Near-term Improvements in NWS Services

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Background

  • 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

<table>
<thead>
<tr>
<th>Project</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
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<tr>
<td>TAF Performance Measures</td>
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<td>NDFD Performance Measures</td>
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<td>Operational Bridging</td>
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<td>National CWSU Web Services</td>
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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
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

### Winter Weather Outlook

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

<table>
<thead>
<tr>
<th>Group I (Cold Weather Cities)</th>
<th>Group II (NYC, PHL, DC)</th>
<th>Group III (Warm Weather Cities)</th>
<th>Group IV (Southern Tier)</th>
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<tbody>
<tr>
<td>8”+ • 1” per hr FZRA/PL/mix less than ½SM</td>
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<tr>
<td>4-8” • ½” per hr FZRA or -PL 1h 1SM</td>
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<tr>
<td>2-4” • ¼” per hr FZRA or -PL 3SM</td>
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<tr>
<td>0-2” .1” per hr</td>
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<tr>
<td>Trace snowfall</td>
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<tr>
<td>No precip</td>
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- **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

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

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.
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