings & average weekday daytime travel speeds in Midtown



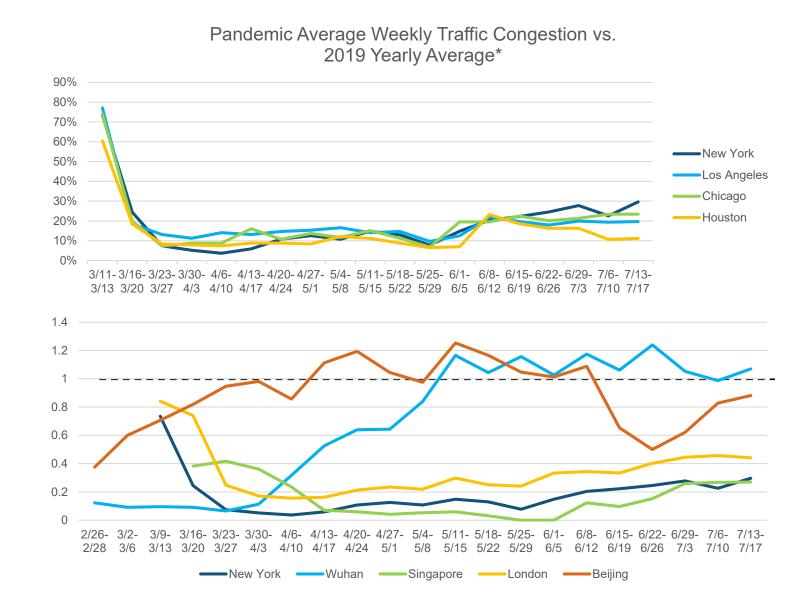
- After a steep decline in total inbound vehicles into the Manhattan CBD in the week leading up to the PAUSE, entries have been increasing since mid-April.
- Over the same time period, weekday daytime speeds in Midtown have been declining.
- Exceptions are observed on major holidays, including Memorial Day and Independence Day.

Source: NYCDOT, providing data from NYCTLC, Port Authority, Triborough Bridge and Tunnel Authority



Traffic Congestion

- Congestion is a measure of the average amount of additional travel time needed to get to a destination anywhere in a city compared to free flow conditions. Zero percent represents free flow speeds.
- After a significant initial decline in congestion in March, all four U.S. cities measured here saw increases in June, but Houston has fallen after heightened spread.
- On the bottom chart, 100 percent represents 2019 yearly average congestion for each city.
- Wuhan and Beijing, which opened sooner than other world cities, have seen higher than average congestion. Congestion dipped in June in Beijing due to a renewed outbreak.





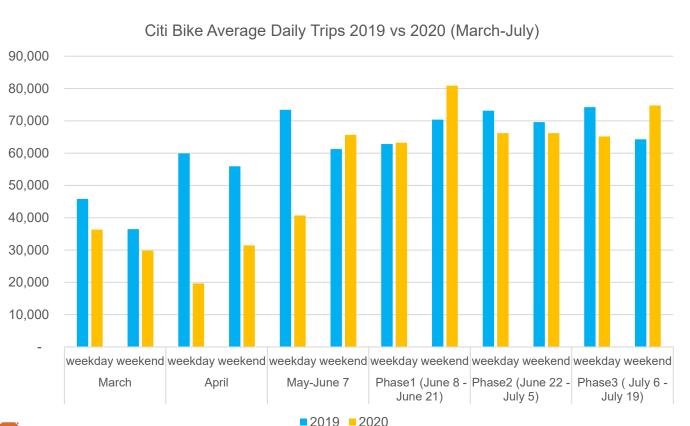
*Some weeks contain less than five days due to holidays and gaps in the data. Data source: TomTom Traffic Index (https://www.tomtom.com/en_gb/traffic-index/)

Citi Bike

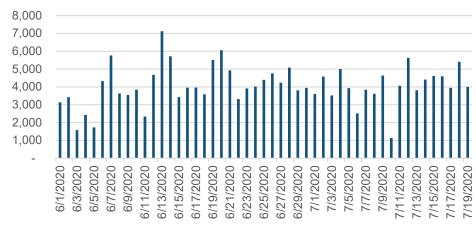


Citi Bike Ridership

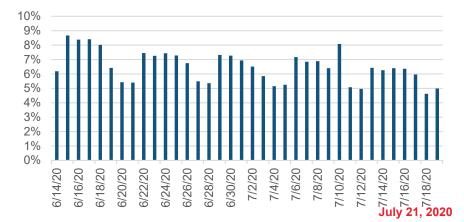
- During early June and July 2020, Citi Bike ridership has been fairly consistent with ridership patterns during the same period in 2019.
- Citi Bike ridership on East River bridge crossings has been fairly steady since early June 2020, with peak travel occurring on weekends.
- The percentage of trips taken by Critical Workers has been declining.



Daily East River Bridge Crossings



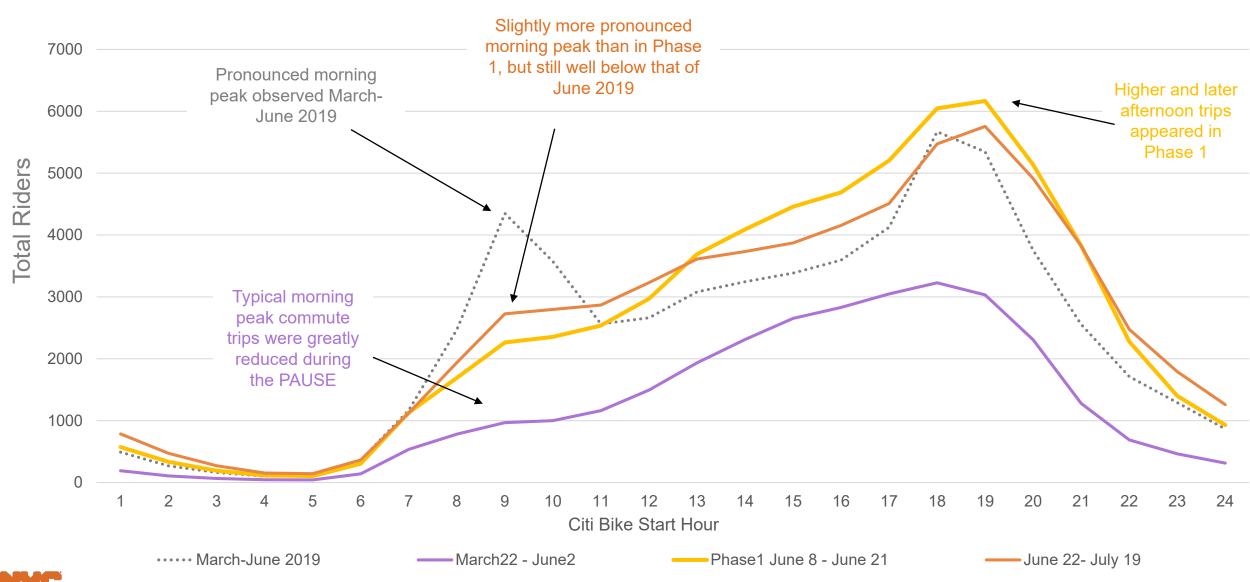
Percent of all trips taken by Critical Workers





Data sources: DOT Citi Bike Data

Citi Bike Ridership by Time of Day



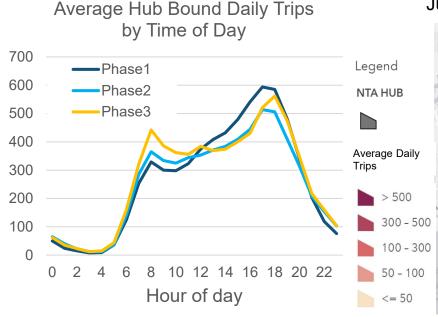


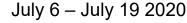
July 21, 2020 27 Data sources: DOT Citi Bike Data

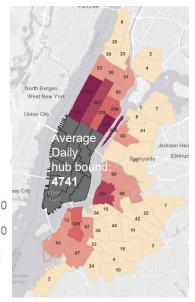
Citi Bike Ridership Trends – Hub Bound Travel

Hub Bound Daily Average Trips By NTA

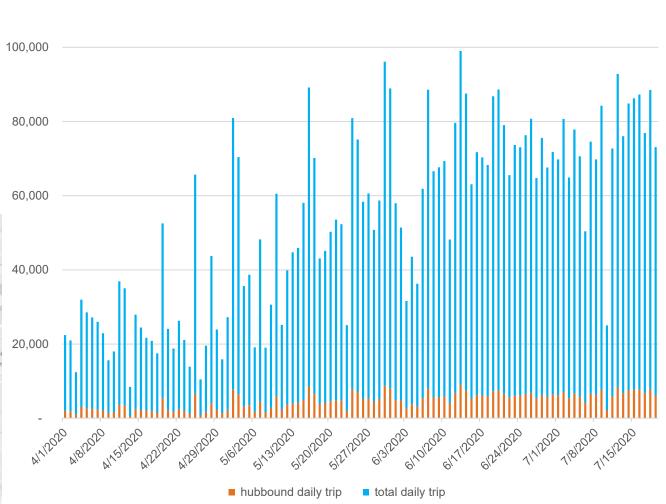
- While overall Citi Bike ridership has been high through May and June, the number of trips* starting outside of the Manhattan CBD and ending within it remain low.
- The low percentage of Citi Bike trips to the Manhattan CBD from outside of it imply that only a few new hub-bound commuters have been using Citi Bike to commute since Phases 1 through 3 were initiated.
- Daily hub bound trips by hour show an increase in AM peak hour trips.







Hub Bound Daily Trips vs Total Daily Trips



^{• *}Hub-bound trips: trips originating outside the hub and ending inside the hub, where trip duration is greater than 1.5 min and less than 45 mins



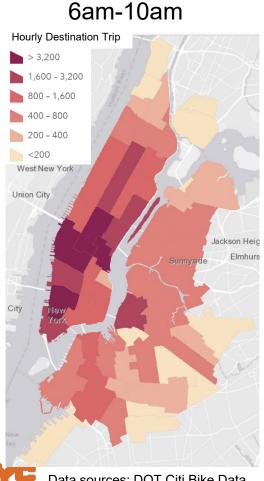
Data sources: DOT Citi Bike Data 28

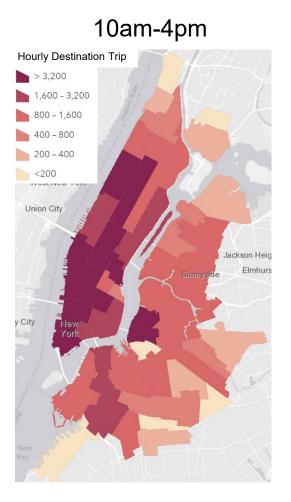
120.000

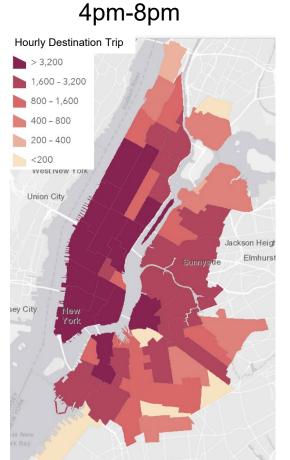
Citi Bike Destination Ridership By Time of Day Trends

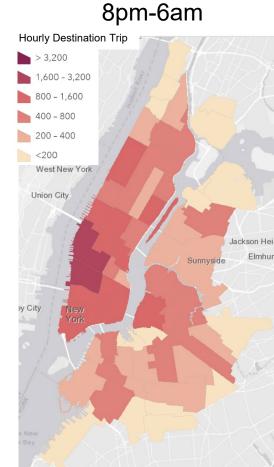
Average Hourly NTA Destination Trips by time of day 6/22-7/19

- Citi Bike trip destinations vary substantially by time of day.
- Manhattan destinations predominate during the morning and evening hours. These trips include any trip that ends in Manhattan, regardless of origin.







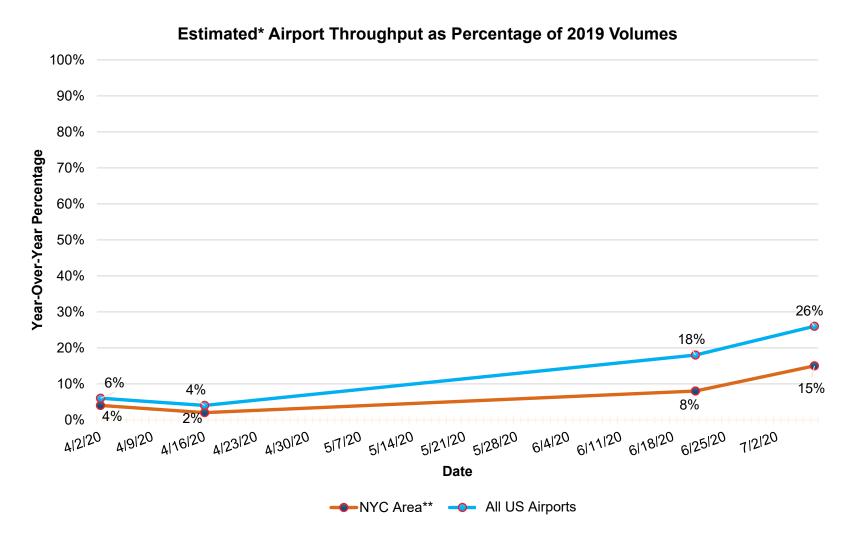


Airports



NYC-Area Airports vs All US Airports

- Air passenger traffic is beginning to recover, but is still significantly reduced from its 2019 levels
- Since mid-April 2020, national air passenger volumes have rebounded somewhat more quickly than New York City area airports
- The tri-state area now requires travelers returning from a list of 31 states with high rates of COVID-19 infections to self-quarantine for 14 days. This is an increase from the original list of 9 states published in late June.



^{*}These figures represent the number of persons screened at TSA checkpoints, including airport and airline employees. Actual passenger volumes may be about 1.5% lower.



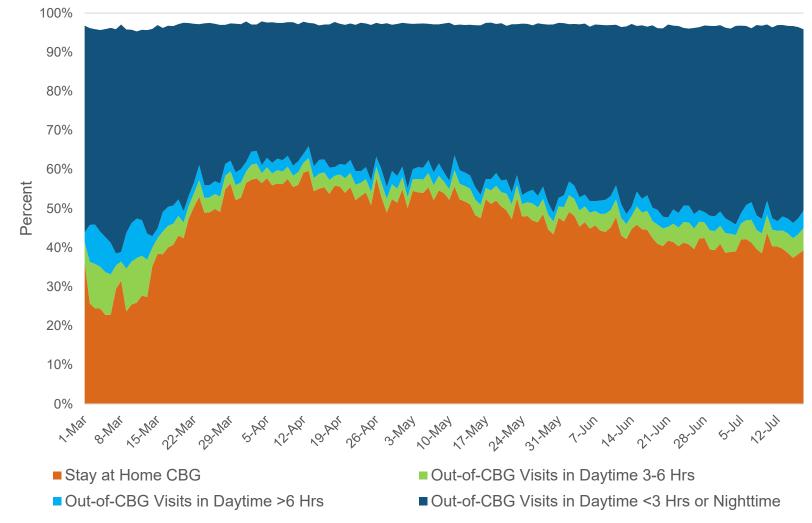
^{**}Includes EWR, JFK, and LGA

Cellphone-based Mobility



Measures of Mobility – Cell Phone Locations



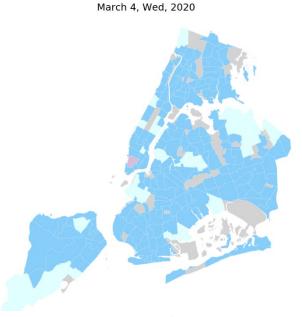


- Mobility patterns are based on data from SafeGraph, a company that generates data by pinging mobile devices throughout the day to determine their locations.
- Based on typical location of devices overnight, assumptions are made about a device's "home" census block group, and interpretations are made about travel based on device location at different points throughout the day.
- SafeGraph data shown here provides information on general duration of trips. The orange area indicates devices that stayed entirely within their home CBG; dark blue area indicates devices that left for less than 3 hours that day, or during the night.
- The percent of devices remaining in their "home" census block group has been trending slightly down since mid-May 2020, with short trips trending up at the fastest rate.

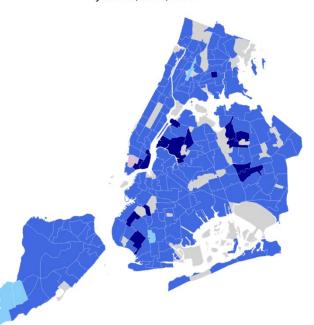


Data sources: SafeGraph, https://www.safegraph.com/. a data company that aggregates anonymized location data from numerous applications in order to provide insights about physical places. To enhance privacy, SafeGraph excludes census block group information if fewer than five devices visited an establishment in a month from a given census block group. SafeGraph collects a semi-random sampling of data throughout the day. "Stay at Home CBG" indicates the devices did not leave the Geohash-7 in which their home is located during the time period that SafeGraph attempted to ping them. The same analysis is applied to each category July 21, 2020 33

Measures of Mobility – Percent of Devices Dwelling at Home in All Observed Time

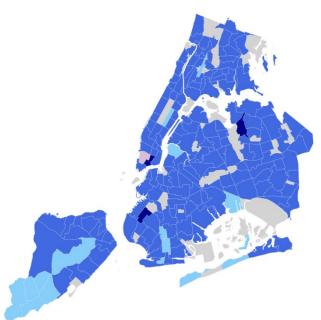


June 17, Wed, 2020



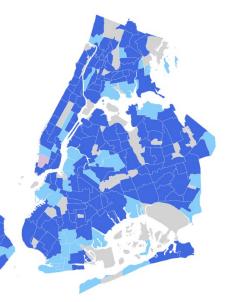
April 15, Wed, 2020

June 24, Wed, 2020



- Among the universe of devices tracked by SafeGraph, there was a significant increase in the share of devices that "stayed at home", or which didn't leave their home census block group, between March and April. Manhattan and portions of Brooklyn showed slightly lower rates of staying at home.
- Data from mid- and late-June indicate increasing mobility across the city, with most neighborhoods demonstrating a greater share of devices leaving their home block group, though still at much lower rates than observed in early March.
- Mobility appears to have increased in many neighborhoods across the city between the end of June and mid July.

July 15, Wed, 2020



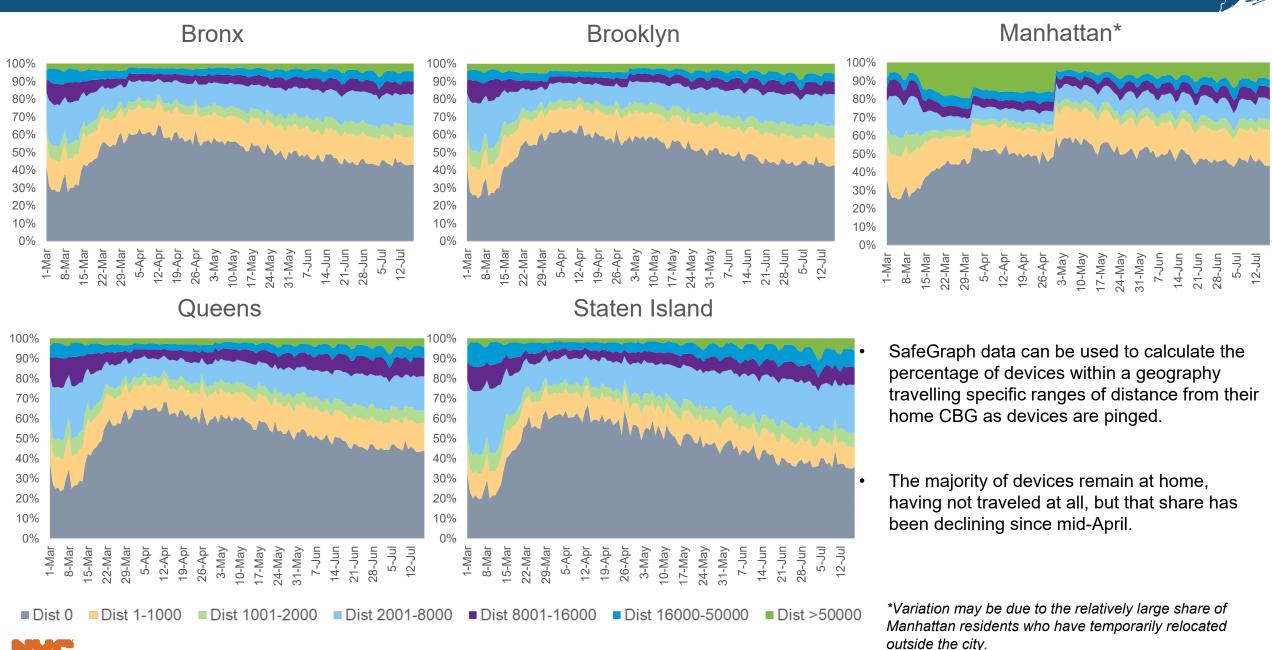
Percent of Devices Dwelling at Home in All Observed Time

- 0~20%
- 20~35%
- 35~50%
- > 50%
- Invalid*
- Parks & Airports & Islands

*GPS data issues result in some neighborhoods being over-indexed. Data from Tribeca in Manhattan appears invalid as a result.

July 21, 2020 34 Data sources: SafeGraph, https://www.safegraph.com/

Measures of Mobility – Distance Traveled (Meters) March 1-July 19 2020



Timeline



New York COVID19 Pandemic Timeline: First Case to End of PAUSE

- March 1st, 2020: First confirmed case in New York https://www.wsj.com/articles/first-case-of-coronavirus-confirmed-in-new-york-state-11583111692
- March 7th, 2020: Governor Cuomo declares state of emergency https://www.nytimes.com/2020/03/07/nyregion/coronavirus-new-york-queens.html
- March 12th, 2020: Governor Cuomo announces restrictions on mass gatherings, directing events with more than 500 people to be cancelled or postponed and any gathering with less than 500 people in attendance to cut capacity by 50 percent. https://www.governor.nv.gov/news/during-novel-coronavirus-briefing-governor-cuomo-announces-new-mass-gatherings-regulations
- March 15th, 2020: NYC school closures announced. https://www.nytimes.com/2020/03/15/nyregion/nyc-schools-closed.html DeBlasio announces the closure of schools, bars, and restaurants (except takeout/delivery) effective the morning of the 17th https://www.nytimes.com/2020/03/15/nyregion/new-york-coronavirus.html
- March 18th: Governor Cuomo announces that 50% of non-essential employees must work from home
- March 20th: Governor Cuomo announces statewide stay at home rules, effective the evening of the 22nd. 100% of non-essential workers must stay home. https://www.npr.org/sections/coronavirus-liveupdates/2020/03/20/818952589/coronavirus-n-y-gov-cuomo-says-100-of-workforce-must-stay-home, travel on transit only when necessary
- March 25th: MTA announces service reduction to **Essential Service** plan https://abc7ny.com/6047040/
- March 27th: The Governor halts non-essential construction https://thecity.nvc/2020/03/cuomo-calls-off-non-essential-construction-statewide.html
- May 1st: Mayor de Blasio announces first seven miles of streets in Open Streets NYC program. https://gothamist.com/news/de-blasio-reveals-first-batch-open-streets-primarily-centered-parks
- May 6th: Governor Cuomo enacts nightly 1am-5am subway shutdowns: https://www.nytimes.com/2020/04/30/nyregion/subway-close-cuomo-coronavirus.html
- May 22nd: Mayor de Blasio announces 45 miles of open streets, the most in the nation, with the City to eventually reach 100 miles, https://www.6sqft.com/nyc-full-list-of-open-streets-summer-2020/
- May 26th: New York Stock Exchange reopens trading floor after 2 month closure. https://www.npr.org/sections/coronavirus-live-updates/2020/05/26/862082828/new-york-stock-exchange-reopenstrading-floor-after-2-month-closure
- May 29th: Governor Cuomo announces that New York City is expected to begin Phase 1 of reopening on Monday, June 8th. https://www.nytimes.com/2020/05/29/nyregion/coronavirus-new-york-liveupdates.html
- June 1st: Governor Cuomo announces overnight curfew in NYC after a weekend of protests due to the death of George Floyd. No-non local vehicles permitted in Manhattan below 96th street, and Citi Bike is shut down during curfew hours. https://deadline.com/2020/06/new-york-city-curfew-andrew-cuomo-george-floyd-protests-1202948548/
- June 5th: The MTA lays out its 13-point "Action Plan For a Safe Return" in preparation for New York City's reopening. https://new.mta.info/document/17751
- June 7th: Mayor de Blasio announces the end of protest-related curfews ahead of schedule, effective immediately, https://www.cbsnews.com/news/nyc-mayor-announces-curfew-has-ended-aheadof-schedule-2020-06-07/



New York COVID19 Pandemic Timeline: Phase 1 to Present

- June 8th: New York City begins Phase 1 of re-opening. Manufacturing, non-essential construction, and non-essential retail via curbside pickup can resume operations https://www.nvtimes.com/2020/06/08/nvregion/coronavirus-nvc-reopen-phase-1.html
 - The Staten Island Ferry begins moving to a 20-minute rush hour schedule beginning with the 3:30 PM trip from St. George. https://www1.nvc.gov/html/dot/html/ferrybus/siferryschedule.shtml#SIschedule
 - Mayor De Blasio announces five new busways to be created throughout the city, modeled after the 14th Street Busway, which will be made permanent. More bus lanes will be added along major corridors, https://www.politico.com/states/new-vork/albany/story/2020/06/08/as-city-reopens-de-blasio-expands-transit-options-1291796
- June 14th: Governor Cuomo issues a statement that the state may reverse the reopening process in regions where the state's reopening plan—particularly social distancing and mask use—are not being followed.
- June 18th: Mayor de Blasio announces guidance for the City's Open Restaurants program, which allows qualifying restaurants and bars to expand outdoor seating on sidewalks. curb lanes, backvards. patios, plazas, and Open Streets. https://www1.nyc.gov/office-of-the-mayor/news/449-20/open-restaurants-new-york-city-prepares-phase-2-reopening-mayor-de-blasio-announces
- June 19th: Governor Cuomo holds his final daily coronavirus briefing, saying "We have done the impossible." He will continue to monitor the situation and hold press conferences as needed. https://www.cbsnews.com/news/andrew-cuomo-new-vorkers-united-coronavirus-pandemic-crisis/
- June 22nd: New York City begins Phase 2 of re-opening, including in-store retail, offices, hair salons and barbershops, house of worship, and car sales. Social distancing and hygiene guidelines remain in place. https://www.nv1.com/nvc/all-boroughs/news/2020/06/21/what-exactly-does-phase-two-reopening-mean-for-new-vork-city-
 - Governor Cuomo says he is actively talking to Governor Murphy of NJ and Governor Lamont of Connecticut, and that the three governors are "seriously considering" implementing a 14-day isolation protocol for visitors from Florida, which could be extended to travelers from Arizona, Texas, and several other stats who are experiencing a rapid rise in Covid cases. https://nypost.com/2020/06/22/gov-cuomo-talks-to-nj-connecticut-about-florida-quarantine-rules/
 - According to a survey conducted by the Partnership for New York City, while Phase 2 allows office workers to return to their offices, respondents from 60 companies predicted that only 10% of their employees would return to the office by August 15th. Rudin Management Company said that, across its 14 offices in New York that reopened on Monday, it reached a collective 5.2 percent occupancy rate. https://www.nytimes.com/2020/06/22/nyregion/nyc-phase-2-reopening-coronavirus.html
- June 24th: The state governments of New York, New Jersey, and Connecticut issue self-quarantine restrictions on travelers returning from a list of 9 states with high infection rates, with the ability to add more as the situation changes. https://coronavirus.health.ny.gov/system/files/documents/2020/06/interimquidance traveladvisory.pdf
- June 29th: Mayor de Blasio announces that, while outdoor dining is "working" in New York City and that the city is moving on track for Phase 3 of reopening on July 6th, the reopening of indoor dining may be delayed due to ongoing coronavirus concerns. Governor Cuomo echoed these concerns. https://abc7nv.com/indoor-dining-in-nyc-new-york-city-reopen-coronavirus/6280941/
- July 6th: New York City begins Phase 3 of re-opening. Originally, this was to include indoor dining at restaurants, but this element has been postponed in light of outbreaks in other states.
 - The Staten Island Ferry resumes regular rush-hour service, with boats running every 15 minutes from 7:00 am 9:00 am and 5:00 pm 7:00 pm. https://mms.tveyes.com/PlaybackPortal.aspx?SavedEditID=ea13aec9-00c3-46cf-998e-a31fa521b891
- July 20th: New York City enters Phase 4 of re-opening, which includes outdoor activities like zoos and botanical gardens, as well as professional sports without spectators. Indoor dining, originally part of Phase 3, is still prohibited. https://www.nytimes.com/2020/07/20/nyregion/nyc-phase-4-reopening-coronavirus.html

