

FAA Safer Skies Agenda
GA Weather Final Report

SmallAircraft Manufacturers Association

Paul Fiduccia, President

May 25, 2000

General Aviation Weather JSAT

- Team: 15 FAA and 5 Association Staff
- Duration: 8 Months
- Goal: Substantial reduction in fatal accidents while preserving capacity, utility, efficiency, and affordability.
- Process: Review all 151 fatal GA weather accident reports for 1995; Detailed Root Cause Analysis and Interventions for 22

JSAT Root Cause Analysis

- Root Cause Categories:
 - Pilot: Education and procedures
 - Aircraft: Weather avoidance and tolerance eqpt.
 - Information: To avoid “Weather Hazard Areas”
 - Air Traffic Control: Weather information and procedures for “weather-intolerant” aircraft
 - Mountain Operations: Special problems
 - Regulations and Enforcement: PIREPS
 - Rotorcraft and Low-Altitude Operations

JSAT Intervention Analysis

- 370 case and cause-specific interventions
- Grouped into Intervention Strategies
- Ranked for Effectiveness in avoiding accidents and implementation Feasibility
- Discarded many based on evaluation
- 5 prioritized Recommendations with 20 implementation elements

JSAT Intervention Recommendations

1. Better information to pilots on location and severity of “weather hazard areas”; how and when to complete the flight safely.
 - New weather hazard graphics -- operational
 - Improved PIREP collection and dissemination
 - FIS implementation and improved certification
 - Improved ATC weather info. & dissemination
 - Model “Flight Operations Manual” decision aid

JSAT Intervention Recommendations

2. Improve weather training materials and dissemination mechanisms.
3. Mountain and Low-Altitude CNS infrastructure, procedures, weather info.
4. Improve technology for rotorcraft and small airplane weather operations.
5. Improved regulations and system certification processes

General Aviation Weather JSIT

- Team: 30 FAA, NWS, NASA, plus 6 Association Staff and 2 unions: Unanimous
- Duration: 6 months
- Goal: Recommend high benefit/cost ratio FAA, NASA, NWS and Industry program modifications (virtually no new programs)
- Process: Develop and evaluate detailed implementation plans for each intervention, recommend high benefit / cost ratio items.

GA Weather Final Report

Recommendations

- Accurate weather hazard graphics, through improved forecasts and PIREPs; to pilots, controllers, FSS specialists; by data link.
- Scenario-based, multi-media training and testing, and guidance and operations materials on weather decision making.
- Minimize regulatory impediments to weather decision making and reporting

Recommended Programs and Resources

- 20 programs; tasks for FAA, NASA, NWS, Pilots, Operators, Manufacturers
 - FAA Resources: Additional 25 FTEs and \$5M in first year, \$10M in second year.
 - NASA, virtually no additions to AvSP
 - Wx service providers, owners, avionics manufacturers, pilot organizations: \$67M
- 200 GA weather fatalities, @\$2.7M / fatality.

Final Report Status

- Submitted January 2000
- Reviewed by Joint Steering Committee
- Three Tiers Established: 15 of 20 in #1
- April, FAA Executive Safety Council Accepted defined outcomes, but may modify schedules -- final response in July
- Very limited action to date

Relationship to NASA AvSP

- NASA Tasks in almost all programs
- Little additional NASA effort required
- Consistent with AWIN elements
 - Weather Graphic development/evaluation
 - Automatic in-flight weather data -- EPIREPs
- One disconnect -- Synthetic Vision

Conclusions

- NASA AvSP/AWIN must continue support for GA Weather Safety Items -- essential to an adequate Federal Response.
- Resources for GA elements protected and enhanced, especially for EPIREPs.
- Parity in Commercial and General Aviation AWIN resources -- Based on % of fatal accidents and number of fatalities.