

General Aviation

Title: ASRS Weather “Callbacks”

Description of Requirement:

This proposed requirement addresses the agency’s goal of reducing general aviation (GA) fatalities. Weather is the single largest cause of aviation fatalities. This is especially true in GA. We need to be sure we fully understand why pilots get in trouble with weather and how we can best prevent this before recommending procedural change. Valid, reliable information on this difficult point is prerequisite for valid, reliable agency decisions.

This project is in conjunction with the General Aviation Joint Steering Committee. It follows up on the results of the 2002 Joint Safety Analysis Team report on errors in aeronautical decision making.

This proposal specifically involves adding a General Aviation Weather Incident Callback Questionnaire to the Aviation Safety Reporting System (ASRS). This questionnaire has already been developed, and needs only objective validation before deployment.

Background:

Most weather-related GA accidents are fatal. General aviation aircraft are generally not equipped with cockpit voice recorders or flight data recorders. This naturally makes accident investigations into the root causes of these fatalities difficult, if not impossible.

The ASRS conducts interviews with pilots who have had close encounters with danger. These pilots are obviously still here to report about what happened. A living witness is superior to a cockpit data recorder in many ways. No recorder can speak to what was going through the pilot’s mind before and during a dangerous incident. These interviews, therefore, give us a unique window into the pilot’s mind. They grant us direct access to decisions made by actual persons who experienced actual weather incidents and lived to tell about it. This type of information is unavailable through other sources. Moreover, the ASRS guarantees anonymity during the “Callback” process. That means the pilot is free to speak candidly about the event without reprisal. This is the best way to maximize the chance of getting reliable, useful information from each interview.

There are clearly many ways this information will be useful. One example involves weather reports. Available weather information for pilots contin-

ues to improve. But analysis shows that less than half of the pilots involved in fatal weather accidents ever received a formal pre-flight weather briefing. One key to lowering the GA accident rate, therefore, involves determining why pilots do not take advantage of this weather information in managing weather risks.

Validity and reliability of information are paramount concerns to this project. Therefore, pilot input will be provided by the Sponsor, as well as three members of the ASRS project staff. All these individuals are pilots. Statistical support is also critical, and will come from the Civil Aerospace Medical Institute (CAMI), AAM-500, Human Factors Branch.

Output:

The output of this project will be:

- A list of environmental and equipment-related weather hazard factors to supplement and support the 2002 JSAT Aeronautical Decision Making Final Report.
- A similar list of weather-related pilot decision-making factors.
- Actual sources for weather information utilized by the survey pilots.
- Reasons why official weather information sources were not utilized
- Deficiencies in weather reports and forecasts.
- Tactical mitigation strategies utilized by pilots during weather encounters.

Regulatory Link:

FAR Part 61, Part 91

Aeronautical Information Manual

