



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

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In reply refer to: A-91-78 through -82

Honorable James B. Busey
Administrator
Federal Aviation Administration
800 Independence Avenue, S.W.
Washington, D.C. 20591

The National Transportation Safety Board has reviewed the Federal Aviation Administration (FAA) final rule that alters the Chicago, Illinois, Terminal Control Area (TCA).¹ The Safety Board is concerned about the designation of airspace surrounding Chicago Midway Airport (MDW) because the altered Chicago TCA design does not incorporate Midway Airport or substantial portions of its arrival and departure corridors within the TCA. Both the mix of flight operations and the increase in passenger enplanements at MDW indicate that MDW should be included in the Chicago TCA.

After the 1978 collision between a Pacific Southwest Airlines Boeing 727 and a Cessna 172 at San Diego, California, the Board recommended that the FAA review procedures at all airports used regularly by air carrier and general aviation aircraft to determine which airports require either a Terminal Control Area or a Terminal Radar Service Area, and then establish the appropriate airspace regulation (Safety Recommendation A-78-78). The FAA took positive action, and the Board, on May 13, 1981, classified the recommendation as "Closed--Acceptable Action." However, because growth and changes in air transportation continually occur, the Safety Board believes that the FAA's determination of the need for TCA's should be an ongoing process. Midway Airport is an example of the changes in air transportation: in 1978, it was not served by air carriers.

Midway Airport currently is used by high performance commercial air carrier and scheduled commuter operations. In the altered design of the Chicago TCA, effective on May 2, 1991, substantial portions of the airspace used by the high performance air traffic for final approach to MDW and the airport's southwest, south, and east departure corridors remain underneath or just outside the Chicago TCA. A large volume of lower performance air traffic operating under visual flight rules (VFR) shares this airspace as it circumnavigates the boundaries of the TCA. The mixture of high performance commercial air traffic with lower performance VFR traffic provides an environment that has been demonstrated to have a high collision potential.

¹ Federal Register, April 2, 1991, p. 13526-13530. Airspace Docket No. 89-AWA-13.

Love Field at Dallas, Texas is similar to MDW in its concentration of high performance commercial air traffic and proximity to a major TCA airport. Love Field lies underneath an outer ring of the current Dallas-Ft. Worth TCA, where VFR traffic circumnavigating the TCA is mixed with arrivals to and departures from Love Field. In a recent notice of proposed rulemaking (NPRM),² the FAA proposed amending the Dallas-Ft. Worth TCA to include Love Field. The FAA stated in its justification, "The mix of small propeller and high performance aircraft at lower altitudes around Dallas Love Field necessitates a TCA design that includes Dallas Love Field and further increases safety within the Dallas Love Field area....The FAA has determined that...including Dallas Love Field in the TCA is in the interest of flight safety and would result in a greater degree of protection for the greatest number of people during flight in the terminal area." The proposed amendment of the TCA provides an extension to include approach and departure procedures for Love Field in TCA airspace. The benefits anticipated by the FAA include "...a lowered risk of midair collisions...thereby reducing the chance of casualty loss (i.e., aviation fatalities and injuries) and property damage."

In its final rule on the Chicago TCA alteration, the FAA dismissed the suggestion of a public comment that a TCA be established at Midway Airport. The FAA response stated, "Chicago Midway Airport does not meet the establishment criteria for a TCA, i.e., 3.5 million passengers enplaned annually or a total airport operations count of 300,000 of which 50 percent is air carrier."³ When the FAA issued its NPRM on the Chicago TCA alteration (on March 28, 1990), the best available data, from 1988, supported this conclusion. Consequently, the Safety Board did not comment on the Chicago TCA design during the public comment period that followed issuance of the NPRM.

After the comment period, 1989 passenger enplanement totals for MDW became available. The 1989 Air Carrier Activity Information System (ACAIS) database,⁴ which is used by the FAA in evaluating airports' passenger enplanements for possible establishment of a TCA, indicates 3,598,045 enplanements for MDW.⁵ This number exceeds the minimum 3.5 million passenger enplanement criterion for TCA establishment.

² Federal Register, April 3, 1991, p. 13713-13717. Airspace Docket No. 90-AWA-14.

³ Federal Register, April 2, 1991, p. 13527. For the purposes of TCA establishment, the FAA defines "air carrier" as a carrier holding a Certificate of Public Convenience and Necessity issued by the U.S. Department of Transportation to conduct scheduled services. These carriers operate under 14 CFR Part 121.

⁴ Passenger enplanement data collected by the U.S. Department of Transportation; these include all revenue passenger enplanements on air carrier and scheduled air taxi flights, as reported by the operators and by airport officials.

⁵ Source: DOT/TSC Calendar '89 ACAIS Database, November 15, 1990, p. VI-1.

Only one of the several criteria enumerated in the rule must be fulfilled to justify establishment of a TCA. Midway Airport did not fulfill the air carrier operations criterion, under which a minimum of 50 percent of total operations must have been performed by air carriers. In fiscal year 1990 (the most recent period for which operations statistics are available⁶), MDW had 322,197 total airport operations, of which 133,855 (41.5 percent) were air carrier operations. However, the Safety Board notes that MDW also had 100,445 air taxi operations, most of which were scheduled commuter passenger flights. When air carrier and scheduled commuter operations are combined, over two-thirds of the total operations at Midway Airport were scheduled commercial passenger-carrying flights.

In comparison, the most recently published statistics indicate that Love Field did not meet the TCA establishment criteria. In 1989, there were 2,781,123 enplanements; in FY 1990 there were 214,468 total airport operations, 38 percent of which were air carrier operations. Combined operations for air carriers and air taxis remained below the 50-percent criterion for air carrier operations alone. Although Love Field did not meet the TCA establishment criteria, the Safety Board agrees with the FAA that an airport with heavy commercial air traffic located under a TCA outer ring deserves special consideration for TCA establishment, because the mix of high and lower performance air traffic under and near TCA boundaries increases the risk of mid-air collisions.

Because Midway Airport is analogous to Love Field in this regard, and because current statistics on passenger enplanements demonstrate that Midway meets the requirements for TCA establishment, the Safety Board believes that the Chicago TCA should be amended to include Midway Airport and the airspace required for its arrival and departure procedures.

Further, the ACAIS statistics for 1989 indicate that passenger enplanements exceeded 3.5 million at six additional airports.⁷ However, the FAA has initiated rulemaking on only one of these airports, the William P. Hobby Airport in Houston, Texas. The FAA's "Procedures for Handling Airspace Matters"⁸ designate that each FAA regional office is responsible for periodically reevaluating TCA designs using the passenger enplanement and air carrier operations guidelines. The Safety Board believes that each FAA region should review the most recent statistics for passenger enplanements and airport operations, and each should initiate rulemaking action for those airports fulfilling the criteria for TCA establishment.

Finally, based on its review of operations at MDW, the Safety Board believes that the FAA should amend its criteria for TCA establishment. The criteria should make special provisions for airports that are located in

⁶ Operations statistics for Chicago Midway Airport and Dallas Love Field are from FAA Air Traffic Activity, FY 1990.

⁷ The airports are Cincinnati, Ohio (CVG); Fort Lauderdale, Florida (FLL); William P. Hobby Airport, Houston Texas (HOU); Nashville, Tennessee (BNA); Raleigh, North Carolina (RDU); and San Juan, Puerto Rico (SJU).

⁸ FAA Handbook 7400.2C, p. 6-20.

close proximity to the boundaries of an existing TCA. Also, all scheduled commercial passenger-carrying operations, rather than only Part 121 air carrier operations, should be considered in fulfilling the 50-percent operations criterion for TCA establishment. The Safety Board believes that passengers on all scheduled commercial flights should be entitled to the same level of safety in terminal operations.

Therefore, the National Transportation Safety Board recommends that the Federal Aviation Administration:

Amend the Chicago, Illinois, Terminal Control Area to include within it the Chicago Midway Airport and the airspace required for its arrival and departure procedures. (Class II, Priority Action) (A-91-78)

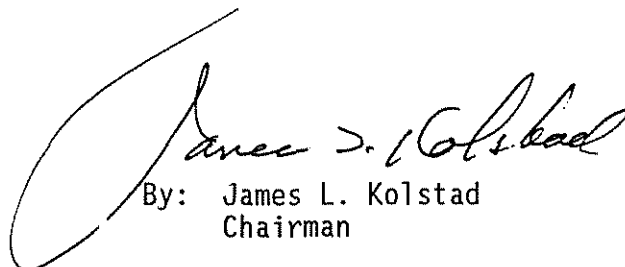
Review all candidate airports for Terminal Control Area establishment, using current criteria and the latest available statistics for passenger enplanements and aircraft operations, and initiate rulemaking to establish a TCA at each airport fulfilling the enplanement or operations guidelines. (Class II, Priority Action) (A-91-79)

Amend the criteria for establishment of a Terminal Control Area to at least 3.5 million passengers enplaned annually or an annual airport operations count of at least 300,000, of which at least 50 percent are scheduled commercial passenger-carrying operations. (Class II, Priority Action) (A-91-80)

Amend the criteria for establishment of a Terminal Control Area to permit the establishment of TCAs at airports that have special conditions resulting in a greater mixture of low and high performance air traffic or other increased potential for midair collisions, but that do not fulfill the passenger enplanement or airport operations criteria. (Class II, Priority Action) (A-91-81)

After amending the criteria for establishment of a Terminal Control Area in accordance with Safety Recommendations A-91-80 and A-91-81, review all airports that have scheduled, commercial, passenger-carrying operations and establish TCAs at airports that fulfill the amended criteria. (Class II, Priority Action) (A-91-82)

Chairman KOLSTAD, Vice Chairman COUGHLIN, and Members LAUBER, HART, AND HAMMERSCHMIDT concurred in these recommendations.



By: James L. Kolstad
Chairman