
Quantifying Aviation Weather Forecast Benefits in a Common Model – an NWS Perspective

Friends/Partners of Aviation Weather Forum
Las Vegas, Nevada
October 11, 2011

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Why Now?

- **More and more questions from those making funding decisions**
 - **OMB**
 - **DOC/NOAA/NWS Finance Offices**
- **If we fund this, how much improvement in your forecasts?**
- **What's the economic impact of these improvements?**
- **Historically, we haven't done a good job of measuring performance in a way to see economic benefits of services**

NWS Near-term Initiatives

- **NWS Initiatives to align performance measures with economic benefits**
- **Aligning measures to air traffic decisions**
 - *CWSU Forecast Accuracy*
 - Measure the impact of CWSU decision support on air traffic decisions
 - Result of GAO recommendation
 - Tracks CWSU Support
 - Lead-time notification of TMU of event impacting NAS
 - Accuracy is also measured
 - Operationally significant wind shift at core airport
 - Provides a basis for assessing impact on flow programs
- **Challenge is to translate this support to the decision and the impact of the decision**

FAA/NWS Near-term Initiatives

- **NWS Initiatives to align performance measures with economic benefits**
- **Traffic Flow Management Weather Requirements Working Group**
 - *Baseline of services would be in a phased approach*
 - Phase 1: assessment of quality of current NWS products and services using current verification tools
 - Phase 2: comparison of current suite of NWS products and services against the Traffic Flow Management (TFM) weather requirements
 - Phase 3: assessment of performance measures for TFM decision making
 - Phase 4: analysis of end-to-end TFM decision-making, from the provision of weather information through the decision-making process and the impact on the National Airspace System (NAS)
- **End result will be end-to-end measure of TFM decision-making based upon weather information**

FAA/NWS Near-term Initiatives

- **Assess the performance based upon TFM requirements**
 - New TFM requirements provided to NWS this spring
 - Airport, Terminal Area, Enroute
 - Focusing on thunderstorms and ceiling and visibility
 - Initial set of requirements more meaningful to TFM
 - Lead-time to onset and cessation
 - Location error
 - Timing error
 - Accuracy
- **Other performance measures will follow**

Next Steps

- We're in the process of developing the performance measures but the next step is more difficult
- We still need to
 - Develop performance measures for other weather elements based on air traffic impacts
 - Look at the decision-making process based upon weather
 - Relate that decision to economic impact
- We are still a long way from completing this but we need the answers now...



Questions?