National Weather Service Activities

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Quantifying Monetary Impacts of Forecasts
NWS Activities

- Why?
- Recent Attempts
- Summary
Why?

• Government expending resources providing products/services
  – Regulatory reasons for NWS products
  – Ensure products/services are meeting NAS needs

• Many forces driving ever-limited resources
  – Focus areas for improvement

• Need factual/reliable data
  – Draw accurate conclusions
Recent Attempts – Case 1

• Additional meteorologists to Golden Triangle NWS Weather Forecast Offices in 2010
  – Weather-related delays decreased in each area 40-55% from previous years
  – Due to improved forecasts!
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Or was it?

Many factors can account for reduction in delays from year to year...prime among them, the weather
Recent Attempts – Case 2

• National Aviation Meteorologists at ATCSCC
  – GDP request based on CIWS/CoSPA forecasts
    • NAM recognized CoSPA forecast discrepancies
  – NAM input to decision not to implement GDP
    • NTMO noted “GDP would have unnecessarily delayed numerous flights and drawn out the schedule”
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How do we know what would have happened?

- Simulated what would have been incurred by the system given a conservative GDP implementation (21z-00z):
  - 322 flights delayed – 232 actual flights delayed = 90 flight delays saved
  - 7565 minutes of delay – 5136 minutes actual delay = 2429 minutes saved
  - 23.5 average delay per aircraft (actual 22.2 minutes for all arrivals)
  - Assuming $40 cost/minute of delay, this one instance of an avoided TMI would have saved roughly $100,000
Summary

• Need to ensure limited resources focused on improvements that show return on investment

• Some simulations show promise in demonstrating benefit of improved products/services

• Need factual data to draw accurate conclusions