

Near-term Improvements in NWS Services

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Background

- **Joint FAA-NWS Traffic Flow Management Weather Requirements Working Group**
 - *Baseline current capability*
 - *Develop requirements for near-term services out to NextGen MOC*
 - *Implement solutions to meet those requirements*
- **Overarching Goal: Improve TFM Weather Support**
- **Near-term Implementation Projects**



Near-Term Projects

FY12 Implementation Timeline

Project	Q1	Q2	Q3	Q4
TAF Performance Measures	[Implementation]			
NDFD Performance Measures	[Implementation]			
Winter Weather Outlook	[Implementation]			
Operational Bridging	[Implementation]			
Space Weather Impacts	[Implementation]			
National CWSU Web Services	[Implementation]			



TAF and NDFD

Performance Measures

- Performance measures linked to decisions for Traffic Management Initiatives
- Assess accuracy of providing lead time to onset and cessation of conditions
- Work underway to develop the tools for new way of assessing forecast performance
- **FY12:**
 - *NWS Performance Branch to deliver TAF assessment tool in Jun 2012*
 - *ESRL/GSD to deliver NDFD assessment study results in Jun 2012*

Winter Weather Outlook

- **2-3 Day Planning Outlook of Winter Weather Impacting Core Airports**
 - *CDM WET identified need for planning forecast*
- **Automation driven with human collaboration**
 - *Short Range Ensemble Forecast (SREF) model “first pass”*
 - *Plug into Extended Collaborative Planning*

Group I 30"+	Group II 15-30"	Group III 0.1-15"	Group IV Trace
DEN (60")	EWR (28")	SEA (11")	FLL/MIA (T)
SLC (59")	LGA (26")	CLT (6")	LAX (T)
MSP (50")	JFK (23")	MEM (5")	MCO (T)
BOS (42")	IAD (22")	DFW (3")	PHX (T)
DTW (41")	BWI (21")	ATL (2")	SAN (T)
MDW (39")	PHL (21")	LAS (1")	SFO (T)
ORD (39")	DCA (17")	IAH (½")	TPA (T)

Winter Weather Outlook

➤ Threshold based Impacts

- *Snow accumulation, snowfall rate, precip-type, visibility*
- *“Sliding scale” to account for relative ops impact at terminals*
- *“Traffic light” type approach leads into forecast/plan collaboration*
- *Thresholds determined by industry and airport authority sources*

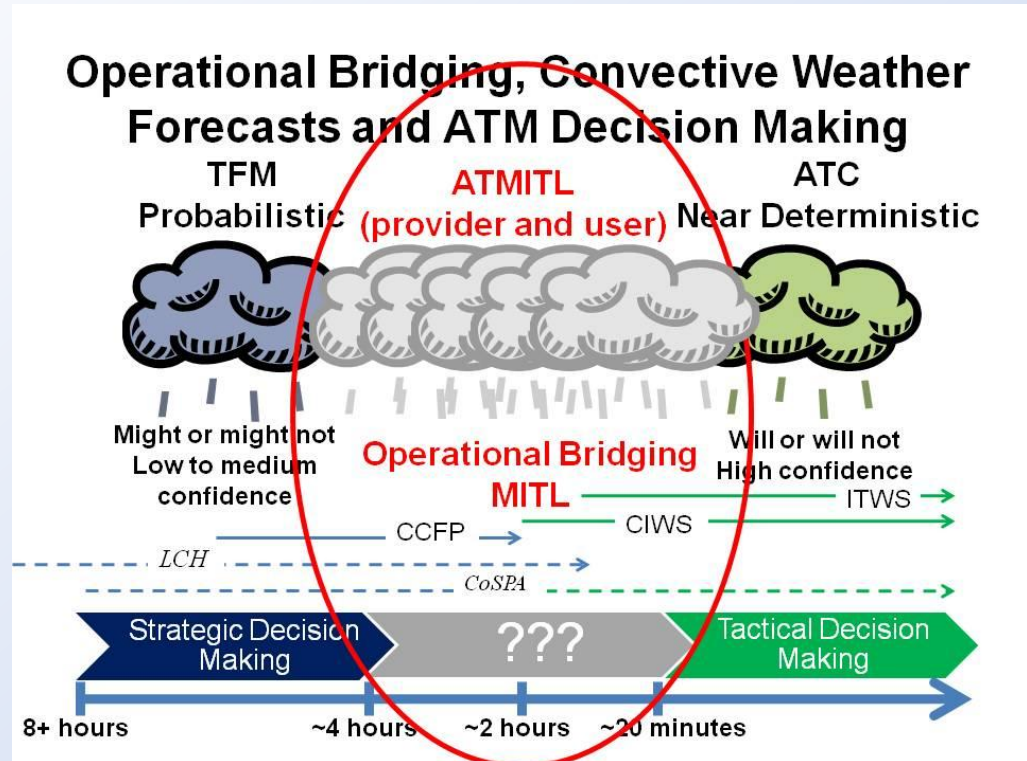
	Group I (Cold Weather Cities)	Group II (NYC, PHL, DC)	Group III (Warm Weather Cities)	Group IV (Southern Tier)
8"+ • 1" per hr FZRA/PL/mix less than ½SM	Red	Red	Red	Red
4-8" • ½" per hr -FZRA or -PL 1h 1SM	Orange	Red	Red	Red
2-4" • ¼" per hr -FZRA or -PL 3SM	Yellow	Orange	Red	Red
0-2" .1" per hr	Green	Yellow	Orange	Red
Trace snowfall	Green	Green	Yellow	Orange
No precip	Green	Green	Green	Green

➤ **FY12: AWC develop capability - initial product in Dec**

Operational Bridging

➤ Collaborative weather forecast process

- *Bridge gap from Strategic to Tactical*
- *Deterministic forecasts sooner*
- *Focus on 0-4 hr timeframe initially – expand in future*
- *Integrate all available weather forecasts (automated and human)*



➤ FY12: AWC working with CDM WET to develop process

- *Meteorology Group at ATCSCC to further develop and implement*

Space Weather Impacts

➤ Space Weather Prediction Center (SWPC) to provide Space Weather Impacts Alerts for TFM

- *Enhance current Space Weather Message format to include Impacts*
- *Disseminated to CWSUs*
- *CWSUs relay alert info to TMUs*

Space Weather Message Code: ALTK06

Serial Number: 270

Issue Time: 2011 Sep 09 1701 UTC

ALERT: Geomagnetic K-index of 6

Threshold Reached: 2011 Sep 09 1700 UTC

Synoptic Period: 1500-1800 UTC

Station: Boulder

Active Warning: Yes

NOAA Scale: G2 - Moderate

Potential Impacts: Affected area down to latitudes of approximately 55 degrees geomagnetic, i.e., New York, Idaho, Central Aleutians. HF may experience fades and disruptions; GPS operations may be affected; electrical power systems may experience voltage irregularities; aurora possibly visible.

➤ FY12: SWPC to begin issuing Space Weather Messages with Impacts in Dec 2011



National CWSU Web Services



- **Integrate existing CWSU websites into a National View**

- **Goals:**
 - *Consistent web presentation for all CWSUs*
 - *Provide a site for forecasting and collaboration*
 - *Integrate National View into AWC web services*
 - *Partner with Regions and CWSUs on design and implementation of technical solutions*

- **FY12: AWC develop National View for CWSU websites Jun 2012**



Summary

- **Implementing near-term projects**
 - *Assess capability with respect to new performance measures*
 - *Provide solutions to meet near-term requirements*
 - *Improve Weather Support to TFM*