



# NWS Partners Meeting

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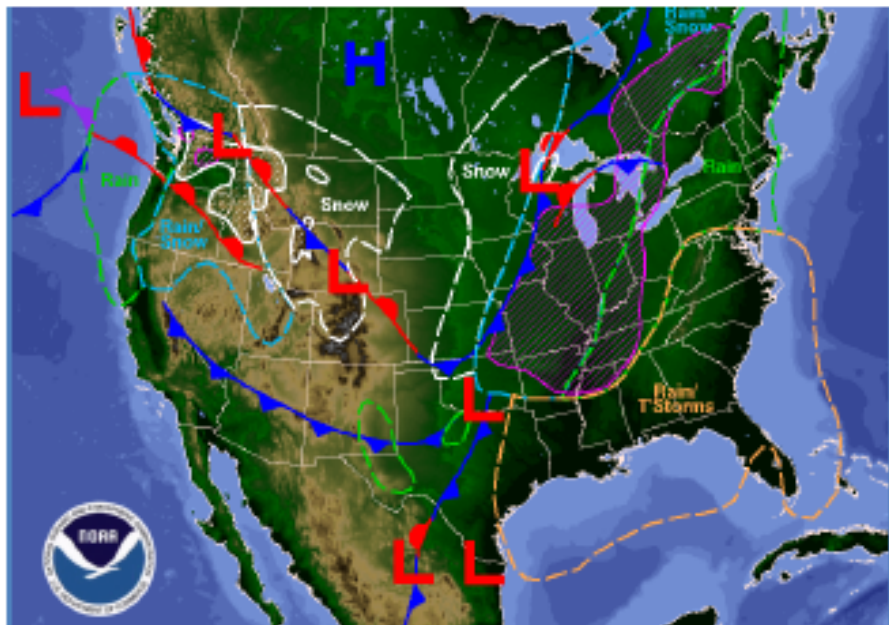
**AMS Annual Meeting – Austin, TX**

**January 11<sup>th</sup>, 2018**

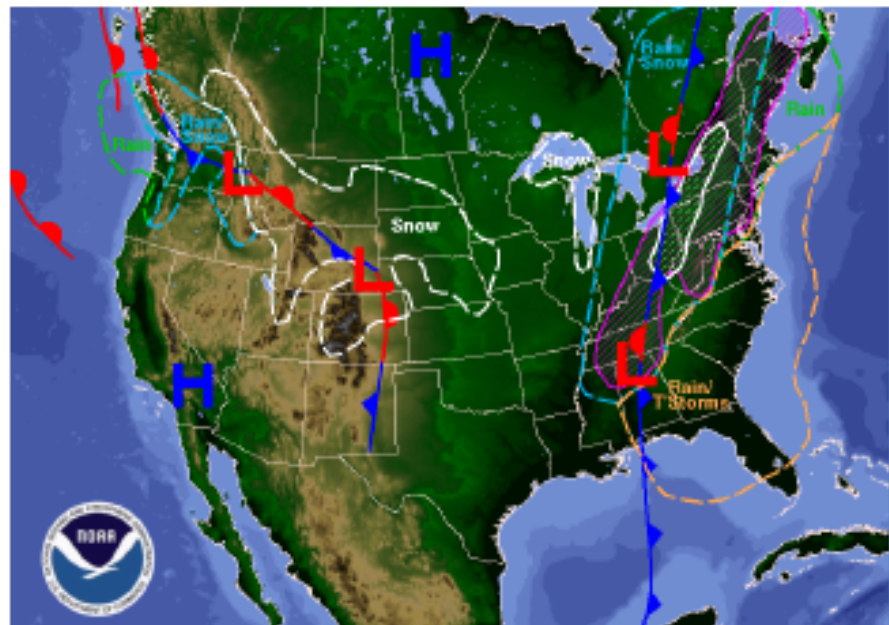


# National Weather Service Operations Center

January 11, 2018



Today



Tomorrow

## Recent Significant Weather Impacts

- At least 15 fatalities reported in Santa Barbara county, CA, due to heavy rain, flooding, and mudslides early in the week. Approximately 20 people remain missing and more than 100 homes have been heavily damaged or destroyed; road closures continue.
- Areas of snow, blowing snow, freezing rain, and gusty winds caused hazardous travel across the Plains on Wednesday.

## Observations

- GOES-16 operational as GOES-East
- First phase of NEXRAD SLEP (Signal Processor) completed in early 2018
- ASOS SLEP initiated to extend service life to 2040
- Alaska Demonstration Project is underway to deploy Autosonde technology
- Nearly 40% of weather buoys upgraded with SCOOP technology

## Science & Tech Integration

- Full implementation of the Virtual Lab
- FV3 (GFDL Finite Volume Cubed-Sphere Dynamical Core) selected to upgrade the current operational GFS
- Implemented new and improved products for National Hurricane Center (NHC) operations
- National Water Model upgraded
- National Blend of Models upgraded

## Facilities

- WFO Boston and Cleveland relocations
- Facility Assessments at 20 Sites
- Barrow Property Disposal
- NWS Facilities Strategic Plan

## Central Processing

- AWIPS II deployed /AWIPS III
- 60% capacity increase in Supercomputing service
- AHPS locations expanded to 4,011 locations nationwide
- AWIPS configured for GOES-16 data



**WRN Ambassador Initiative  
7000+ Ambassadors**

## Dissemination

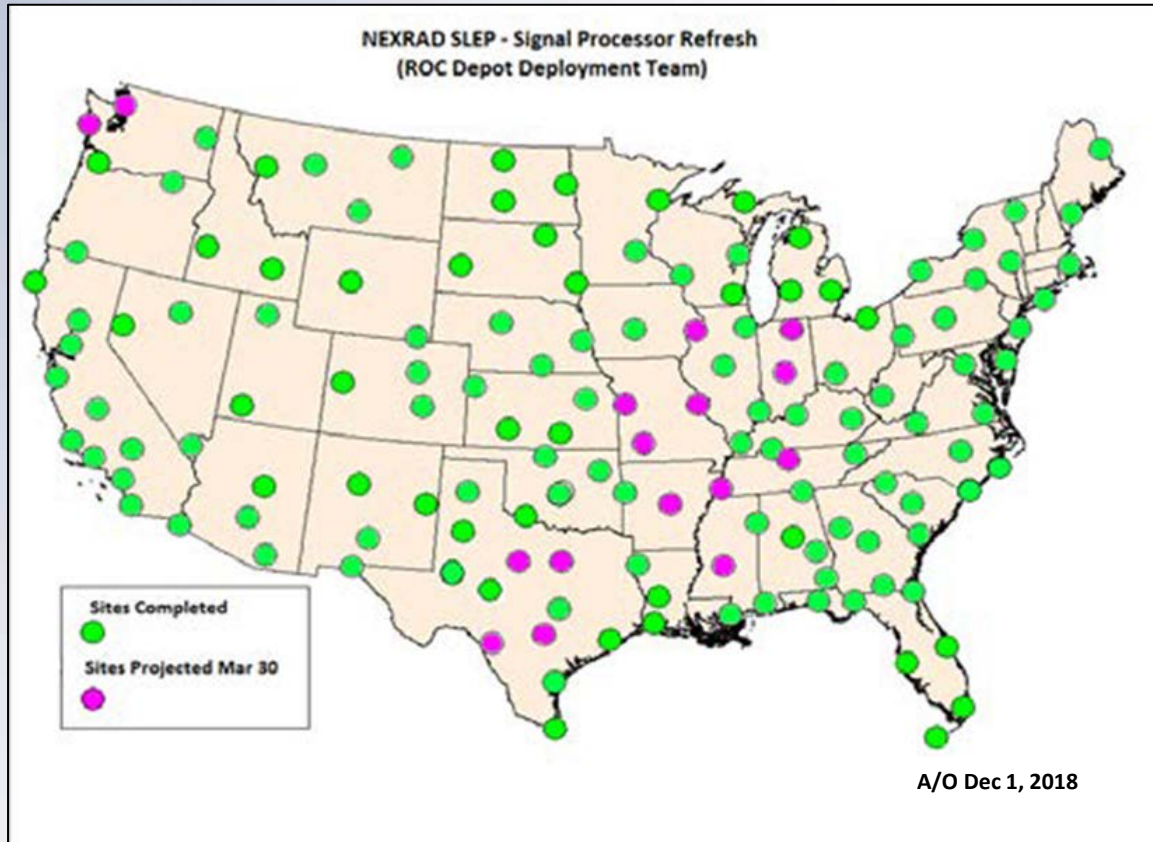
- OneNWS upgrades for 114 CONUS sites
- Operational implementation of Integrated Dissemination Program (IDP)
- GOES-16 Readiness

## Analyze, Forecast, Support

- Pathfinder Partnerships between WFOs and State DOTs
- Operationalize National Blend of Models
- GOES 16 Training Readiness
- Hazard Simplification consolidation for winter products
- Operational Storm Surge Watch/Warnings
- Experimental National Water Model products
- New Operational Tsunami Modeling System
- Operational Impact-Based format for Convective Warnings
- Operational implementation of Week 3-4 Temperature Outlook

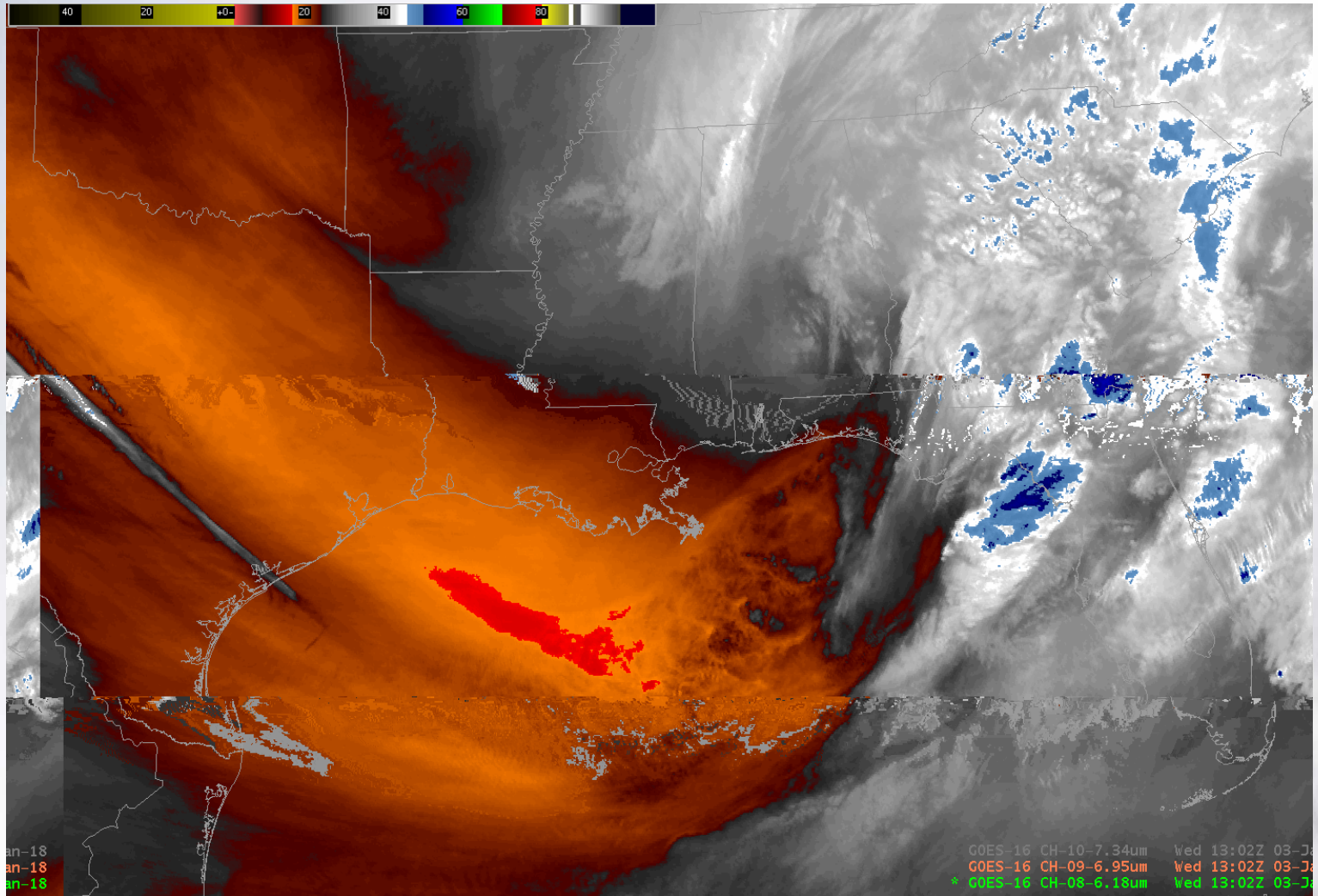


# Investing in Observation Infrastructure: NEXRAD SLEP



- **NEXRAD Service Life Extension Program (SLEP)** ensures viability thru at least 2030
- Signal Processor Suite Technology Refresh scheduled to be complete in 2017
- Transmitter Refurbishment (second of 4 projects), first site completed all phases of refurbishment
- Pedestal Refurbishment Request for Proposals issued
- Shelter Refurbishment (contract scheduled Q4 FY2018)
- Overall, the project is ahead of schedule and within budget

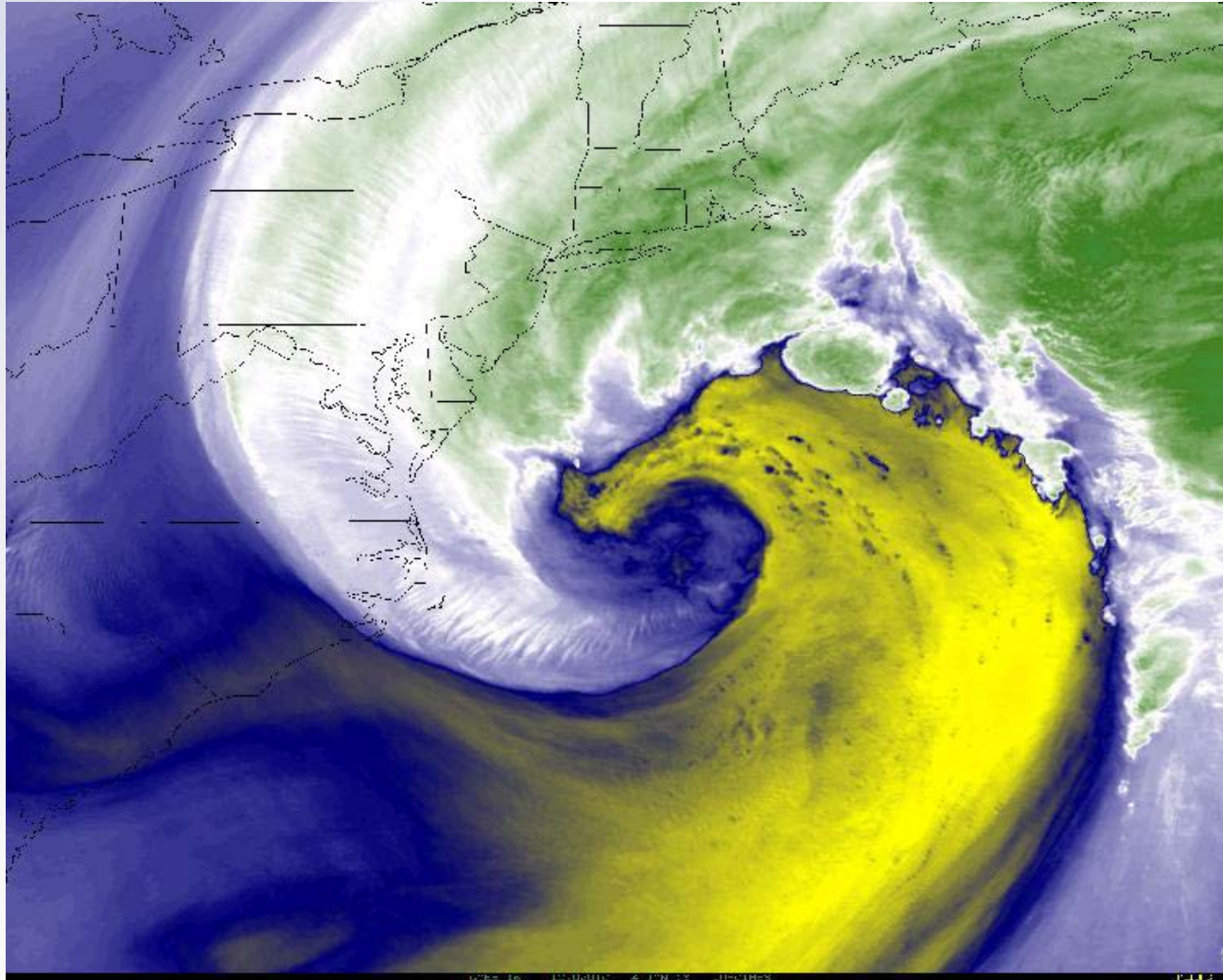
# January 3-5, 2018 Blizzard



GOES East



# January 3-5, 2018 Blizzard



GOES East

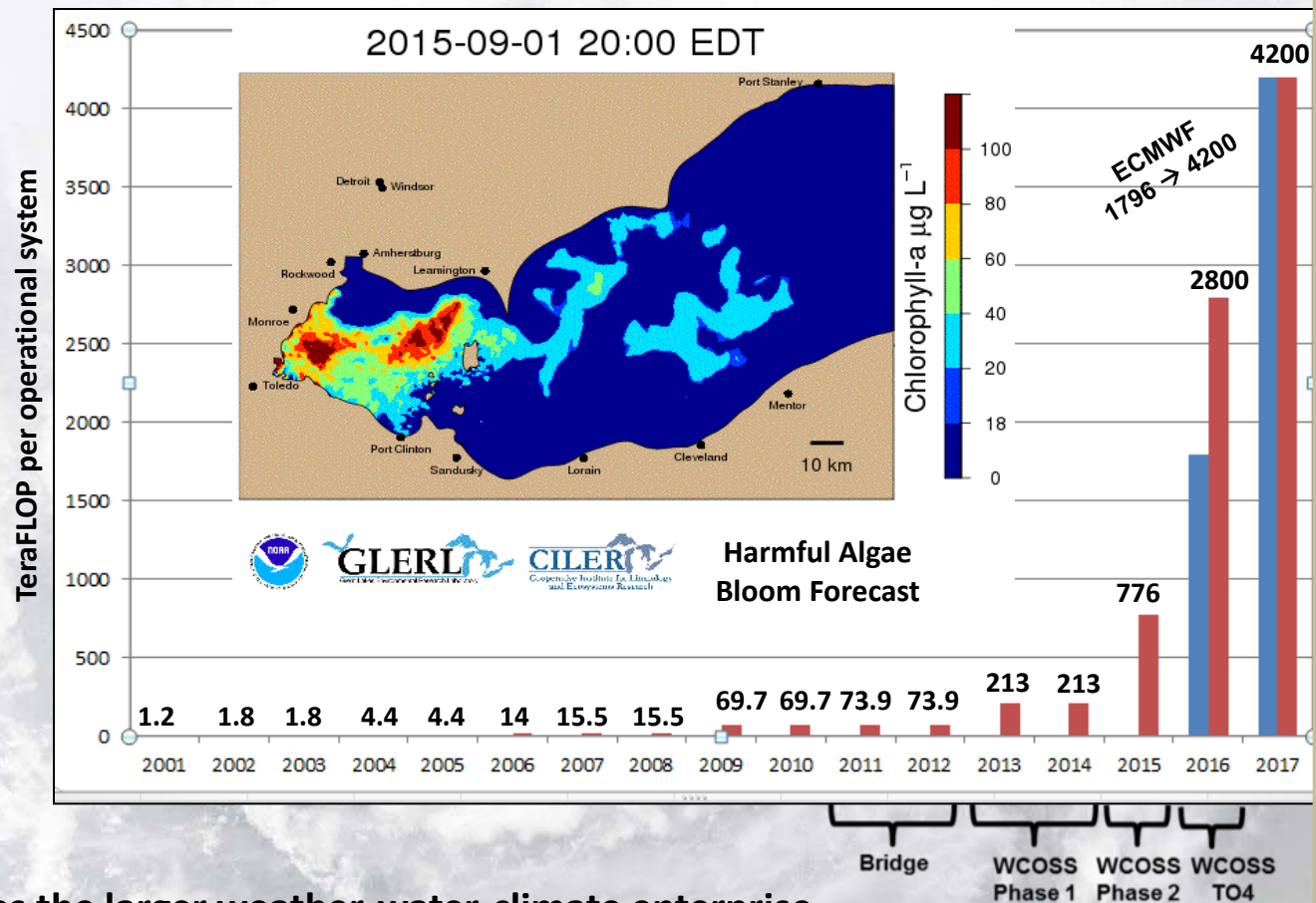
# Computer Status/Model Implementation Supported through HFIP and Sandy Supplemental

**Increase of HPC capacity to 4.2 petaFLOPs**

*(for primary and backup, respectively—for a total of 8.4 PF)*

## Key Atmospheric FY 2018 Model Upgrades:

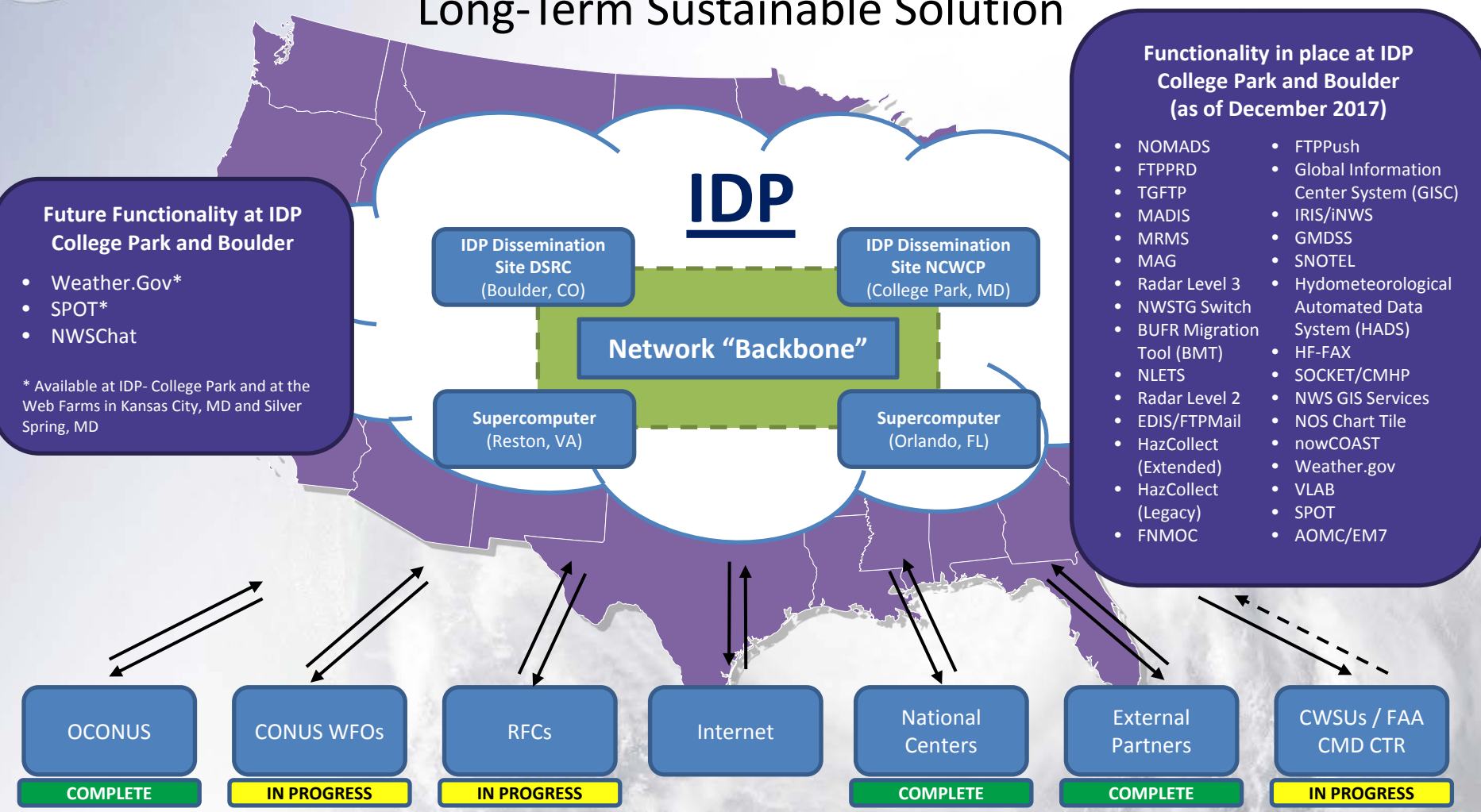
- Q2: GLOBAL Wave Model
- Q2: Nearshore Wave Prediction System (NWPS)
- Q2: Real-Time Global Sea Surface Temperature (RTG SST)
- Q2: North American Ensemble Forecast System (NAEFS)
- Q3: Rapid Update/ High-Resolution Rapid Refresh (RAP/HRRR)
- Q3: FV3GFS Beta (will run as a parallel with operational GFS)
- Q3: Hurricane WRF/Hurricanes in a Multi-scale Ocean-coupled Non-hydrostatic model (HWRF/HMON)
- Q3: Air parcel transport, dispersion, chemistry, deposition (HYSPLIT)
- Q3: Air Quality Model (AQM)
- Q4: RTMA/URMA
- Q4: Real-time Ocean Forecasting System (RTOFS)



**Every model upgrade involves the larger weather-water-climate enterprise**

# Integrated Dissemination Program (IDP)

## Long-Term Sustainable Solution



**"OneNWS" Network**

The future OneNWS network will consolidate all operational networks (OPSnet, Regional, etc.) as a single managed network under NCEP Central Operations (NCO).





# System Readiness Summary

## 25 August 2017



Units	Impact	Location: Failure- Actions			Network	
ASOS	3 / 889	<p><b>Long Term &gt;1 week</b>  <b>Glens Falls, NY:</b> Intermittent METAR– Circuit is being monitored NWS Tech Tracking (EDRTS: 31Aug17)  <b>Floral, AL:</b> Lighting strike – Unit being repaired (EDRTS: 9Sep17)  <b>Lander, WY:</b> Power off until runway reconstruction is complete (EDRTS: 21Sep17)</p> <p><b>Short Term &lt;1 week</b>            N/A</p>			99.6 / 96.0	
NEXRAD	6 / 159	<p><b>National Weather Service</b>            In Service: 119 Out of Service: 3            Alarm Status: 16 Available: 97.5%</p> <p><b>Outage Information</b>  <b>Albany, NY:</b> Bull gear replacement- ROC support in transit (EDRTS: 1Sep17)  <b>Little Rock, AR:</b> Radome maintenance to be completed by COB today (EDTRS:25Aug17)  <b>Seattle, WA:</b> Capacitor Bank and related parts shipped from NLSC to arrive today (EDRTS: 26Aug17)</p>	<p><b>Federal Aviation Admin.</b>            In Service: 11 Out of Service: 1            Alarm Status: 7 Available: 91.7%</p> <p><b>Outage Information</b>  <b>Nome, AK:</b> SLEP and Build 17 per schedule (EDRTS: 1Sep17)</p>	<p><b>Department of Defense</b>            In Service: 23 Out of Service: 2            Alarm Status: 11 Available: 92%</p> <p><b>Outage Information</b>  <b>Kadena AB, Japan:</b> RVP Signal processor found defective and causing pedestal errors – Troubleshooting continues (EDRTS: TBD)  <b>Holloman AFB, NM:</b> Mandatory maintenance alarm – Tech on site (EDRTS: 25Aug17)</p>	96.2 / 96.0	
NWR	5 / 1019	<p><b>Long Term Outages &gt;1 month [ 2 Transmitters]</b>  <b>Walton NY:</b> Transmitter Failure- Relocation required (EDRTS: TBD)  <b>Cooperstown, NY:</b> Lighting strike – Finance w/Town (EDRTS: 30Sep17)</p> <p><b>Short Term &gt; 24Hrs &lt;1 month [ 3 Transmitters]</b>  <b>Baton Rouge, LA:</b> Telco Issue, Local telco notified (EDRTS 29Aug17)  <b>Bogalusa, LA:</b> Telco Issues, Local telco notified (EDRTS: 29Aug17)  <b>New Orleans, LA:</b> Telco issues, Local telco notified (EDRTS: 29Aug17)</p> <p>INSET SHOWS LOCATION OF OUT OF SERVICE TRANSMITTERS LOCAL TELCO NOTIFIED</p>				99.5 / 96.0
		<b>Scheduled repairs per month; Buoy Projected (System / Data) Availability</b>			<b>Ao /(Data /Goal)</b>	
Wx Buoys	12/101	Second leg of repair cruise continuing			89.0% / Aug (89 / 80)	
CMAN	2/46				95.6% / Aug (96 / 80)	
TAO	7/55	Repair cruises planned through August 2017 – damage still resulting from fishing vessel moorings			76.0% / Aug (76 / 80)	

# Dialogue

- Valuable Perspectives
- Exploring Potential Solutions
- Paradigm Shifts
- Targeted or Sector Focus?
- December Partners Workshop Summary -  
[weather.gov/WRN/calendar](http://weather.gov/WRN/calendar)
  - possibility of IDSS shared values & standards
  - including new participants
  - leveraging AMS

## Feedback incorporated into SDD from December 2017 Partners Workshop and Webinars

- **Recognizes** role America's Weather Climate Industry can play in providing specialized support that NWS doesn't have capacity or expertise to provide.
- **Clarifications** made to standardize the level of service across NWS offices and in some cases we may need to scale back
- Provides AMS and NWS webpage **links to listings** of services/providers available across Enterprise.
- **Coordination section** that recognizes the need for NWS and AWCI to ensure consistent messaging.
- Concludes with acknowledgement of need for **continued review** and update of SDD and it will be modified based on input from all partners



# Keep vs. Change

## What is NOT Going to Change

NWS mission and NWS strategic vision of Building a Weather-Ready Nation

Impact-Based Decision Support Services as a key strategy

## What Could Change

Goal structure - Today's complex challenges require understanding of weather, water, climate linkages

Importance of forecast communication and social sciences to IDSS and saving lives and property