

*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 following charts compare actual hourly traffic with the estimated capacity curves for MIA.

**RECENT CAPACITY IMPROVEMENTS AT MIA**

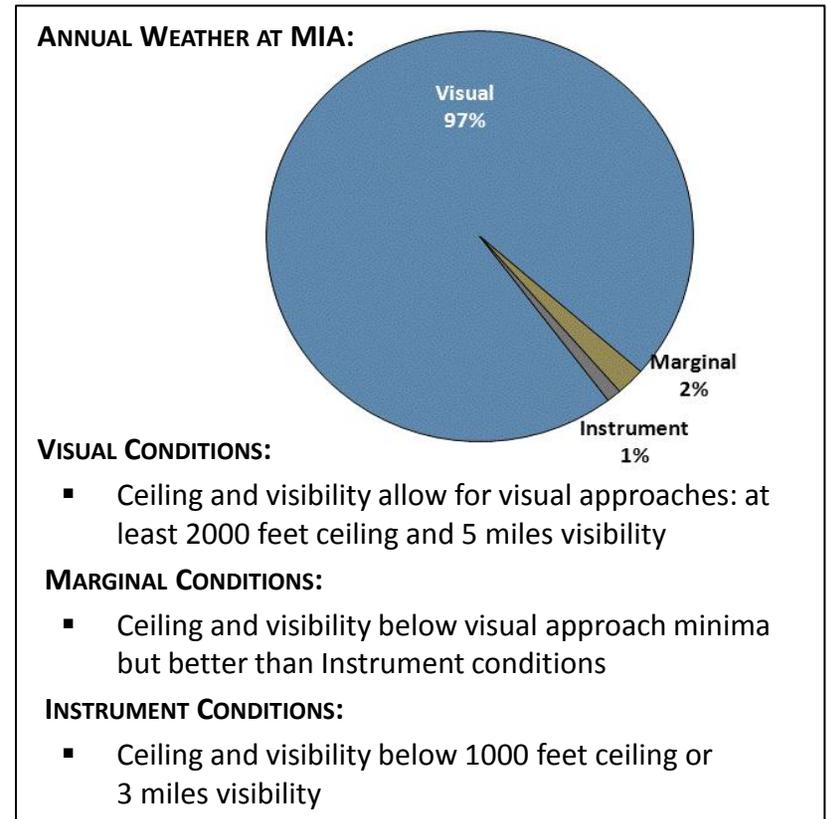
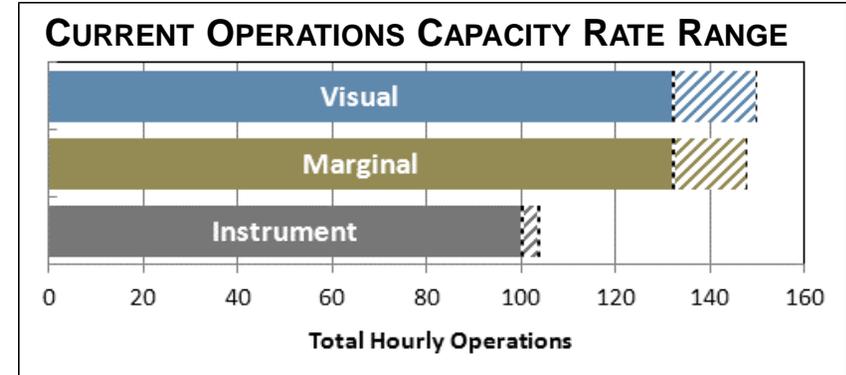
- In 2003 MIA commissioned a new runway, 8L/26R, which is typically used for arrivals.
- Implementation of Traffic Management Advisor (TMA) helps to improve the flow of arrivals to the runways.

**FUTURE IMPROVEMENTS AT MIA**

- *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.
- *Improved Parallel Runway Operations:* Current spacing of Runway 8L/26R allows for Simultaneous Instrument Approaches with Runway 9/27, however this procedure cannot be implemented at MIA until a glide slope is installed for Runway 8L/26R.
- Additional information on these improvements may be found in this report under "Future Operation Assumptions."

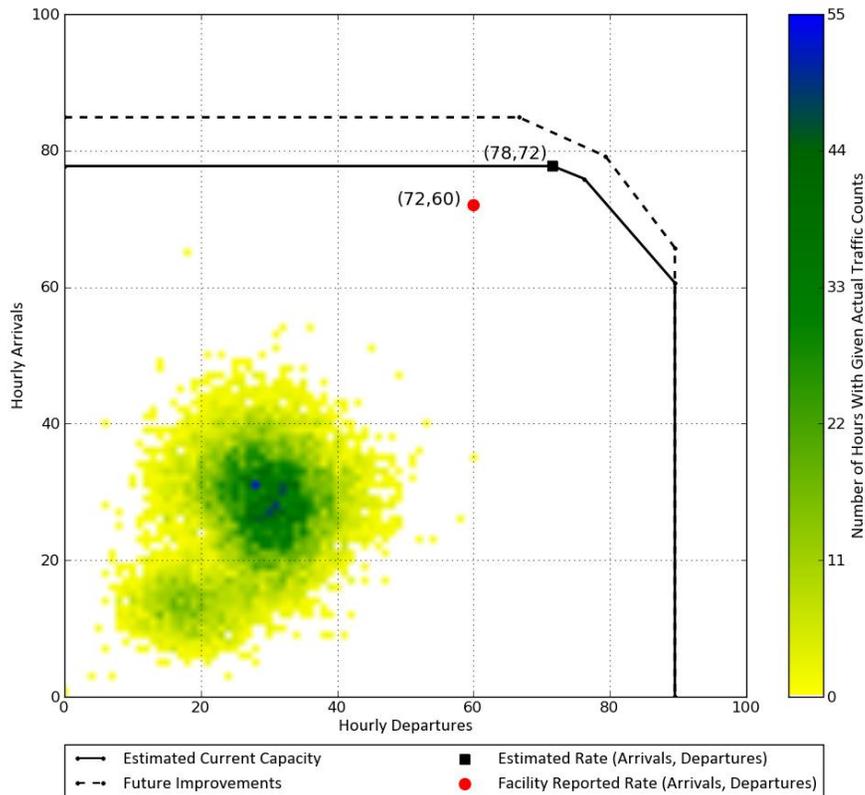
**DATA SOURCES**

- Actual hourly MIA 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 MIA.
- Model-estimated rates are derived from operational information provided by ATC.



MIA Scenario	Arrival Runways	Departure Runways	Procedures	Hourly Rate	
				ATC Facility Reported	Model-Estimated
<b>CURRENT OPERATIONS</b>	8L, 9	8R, 12	Visual Approaches, Visual Separation	132	150
<b>FUTURE IMPROVEMENTS</b> Improved Runway Delivery Accuracy	8L, 9	8R, 12		N/A	152

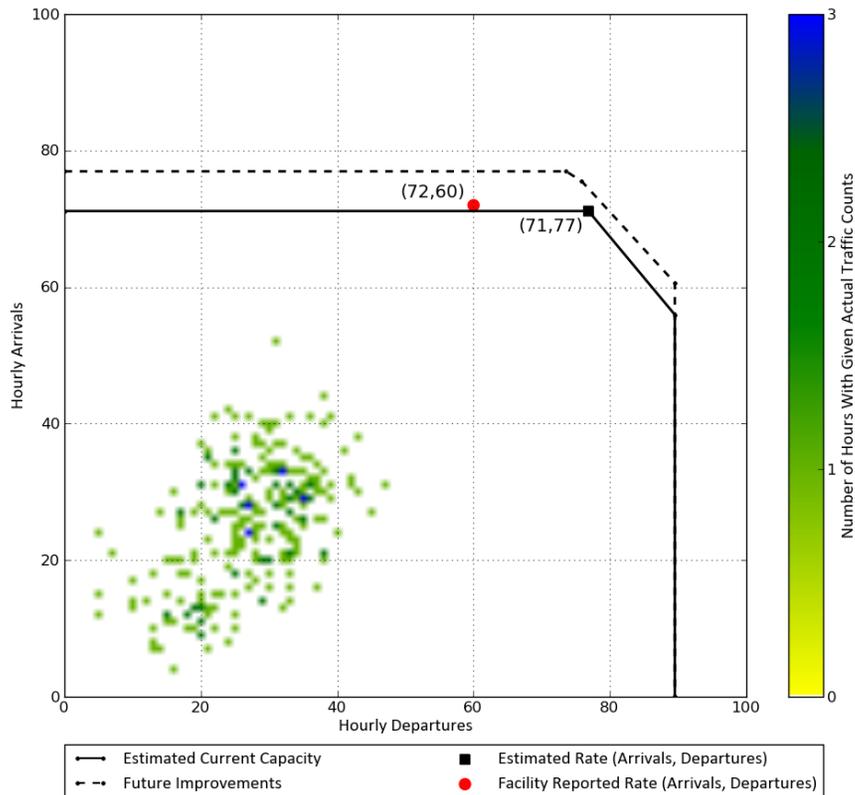
## VISUAL WEATHER CONDITIONS



- The capacity rate range in Visual conditions is currently 132-150 operations per hour.
- MIA has two primary directional traffic flows. The airport operates in variations of this configuration approximately 57% of the time in Visual weather conditions (totaling 55% annually).

MIA Scenario	Arrival Runways	Departure Runways	Procedures	Hourly Rate	
				ATC Facility Reported	Model-Estimated
<b>CURRENT OPERATIONS</b>	8L, 9	8R, 12	Non-Precision Instrument Approaches, Visual Separation	132	148
<b>FUTURE IMPROVEMENTS</b> Improved Runway Delivery Accuracy	8L, 9	8R, 12		N/A	151

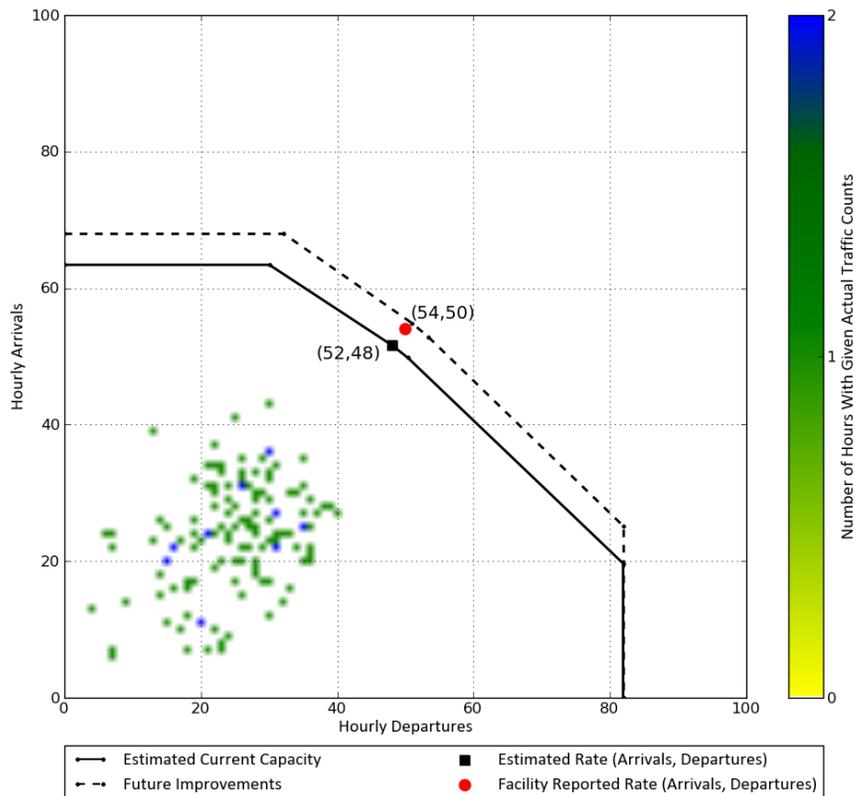
## MARGINAL WEATHER CONDITIONS



- The capacity rate range in Marginal conditions is currently 132-148 operations per hour.
- MIA has two primary directional traffic flows. The airport operates in variations of this configuration approximately 43% of the time in Marginal weather conditions (totaling 1% annually).
- Reduced separation (2.5 NM) between arrivals is authorized for approaches to Runways 8L and 9 at MIA.

MIA Scenario	Arrival Runways	Departure Runways	Procedures	Hourly Rate	
				ATC Facility Reported	Model-Estimated
<b>CURRENT OPERATIONS</b>	8R, 9	8L, 8R, 12	Simultaneous Instrument Approaches, Radar Separation	104	100
<b>FUTURE IMPROVEMENTS</b> Improved Runway Delivery Accuracy Improved Parallel Runway Operations	8L, 9	8R, 12		N/A	106

## INSTRUMENT WEATHER CONDITIONS



- The capacity rate range in Instrument conditions is currently 100-104 operations per hour.
- MIA has two primary directional traffic flows. The airport operates in variations of this configuration approximately 30% of the time in Instrument weather conditions (totaling less than 1% annually).
- Reduced separation (2.5 NM) between arrivals is authorized for approaches to Runways 8R and 9 at MIA.
- Long-haul aircraft departures are not assigned to Runway 8L due to length.