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.
Hartsfield-Jackson Atlanta International Airport (ATL) Overview

About this Airport Capacity Profile
- 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 capacity rate range.
- For each weather scenario, capacity estimates are based on information provided by ATC, including reported arrival and departure rates.

Recent Capacity Improvements at ATL
- **Time-Based Flow Management** (TBFM) helps to improve the flow of arrivals to the runways.
- **Wake Recategorization Phase 1** assigns aircraft to new wake turbulence classifications based on their wake turbulence characteristics, such as wake generation, wake decay, and encounter effects. This results in closer longitudinal separation for certain aircraft types without sacrificing safety.
- **Same Runway Departure Fanning** using Equivalent Lateral Spacing Operations (ELSO) is in use at ATL. This improvement allows reduced separation between successive departures due to the availability of new Standard Instrument Departure (SID) procedures which provide more precise guidance and control for departing aircraft.

Future Improvements at ATL
- **Improved Runway Delivery Accuracy**: The combined effects of several new capabilities, including Automatic Dependent Surveillance-Broadcast (ADS-B) Out, Cockpit Display of Traffic Information (CDTI), and Terminal Sequencing and Spacing (TSAS) in the terminal area, will improve the ability of controllers 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.
- **Wake Recategorization Phase 2** assigns aircraft to new wake turbulence classifications based on their wake turbulence characteristics, such as wake generation, wake decay, and encounter effects. This results in closer longitudinal separation for certain aircraft types without sacrificing safety.
- The end around taxiway around the end of Runway 09L will allow for the movement of aircraft to the terminal in West Flow without needing to cross Runway 09L/27R.
**Current Operations Capacity Rate Range**

<table>
<thead>
<tr>
<th>Current Operations Capacity Rate Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual - East Flow</td>
</tr>
<tr>
<td>Visual - West Flow</td>
</tr>
<tr>
<td>Marginal - East Flow</td>
</tr>
<tr>
<td>Marginal - West Flow</td>
</tr>
<tr>
<td>Instrument - East Flow</td>
</tr>
<tr>
<td>Instrument - West Flow</td>
</tr>
<tr>
<td>Low Instrument - East Flow</td>
</tr>
<tr>
<td>Low Instrument - West Flow</td>
</tr>
</tbody>
</table>

The hatched region represents the range between the facility-reported rate and the modeled rate.

**Annual Weather Conditions**

- **Visual Conditions**: Ceiling and visibility allow for visual approaches: at least 5000 feet ceiling and 6 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 but better than low instrument conditions
- **Low Instrument Conditions**: Ceiling and visibility below 500 feet ceiling or 1 mile visibility

**Data Sources**

- Throughout the profile, actual hourly ATL operations, weather and configuration data were obtained from the FAA ASPM database, and represent operational hours from 7am to 11pm local time for October 1, 2014 through September 30, 2017. Actual configuration usage is determined by multiple operational factors, including weather conditions.
- Facility-reported rates were provided by ATC personnel at ATL.
- Model-estimated rates are derived from operational information provided by ATC.
### Visual Approaches, Visual Separation

<table>
<thead>
<tr>
<th>Type Operations</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Hourly Rate</th>
<th>ATC Facility-Reported</th>
<th>Model-Estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CURRENT OPERATIONS</strong></td>
<td>08L,09R,10</td>
<td>08R,09L</td>
<td>250</td>
<td>252</td>
<td></td>
</tr>
<tr>
<td><strong>FUTURE IMPROVEMENTS</strong></td>
<td>08L,09R,10</td>
<td>08R,09L</td>
<td>N/A</td>
<td>260</td>
<td></td>
</tr>
</tbody>
</table>

- **Future improvements**: Improved Runway Delivery Accuracy, Wake Recategorization Phase 2

- The capacity rate range in Visual conditions in East flow is currently 250-252 operations per hour.

- Same runway departure fanning is conducted from Runways 08R and 09L. This procedure enables higher departure throughput by reducing the minimum time required between successive departures.

- Runway crossings are not modeled because preferred taxi paths allow arrivals to cross behind departing aircraft in East flow.
Actual traffic counts shown are for all Visual hours, all configurations.
For data source information, see page 3.
### Visual - West Flow

**Visual Approaches, Visual Separation**

<table>
<thead>
<tr>
<th>Type Operations</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Operations</strong></td>
<td>26R,27L,28</td>
<td>26L,27R</td>
<td>240 ATC Facility-Reported, 231 Model-Estimated</td>
</tr>
<tr>
<td><strong>Future Improvements</strong></td>
<td>26R,27L,28</td>
<td>26L,27R</td>
<td>N/A ATC Facility-Reported, 268 Model-Estimated</td>
</tr>
</tbody>
</table>

- **Future improvements**: Improved Runway Delivery Accuracy, Wake Recategorization Phase 2, End Around Taxiway

- The capacity rate range in Visual conditions in West flow is currently 231-240 operations per hour.

- Same runway departure fanning is conducted from Runways 26L and 27R. This procedure enables higher departure throughput by reducing the minimum time required between successive departures.

- Runway crossings have been modeled on the South side of the airport terminal to reflect current operations. This assumption is removed in the future scenario to reflect completion of the planned end around taxiway.
Actual traffic counts shown are for all Visual hours, all configurations. For data source information, see page 3.
### Marginal – East Flow

#### Two Visual Approaches, Visual Separation

<table>
<thead>
<tr>
<th>Type Operations</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CURRENT OPERATIONS</strong></td>
<td>08L,09R,10</td>
<td>08R,09L</td>
<td>242</td>
</tr>
<tr>
<td><strong>FUTURE IMPROVEMENTS</strong></td>
<td>08L,09R,10</td>
<td>08R,09L</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ATC Facility-Reported</th>
<th>Model-Estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td>248</td>
<td>252</td>
</tr>
</tbody>
</table>

- **Future improvements**: Improved Runway Delivery Accuracy, Wake Recategorization Phase 2
- The capacity rate range in Marginal conditions in East flow is currently 242-248 operations per hour.
- Reduced separation (2.5 NM) between arrivals is authorized for instrument approaches to all arrival runways.
- Visual approaches are run to Runways 08L and 10, while an instrument approach is used to Runway 09R.
- Same runway departure fanning is conducted from Runways 08R and 09L. This procedure enables higher departure throughput by reducing the minimum time required between successive departures.
- Runway crossings are not modeled because preferred taxi paths allow arrivals to cross behind departing aircraft in East flow.
- As ATL approaches Marginal conditions, ATC loses the ability to run visual approaches to all three runways. Instead, a combination of visual and instrument approaches is used. This Marginal configuration occurs most frequently.
Actual traffic counts shown are for all Marginal hours, all configurations.
For data source information, see page 3.
### Marginal – West Flow

<table>
<thead>
<tr>
<th>Type Operations</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Hourly Rate</th>
<th>ATC Facility-Reported</th>
<th>Model-Estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Operations</strong></td>
<td>26R, 27L, 28</td>
<td>26L, 27R</td>
<td>232</td>
<td>228</td>
<td></td>
</tr>
<tr>
<td><strong>Future Improvements</strong></td>
<td>26R, 27L, 28</td>
<td>26L, 27R</td>
<td>N/A</td>
<td>260</td>
<td></td>
</tr>
</tbody>
</table>

- **Future improvements**: Improved Runway Delivery Accuracy, Wake Recategorization Phase 2, End Around Taxiway
- The capacity rate range in Marginal conditions in West flow is currently 228-232 operations per hour.
- Reduced separation (2.5 NM) between arrivals is authorized for instrument approaches to all arrival runways.
- Visual approaches are run to Runways 26R and 28, while an instrument approach is used to Runway 27L.
- Same runway departure fanning is conducted from Runways 26L and 27R. This procedure enables higher departure throughput by reducing the minimum time required between successive departures.
- Runway crossings have been modeled on the South side of the airport terminal to reflect current operations. This assumption is removed in the future scenario to reflect completion of the planned end around taxiway.
- As ATL approaches Marginal conditions, ATC loses the ability to run visual approaches to all three runways. Instead, a combination of visual and instrument approaches is used. This Marginal configuration occurs most frequently.
MARGINAL – WEST FLOW

MARGINAL WEATHER CONDITIONS

TWO VISUAL APPROACHES, VISUAL SEPARATION
ONE INSTRUMENT APPROACH, RADAR SEPARATION

Actual traffic counts shown are for all Marginal hours, all configurations. For data source information, see page 3.
### Instrument - East Flow

#### Instrument Approaches, Radar Separation

<table>
<thead>
<tr>
<th>Type Operations</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Operations</strong></td>
<td>08L,09R,10</td>
<td>08R,09L</td>
<td>204 200</td>
</tr>
<tr>
<td><strong>Future Improvements</strong></td>
<td>08L,09R,10</td>
<td>08R,09L</td>
<td>N/A    210</td>
</tr>
</tbody>
</table>

- **Future improvements**: Improved Runway Delivery Accuracy, Wake Recategorization Phase 2
- The capacity rate range in Instrument conditions in East flow is currently 200-204 operations per hour.
- Reduced separation (2.5 NM) between arrivals is authorized for instrument approaches to all arrival runways.
- Same runway departure fanning is conducted from Runways 08R and 09L. This procedure enables higher departure throughput by reducing the minimum time required between successive departures.
- Runway crossings are not modeled because preferred taxi paths allow arrivals to cross behind departing aircraft in East flow.
Actual traffic counts shown are for all Instrument hours, all configurations.

For data source information, see page 3.
### Instrument – West Flow

#### Instrument Approaches, Radar Separation

<table>
<thead>
<tr>
<th>Type Operations</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Operations</strong></td>
<td>26R,27L,28</td>
<td>26L,27R</td>
<td>204</td>
</tr>
<tr>
<td><strong>Future Improvements</strong></td>
<td>26R,27L,28</td>
<td>26L,27R</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- **Future improvements:** Improved Runway Delivery Accuracy, Wake Recategorization Phase 2
- The capacity rate range in Instrument conditions in West flow is currently 197-204 operations per hour.
- Reduced separation (2.5 NM) between arrivals is authorized for instrument approaches to all arrival runways.
- Same runway departure fanning is conducted from Runways 26L and 27R. This procedure enables higher departure throughput by reducing the minimum time required between successive departures.
- Runway crossings were not explicitly modeled in this configuration because arrival departure dependencies in Instrument conditions allows natural crossing gaps to occur.
Actual traffic counts shown are for all Instrument hours, all configurations.
For data source information, see page 3.
### Low Instrument – East Flow

#### Instrument Approaches, Radar Separation

<table>
<thead>
<tr>
<th>Type Operations</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Hourly Rate</th>
<th>ATC Facility-Reported</th>
<th>Model-Estimated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Operations</strong></td>
<td>08L,09R,10</td>
<td>08R,09L</td>
<td>182</td>
<td>186</td>
<td></td>
</tr>
<tr>
<td><strong>Future Improvements</strong></td>
<td>08L,09R,10</td>
<td>08R,09L</td>
<td>N/A</td>
<td>194</td>
<td></td>
</tr>
</tbody>
</table>

- **Future improvements**: Improved Runway Delivery Accuracy, Wake Recategorization Phase 2.
- The capacity rate range in Low Instrument conditions in East flow is currently 182-186 operations per hour.
- Reduced separation (2.5 NM) between arrivals is not available during Low Instrument conditions.
- Same runway departure fanning is conducted from Runways 08R and 09L. This procedure enables higher departure throughput by reducing the minimum time required between successive departures.
- Runway crossings are not modeled because preferred taxi paths allow arrivals to cross behind departing aircraft in East flow.
LOW INSTRUMENT – EAST FLOW

LOW INSTRUMENT WEATHER CONDITIONS

INSTRUMENT APPROACHES, RADAR SEPARATION

Actual traffic counts shown are for all Instrument hours, all configurations. For data source information, see page 3.
## Instrument Approaches, Radar Separation

### LOW INSTRUMENT – WEST FLOW

<table>
<thead>
<tr>
<th>Type Operations</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CURRENT OPERATIONS</strong></td>
<td>26R,27L,28</td>
<td>26L,27R</td>
<td>ATC Facility-Reported</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Model-Estimated</td>
</tr>
<tr>
<td><strong>FUTURE IMPROVEMENTS</strong></td>
<td>26R,27L,28</td>
<td>26L,27R</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- **Future improvements**: Improved Runway Delivery Accuracy, Wake Recategorization Phase 2
- The capacity rate range in Instrument conditions in West flow is currently 177-178 operations per hour.
- Reduced separation (2.5 NM) between arrivals is not available during Low Instrument conditions.
- Same runway departure fanning is conducted from Runways 26L and 27R. This procedure enables higher departure throughput by reducing the minimum time required between successive departures.
- Runway crossings were not explicitly modeled in this configuration because arrival departure dependencies in Low Instrument conditions allows natural crossing gaps to occur.
Actual traffic counts shown are for all Instrument hours, all configurations.
For data source information, see page 3.
HISTORICAL CALLED RATE AND CONFIGURATION USAGE BY FLOW
Reduced departure rate is more common in East Flow.

Typical East Flow ADR (118) is higher than West Flow ADR (108).

Other rates: 22.9%

Rates for all hours regardless of configuration, minimum 2% of time

132,118 is most commonly used rate in East Flow.

**DRAFT**

**Key**

Arrivals | Departures (percent of time in configuration)

---

Rates: 90,90 (90%) Rates (AAR, ADR) called at least 5% of time when configuration used

Wind & Weather: Wind speeds increase away from center (3 knot increments)

More common winds are darker

Percent of time spent in VMC/MMC/IMC when configuration used

All data for hours from 1 Oct 2014 – 30 Sept 2017, 7 AM to 11 PM. Excludes variable winds and missing or incomplete data. Only shows rates called at least 2% of all hours.
**HISTORICAL USAGE - WEST FLOW**

**Called Rates**

132,108 is most commonly used rate in West Flow

- 29.5% AAR
- 11.5% ADR

Lower AARs are called at times, but ADR is nearly always 108

- 10.7% AAR
- 6.0% ADR

Other rates: 22.9%

Rates for all hours regardless of configuration, minimum 2% of time

**Configuration Usage**

- 26R, 27L, 28L, 27R (59%)
- 132,108: 50%
- 124,108: 18%
- 110,108: 9%
- 118,108: 7%

**Key**

- **Arrivals | Departures (percent of time in configuration)**
- **Rates**
  - 90,90 (90%)
  - Rates (AAR, ADR) called at least 5% of time when configuration used

**Wind & Weather**

- Wind speeds increase away from center (3 knot increments)
- More common winds are darker

Percent of time spent in VMC/MMC/IMC when configuration used

All data for hours from 1 Oct 2014 – 30 Sept 2017, 7 AM to 11 PM. Excludes variable winds and missing or incomplete data. Only shows rates called at least 2% of all hours.