## Cincinnati/Northern Kentucky International Airport Benchmarks

- The current capacity benchmark at Cincinnati is 123-125 flights per hour in good weather.
- Current capacity falls to 121-125 flights (or fewer) per hour in adverse weather conditions, which may include poor visibility, unfavorable winds, or heavy precipitation.
- Cincinnati is one of the few airports whose capacity does not change much when the weather deteriorates.
- The peaks in scheduled departures and arrivals tend to be complementary, as that capacity is adequate to handle current demand with minimal delay. Peaks are periods of high concentration of arrival and/or departure traffic.
- Less than 2% of Cincinnati's flights were delayed more than 15 minutes in 2000.
- A new runway, planned for completion in 2005, is expected to improve Cincinnati's capacity benchmark by 26% in both good and bad weather (to roughly 152-157 flights per hour). This assumes that airspace, ground infrastructure, and environmental constraints allow full use of the runway.
- In addition, technology and procedural improvements, when combined with the new runway, are expected to increase Cincinnati's capacity benchmark by a total of 28% (to 155-157 flights per hour in good and 27% in adverse weather conditions over the next 10 years).
- These capacity increases could be brought about as a result of:
  - Triple simultaneous instrument approaches with the new runway.
  - 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.
- Demand at Cincinnati is projected to grow 40% over the next decade, which suggests that delays may become more of a problem in the future.

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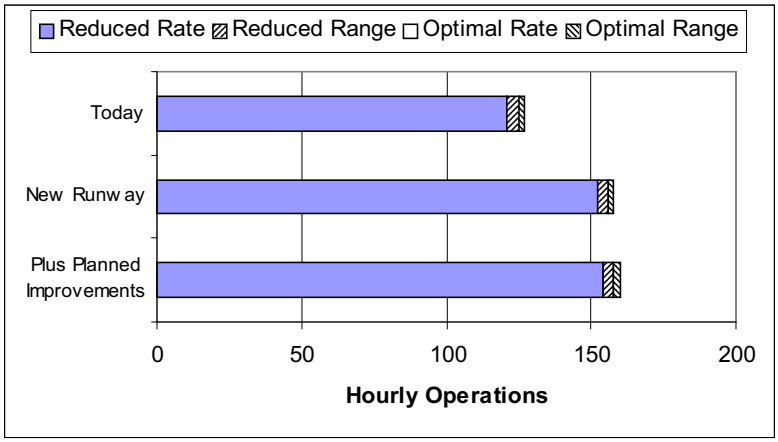
## Airport Capacity Benchmarks – These values are for total operations achievable under specific conditions:

- **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 | **123-125** | **121-125** |
| New Runway | **155-157** | **152-156** |
| Plus planned improvements | **158-160** | **154-158** |



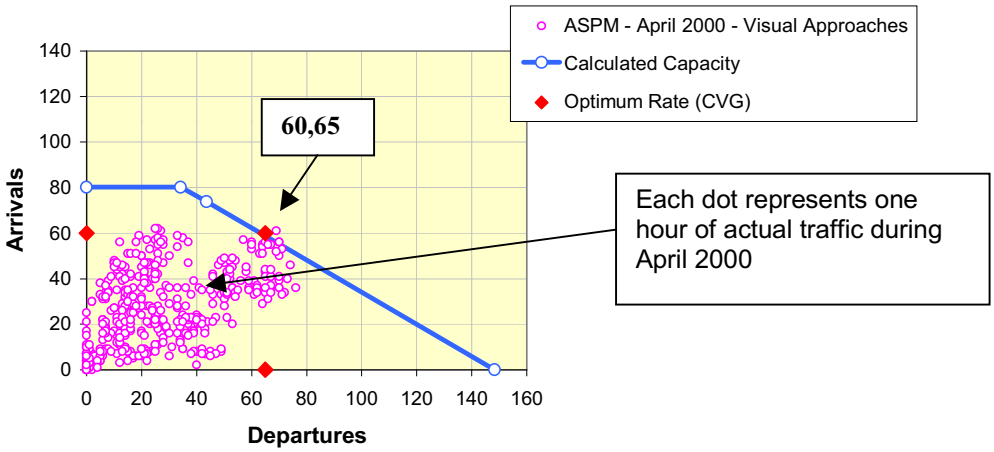

- The benchmarks describe an achievable level of performance for the given conditions, which can occasionally be exceeded. Lower rates can be expected under adverse conditions. Note: In some cases, facilities provided separate unbalanced maximum arrival and departure rates.
- Planned Improvements include:
  - Triple simultaneous instrument approaches with the new runway
  - 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

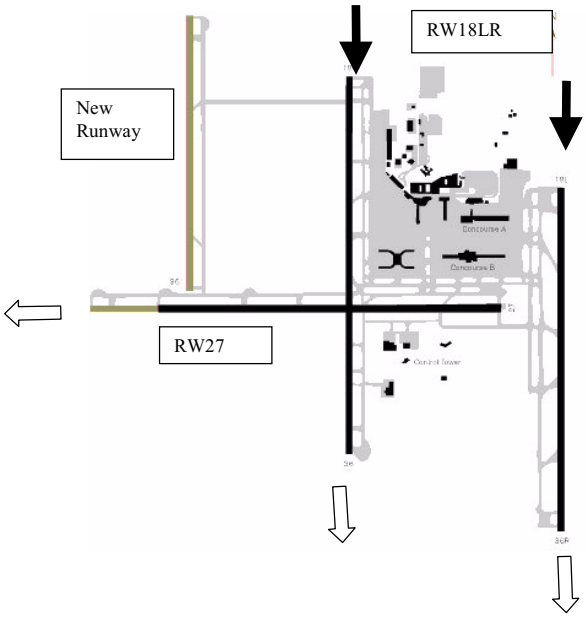
*These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the individual programs.*

***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 (60,65) was reported by the facility. RW18LR/27 is RWY configuration reported by facility.
- ASPM data is actual hourly traffic counts
- Chart below represents observed hourly traffic and expected rates in terms of operations per hour. Solid line represents the expected limit of hourly operations: RW18LR/27.



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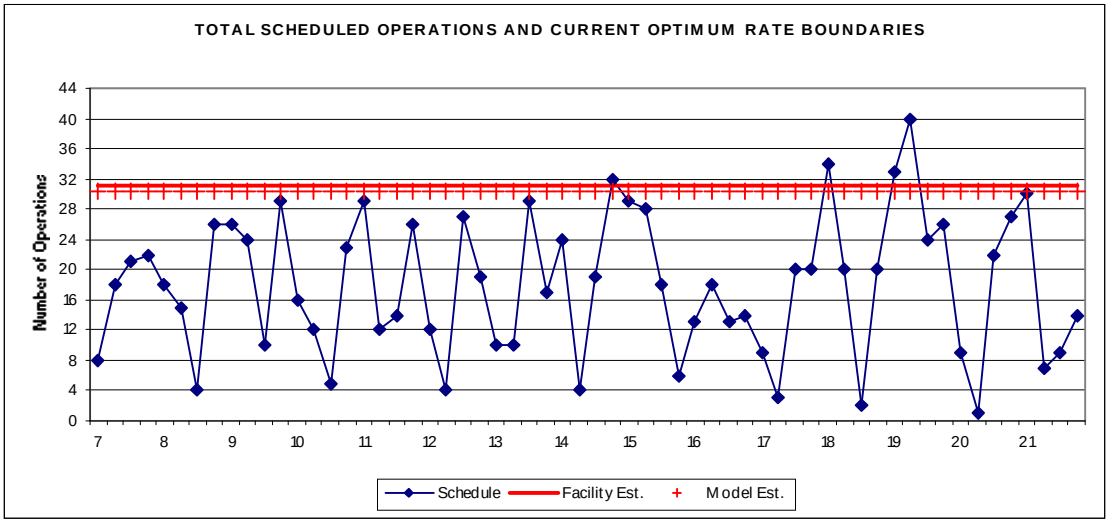
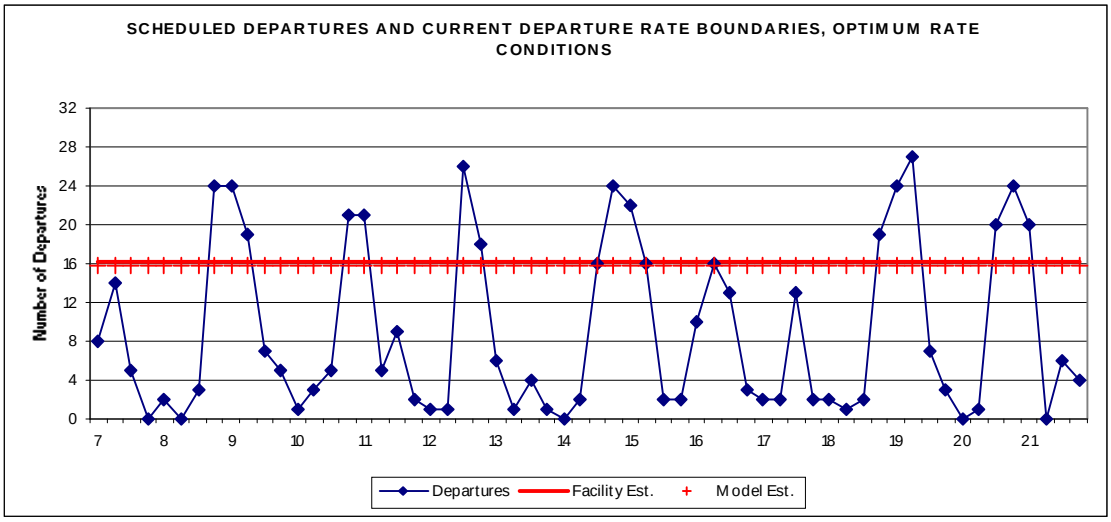
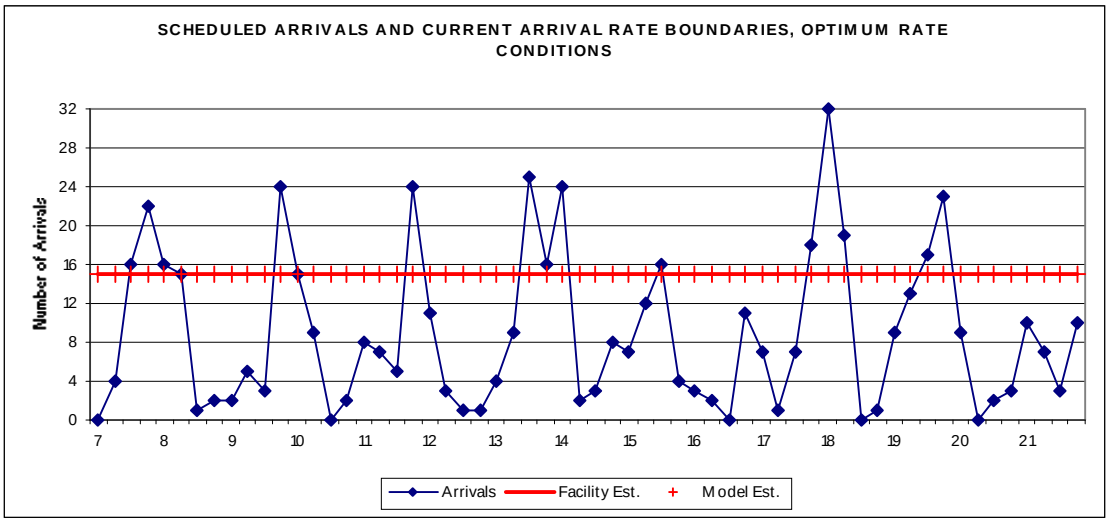
## Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Optimum Rate Conditions

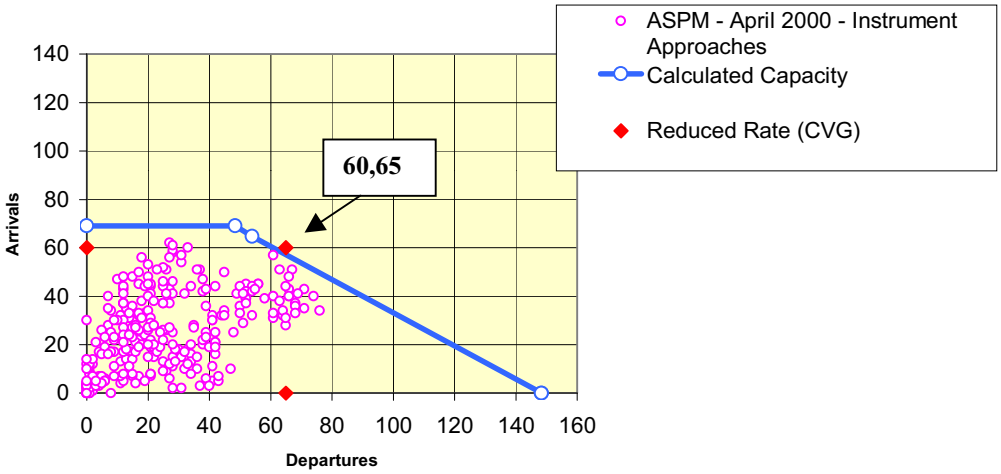


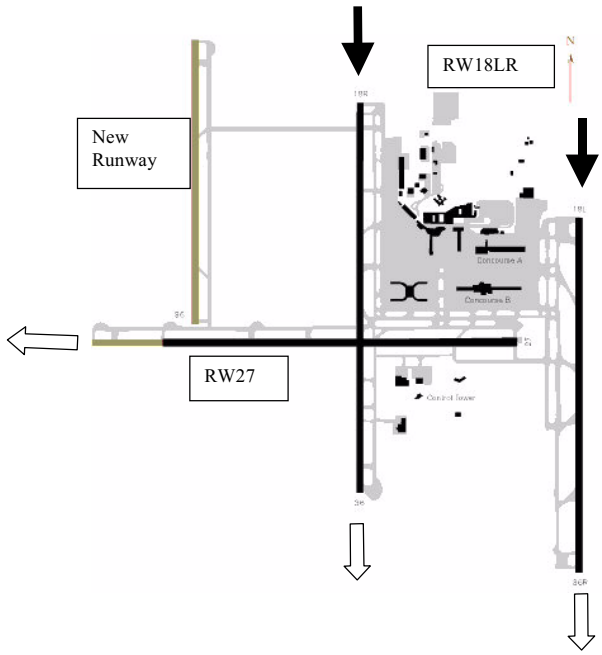



# Current Operations – Reduced Rate

- Instrument approaches (below Visual Approach Minima)
  - Reduced rate of (60,65) was reported by the facility
  - RW18LR/27 is RWY configuration reported by facility.
- ASPM data for "Instrument Approaches" can include marginal VFR, with higher acceptance rates.
- Chart below represents observed hourly traffic and expected rates in terms of operations per hour. Solid line represents the expected limit of hourly operations: RW18LR/27.



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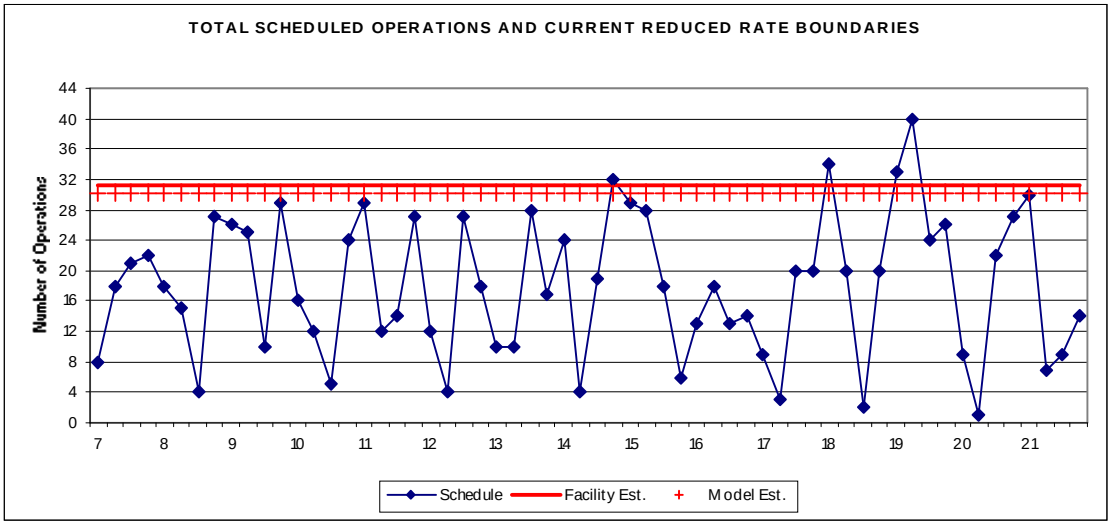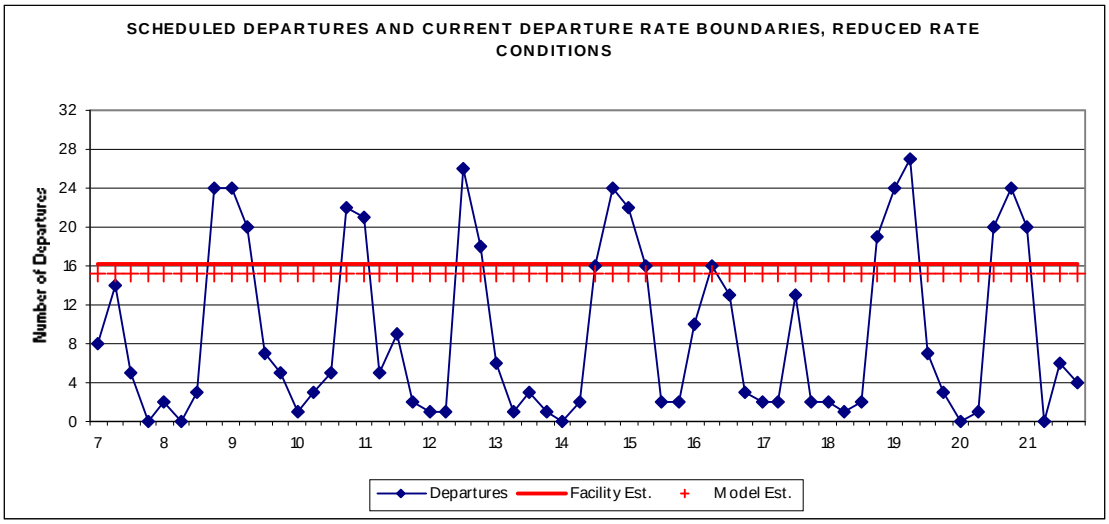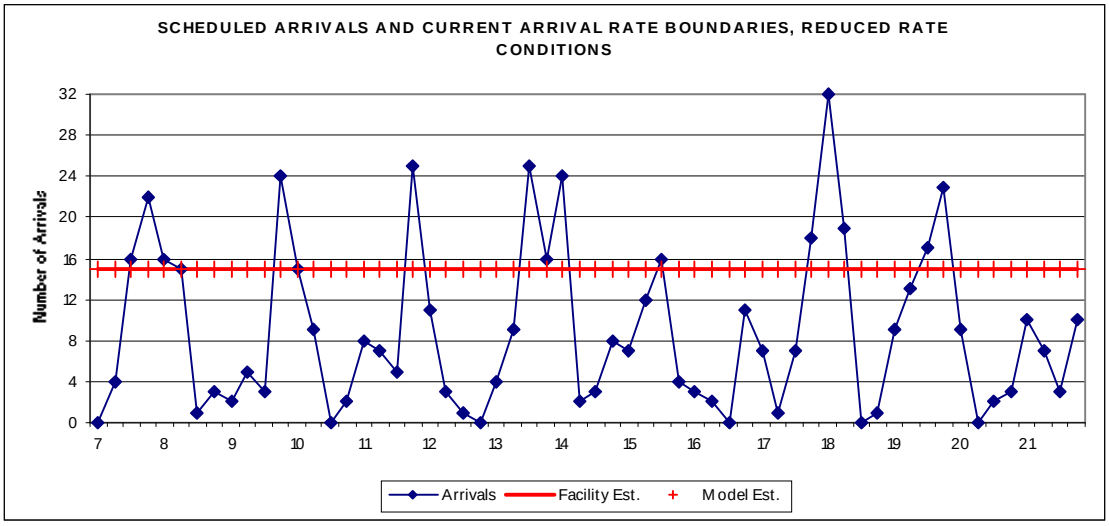
## Scheduled Departures and Arrivals and Current Departure and Arrival Rate Boundaries (15-Minute Periods) Under Reduced Rate Conditions