Challenges for Flight Instructors Teaching Weather Information

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CHALLENGES FOR FLIGHT INSTRUCTORS TEACHING WEATHER INFORMATION

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Overview

• Flight Instructors face a challenge when teaching/learning weather information

• Multiple overlapping resources for aviation weather

• AC takes longer timeframe to update – problem for quick updates of information
Current Weather Guidance

• Spread Over Multiple Advisory Circulars and Handbooks
• Difficult to track content for consistency

• AC 00-06B  Aviation Weather
• AC 00-24B  Thunderstorms
• AC 00-30C  Clear Air Turbulence Avoidance
• AC 00-45H  Aviation Weather Services
• AC 00-54   Pilot Windshear Guide
• AC 00-57   Hazardous Mountain Winds
• AC 00-63A  Use of Cockpit Displays of Wx and Aero. Info.
• AC 91-74B  Pilot Guide: Flight In Icing Conditions
• FAA-H 8083-25B Pilot Handbook of Aeronautical Knowledge
• And More....
Current documents have a limited focus on product interpretation

- Turns the Flight Instructor into a chef
- FAA provides the ingredients (all the ACs)
- But the instructor has to find all the ingredients and cook the meal
- Leave a chance of the flight instructor not finding all information and...
- Very limited examples of practical application of weather information
- Required the Instructor to come up with scenarios and examples – if they know how
Recommendations and Suggestions

• Create an “Aviation Weather Handbook”
  ▫ We would LOVE to do this for the FAA!

• Consolidate all weather phenomenology

• Handbooks tends to carry more “weight” with pilot community than Ac's

• Handbooks can be updated quicker than ACs

• Reduces overlap and potential for conflicting information
Recommendations and Suggestions

• Develop publications with examples that can show pilots how to use these products
  ▫ VFR and IFR
  ▫ Geographic Differences
  ▫ Provide instructors with support for Weather Training - instructional support tools

• Continue to develop new FAA knowledge test questions
  ▫ Leverage universities like ERAU to validate questions to get them to the knowledge test database quicker

• Additional research (e.g., criterion validity studies associating the weather knowledge with performance in flight simulations).
Suggestions and Recommendations – Aviation Weather Center Products

- Already has great information on products
- Hidden behind tiny INFO button
- Perhaps make button bigger
- Different label - “AIRMET HELP” or “What’s an AIRMET?”
Recommendations and Suggestions

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- Additional research (e.g., criterion validity studies associating the weather knowledge with performance in flight simulations).
Conclusion

- The 27th annual Nall Report states the percent of pilot-related weather accidents remained constant
  - Primarily VFR into IMC

- Merging ACs into one Aviation Weather Handbook will make it easier for pilots and instructors to find the information they need

- Providing examples will help instructors better prepare students