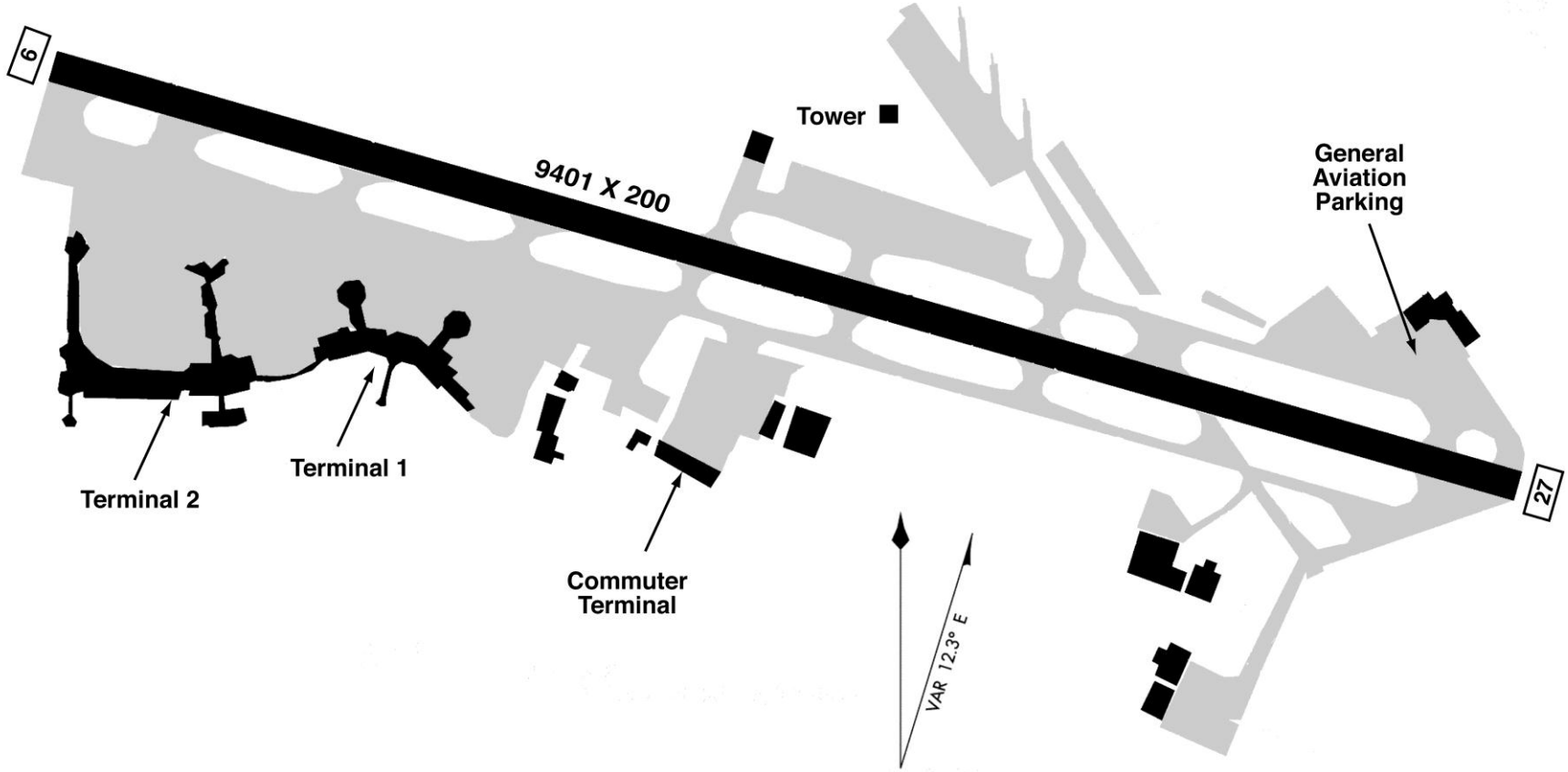
SAN San Diego International



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.

SAN San Diego International

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 SAN. Some hourly traffic points fall outside the estimated capacity curves. There are many reasons why this may occur without affecting operational safety. For example, 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.

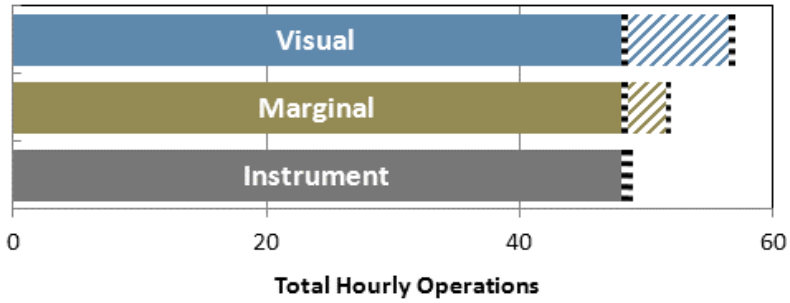
Future Improvements at SAN

- *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."

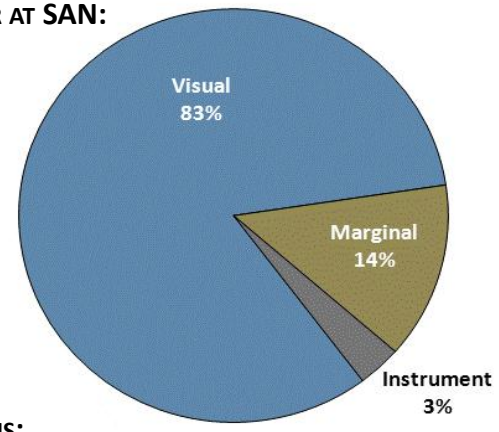
Data Sources

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

Current Operations Capacity Rate Range



Annual Weather at SAN:



Visual Conditions:

- Ceiling and visibility allow for visual approaches: at least 2000 feet ceiling and 3 miles visibility

Marginal Conditions:

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

Instrument Conditions:

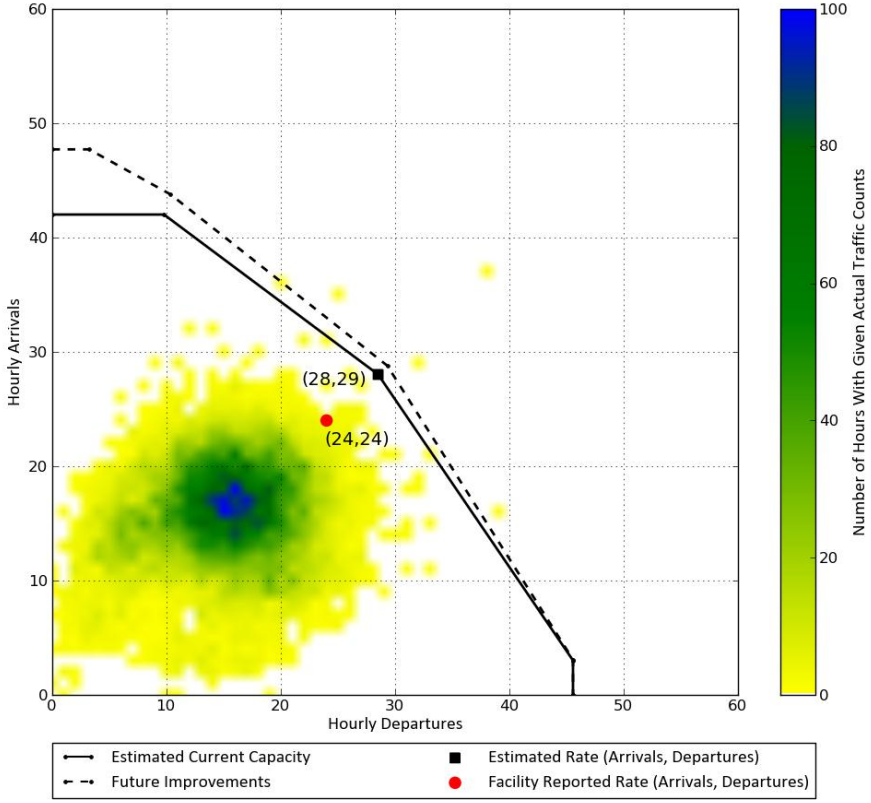
- Ceiling and visibility below 1000 feet ceiling or 3 miles visibility

VISUAL

SAN DIEGO INTERNATIONAL

SAN Scenario	Arrival Runways	Departure Runways	Procedures	Hourly Rate	
				ATC Facility Reported	Model-Estimated
CURRENT OPERATIONS	27	27	Visual Approach, Visual Separation	48	57
FUTURE IMPROVEMENTS Improved Runway Delivery Accuracy	27	27		N/A	58

VISUAL WEATHER CONDITIONS



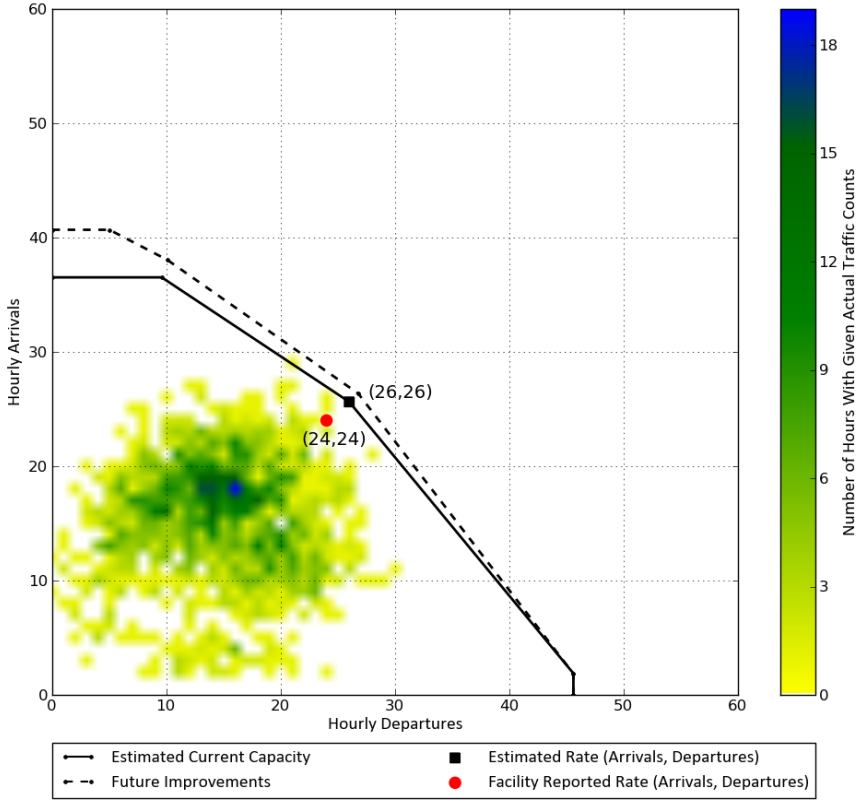
- The capacity rate range in Visual conditions is currently 48-57 operations per hour.
- Aircraft movements on the surface and runway crossings may reduce runway capacity slightly, as there is a full length taxiway on only one side of the runway.
- SAN has two primary directional traffic flows. The airport operates in variations of this configuration approximately 99% of the time in Visual weather conditions (totaling 82% annually).

MARGINAL

SAN DIEGO INTERNATIONAL

SAN Scenario	Arrival Runways	Departure Runways	Procedures	Hourly Rate	
				ATC Facility Reported	Model-Estimated
CURRENT OPERATIONS	27	27	Non-Precision Instrument Approach, Visual Separation	48	52
FUTURE IMPROVEMENTS Improved Runway Delivery Accuracy	27	27		N/A	53

MARGINAL WEATHER CONDITIONS



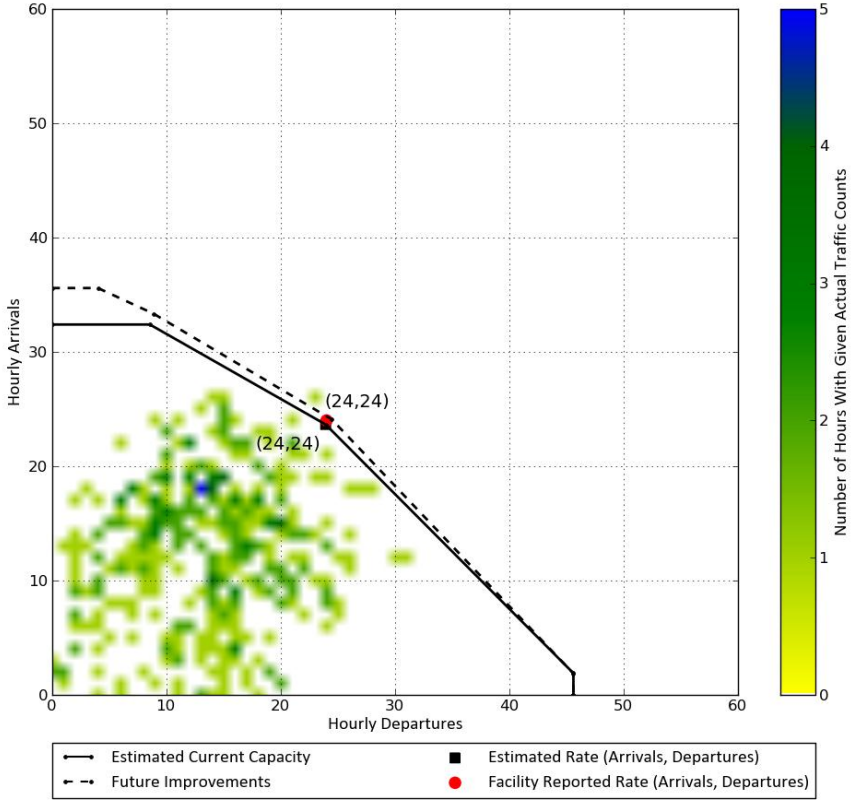
- The capacity rate range in Marginal conditions is currently 48-52 operations per hour.
- SAN operates in variations of this configuration approximately 98% of the time in Marginal weather conditions (totaling 14% annually).

INSTRUMENT

SAN DIEGO INTERNATIONAL

SAN Scenario	Arrival Runways	Departure Runways	Procedures	Hourly Rate	
				ATC Facility Reported	Model-Estimated
CURRENT OPERATIONS	27	27	Non-Precision Instrument Approach, Radar Separation	48	48
FUTURE IMPROVEMENTS Improved Runway Delivery Accuracy	27	27		N/A	48

INSTRUMENT WEATHER CONDITIONS



- The capacity rate range in Instrument conditions is currently 48 operations per hour.
- SAN operates in variations of this configuration approximately 61% of the time in Instrument weather conditions (totaling 2% annually).
- A non-precision approach to Runway 27 can only be performed when the ceiling is above 700 feet with at least 1 mile of visibility. When the weather falls below those minima, then instrument approaches must be conducted to Runway 9.