NWS Fall Partners Meeting
Director’s Remarks

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November 1– NWS Fall Partners Meeting
Silver Spring, MD
Overview

• Continuing our efforts to Evolve the NWS – Build a Weather-Ready Nation

• Making progress in building/repairing our infrastructure

• Making progress in predicting extreme events – providing necessary IDSS to core partners
NWS Strategic Outcome:  
A Weather- and Water-Ready Nation

“Ready, Responsive, Resilient”

Becoming a Weather-Ready Nation is about building community resiliency in the face of increasing vulnerability to extreme weather, water and climate events

Better forecasts and warnings
Consistent products and services

Actionable environmental intelligence
Connecting forecasts to decisions

Involves the entire US Weather, Water and Climate Enterprise WORKING TOGETHER

We have 3650 WRN Ambassadors
FROM TODAY...
Inconsistent service which, at times, does not go “beyond the forecast” to explain impacts

- Mismatch in workload & skills
- Variation in partners served
- Variation in products and services; Redundancy in internal processes

TO THE FUTURE...
NWS provides DSS before, during and after events through a fully integrated field structure

General partners
Core partners
“Deep relationships” core partners

Involve, Engage and Communicate with Internal and External Stakeholders Throughout!
No Office Closures!
Building a Weather-Ready Nation
Ready, Responsive, Resilient

3650 WRN Ambassadors
Multi-faceted Communication Strategy
Deep Relationships
Core Partners

NWS Providing Impact-Based Decision Support Services (IDSS)

Accurate & Consistent Forecasts/Warnings
Social Science
Fully-Integrated Field Structure through a Collaborative Forecast Process
National Blend of Models: Forecast starting point
One NWS, One Dissemination Network
Observations and Numerical Weather Prediction

Pulling it all together to accomplish our mission and to build a Weather-Ready Nation
FY 2017 Portfolio Highlights

**Observations**
- NEXRAD Service Life Extension
- ASOS SLEP
- Radiosonde frequency migration
- Achieve IOC for GOES-R
- Achieve IOC for JPSS-1

**Science & Technology Integration**
- Complete GOES –R training development (SIFT)
- National Water Model v 2.0
- NGGPS Dynamic Core Integration
- HWRF upgrade
- Complete impacts catalog v2.0 design
- Operations Workforce Analysis

**Facilities**
- Complete planning phase for SSMCII realignment
- Complete relocation of WFO Cleveland & WFO Davenport
- Complete Facility Assessments for 2nd 1/3
- Complete Phase 1 disposal of Valdez Alaska

**Central Processing**
- AWIPS configured for GOER-R data
- Complete use case development for NAWIPS
- Extend the performance period WCOSS supercomputing systems and service.

**Dissemination**
- Shutdown legacy NWSTG
- OneNWS upgrades for 50 CONUS sites
- Complete Acq Plan for Enterprise Infrastructure Solutions.

**WRN Ambassador Initiative**
3650 Ambassadors

**Analyze, Forecast, Support**
- National Blend of Models prototype demonstration
- 100 new Storm Ready Communities
- Operational Storm Surge Watch/Warning product suite
- 10 new/renewed Tsunami Ready communities
- CONOPS for NWC Operations Center Transition to Operations experimental week 3-4 temperature and precipitation outlook
Integrated Dissemination Program (IDP) OneNWS Network
Long-Term Sustainable Solution

Future Functionality at IDP College Park and Boulder (Expected By December 2016)
- Snow Telemetry (SNOTEL)
- Hydrometeorological Automated Data System (HADS)
- HF-FAX
- SOCKET/CMHP
- NWS Chat

Functionality in place at IDP College Park and Boulder* (as of October 2016)
- NOMADS*
- FTPPRD*
- TGFTP*
- MADIS*
- MRMS*
- MAG*
- Radar Level 3*
- nowCOAST
- IRIS/inNWS
- NWS GIS Services
- NOS Chart Tile
- NWSTG Switch*
- HazCollect (Legacy)
- Weather.gov

* Application operational in both College Park & Boulder

“OneNWS” Network
The future OneNWS network will consolidate all operational networks (OPSnet, Regional, etc.) as single managed network under NCEP Central Operations (NCO).
Computer Status/Model Implementation
Supported through HFIP and Sandy Supplemental

Key Atmospheric Model Upgrades Complete:

• Jan 2015: Global Forecast System (GFS) upgraded – 13km out to 10d
• Jun 9, 2015: 2km HWRF
• Sep 2015: SREF, GEFS
• Mar 8, 2016: HIRESW implemented on Cray
• May 11, 2016: GFS/4D ENKF
• July 12, 2016: HWRF – Wave Watch 3

• HPC-Based Water Modeling:
  • Deploy National Water Model on WCOSS
  • HRRR v2.0 (HRRRe)
  • Geospace Solar Wind Forecast

Increased HPC capacity to 2.8 petaFLOPs (for primary and backup, respectively–for a total of 5.6 PF)
Accepted for Operations: November 30, 2015
Recent Success Stories

Predicting extreme events 7-8 days in advance

- October 2015 South Carolina 20” Rain
- Central U.S. Post Christmas 2015 Storm
- January 2016 East Coast Blizzard
- March 2016 Flooding
- June 2016 Southwest Heat Wave
- Hurricane Matthew

Successful Weather, Water and Climate IDSS Provided to Local, State and National Partners Before, During and After Events
### Post Christmas Storm (Dec. 25-28, 2015): The Spectrum of IDSS

#### Preparedness

**Federal and State Actions**
- Maintained situational awareness through NWS and liaison briefings (as early as Dec 22)
- Allocated response teams and assets for possible activation or deployment (over holiday weekend)
- Increased level of coordination across federal, state and local jurisdictions

#### Immediate Response

**Tornadoes**
- WFO Fort Worth created preliminary tornado tracks in collaboration with SR-ROC and liaisons; FEMA analyzed impacts to support activation and deployment decisions

**Blizzard**
- State and local municipalities mobilized to address road conditions and open shelters

**Flooding**
- Emergency Response Specialist (ERS) deployed to FEMA VII Regional Response Coordination Center
- NOAA Liaison to FEMA and ERS highlighted greatest flood risk to support staging operations

#### States of Emergency Declared
- Dec 27: TX/NM/MI
- Dec 28: OK
- Dec 29: IL
- Dec 30: MS/LA

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**Photo:** News Channel 10 – Amarillo, TX
**Photo:** St. Louis Post Dispatch
Post Christmas Storm (Dec. 25-28, 2015): The Spectrum of IDSS

Response and Recovery

**Long-Duration River Flooding**
- NOAA Liaison provided location and timing of peak crests along affected rivers:
  - to help FEMA define when NOAA and interagency remote sensing capabilities should be executed
  - imagery captured real-time visual impacts during worst conditions to support NWS RFC operations as well as inform disaster declaration (recovery) decisions
- NWS Central and Southern Regions worked closely with FEMA Regions and States to define the events for declaration requests
- Central Region ROC continues to provide IDSS for debris removal operations in southern Missouri

NOAA King Air Aircraft
Hurricane Matthew (Oct. 6-9, 2016): The Spectrum of IDSS

Preparedness

Federal and State Actions
- WCM deployed to SC EOC Oct 3; EOC ER-MET deployed to GA and FL through week
- Briefings provided to partners as early as Oct 3
- FEMA Region IV provided a pre-declaration write-up for the Carolinas in anticipation of the state’s request

Immediate Response

Surge
Mean higher high water/inundation was highest ever recorded at seven locations. WFOs conducted Storm Surveys as conditions allowed.

Wind
WFOs provided 3-hourly wind forecasts and 1-hour spot forecasts to multiple nuclear power plants

Flooding
Record river flood levels at multiple locations in North Carolina. WFO Wilmington, NC deployed storm survey team to survey record flooding on the Lumber River at Lumberton, NC.

States of Emergency Declared
Oct 3: FL, NC; Oct 4: GA
### Hurricane Matthew: Connecting All of the Pieces

**Oct 3**
- **U.S. Personnel airlifted from military installations in Cuba**
- **NWS offices continue briefing partners and begin deploying to EOCs**

**Oct 4**
- **Hurricane and Tropical Storm Warnings Issued for FL**
- **Florida Keys prepare for shelter in place vs evacuation**

**Oct 5**
- **Hurricane Watch Issued for GA**
- **Members of Congress/Staff Briefed**

**Oct 6**
- **Matthew Begins to Impact FL**
- **Hurricane Warning Issued for GA/SC**
- **Louis appears on CNN**
- **President Briefed**

**Oct 7**
- **Matthew Impacts FL/GA**
- **Hurricane and Tropical Storm Warnings for NC**
- **Confidence increases in flooding across Carolinas**

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**Partner coordination/ briefings help evacuation decisions**
**NWS staff deployed to WFOs and EOCs**

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**State of Emergency Declared:**
- Florida
- North Carolina

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**72h QPF Valid 12z Oct 7**
Working Together: Vision Becoming a Reality

• Partnerships contribute to all aspects of building a Weather-Ready Nation

• We have come a long way together and we will continue working with you across all portfolios

• We are transitioning from OWA to Evolving the NWS
  – “This is not a destination – it is a journey”
  – This is not just about “weather” – it is about the weather-water-climate enterprise – poised for growth