



# NOAALink Executive Industry Council Quarterly Meeting

October 20, 2016



*Service. Partnership. Commitment.  
Where Business and IT Connect.*

# EIC Meeting Agenda



- |                 |  |
|-----------------|--|
| 11:00 – 11:10am | Executive Address                        |
| 11:10 – 11:45am | NWS Overview – Richard Varn, Acting ACIO |
| 11:45 – 11:50am | Program Update and Metrics               |
| 11:50 – 12:00pm | Q&A                                      |



# **National Weather Service 101**

***“Evolving NWS to Build a Weather-Ready Nation”***

**Mr. Richard Varn: Assistant Chief Information Officer for Weather**  
**July 20, 2016**

# What the NWS Does

## VISION



A Weather-Ready Nation where Society is prepared for and responds to Weather-Dependent Events

## MISSION



Provide weather, water, and climate data, forecasts and warnings for the protection of life and property and the enhancement of the national economy.

Ready, Responsive, Resilient

# A Weather & Water-Ready Nation

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

## *“Ready, Responsive, Resilient”*

- **Requires NWS to produce:**
  - *Better forecasts and warnings*
  - *Consistent products and services*
  - *Actionable environmental intelligence*
- **NWS needs to address the “last mile” that connects forecast to critical national, state and location decisions**
  - *Provide Impact-based Decision Support Services (IDSS)*
  - *Deliver through multiple and reliable dissemination pathways*
  - *Work with partners*



*Involves entire US Weather, Water and Climate Enterprise WORKING TOGETHER to achieve national preparedness for weather, climate and water events*

# The Job Doesn't End with Forecasts and Warnings



*“First, it should be understood that forecasts possess no intrinsic value. They acquire value through their ability to influence the decisions made by users of the forecasts.”*

# What Does Building a Weather-Ready Nation Mean to the NWS?

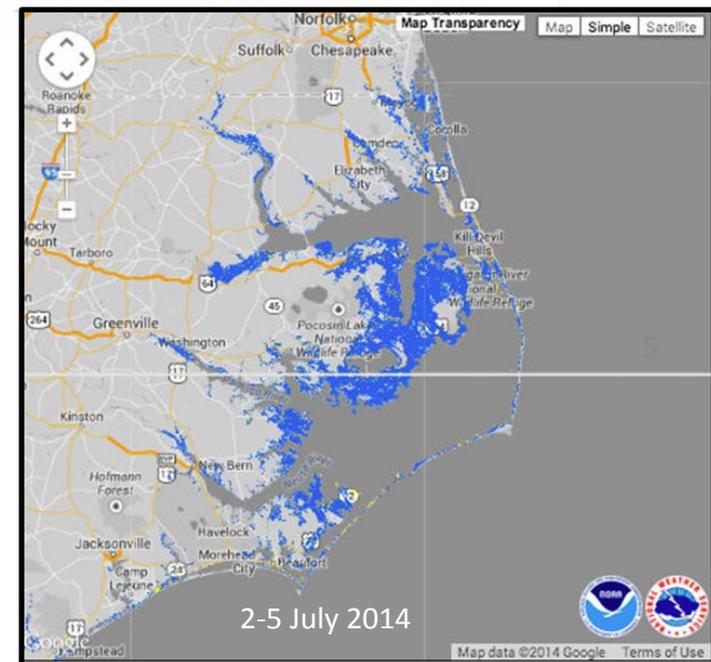
Building a *Weather & Water* Ready Nation will change the way we work—and change the nature of our products:

- Becoming more oriented toward Earth System Sciences (atmosphere, ocean, land, cryosphere)
- Social Science - ensure message delivered = message received for desired outcomes
- Understanding decision makers and their “shifting risk preferences” before/during/after an event
- Connecting observations/forecasts/warnings to “Key Decision Points” in all service areas
- How we measure success: determining intrinsic value of the forecast and IDSS

## Hurricane Arthur Potential Storm Surge Mapping

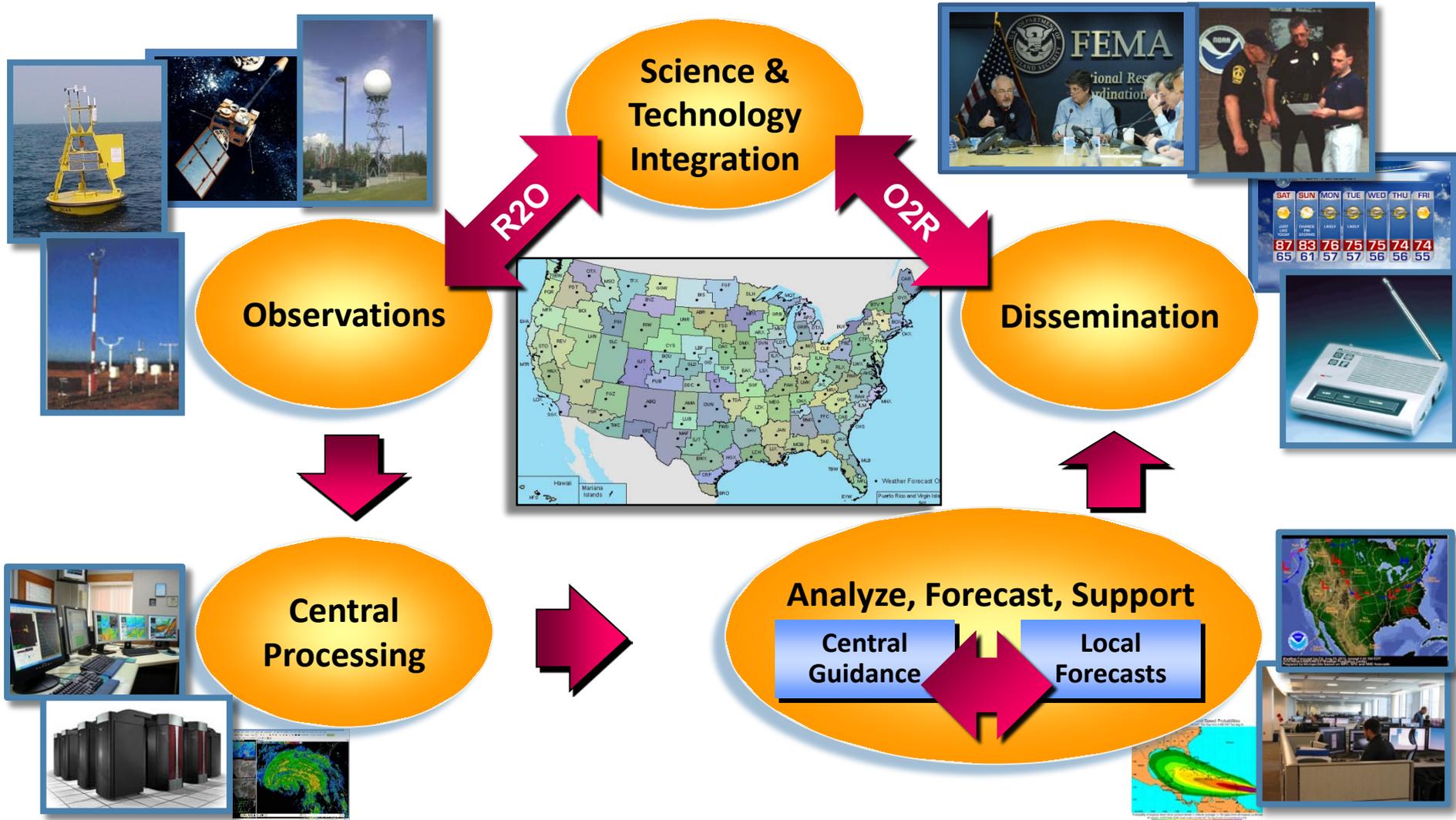
*‘Best Guess, Worst Case Scenario’*

NHC Experimental Potential Storm Flooding Map  
Tropical Storm ARTHUR (2014) Advisory 7  
From 11 AM EDT Wednesday July 02 to 04 PM EDT Saturday July 05



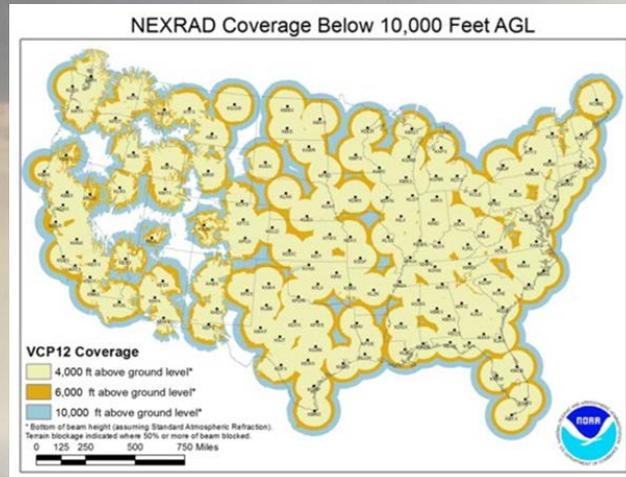
*The NWS must evolve to complete these goals*

# NWS Operations: The Forecast Process



# NWS Observational Infrastructure Across the Nation

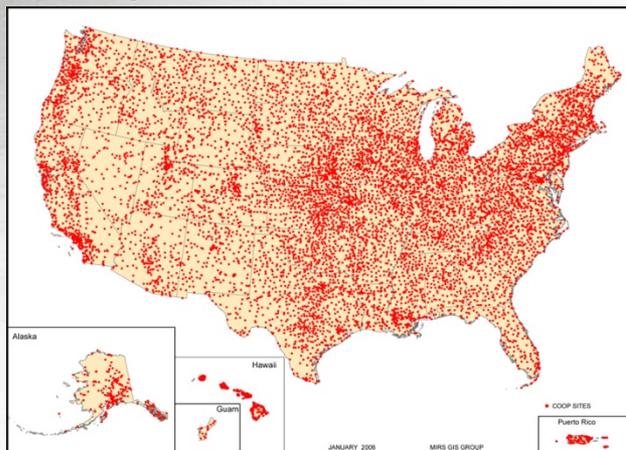
## Doppler Radars



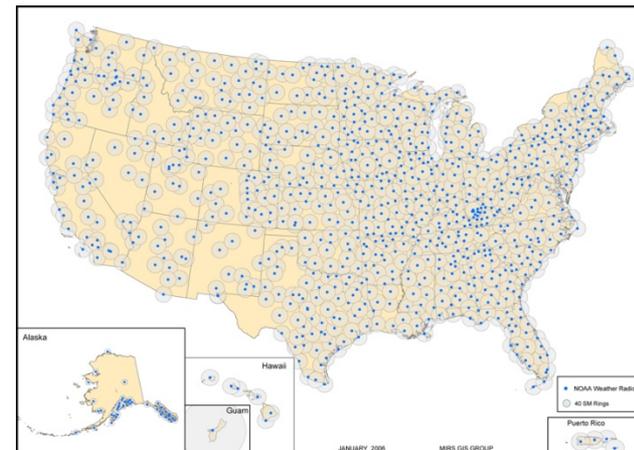
## Automated Surface Observing



## Cooperative Observer Sites



## NOAA Weather Radio Transmitters



# The Importance of Central Processing and STI Portfolios

## Today's Weather Forecast

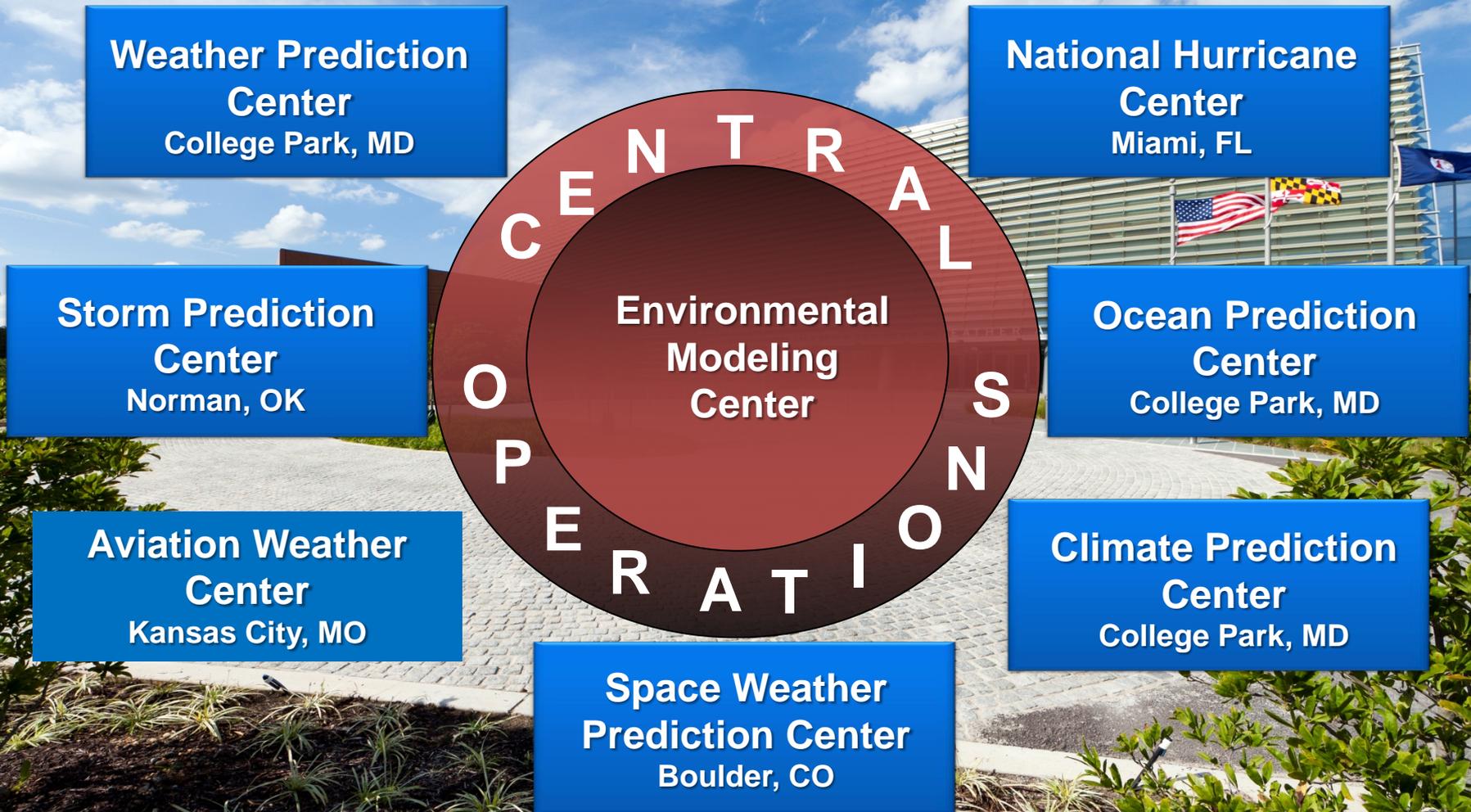
*Everything you read, see or hear about weather, climate and ocean forecasts is based on numerical prediction models*

### Four Essential Components of the Prediction Enterprise

- **Global Observations**
  - ~ 2 billion/day
  - 99.9% remotely sensed, mostly from satellites
- **Data Assimilation & Modeling/Science**
  - Computing: Primary/Backup each @ 2.8PF runs with 99.9% reliability
  - Earth System model - coupled
- **Supercomputers**
- **Forecaster Skill**



# Analyze, Forecast, Support: *National Centers*



# Analyze, Forecast, Support: *Weather Forecast Offices (WFOs)*

- Issue all Local Forecasts and Warnings that *save lives and property*
- Provide Expert Advice to Emergency Managers and other Decision Makers
- Solicit Customer Feedback on Products and Services
- Conduct Community Awareness and Education Programs
- Train Volunteer Observers and Storm Spotters
- **Build and Maintain Relationships With Local and State Governments**



# Analyze, Forecast, Support: National Water Center University of Alabama – Tuscaloosa, AL



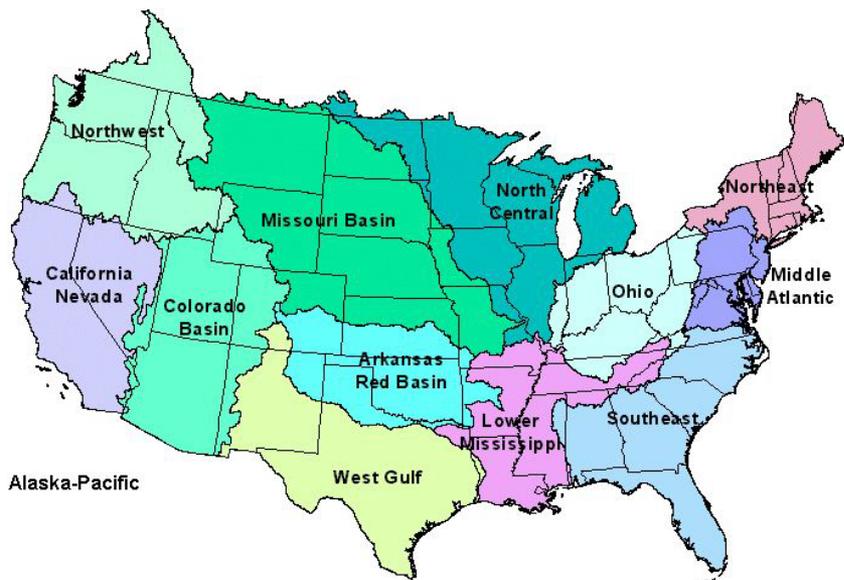
**VISION:** Scientific excellence and innovation driving water prediction to support decisions for a water resilient nation

## **BENEFITS:**

- State-of-the science modeling for global to street level predictions (*from 6,000 forecast locations to 2.7 million stream reaches*)
- Operations Center to establish common operating picture within NOAA and among water agencies; decision support for floods to droughts (*flood mapping to street level*)
- Proving ground to accelerate research to operations; partnerships with research communities (*e.g. CHUASI, National Flash Flood Interoperability Experiment*)
- Data integration and service backup

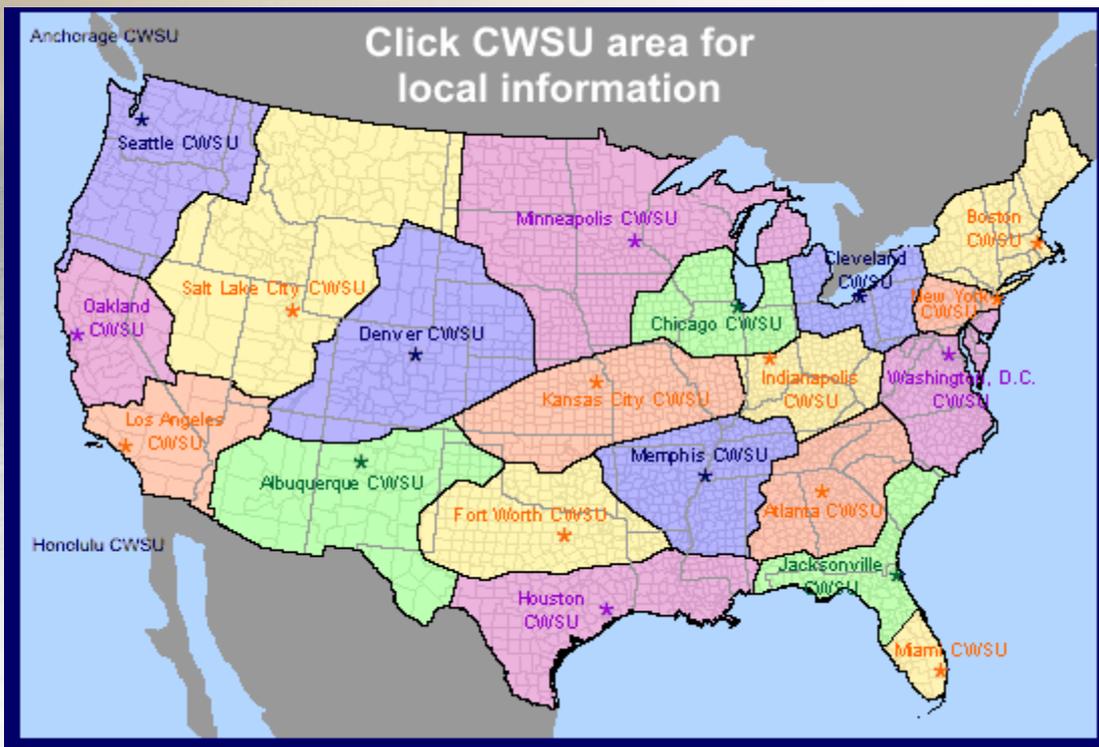
# Analyze, Forecast, Support: *River Forecast Centers (RFCs)*

- Issue river, reservoir and flood forecasts based on computer models
- Provide forecast guidance to Weather Forecast Offices (WFOs)
- **Work with local/region water managers and other Federal Agencies**

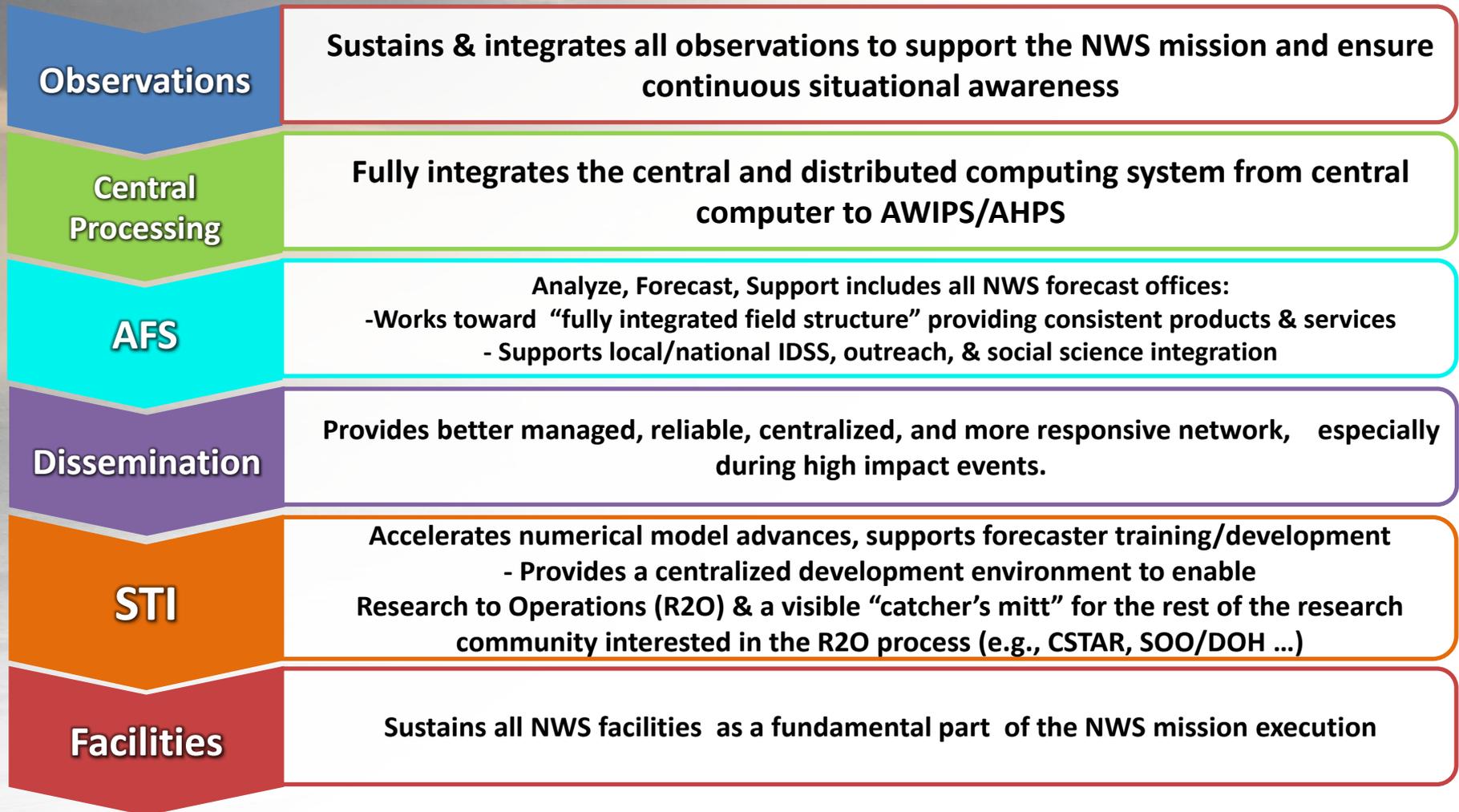


# Analyze, Forecast, Support: *Center Weather Service Centers (CWSUs)*

- Embedded in FAA Air Route Traffic Control Centers and provide IDSS 16x7 for en route air traffic
- **88 NWS employees, reimbursable by FAA**



# New Planning & Budget Structure Increases Transparency and enhances Service Delivery

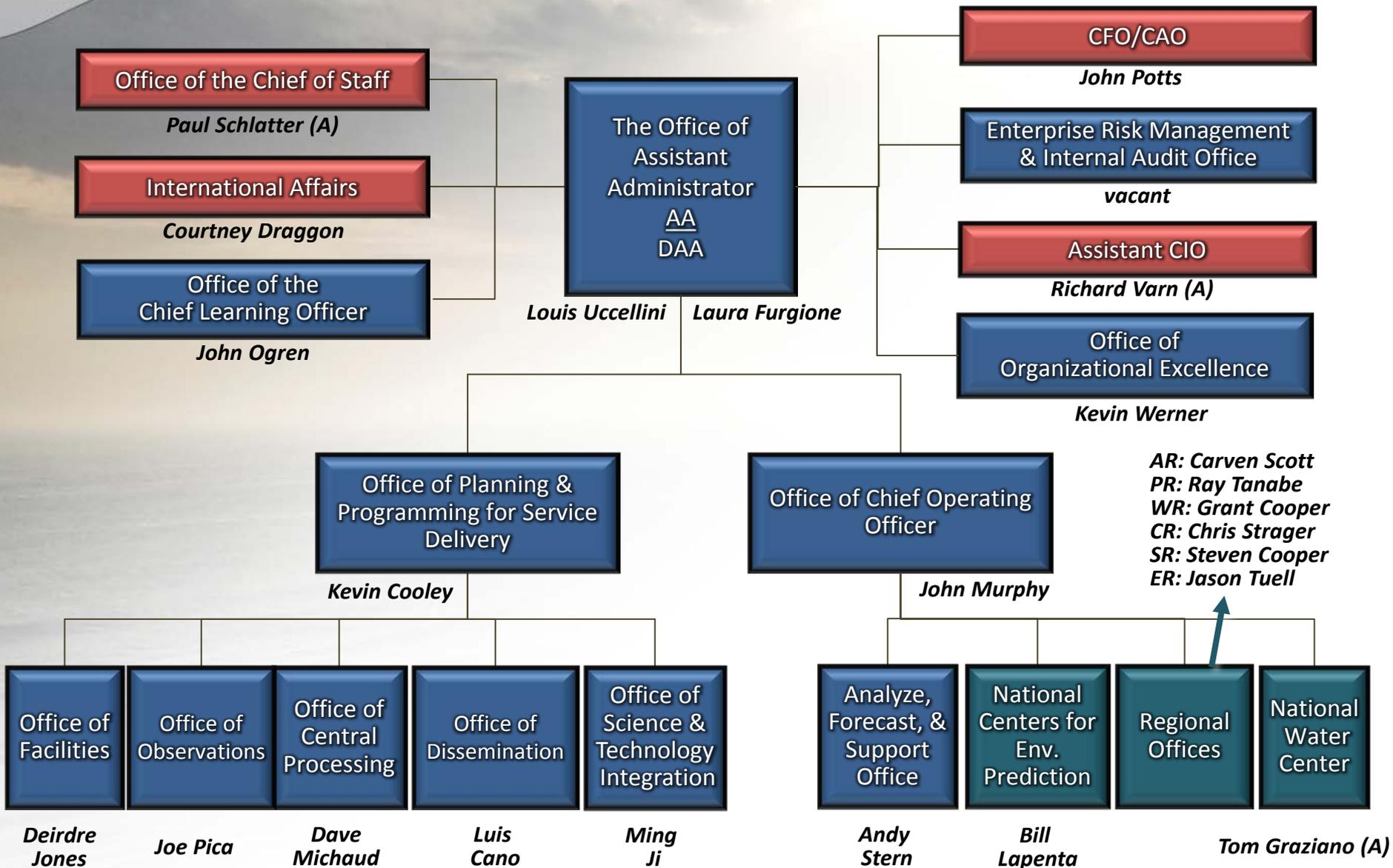


# NWS Organization

New HQ Office

Field Office

Existing HQ Office



# FY 16 Portfolio Highlights

## Observations

- JPSS/GOES-R Readiness
- NEXRAD Service Life Extension
- Autosonde testing
- Buoys sustained
- ASOS SLEP

## Science & Technology Integration

- Model upgrades: GEFS, HWRP, NWPS, HRRR, NWM
- HEFS implementation in RFCs
- Exp. Winter Weather Days 4-7 Outlook
- Exp. Arctic Sea Ice Outlooks,
- Grants: CSTAR/NGGPS/HFIP/Testbeds (\$4.7M FY16)
- National Blend of Models V1/Virtual Lab
- Exp. Week 3-4 Temp and Precip
- Geospace Model Transitioned

## Facilities

- Relocation with partners, if possible
- Second one-third Facility Condition Assessments
- WFO Relocations: Phoenix & Cleveland



**WRN Ambassador Initiative  
>3000 Ambassadors**

## Dissemination

- “One NWS Network”
- NOMADS, MAG, MADIS, MRMS, nowCOAST, FTPPRD, [www.weather.gov](http://www.weather.gov)

## Central Processing

- Central computer upgrade
- AHPS locations added
- AWIPS/NAWIPS Merger

## Analyze, Forecast, Support

- Impact-based Decision Support
- Hazard Simplification
- National Impacts Catalog
- Enable Ecological Forecasting
- Impact-based Warning Demo expanding nationally
- Weather/Climate linkage (e.g., week 3-4 outlooks)
- Storm Surge Watch/Warnings
- Probabilistic winter outlooks and snowfall predictions
- National Water Model Exp. products

# What Does the OACIO Do?

## VISION



Effectively transition and efficiently leverage the dynamic and innovative capabilities of shared services, cloud initiatives, emerging technology, and partners to provide a resilient and reliable platform for NWS activities.

## MISSION



Provide the National Weather Service with Information Technology services nationally to enable the Weather Ready Nation.

**Ready, Responsive, Resilient**



# OACIO Priorities

- Modernize
  - Operating systems
  - Optimize with cloud services (Cloud First)
  - Thin and Virtual Clients
  - Maximize Virtual Environments
- Reduce costs
  - Shared services (Data Center Consolidation and Optimization)
- Defend the network
  - Infrastructure Resiliency and Redundancy
  - Configuration management
  - Monitoring and Incident Management
- Empower the workforce
  - Remote access
  - Mobile services

# OACIO INITIATIVES

Initiative	Timeframe
Transition business system to shared services	FY17
Exploit Cloud Services for Shared Storage	FY17-FY18
Review Cross Domain Thin Client solution to reduce infrastructure	FY17
Explore shared services for task and project management tools	FY16-FY17
Coordinate use of shared services for portfolio management	FY16-FY17
Data Center Consolidation	FY17-FY21

# THANKS





- **Small Business Refresh**

- In evaluation
- Anticipated award without discussions – October / November 2016
- Anticipated award with discussions - January 2017

- **NOAALink 2.0**

- Begin planning activities in Q1 FY17
- Anticipated awards August 2018
- Planned 6 - 12 months of transition  
(current NOAALink expires on September 16, 2020)

# NOAALink FY15 and FY16 Metrics



	FY15 Actual	FY16 Actual
Total Contract Actions	1,306	1,185
Total Obligated Value	\$257,859,622	\$262,367,143
Core	\$144,845,835	\$126,114,255
Non-core	\$113,013,787	\$136,252,888
Non-core obligated to NOAALink 8(a) contractors	\$4,277,147	\$24,697,366
Average Days from PR Received to Award*	35	28
Average Days for Invoices to be Paid	15	13

\*CAM 1307.1 - Required PALT for Task Orders under IDIQ contracts, any amount, lead time range 30-60 days  
 Required PALT for Task Orders under GSA/FSS (requiring a SOW) lead time range 90-165 days



# FY16 NOAALink Core Summary



Core Contractors	Contract Actions	New	Obligated Value
		Mods	
8(a)	68	0	\$0
		68	\$29,978,893
SB	144	18	\$12,915,469
		126	\$71,196,390
SMS	28	3	\$2,476,126
		25	\$9,547,377
<b>Total</b>			<b>\$126,114,255</b>



- **Wrap-up and Review Action Items**
- **Next Executive Industry Council Meeting**
  - Date: January 19, 2017
  - Time: 11 a.m. – 12 p.m.

**NOAALink Help:**

[noaalink.help@noaa.gov](mailto:noaalink.help@noaa.gov)

301-628-5700



# Backup

# Core Program Summary Through 10/13/2016



Contractor Name	Contract No.	# of Task Orders	Obligated Amount for all Task Orders Issued	Total Base and All Options Amount for all Task Orders Issued
Ambit Inc	DG133010CQ0003	21	\$27,866,889.33	\$29,461,146.50
<b>Ambit Inc Ceiling</b>				\$30,000,000.00
Ambit Inc	ST133014BU0002	9	\$20,040,388.07	\$42,981,130.57
<b>Ambit Inc Ceiling</b>				\$49,000,000.00
<b>8(a) Awards</b>				
E&E Enterprises Global	DG133W10CQ0021	28	\$5,517,639.39	\$5,517,639.39
Ace Info Solutions	DG133W10CQ0026	38	\$63,958,724.97	\$73,983,425.47
ActionNet	DG133W10CQ0027	20	\$84,203,264.95	\$91,150,575.77
Cyberdata Technologies	DG133W10CQ0028	41	\$98,375,170.70	\$111,705,097.68
Aster Engineering Inc	DG133W10CQ0036	1	\$0.00	\$0.00
<b>Total 8(a)</b>		128	\$252,054,800.01	\$282,356,738.31
<b>8(a) Ceiling</b>				\$300,000,000.00
<b>Small Business Awards</b>				
Caelum Research Corp	DG133W10CQ0040	15	\$26,005,198.77	\$39,164,101.19
2020 Company LLC	DG133W10CQ0041	19	\$86,806,970.21	\$169,983,650.72
Earth Resources Technology	DG133W10CQ0042	66	\$156,728,311.63	\$239,780,462.67
Systems Integration & Development	DG133W10CQ0049	25	\$38,007,197.22	\$53,567,317.40
Think Tank INC	DG133W10CQ0050	38	\$38,003,262.41	\$70,172,151.71
<b>Total Small</b>		163	\$345,550,940.24	\$572,667,683.69
<b>Total Core Contracts 8(a) and Small</b>		291	\$597,605,740.25	\$855,024,422.00
<b>Total All Including Ambit</b>		321	\$645,513,017.65	\$927,466,699.07
<b>Total Program Ceiling</b>				\$2,500,000,000.00
<b>Total Available Program Ceiling</b>				\$1,572,533,300.93
				Source FPDS- 10/13/2016