

*Airport capacity profile estimates were created using a standard set of performance characteristics and do not take into account non-runway constraints, unless otherwise noted. The capacity estimates developed for this report are not intended to replace the results of any detailed analysis that would precede an environmental, investment, or policy decision.*

*The list of Future Improvements and their expected effects on capacity does not imply FAA commitment to, or approval of, any item on the list.*

**DEFINITION**

- The capacity profile shows the hourly throughput that an airport is able to sustain during periods of high demand, represented as the range between the model-estimated capacity and the ATC facility reported rate (called rate). Each weather condition has a unique capacity rate range.
- The operational limits put in place under the Schedule Orders and proposed in the NPRM for LGA involve a trade-off between airport throughput and a tolerable level of delay. The Government Accountability Office (GAO) recommended, and FAA agrees, that operational limits for LGA should be established under realistic weather and operating scenarios, not optimal conditions. This can result in less throughput under good weather conditions but helps prevent excessive delays during adverse weather periods.
- The following charts compare actual hourly traffic with the estimated capacity curves for LGA. Some hourly traffic points fall outside the estimated capacity curves. There are many reasons why this may occur without affecting operational safety, including efficient sequencing of aircraft. Also, actual weather may have been better for part of the hour than that recorded for the hour, allowing more efficient ATC procedures than were modeled.

**RECENT CAPACITY IMPROVEMENTS AT LGA**

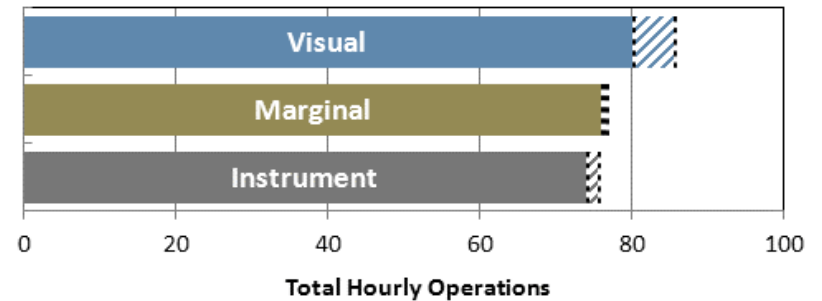
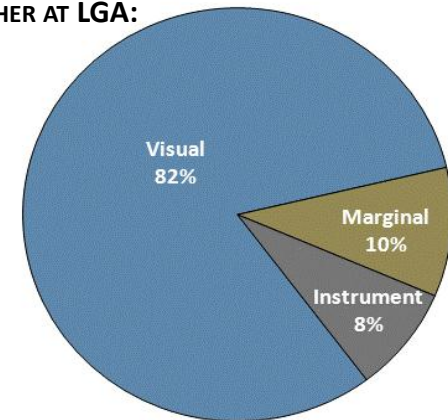
- Implementation of Traffic Management Advisor (TMA) helps to improve the flow of arrivals to the runways.

**FUTURE IMPROVEMENTS AT LGA**

- *Improved Runway Delivery Accuracy:* The combined effects of several new capabilities, including ADS-B Out, CDTI, and TBM in the terminal area, will improve the ability of controllers by 2020 to deliver aircraft to the runway with the desired separation from the preceding aircraft. This will reduce the average spacing between arrivals and boost arrival capacity.
- Additional information on these improvements may be found in this report under "Future Operation Assumptions."

**DATA SOURCES**

- Actual hourly LGA operations, weather and configuration data were obtained from the FAA ASPM database, and represent operational hours from 7am to 11pm local time for all of Fiscal Years 2009 and 2010. Actual configuration usage is determined by multiple operational factors, including weather conditions.
- Facility reported rates were provided by ATC personnel at LGA.
- Model-estimated rates are derived from operational information provided by ATC.

**CURRENT OPERATIONS CAPACITY RATE RANGE****ANNUAL WEATHER AT LGA:****VISUAL CONDITIONS:**

- Ceiling and visibility allow for visual approaches: at least 3200 feet ceiling and 4 miles visibility

**MARGINAL CONDITIONS:**

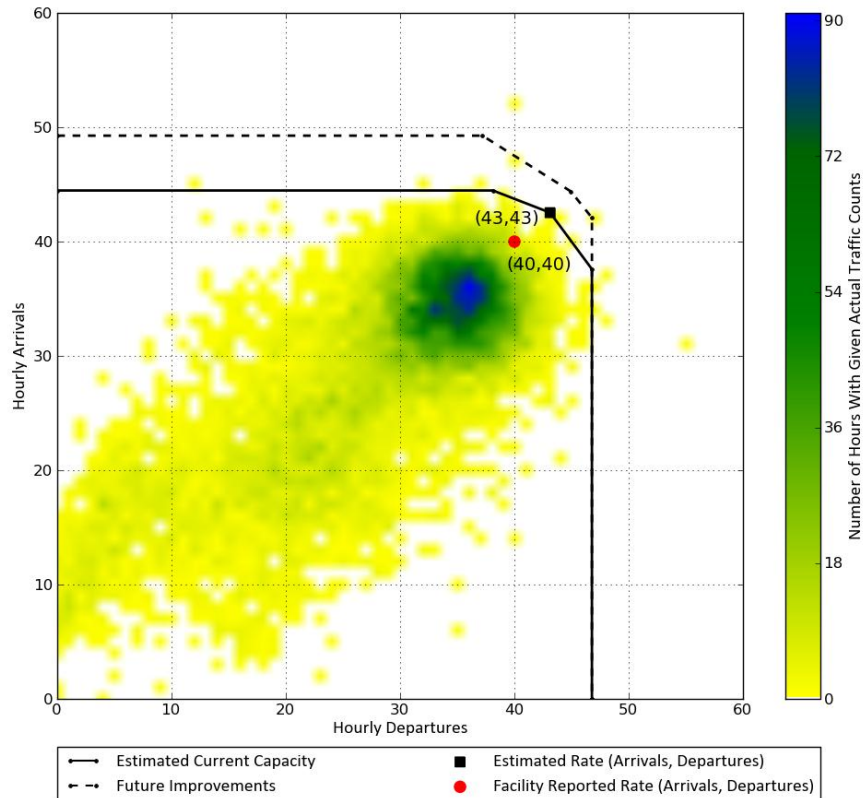
- Ceiling and visibility below visual approach minima but better than Instrument conditions

**INSTRUMENT CONDITIONS:**

- Ceiling and visibility below 1000 feet ceiling or 3 miles visibility

LGA Scenario	Arrival Runways	Departure Runways	Procedures	Hourly Rate	
				ATC Facility Reported	Model-Estimated
<b>CURRENT OPERATIONS</b>	22	13	Visual Approach, Visual Separation	80	86
<b>FUTURE IMPROVEMENTS</b> Improved Runway Delivery Accuracy	22	13		N/A	89

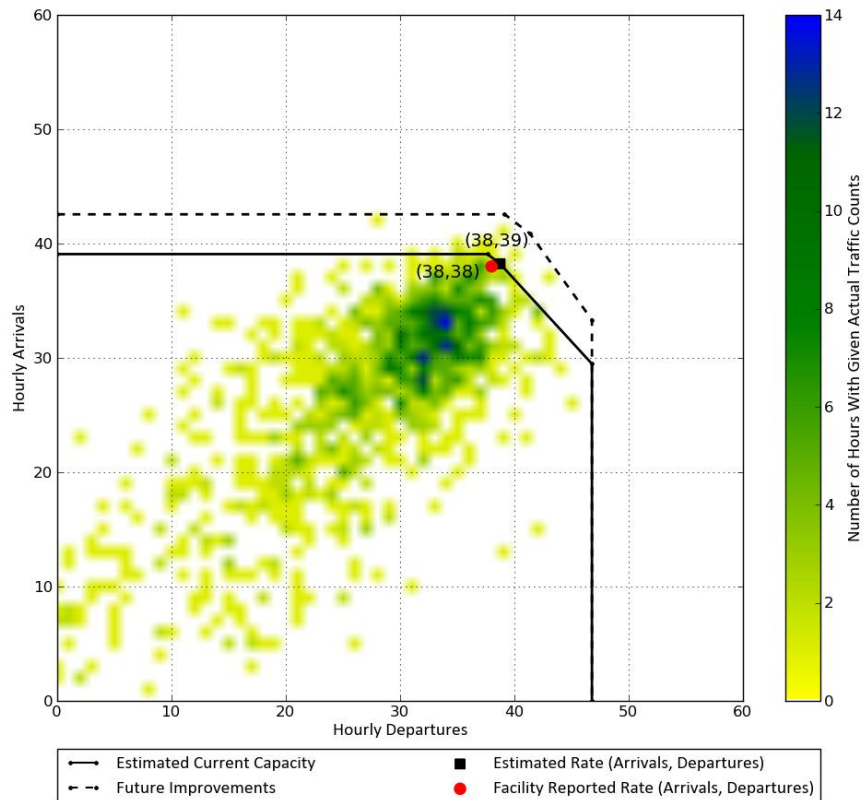
## VISUAL WEATHER CONDITIONS



- The capacity rate range in Visual conditions is currently 80-86 operations per hour.
- LGA does not have a dominant airport configuration. The profiled configuration offers slightly higher hourly capacity than other configurations because of the short distance to the runway intersection. However this configuration is not always available, due to winds or airspace constraints. The airport operates in this profiled configuration approximately 11% of the time in Visual weather conditions (totaling 9% annually).
- This capacity profile does not take into consideration operating configurations at nearby airports such as EWR, JFK, or PHL. In particular, the NY/NY/PHL airspace is complex and highly interconnected. Departure or arrival patterns at one airport can impact capacity at nearby airports.
- Both runways at LGA have aircraft weight limitations related to their structural construction over the bay.

LGA Scenario	Arrival Runways	Departure Runways	Procedures	Hourly Rate	
				ATC Facility Reported	Model-Estimated
<b>CURRENT OPERATIONS</b>	22	13	Instrument Approach, Visual Separation	76	77
<b>FUTURE IMPROVEMENTS</b> Improved Runway Delivery Accuracy	22	13		N/A	82

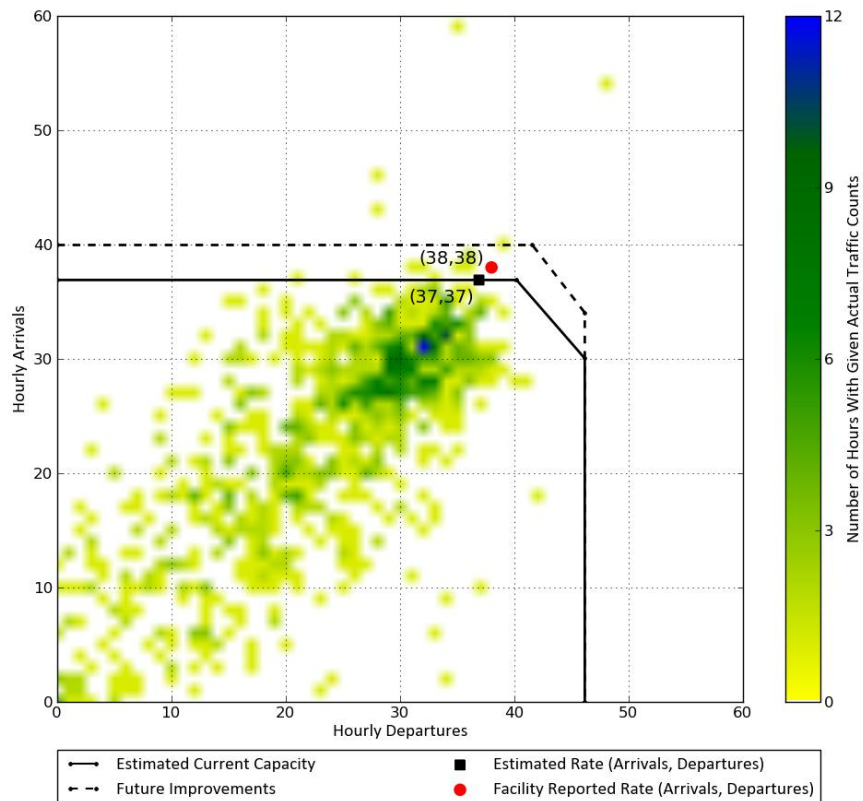
## MARGINAL WEATHER CONDITIONS



- The capacity rate range in Marginal conditions is currently 76-77 operations per hour.
- LGA does not have a dominant airport configuration. The profiled configuration offers slightly higher hourly capacity than other configurations because of the short distance to the runway intersection. However this configuration is not always available, due to winds or airspace constraints. The airport operates in this profiled configuration approximately 8% of the time in Marginal weather conditions (totaling less than 1% annually).
- Reduced separation (2.5 NM) between arrivals is authorized for approaches to Runway 22.
- This capacity profile does not take into consideration operating configurations at nearby airports such as EWR, JFK, or PHL. In particular, the NY/NY/PHL airspace is complex and highly interconnected. Departure or arrival patterns at one airport can impact capacity at nearby airports.
- Both runways at LGA have aircraft weight limitations related to their structural construction over the bay.

LGA Scenario	Arrival Runways	Departure Runways	Procedures	Hourly Rate	
				ATC Facility Reported	Model-Estimated
<b>CURRENT OPERATIONS</b>	22	13	Instrument Approach, Radar Separation	76	74
<b>FUTURE IMPROVEMENTS</b> Improved Runway Delivery Accuracy	22	13		N/A	80

## INSTRUMENT WEATHER CONDITIONS



- The capacity rate range in Instrument conditions is currently 74-76 operations per hour.
- LGA does not have a dominant airport configuration. The profiled configuration offers slightly higher hourly capacity than other configurations because of the short distance to the runway intersection. However this configuration is not always available, due to winds or airspace constraints. The airport operates in this profiled configuration approximately 14% of the time in Instrument weather conditions (totaling 1% annually).
- Reduced separation (2.5 NM) between arrivals is authorized for approaches to Runway 22.
- This capacity profile does not take into consideration operating configurations at nearby airports such as EWR, JFK, or PHL. In particular, the NY/NY/PHL airspace is complex and highly interconnected. Departure or arrival patterns at one airport can impact capacity at nearby airports.
- Both runways at LGA have aircraft weight limitations related to their structural construction over the bay.