Federal Aviation Administration

Memorandum

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To: Melvin O. Cintron, Manager, General Aviation and Commercial Division, AFS-800

From: Rebecca B. MacPherson, Assistant Chief Counsel for Regulations, Regulations Division, Office of the Chief Counsel, AGC-200

Prepared by: Robert H. Frenzel, Manager, Operations Law Branch, Regulations, Regulations Division, Office of the Chief Counsel, AGC-220

Subject: Legal Definitions of "Densely Populated" and "Congested Airway"

This memorandum responds to your request for a legal interpretation regarding the definitions of "densely populated" and "congested airway" in the context of limitations on experimental aircraft, particularly with regards to Living History Flight Experience (LHFE) flights operations. These terms, along with the terms "congested areas," "other than congested areas," "sparsely populated," and "open air assembly of persons" are found in various sections of 14 C.F.R. and have the effect of limiting operations covered by the following sections:

- § 91.119, Minimum Safe Altitudes: General,
- § 91.303, Aerobatic Flight,
- § 91.313, Restricted Category,
- § 91.319, Aircraft having experimental certificates: Operating limitations,[1]
- § 133.33, Operating rules,
- § 137.49, Operation over other than congested areas,
- § 137.51, Operation over congested areas: General; and,
- § 137.53, Operation over congested areas: Pilots and aircraft.

We are unable to provide you with discrete definitions for these terms.

[1] § 91.319 (c) is specifically related to the operating limitations on experimental aircraft:

(c) Unless otherwise authorized by the Administrator in special operating limitations, ***no person may operate an aircraft that has an experimental certificate over a densely populated area or in a congested airway***. The Administrator may issue ***special operating limitations for particular aircraft to permit takeoffs and landings to be conducted over a densely populated area or in a congested airway***, in accordance with terms and conditions specified in the authorization in the interest of safety in air commerce.

Although these terms are not defined by regulation, there has been a long history stretching back over 40 years of using a case-by-case approach in determining how to apply those terms and how they relate to one another. This approach "is well documented and supported by many legal opinions issued by the FAA, the National Transportation Board (NTSB) and federal courts." *See,* Leanne Simmons, Legal Interpretation, March 8, 2010 (citing Richard D. Henderson, Legal Interpretation, September 13, 1976, which summarized the NTSB's guidelines for sustaining violations of § 91.119 in cases where pilots operated aircraft over a small area consisting of approximately ten houses and a school, over the campus of a university, a beach area along a highway, and over a boy's camp where there were numerous people on the docks and children playing on the shore. *The opinion also noted that there is no precise density of population, ground traffic or congestion, or description of the proximity of buildings, or number of residences*). In addition to the Simmons interpretation, this approach has been adopted in other recent opinions. *See,* Robert E. Anderson, Legal Interpretation, July 2, 2009 and Gary S. Wilson, Legal Interpretation, December 11, 2006.

The term "congested airway," on the other hand, has not been specifically referenced or defined by interpretation. The reason for this may be that operations on airways within the National Airspace System are generally the responsibility of Air Traffic Control and those operating within that system clearly understand the application of the term. In addition, operating on a congested airway with a restricted or experimental aircraft for the purposes of takeoff or landing can only be done through the issuance of special operating limitations, where specific flight plans, areas of operation and coordination with ATC are required.

You suggest that any definitions should be easily determined by pilots during their preflight planning using existing navigation aids and charts. While this may be a desirable goal, this possibility was considered and rejected in the Simmons interpretation noted above. In that case, we were asked to clarify whether pilots could use the yellow areas depicted in the National Aeronautical Charting Office (NACO) Aeronautical Chart Users Guide to designate a congested area under § 91.119(b) and any other area not so identified would be "other than a congested area" as that term is used in § 91.119(c). Our analysis concluded that:

> While there is no precise definition of a "congested area," official U.S. government aeronautical charts and NOTAMs provide general guidance for developing a proposed route that complies with § 91.119. However, aeronautical charts would not be expected to reflect all required local information. Pilots may obtain such information in a briefing from the local Flight Standards District Office. This information along with the pilot's prior knowledge of the area and information the pilot obtains from other sources may require an adjustment to the planned flight path before or during flight. Ultimately, it is the pilot's responsibility to maintain the minimum safe altitudes required by § 91.119.

I suggest a review of the appropriate FAA guidance material to determine whether further explanation of these definitions through examples may help users and inspectors to better understand what is meant by these terms. My office would be happy to provide assistance in that review.