



Presentation to GRAY, ME NWS AVIATION WORKSHOP

Tim Matuszewski

United Airlines

Manager Dispatch Air Traffic Operations and Weather Services

Office 847-700-3016

Email timothy.matuszewski@united.com



Terminal Forecasts (TAF)

TAF is the principle component to the Flight Planning process for both Destination and if needed, Alternate(s)

- 2000/3 rule
- 1000/2 rule
- Ceiling and visibility impact on runway availability
- Wind impact on runway availability
- Rain/wet runways
- Frozen precipitation
- Thunderstorms

Terminal Forecasts (TAF)

Points of Confusion

- Use of VCTS doesn't match its definition
- Use of “CB” *is it going to thunder or not?*
- Amendments/Forecast Changes
 - Last minute amendments
 - Area of TS approaching is a classic example

Forecast Impact on Flight Costs

Airlines measure fuel in pounds as it is part of the weight of the aircraft

- 100lbs fuel = 15 gallons fuel
- Fuel is about \$1.55/gallon so 100lbs = \$23.25

- Alternate fuel ranges from 1500lbs to 4000lbs.
 - 1500lbs = 348.75 (LGA with EWR Alternate)
 - 2500lbs = 581.25 (LGA with PHL Alternate)
 - 4000lbs = 930.00 (LGA with BWI Alternate)

Forecast Impact on Flight Costs

Round trip cost ORD-LGA is roughly \$265.00 or \$132.50 one-way

- Alternate fuel ranges from 1500lbs to 4000lbs.

- 1500lbs = 348.75 (LGA with EWR Alternate) **2.5 fares**
- 2500lbs = 581.25 (LGA with PHL Alternate) **4 fares**
- 4000lbs = 930.00 (LGA with BWI Alternate) **7 fares**

NWS Aviation Weather Support

BENEFITS

- National coverage
- Broad array of maps, charts, products, and services allows us to pick and choose what we need.
- Severe Weather advisories
- Easy Access to warnings, advisories, and forecasts

AREAS of WEAKNESS

- No advance warning of amendments.
Ideal: 2-3 hour lead time
- Lack of knowledge of “bingo” parameters at the airport
 - Example: PVD CAT I Landing mins are 200' - 1/2sm on runway 5 and 23, but increase to 300' – 1sm on runway 34.
- No info regarding updates/alerts/”what ifs”
- Difficult to contact the forecaster for consultation on forecast.
- The TAF does not adequately address TS.

LIFE BEYOND THE TAF: TERMINAL AREA TS



LIFE BEYOND THE TAF: TERMINAL AREA TS

- Thunderstorms begin to impact airport operations well before reaching the aerodrome.
- Depending on the airport, impact can occur when TS move to within 125nm.
- Current automated TS prediction tools help, but model biases, lack of general product knowledge limit effectiveness.

NEW PRODUCT?

- TS prediction tools still require “human-over-the-loop” to account for model discontinuity
- Ideal solution would be a graphic which depicts TS location within 100nm of airport

THANK YOU!

These comment should not be taken as complaints. Instead, they are designed to help you understand the “customer” perspective, and allow you to refine the excellent service you currently provide.

On behalf of United Airlines, thank you for the outstanding support you provide on a daily basis! We look forward to working with you to improve National Airspace Operations.