Phoenix Sky Harbor International Airport Benchmarks

- The current capacity benchmark at Phoenix Sky Harbor today is 101-110 flights per hour in good weather.
- Current capacity falls to 60-65 flights (or fewer) per hour today in adverse weather conditions, which may include poor visibility, unfavorable winds or heavy participation.
- This year Phoenix opened a new third runway which raises the good weather capacity to 137-146 flights per hour (a 36% increase), and to 96-101 flights per hour (a 60% increase) in adverse weather conditions.
- As a result of the addition of the new third runway, Phoenix now operates below its good weather and reduced rate capacity throughout the day.
- Overall, about 2% of the flights at Phoenix were delayed significantly (more than 15 minutes) prior to the operation of the third new runway.
- In addition to the new runway, technology and procedural improvements are expected to improve the Phoenix capacity benchmark by a total of 40% (to 141-150 flights per hour) over the next 10 years. Technological and procedural improvements will not increase the adverse weather capacity benchmarks.
- These capacity increases could be brought about as a result of:
  - ADS-B/CDTI (with LAAS), which provides a cockpit display of the location of other aircraft and will help the pilot maintain the desired separation more precisely.
  - FMS/RNAV Routes, which allow a more consistent flow of aircraft to the runway.
- The capacity at Phoenix with the new runway is adequate to accommodate the projected increase in demand of 31% over the next decade.

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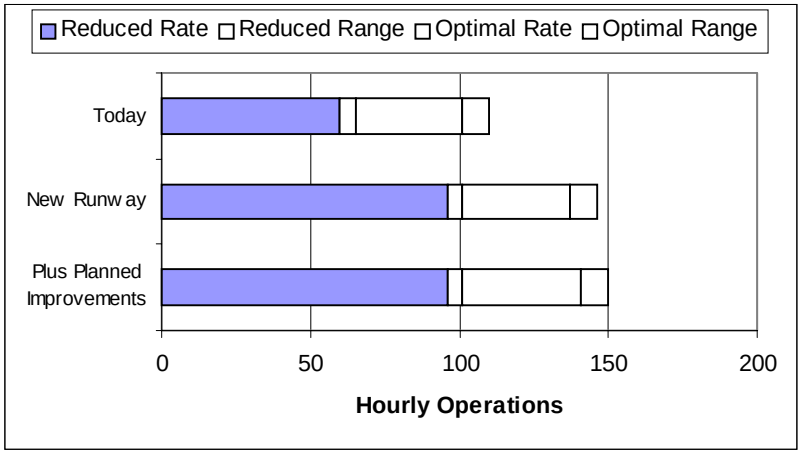
Airport Capacity Benchmarks – These values are for total operations achievable under specific conditions:

- **Optimum Rate** – Visual Approaches (VAPS), unlimited ceiling and visibility
- **Reduced Rate** – Most commonly used instrument configuration, below visual approach minima

Scenario	Optimum Rate	Reduced Rate
Today	**101-110**	**60-65**
New Runway	**137-146**	**96-101**
Plus planned improvements	**141-150**	**96-101**



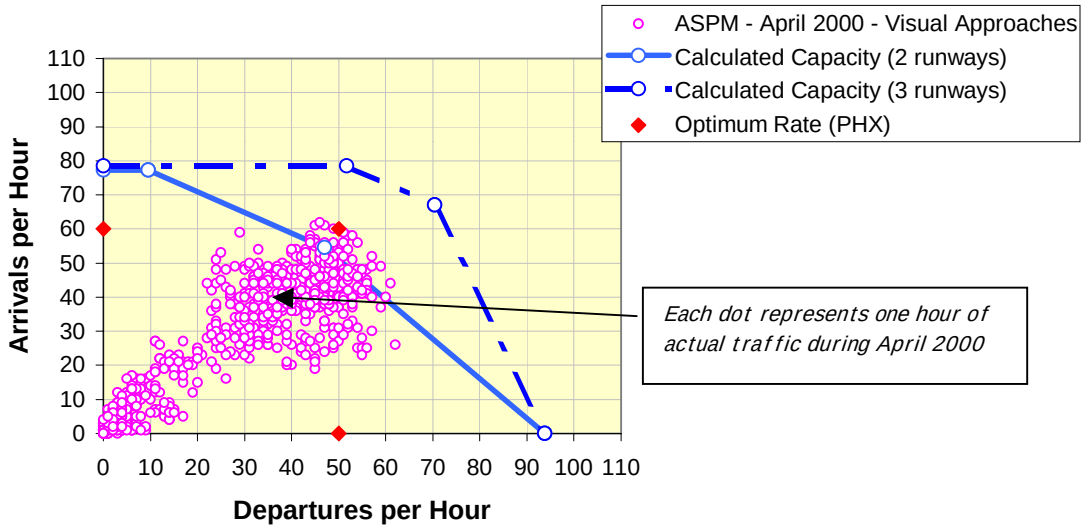
- The benchmarks describe an achievable level of performance for the given conditions, which can occasionally be exceeded. Lower rates can be expected under adverse conditions. Note: In some cases, facilities provided separate unbalanced maximum arrival and departure rates.
- Planned Improvements include:
  - ADS-B/CDTI (with LAAS) – provides a cockpit display of the location of other aircraft. This will help the pilot maintain the desired separation more precisely.
  - FMS/RNAV Routes – allows more consistent delivery of aircraft to the runway threshold.
- Benefits from Planned Improvements assume that all required infrastructure and regulatory approvals will be in place. This includes aircraft equipage, airspace design, environmental reviews, frequencies, training, etc. as needed.
- **Note:** These benchmarks do not consider any limitation on airport traffic flow that may be caused by non-runway constraints at the airport or elsewhere in the NAS. Such constraints may include:
  - Taxiway and gate congestion, runway crossings, slot controls, construction activity
  - Terminal airspace, especially limited departure headings
  - Traffic flow restrictions caused by en route miles-in-trail restrictions, weather or congestion problems at other airports

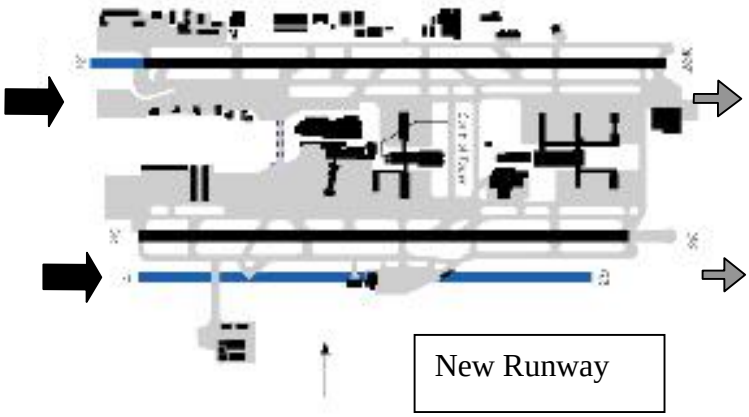
These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the individual programs.

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

Current Operations – Optimum Rate

- Visual approaches, visual separation – Optimum Rate of (60,50) was reported by the facility
  - Arrive from West
- ASPM data is actual hourly traffic counts for the month of April 2000 for Visual Approach conditions. This data includes other runway configurations and off-peak periods.
- Chart below represents observed traffic and expected rates in terms of operations per hour





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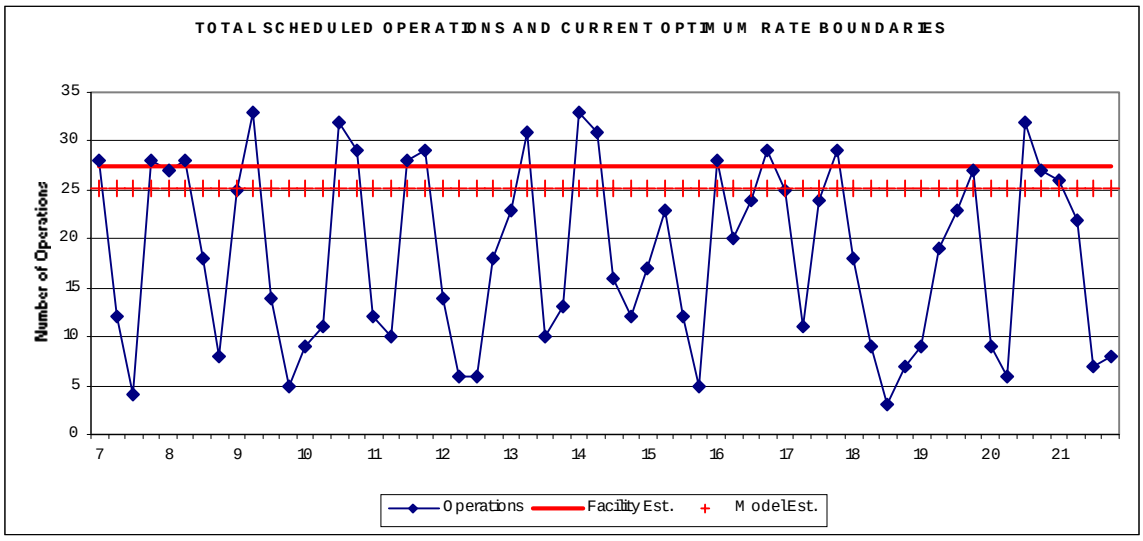
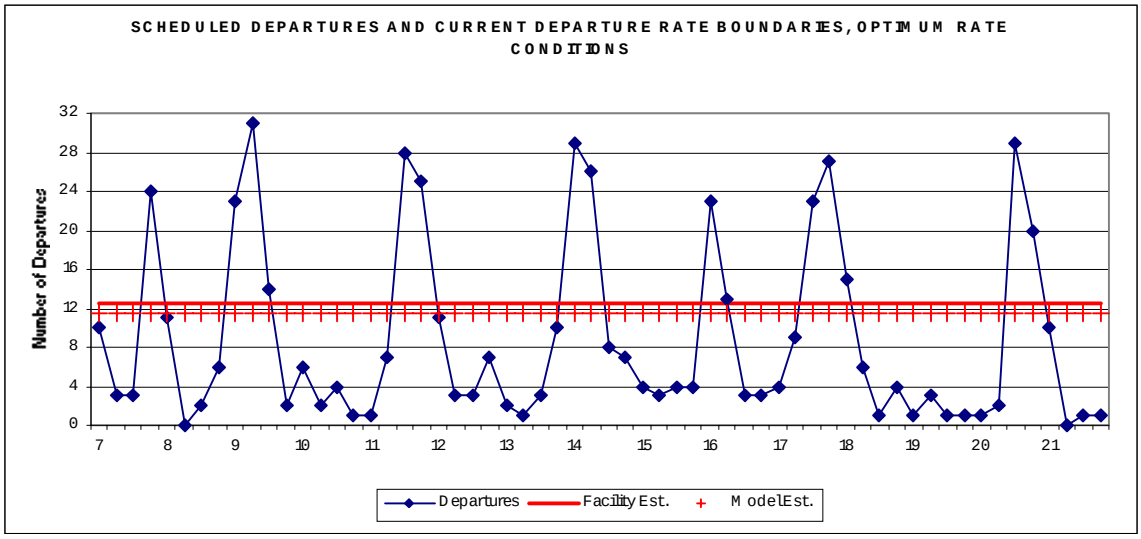
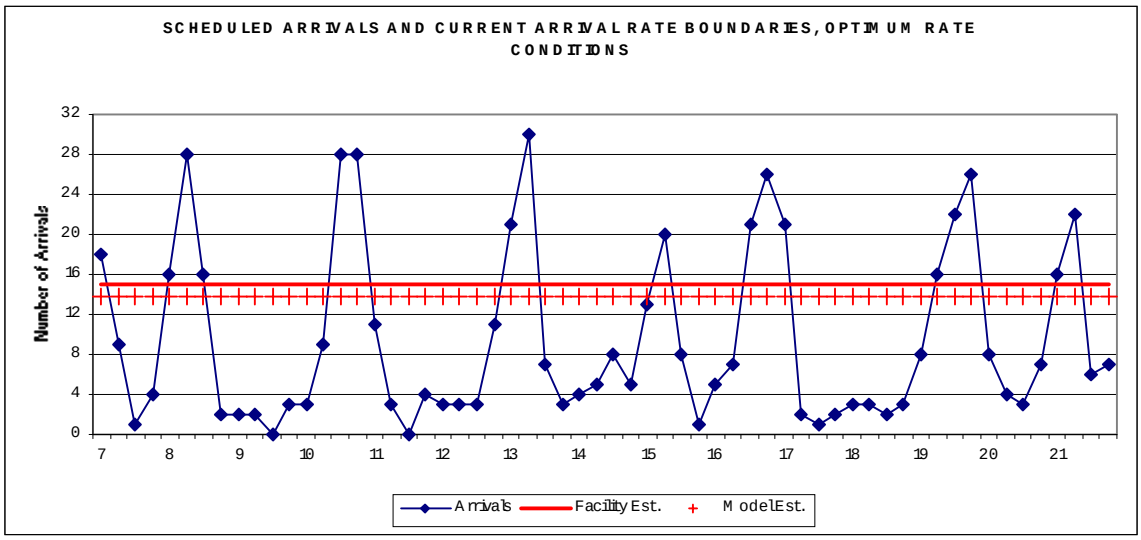
Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Optimum Rate Conditions

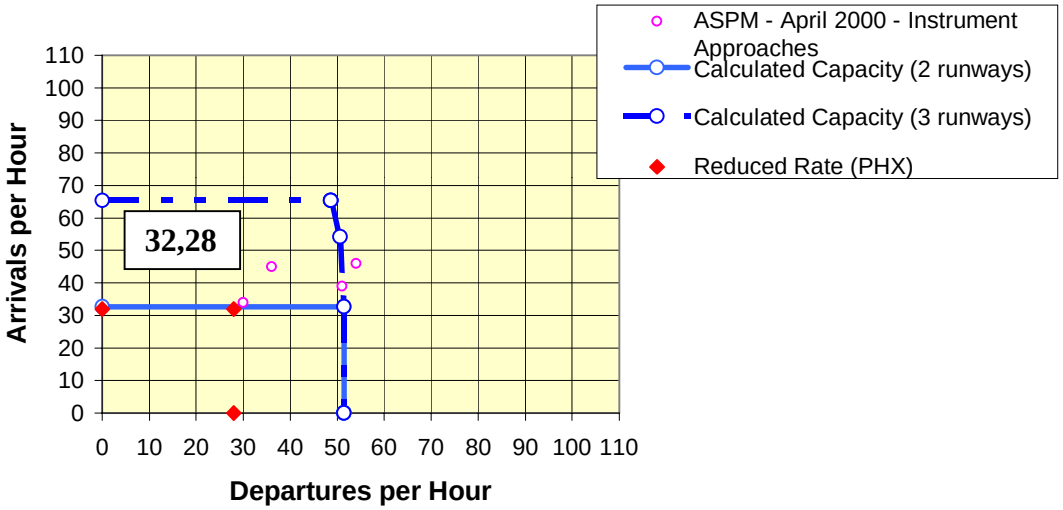


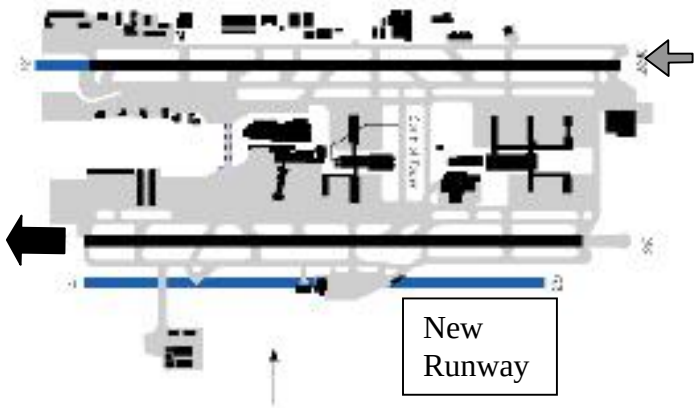




Current Operations – Reduced Rate

- Instrument approaches (below Visual Approach Minima) - Reduced Rate of (32,28) was reported by the facility
  - Arrive from East
- ASPM data for “Instrument Approaches” can include marginal VFR, with higher acceptance rates
- Chart below represents observed traffic and expected rates in terms of operations per hour





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Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Reduced Rate Conditions