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**Statement of Craig L. Fuller, President
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before the

**Committee on Transportation and Infrastructure's
Subcommittee on Aviation
U.S. House of Representatives**

concerning

**The Hudson River Airspace and Management of
Uncontrolled Airspace Corridors**

September 16, 2009

Good morning. My name is Craig Fuller, and I am President and Chief Executive Officer of the Aircraft Owners and Pilots Association (AOPA), a not-for-profit individual membership organization representing more than 415,000 members, nearly three-quarters of the nation's pilots. AOPA's mission is to effectively represent the interests of its members as aircraft owners and pilots concerning the economy, safety, utility, and popularity of flight in general aviation (GA) aircraft.

Although GA is typically characterized by recreational flying, it encompasses much more. In addition to providing personal, business, and freight transportation, general aviation supports such diverse activities as law enforcement, fire fighting, air ambulance, logging, fish and wildlife management, news gathering, and other vital services.

Each year, 170 million passengers fly using personal aviation, the equivalent of one of the nation's major airlines, contributing more than \$150 billion to U.S. economic output, directly or indirectly, and employing nearly 1.3 million people whose collective annual earnings exceed \$53 billion. General aviation serves 5,200 public use airports as well as more than 13,000 privately owned landing facilities. In a poll conducted on election night last November, more than 60 percent of American voters said they understood that general aviation (all flying other than military or commercial airlines) is a vital part of America's transportation system.

Controlled and Uncontrolled Airspace

The notion that we have uncontrolled airspace in the United States may, at first blush, seem unusual. Despite official use of the term "uncontrolled", the reality is that all airspace in the United States exists under some degree of control. Those of us who fly in the airspace do so within a complex set of rules and regulations that control where we fly and under what conditions. What is referred to as "uncontrolled airspace" is actually carefully depicted on charts and is available to pilots only when very specific weather and visibility conditions exist.

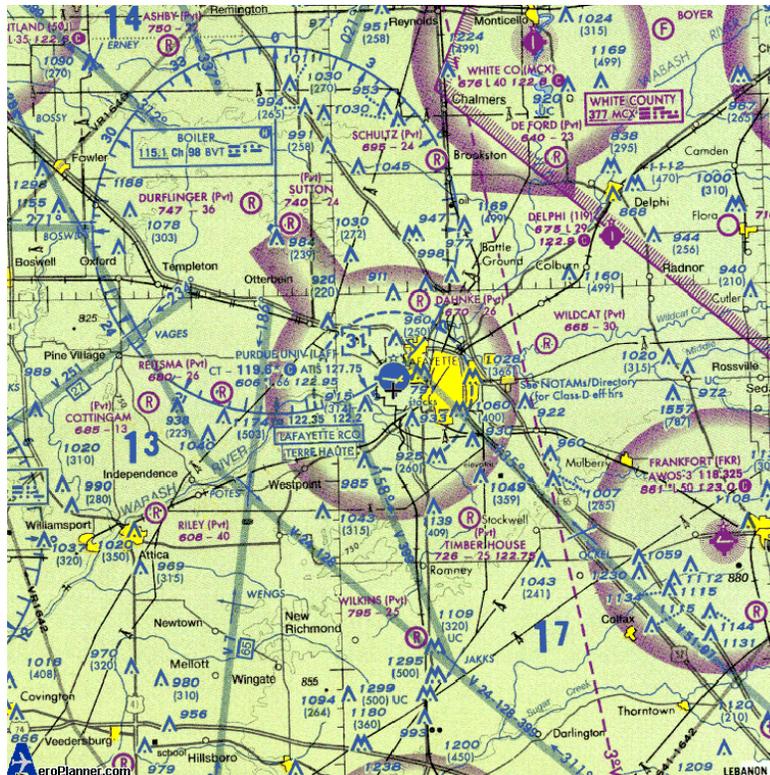


Figure 1: Uncontrolled airspace from the surface to 700' is charted within the shaded magenta areas. Outside these areas uncontrolled airspace exists from the surface to 1200'.

In practice, different groups tend to refer to different types of airspace as “uncontrolled.” Air traffic control (ATC) typically considers airspace outside of the areas where controllers provide positive control of all aircraft to be “uncontrolled.” This would generally include any airspace that is not designated as Class A, B, C, or D airspace.

The official FAA definition of “uncontrolled” airspace is different, however. According to the FAA, uncontrolled airspace is simply airspace with lower visibility and cloud clearance requirements. It typically exists below 700 feet above the ground in the vicinity of most airports and below 1,200 feet above the ground in most other areas. In the Hudson River corridor, controlled airspace begins at 700 feet, meaning most traffic, including most all fixed-wing traffic, is flying within controlled airspace. Most VFR flyways or “corridors,” including the Hudson River corridor, are actually within controlled airspace.

Even though the airspace is technically “controlled”, aircraft choosing to operate under IFR are steered clear of such corridors, even when weather is good. This ensures that instrument flights, whether commercial or private, are kept separate from VFR flights operating in designated corridors, flyways, and transition routes.

VFR Flying Is Controlled by Definition

Although they often are characterized as “uncontrolled,” flights made under visual flight rules, or VFR, adhere to strict procedures designed to ensure the safety of those in the air and on the ground.

VFR flight is governed by a defined set of FAA regulations and "rules of the road" covering operation of aircraft primarily by visual reference to the horizon for aircraft control and see-and-avoid procedures for traffic separation. VFR is used by more than 70 percent of all flights; it is not, by definition, uncontrolled or out of control.

All pilots, including those who fly exclusively under visual flight rules, are required to undergo extensive training, be tested to established FAA standards, and maintain proficiency at levels determined by the FAA. Pilot qualifications must be reevaluated at least every two years. In addition, pilots must adhere to regulatory requirements for flight planning and follow regulations governing factors including airspeed, direction of flight, altitude, weather minimums, and communication.

The rules that govern visual flight, instrument flight, and operations through airspace corridors are established precisely to maximize operational safety. The rules are taught to all pilots, tested over time, and refined as necessary, as we have recently seen from the process of reviewing and revising the rules for flying in the airspace over the Hudson River in New York.

Hundreds of thousands of safe operations have been conducted year after year in corridors around the nation. They represent consistent, long-term evidence that VFR traffic can be safely and efficiently accommodated even in the busiest airspace.

See and Avoid

Under FAA regulations, all pilots are ultimately responsible for maintaining separation from other aircraft whenever visual conditions permit, as they do at any time aircraft are operating under VFR. Even flights that are being guided by air traffic controllers, either under instrument flight rules (IFR) or VFR, are responsible for visually scanning to see and avoid potential traffic conflicts. The see-and-avoid principle is codified in Federal Aviation Regulation 14 CFR Part 91.113 (b) as follows:

"When weather conditions permit, regardless of whether an operation is conducted under instrument flight rules or visual flight rules, vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft. When a rule of this section gives another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear."

With the onus on all pilots to be vigilant for other traffic, midair collisions are rare. For example, in 2007, there were 624,007 pilots in the United States along with 221,943 general aviation aircraft. All told, pilots flew 21.4 million flight hours that year. That same year, general aviation aircraft were involved in 10 midair collisions, four of which were fatal. The accidents included a collision between competitors rounding a pylon in an air race, and a collision between two aircraft conducting a formation landing. Of the remaining accidents, two occurred during flight instruction; three occurred in the traffic pattern, including one at a towered airport; two occurred during formation flight; and one occurred in low-altitude cruising flight.

Corridors, Flyways and Transition Routes

The aviation community utilizes many terms, often in the wrong context, to describe methods of transitioning either through or around the nation's busiest airspace, designated as Class B. Class B airspace surrounds the largest airports in cities like Boston, Chicago, Los Angeles, and New York, among others.

Class B airspace is designed to help manage the flow of high volumes of airline traffic as these aircraft transition from the high-altitude flight levels into the lower altitudes and eventually to the airport itself and in reverse for departing aircraft. The airspace is shaped like an upside-down wedding cake with concentric expanding circles stacked on top of each other. The airspace and corresponding shape funnels aircraft in and out of the main airport.

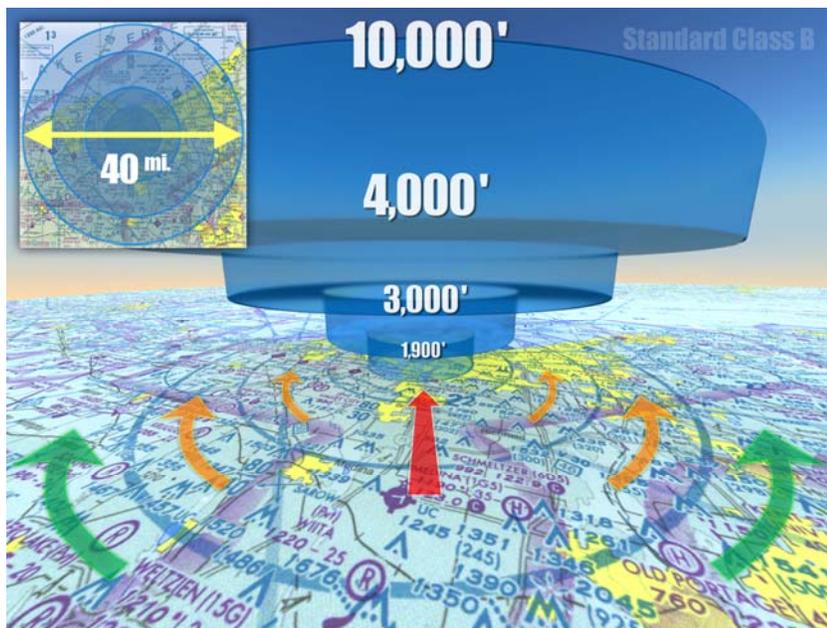


Figure 2: Class B airspace takes the form of an upside down wedding cake, with the largest rings at the highest altitudes.

Most, but not all, Class B airspace extends from the surface to 10,000 feet mean sea level (msl) with the diameter of the largest and highest sections often exceeding 40 nautical miles. Pilots must obtain a clearance from air traffic control before entering Class B airspace and then maintain radio contact with ATC. Aircraft must be equipped with an altitude-encoding transponder.

Published VFR routes for transitioning around, under, and through complex airspace such as Class B airspace were developed through a number of FAA and industry initiatives. The terms "VFR flyway", "VFR corridor", and "Class B airspace VFR transition route" all have been used when referring to such routes or airspace.

Each type of transition airspace is slightly different, although all share the goal of guiding VFR traffic safely in the vicinity of busy, complex airspace.

VFR flyways are general flight paths, not defined as a specific course, for use by pilots in planning flights into, out of, through, or near complex terminal airspace to avoid Class B airspace. An ATC clearance is not required to fly these routes. These routes are not intended to discourage requests for VFR operations within Class B airspace but are designed to assist pilots in planning flights that do not actually enter Class B airspace.

VFR flyways are generally charted on VFR Flyway Charts found on the reverse side of many Terminal Area Charts, but not all flyways are charted. The route commonly referred to as the "Hudson River Corridor" by pilots and the "Hudson River Exclusion" by air traffic controllers is actually an example of an uncharted VFR flyway. (Although it should be noted that the FAA plans to chart this route in the future as part of the revisions planned following the recent Hudson River midair collision.)

It is important to remember that these suggested routes are not sterile of other traffic. The entire Class B airspace, and the airspace underneath it, may be heavily congested with many different types of aircraft. Pilots using flyways must strictly adhere to VFR rules.

VFR corridors are designed into some Class B airspace areas to provide a designated space for the passage of VFR traffic. A VFR corridor is defined as airspace through Class B airspace, with defined vertical and lateral boundaries, in which aircraft may operate without an ATC clearance or communication with air traffic control. A corridor is, in effect, a "hole" through Class B airspace. A corridor is surrounded on all sides by Class B airspace and does not extend down to the surface like a VFR flyway. One example of a corridor can be found

in the San Diego Class B airspace just east of the airport between 3,300 feet and 4,700 feet.

Because of the heavy traffic volume and the procedures necessary to efficiently manage the flow of traffic, it has not been possible to incorporate VFR corridors in the development or modification of Class B airspace in recent years.

To accommodate VFR traffic through certain Class B airspace, such as Seattle, Phoenix and Los Angeles, Class B airspace VFR transition routes were developed. A Class B airspace VFR transition route is defined as a specific flight course depicted on a Terminal Area Chart for transiting specific Class B airspace. These routes include ATC-assigned altitudes, and pilots must obtain an ATC clearance prior to entering Class B airspace on the route.

“Corridors” Are Necessary and Enhance Safety

Since becoming president of AOPA eight months ago, I have flown numerous times into busy airspace around New York, Boston, Houston, Dallas, and Los Angeles. In all cases, I flew using an instrument flight plan. My approaches and departures were handled by air traffic control, keeping me clear of the areas where aircraft could operate under visual flight rules without contacting air traffic control.

Without the VFR corridors, flyways, and transition routes, air traffic controllers would be forced to handle thousands of additional operations in and around some of the busiest airspace in the country. Delays would be inevitable and some aircraft would skirt the areas requiring contact with air traffic control, making their precise locations unpredictable. Corridors, flyways, and transition routes create designated spaces for these VFR flights, easing controller workload, and making it easier for aircraft to avoid one another in crowded skies.

In the days since the Hudson River midair collision, I have heard from many AOPA members who have safely used the Hudson River flyway and similar routes nationwide for many years. Their comments consistently note that such routes are efficient means of safely navigating through busy airspace, adding that if these routes were lost, pilots would be forced to fly many miles out of their way, significantly increasing costs and imposing new safety risks associated with fuel usage and weather considerations.

The Hudson River Corridor Working Group Recommendations

It is understandable that a tragedy like the one we recently witnessed in New York brings calls for major airspace realignments. While these calls are based on the best of intentions, it is important to base action on careful calculations of risks and airspace utilization. Even well-intentioned efforts to realign airspace are likely

to come with unintended consequences that could increase, rather than reduce, hazards in and around busy airspace.

FAA Administrator Randy Babbitt on Sept. 2 announced steps the agency will take to enhance safety in the Hudson River flyway—steps AOPA believes are sensible and likely to have a favorable effect.

The plan is the direct result of a working group convened by Babbitt just two weeks ago that was made up primarily of FAA staff from diverse departments, including the air traffic organization, air traffic controllers, airspace designers, and flight standards. The panel also included AOPA and representatives of two other industry groups to reflect the needs of airspace users. I believe this cooperative effort is an excellent example of how to effectively address safety concerns by considering the needs of all stakeholders.

The FAA is expected to implement the working group's eight recommendations, which align closely with those developed independently by the National Transportation Safety Board (NTSB).

The working group report suggests making current best practices mandatory. These practices including flying with lights on and using two-way air-to-air communication. The recommendations also include developing flight rules and training for operations in the exclusion zone. As noted previously, the FAA plan also goes beyond the NTSB recommendations by adding improved charting to include VFR flyways, which will give pilots more and better information.

Training and education

Pilots are accustomed to making recurring training part of their flying regimen. Pilots engage in both mandatory and voluntary training programs aimed at improving safety. AOPA is actively assisting in making additional training materials and programs available to pilots through the AOPA Air Safety Foundation.

Earlier this week, AOPA Air Safety Foundation President Bruce Landsberg went to New Jersey to host a training seminar focusing on best practices for flying in and around New York. The seminar was available both in person and via Web cast to maximize participation.

In addition, numerous mechanisms already exist to ensure that training on the use of flyways, corridors, and transition routes is integrated into ongoing pilot training. Options include making it an area of emphasis for flight reviews, which are required of all active pilots every two years, and practical tests, which are taken by all new pilots as well as those who are upgrading or adding new certificates or ratings. Information on using corridors can also be added to Flight

instructor renewal courses, which many flight instructors use to renew their certificates every two years. Finally, the aviation industry can be enlisted to communicate key training information through print and electronic media such as magazines and newspapers delivered to pilots. The FAA's FFAST Team provides another possible mechanism for disseminating important safety and training information.

Conclusion and summary

Safety is a top priority for everyone within the aviation community, and history has shown that VFR flyways, corridors, and transition routes are a safe and efficient way of moving traffic through some of the nation's busiest airspace.

Despite the use of the term "uncontrolled", virtually all airspace is controlled to some degree, and pilots who fly in it must strictly adhere to regulations and requirements governing everything from their qualifications and the airworthiness of their aircraft to weather and altitude.

By providing well-known routes through complex and busy airspace, these "corridors" reduce the workload on air traffic controllers and help controllers and other pilots predict the location of VFR traffic. Eliminating such routes could have dangerous unintended consequences.

At the same time, as the recent Hudson River Corridor Working Group demonstrated, there are opportunities to enhance safety while keeping the airspace open by codifying best practices, improving charting, and making additional training materials available to pilots. Identifying such opportunities can be done most effectively when the FAA partners with the aviation industry to identify the needs of stakeholders early in the process.