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 LGB. The actual hourly traffic data at LGB is based on filed IFR flight plans, and thus does not include a significant number of general aviation flights that operated under Visual Flight Rules (VFR).

FUTURE IMPROVEMENTS AT LGB

- No capacity improvements were modeled at LGB.

DATA SOURCES

- Actual hourly LGB 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 LGB.

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

CURRENT OPERATIONS CAPACITY RATE RANGE

- Visual
- Marginal
- Instrument

ANNUAL WEATHER AT LGB:

- Visual 89%
- Marginal 7%
- Instrument 4%

VISUAL CONDITIONS:

- Ceiling and visibility allow for visual approaches: at least 2100 feet ceiling and 3 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
### Visual Weather Conditions

- The capacity rate range in Visual conditions is currently 48-105 operations per hour.
- This is LGB’s dominant configuration. The airport operates in variations of this configuration approximately 96% of the time in Visual weather conditions (totaling 85% annually).
- In Visual weather conditions, the LGB’s ATC Facility Reported Rate and actual hourly traffic primarily reflect commercial aircraft capacity. An Airport Noise Compatibility Ordinance restricts the amount of commercial aircraft noise levels. The Ordinance provides an annual noise budget for each of five user groups (air carrier, charter, commuter, general aviation, and industrial).
- On average, about two out of every three operations is a general aviation aircraft operating under VFR. This activity is not reflected in LGB’s actual hourly traffic data.
- Normally smaller aircraft operate on Runways 25R and 25L due to length and noise restrictions. Runway 25R is available for air carriers if Runway 12/30 is closed. Many pilot training operations, known as touch-and-gos, occur on these two runways. This activity was not included in the profile.
- LGB utilizes land and hold short (LAHSO) operations for specific combinations of aircraft operations between Runways 30 and 25R and Runways 12 and 25R.

### Table: LGB Scenario Arrival Runways vs. Departure Runways

<table>
<thead>
<tr>
<th>LGB Scenario</th>
<th>Arrival Runways</th>
<th>Departure Runways</th>
<th>Procedures</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Future Improvements</strong></td>
<td>25R, 25L, 30</td>
<td>25R, 25L, 30</td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

![Visual Chart](image-url)
### Marginal Weather Conditions

- The capacity rate range in Marginal conditions is currently 48-70 operations per hour.
- LGB operates in variations of this configuration approximately 93% of the time in Marginal weather conditions (totaling 7% annually).
- Operations at LGB are governed by an Airport Noise Compatibility Ordinance. The Ordinance provides a noise budget for each of five user groups (air carrier, charter, commuter, general aviation, and industrial).
- LGB’s ATC Facility Reported Rate and actual hourly traffic reflect commercial aircraft capacity.
- Normally smaller aircraft operate on Runways 25R and 25L due to length and noise restrictions. Runway 25R is available for air carriers if Runway 12/30 is closed.
- LGB utilizes land and hold short (LAHSO) operations for specific combinations of aircraft operations on Runways 30 and 25R and Runways 12 and 25R.
**INSTRUMENT**

**WEATHER CONDITIONS**

<table>
<thead>
<tr>
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<tr>
<td><strong>FUTURE IMPROVEMENTS</strong></td>
<td>25R, 30</td>
<td>25L, 30</td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

- The capacity rate range in Instrument conditions is currently 42-47 operations per hour.
- LGB operates in variations of this configuration approximately 86% of the time in Instrument weather conditions (totaling 3% annually).
- Operations at LGB are governed by an Airport Noise Compatibility Ordinance. The Ordinance provides a noise budget for each of five user groups (air carrier, charter, commuter, general aviation, and industrial).
- LGB’s ATC Facility Reported Rate and actual hourly traffic reflect commercial aircraft capacity. Poor weather conditions significantly reduce the number of general aviation operations at LGB, as they must be properly equipped and certified for instrument operations.
- RNAV approaches to Runway 25R are limited to aircraft with proper equipage.
- Normally smaller aircraft operate on Runways 25R and 25L due to length and noise restrictions. Runway 25R is available for air carriers if Runway 12/30 is closed.