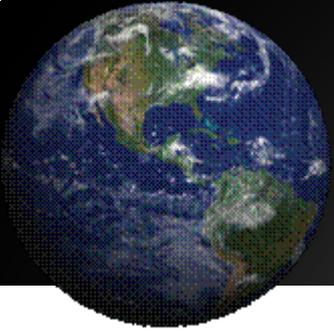


Unidata Policy Committee

***Weather-Ready Nation
Saving Lives and Livelihoods***

May 21, 2014

LeRoy Spayd – NOAA/NWS



Outline

- **Weather Ready Nation**
- **NOAA**
- **Budget**
- **AWIPS 2 Algorithm Verification study**
- **National Water Center**



NWS Strategic Outcome: A Weather-Ready Nation

Becoming a Weather-Ready Nation is about building community resilience in the face of increasing vulnerability to extreme weather.



Decreasing Vulnerability by Increasing Resilience

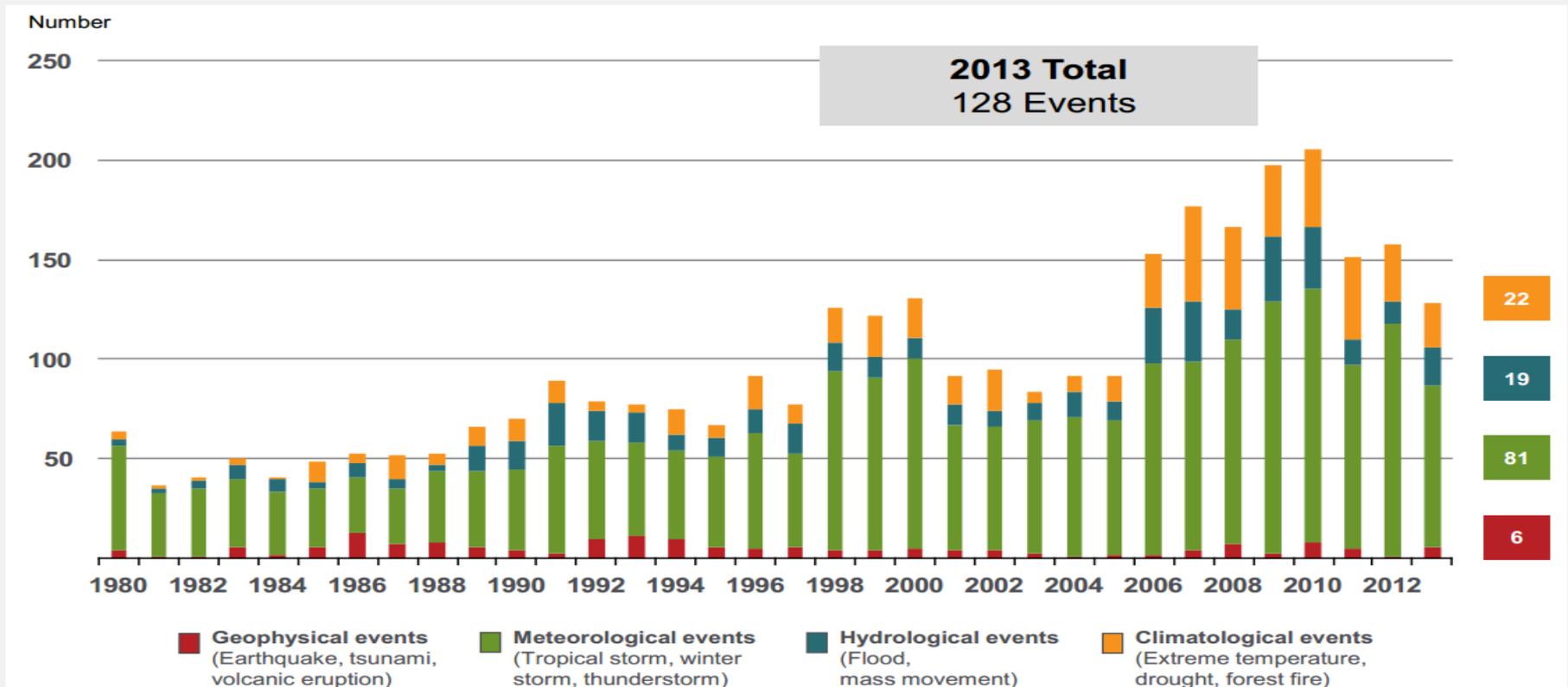


Case for Change - Events

US Natural Catastrophe Update

Loss Events in the U.S. 1980 – 2013

Number of events



22

19

81

6

Source: MR NatCatSERVICE

© 2014 Munich Re

7

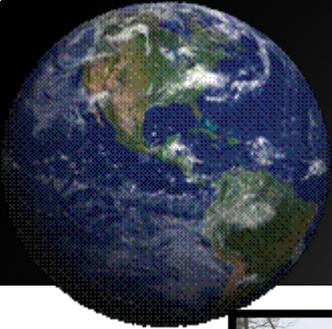


Case for Change

In the past few years magnitude of disasters reflects increased societal vulnerability



NOAA's National Coastal Population Report (2013)



Case for Change

"Average" Year and Trends in the U.S.



650 Deaths
\$15B in Losses



26,000 Severe
Thunderstorms



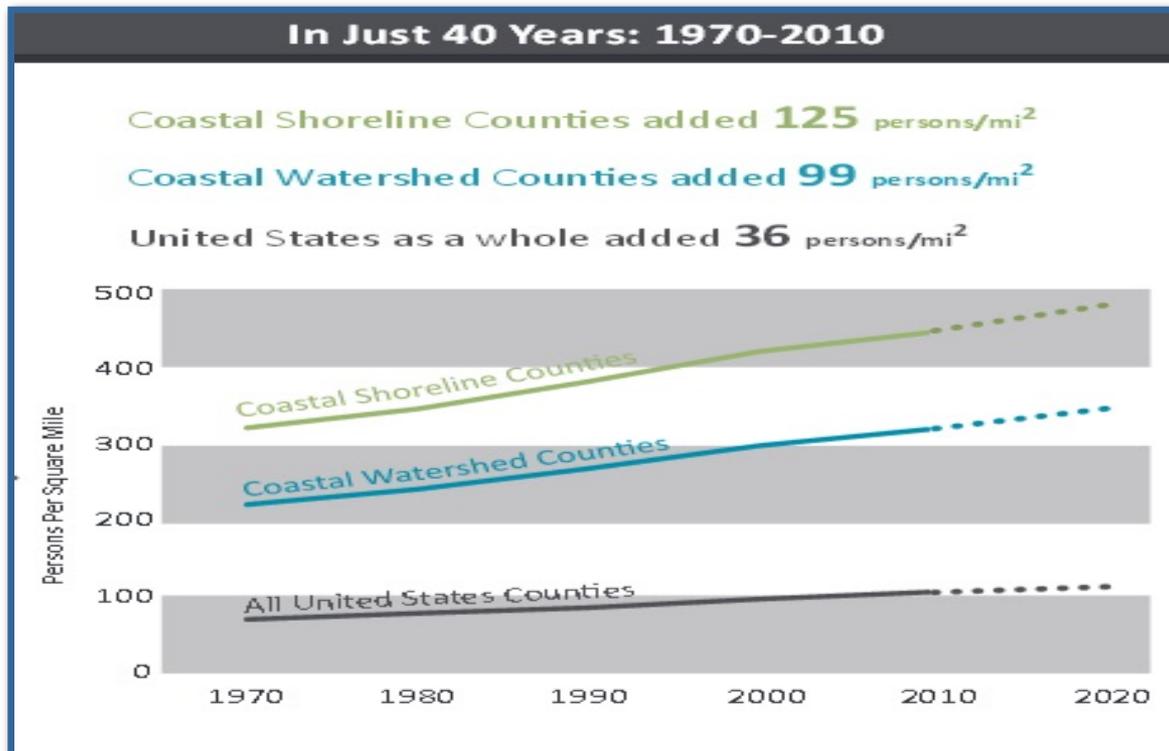
6 Atlantic Basin
Hurricanes



1,300 Tornadoes



5,000 Floods



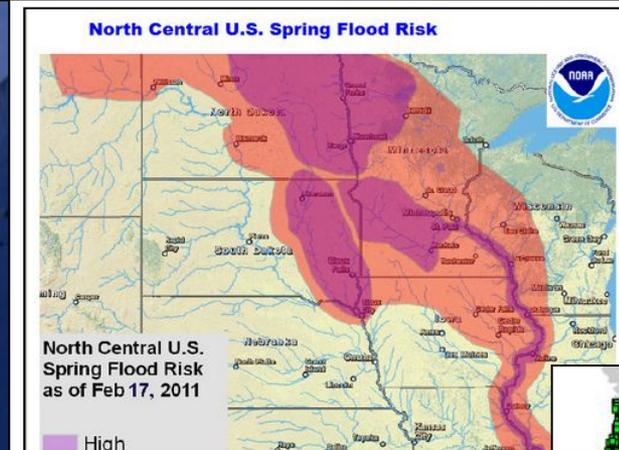
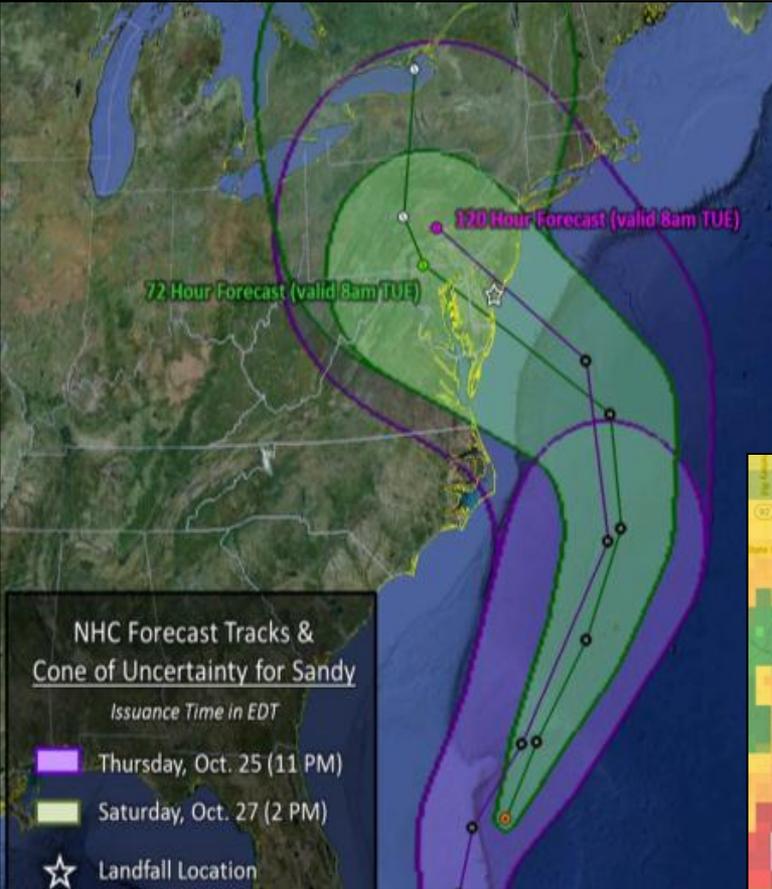
Regardless of the cause, the trend shows an increasing number of extreme weather events at increasing cost to the nation.

Source: Munich Re, (2014)

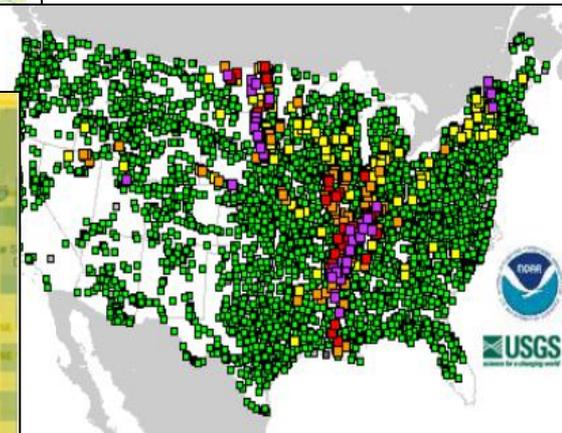
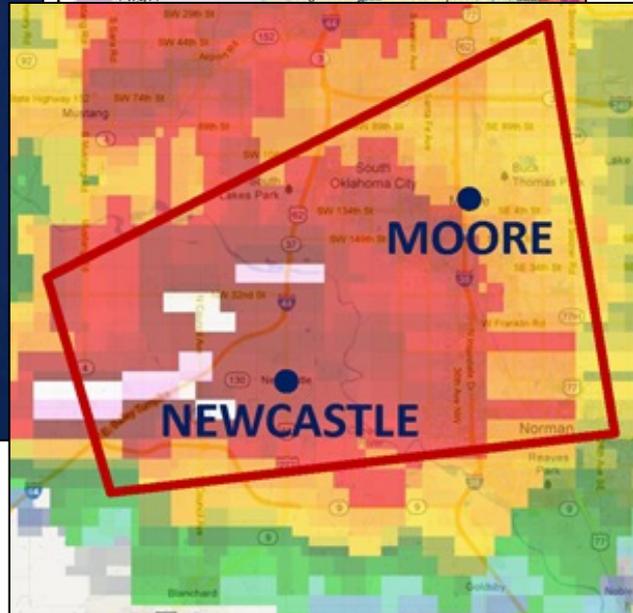


Case for Change

Extreme events well forecast...but societal impacts?



Flood Outlook months in advance of historical 2011 flooding



May 2013 Moore, OK Tornado ~16 minutes before formation (36 min. before arriving in Moore)



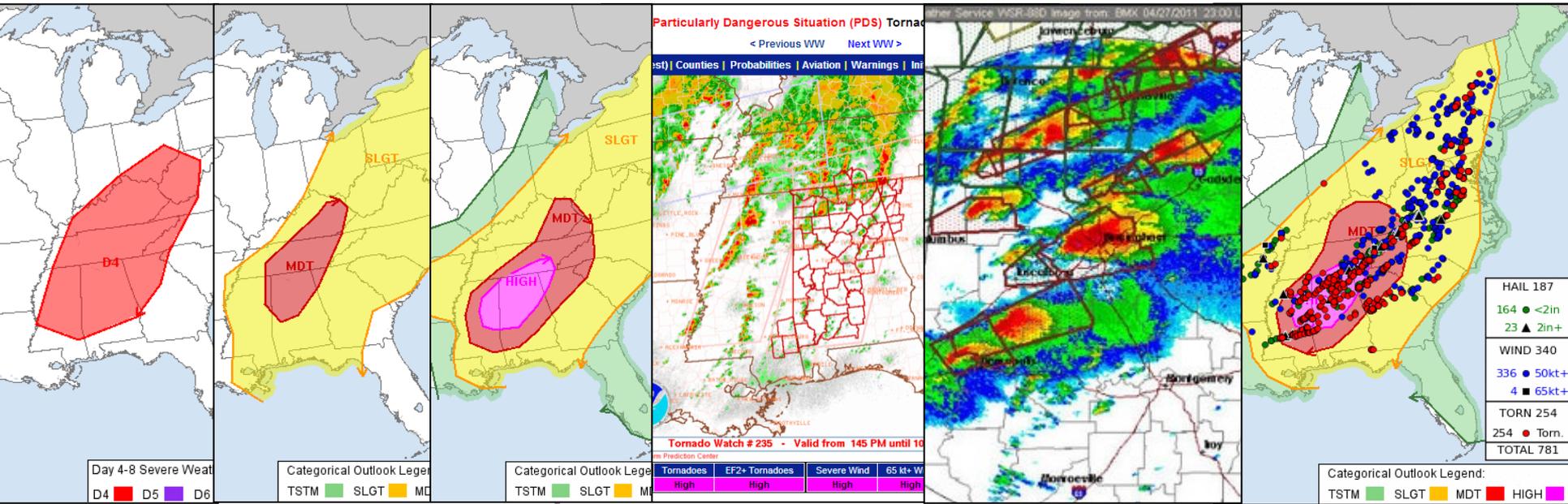
Case for Change

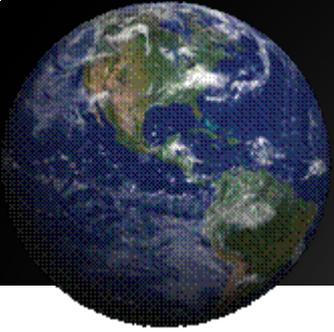
Southeast Tornado Outbreak April 27-28, 2011

Coordination calls with emergency managers beginning on day 3

96% of tornadoes located within SPC Watch
Ave. Warning Lead Time = 24 minutes

Deadliest outbreak since 1932
~190 tornadoes
~311 fatalities





Weather-Ready Nation

Five Major Focus Areas

Internal

- ☑ Impact-based Decision Support Services
- ☑ Communications/Outreach
- ☑ Science & Technology Advances
- ☑ Information Delivery

- ☑ Innovative Partnerships

External to NOAA





Taking NWS to the Next Level

Impact-based Decision Support Services

IDSS has four elements:

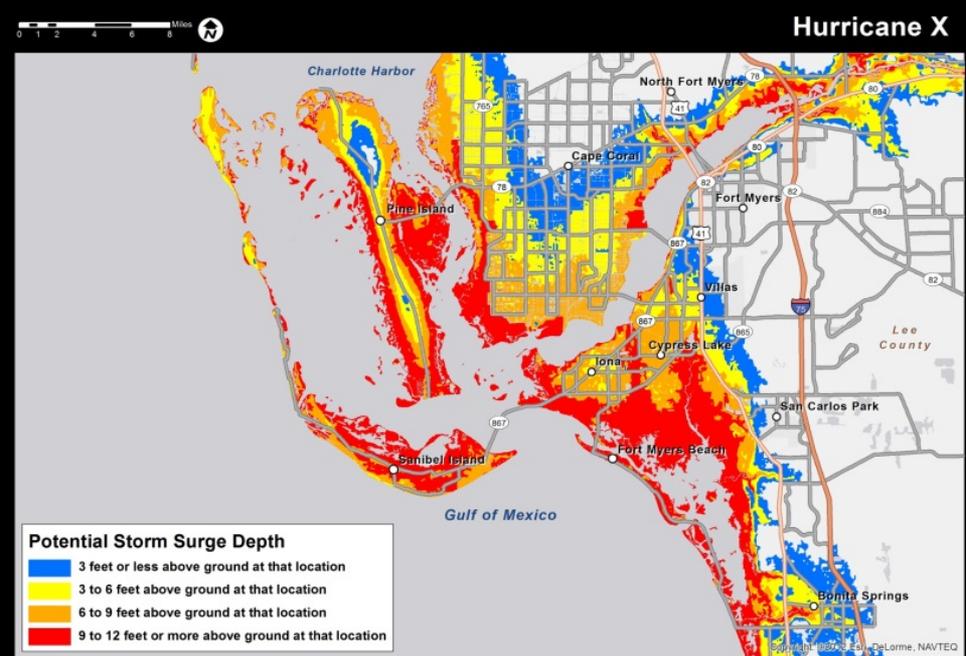
- ✔ Better understanding of societal impacts.
- ✔ Making our information more relevant to decision makers.
- ✔ Participating directly in decision making for those decisions fundamental to the role of government, especially the protection of life and property.
- ✔ Counting on market forces to provide diverse decision-support services across the entire economy.





Taking NWS to the Next Level

S&T Advances...including Social Science



Winter Hazards Simplification

Confused by winter weather watches, warnings & advisories?

[Click here to help NWS simplify our products.](#)

Impact Based Warning Demo

Tags and text

Tornado Tag	Severe onshore and near storm environment is supportive, but no confirmation.
Tornado Observed	Tornado is confirmed by spotters, law enforcement, etc.
Tornado Damage Threat Tag	It is probable that some, when tornado damage potential exists the warning implies. Tornado duration generally expected to be long.
Tornado Damage Threat - Considerable	Very rarely, when there is credible evidence that a tornado, capable of producing considerable damage, is imminent or ongoing. Tornado duration generally expected to be long.
Tornado Damage Threat - Catastrophic	Use excessive caution when areas are in threat to human life and catastrophic damage from a tornado is occurring, and will only be used when reliable sources confirm a violent tornado. Tornado duration generally expected to be long.
Tornado Tag in Severe Thunderstorm Warnings	A severe thunderstorm has some potential for producing a tornado although forecaster confidence is not high enough to issue a Tornado Warning.



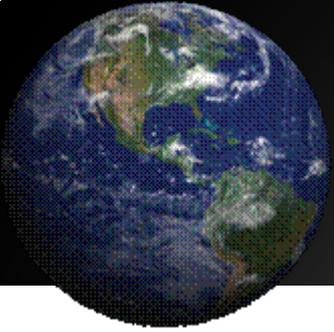


Taking NWS to the Next Level

Information Delivery

Deliver through multiple channels...

- ✔ Social Media
- ✔ Wireless Emergency Alerts
- ✔ interactiveNWS (iNWS)



NOAA Administrator

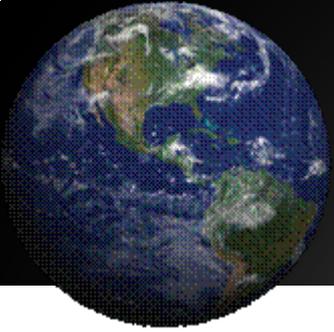
TIME Named Kathryn Sullivan one of

“100 Most Influential People”

-The world's weatherwoman

-1st US woman to walk in space





NWS Budget Reorganization

NWS strictly adhering to Congressional funding lines for programs

17 different funding lines going to 6

- ✔ Facilities
- ✔ Observations
- ✔ Central Processing
- ✔ Analyze, Forecast, Assist
- ✔ Dissemination
- ✔ Science Technology Infusion





Budget Restructuring – FY 15 (+ Facilities)

Portfolios

Programs

Observations



Surface, Ocean & Upper Air Observations
Observations Support

Central Processing



Data Collection
Centralized Guidance
Model Implementation
Supercomputing

Analyze,
Forecast,
Assist



Forecasts & Warnings
Decision Support Services
National Service Centers

Disseminate



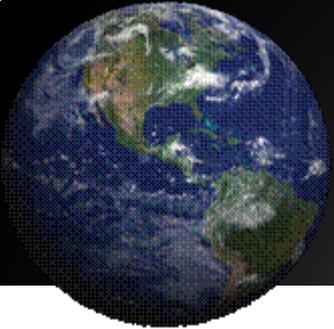
IT & Dissemination Systems

Science
Technology
Infusion



Training, CSTAR, SOO, SSD
Education & Outreach, Student Employment,
Research/Development/Assess,
Test and Demonstration





NOAA/NWS Budget

NOAA

FY 14 \$ 5323 M enacted

FY15 Pres Bud \$5497M

**Increase of 3.2% over FY
14 enacted**

**Part of two year budget
deal by Congress to
delay sequestration to FY
16**

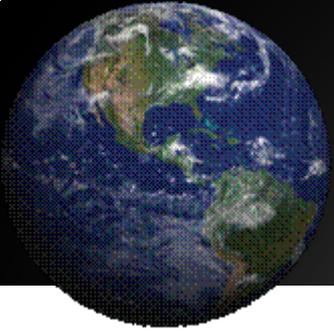
NWS

FY 14 \$1086 M enacted

FY 15 Pres Bud \$1063M

**Decrease of 2.4% over
FY 14 enacted**

**Requested PPA
reduction from 17 to 6**



AWIPS Algorithm Verification Study

Underway at COMET – Tim Alberta

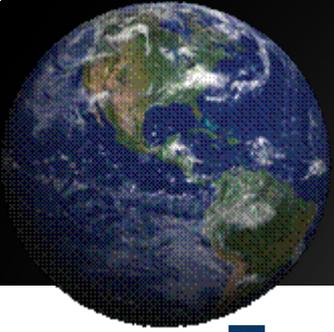
Funded for 2 years by AWIPS program

Will Validate AWIPS 2 algorithms versus AWIPS-1 and GEMPAK

AWIPS 2 Sounding/Skew-T algorithms rewritten from AWIPS 1

Will publish results for scientific community

Project is mid-way through Year 1



National Water Center

Tuscaloosa, AL on University of Alabama

Hub for developing and testing new centralized hydrologic modeling

