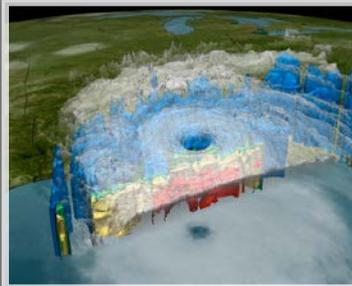
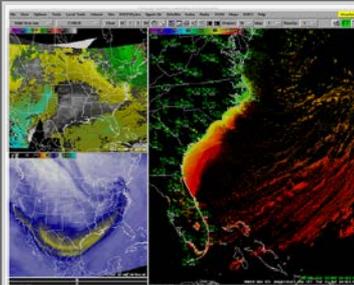


The National Weather Service of the Future: Building a Weather-Ready Nation – *Advancing Climate Services*



Dr. Louis W. Uccellini

Director, National Weather Service

NOAA Assistant Administrator for Weather Services

November 9, 2015



NWS Strategic Outcome: A Weather, Water and Climate-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 EVOLVE:

- Fully integrate our field structure to produce:
 - Better forecasts and warnings
 - Consistent products and services
 - Actionable environmental intelligence
- **Provide Impact-based Decision Support Services (IDSS)**
- Deliver through multiple and reliable dissemination pathways
- Work with partners to ***gain needed response***; includes embedding NWS in Emergency Operations Centers and incorporating Social Sciences

WRN

We have 2040
WRN Ambassadors

***Involves entire US Weather, Water and Climate Enterprise WORKING TOGETHER
to achieve far-reaching national preparedness for weather events***





NWS Strategic Outcome: A Weather-Ready Nation

NWS Strategic Goals

- Improve **Weather** Impact-Based Decision Support Services
- Improve **Water** Forecasting Services based on “Total Water Prediction”
- Enhance **Climate** Services and adapt to climate-related risks
- Improve sector-relevant information in support of **economic productivity**
- **Enable** environmental forecast services supporting healthy communities and ecosystems
- Sustain a highly skilled, professional **workforce** equipped with training, tools, and infrastructure to meet mission

Interdisciplinary/Collaborative



August 2014 – Harmful Algal Bloom

Prediction is what makes NOAA/NWS unique and indispensable!



Evolving to Build a Weather-Ready Nation

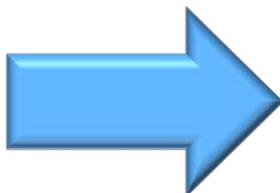
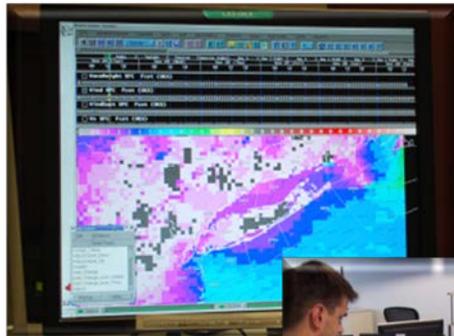
Evolving is a journey ... not a destination!

Generating forecasts and warnings

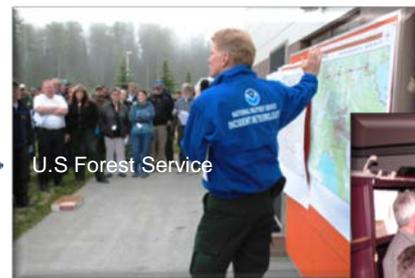


Connecting those forecasts/warnings with impacts

= **IDSS**



Forecast and Warning Products



U.S. Forest Service



©The COMET Program



Impact-based Decision Support Services

New Budget Structure & HQ Reorganization

***Building an Organization Capable of
Change and Innovation***





New Planning & Budget Structure Increases Transparency and Enhances Service Delivery

Observations

- A focused effort on sustaining & integrating all observations supporting the NWS mission and ensuring continuous situational awareness.

Central Processing

- Fully integrating the central and distributed computing system from central computer to AWIPS/AHPS

AFS

- Working toward “fully integrated field structure” providing consistent products & services
- Supports local/national IDSS, outreach, & social science integration (nature of work will change)

Dissemination

- Better managed, reliable, centralized, and more responsive network, especially during high impact events.

STI

- Accelerates numerical model advances, supports forecaster training/development and **TEST BEDS**
- Provides a centralized development environment to enable Research to Operations (R2O) & a visible “catcher’s mitt” for the entire research community interested in the R2O process (e.g., CSTAR, SOOs, DOHs, MDL, NCEP Centers and Technical Development Units)

Facilities

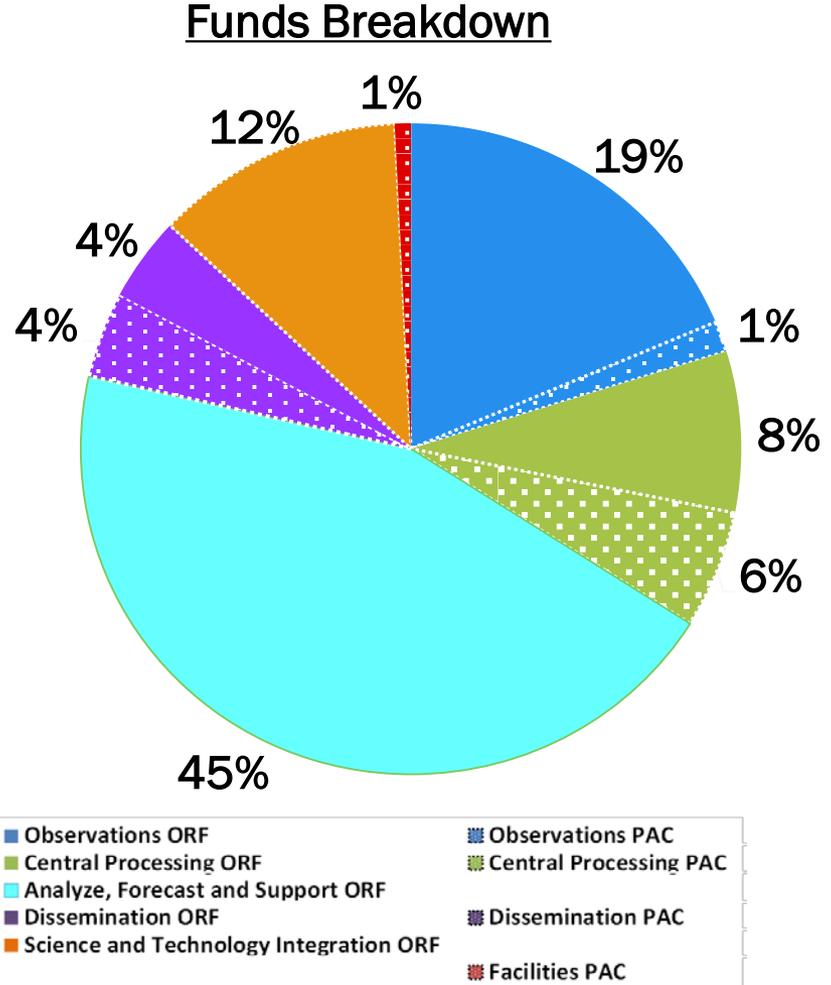
- Make sustaining all of the NWS facilities a fundamental part of the NWS mission execution



FY2016 NWS President's Budget Request Composition by Portfolio

| PPA | Funds* | Full Time Employees (FTE) |
|--|------------------|---------------------------|
| Observations ORF | 204,876 | 804 |
| Observations PAC | 16,720 | - |
| Central Processing ORF | 87,902 | 134 |
| Central Processing PAC | 64,261 | 22 |
| Analyze, Forecast and Support ORF | 489,845 | 3,010 |
| Dissemination ORF | 46,743 | 82 |
| Dissemination PAC | 45,684 | - |
| Science and Technology Integration ORF | 134,197 | 488 |
| Facilities PAC | 8,650 | - |
| TOTAL | 1,098,878 | 4,540 |

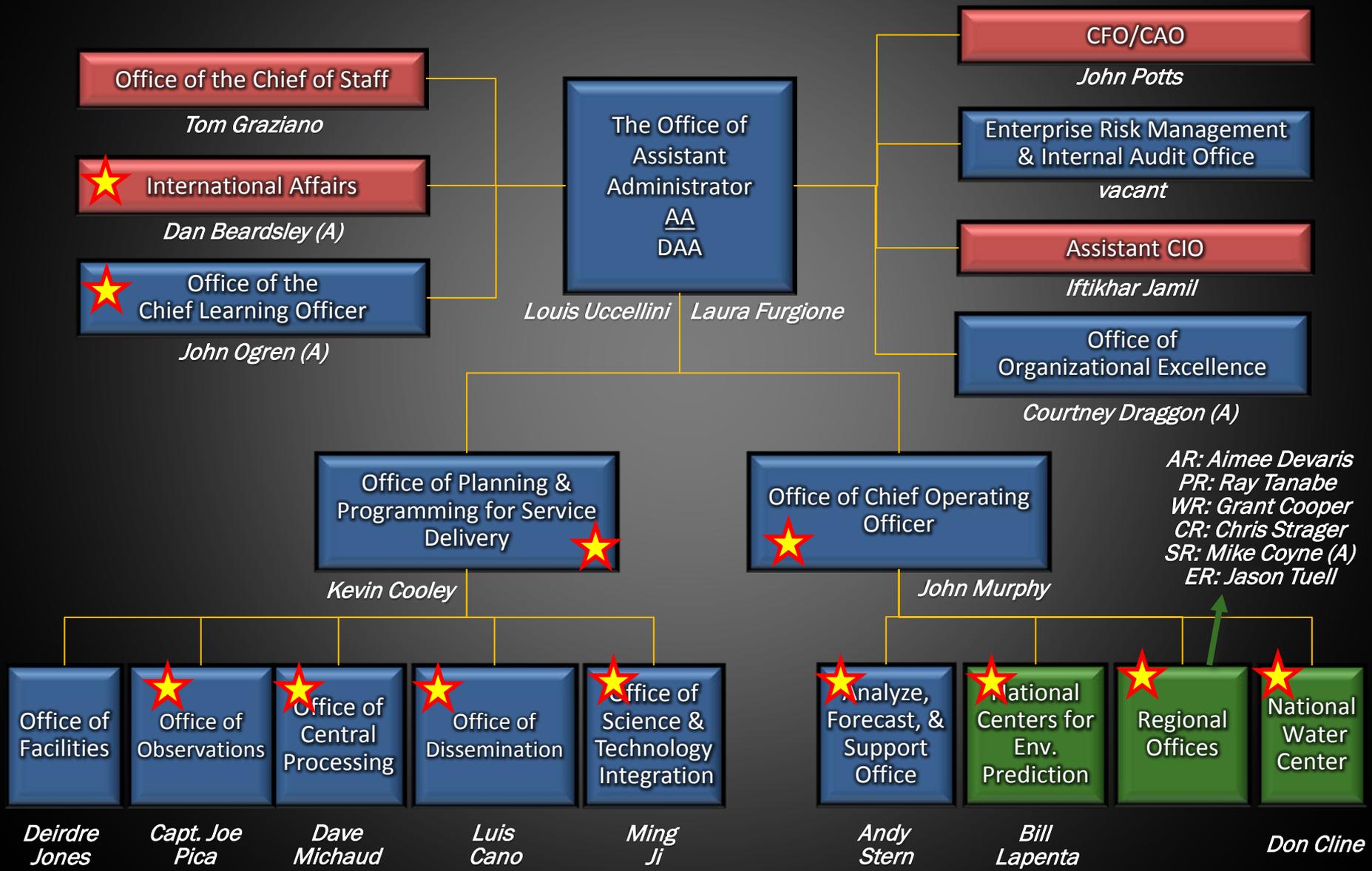
* In thousands of dollars



HQ Organization

New HQ Office Field Office Existing HQ Office

★ Explicit climate activities





NOAA Climate Test Bed Joint NWS and OAR

- **Through CTB, we have made great strides in testing/improving NCEP's GFS and CFS, NMME, new products**
- **Thanks for your efforts to improve NWS mission delivery capabilities through identification of areas needing improvement and improved interactions between NCEP and the external research community**



CTB Successes

1. NMME - in NCEP operations Sep 2015
2. Improvements to NCEP GFS and CFS
3. Improved R2O process by closely working with CPO
4. Played significant role in improving interactions among operational and research communities



Science to Services

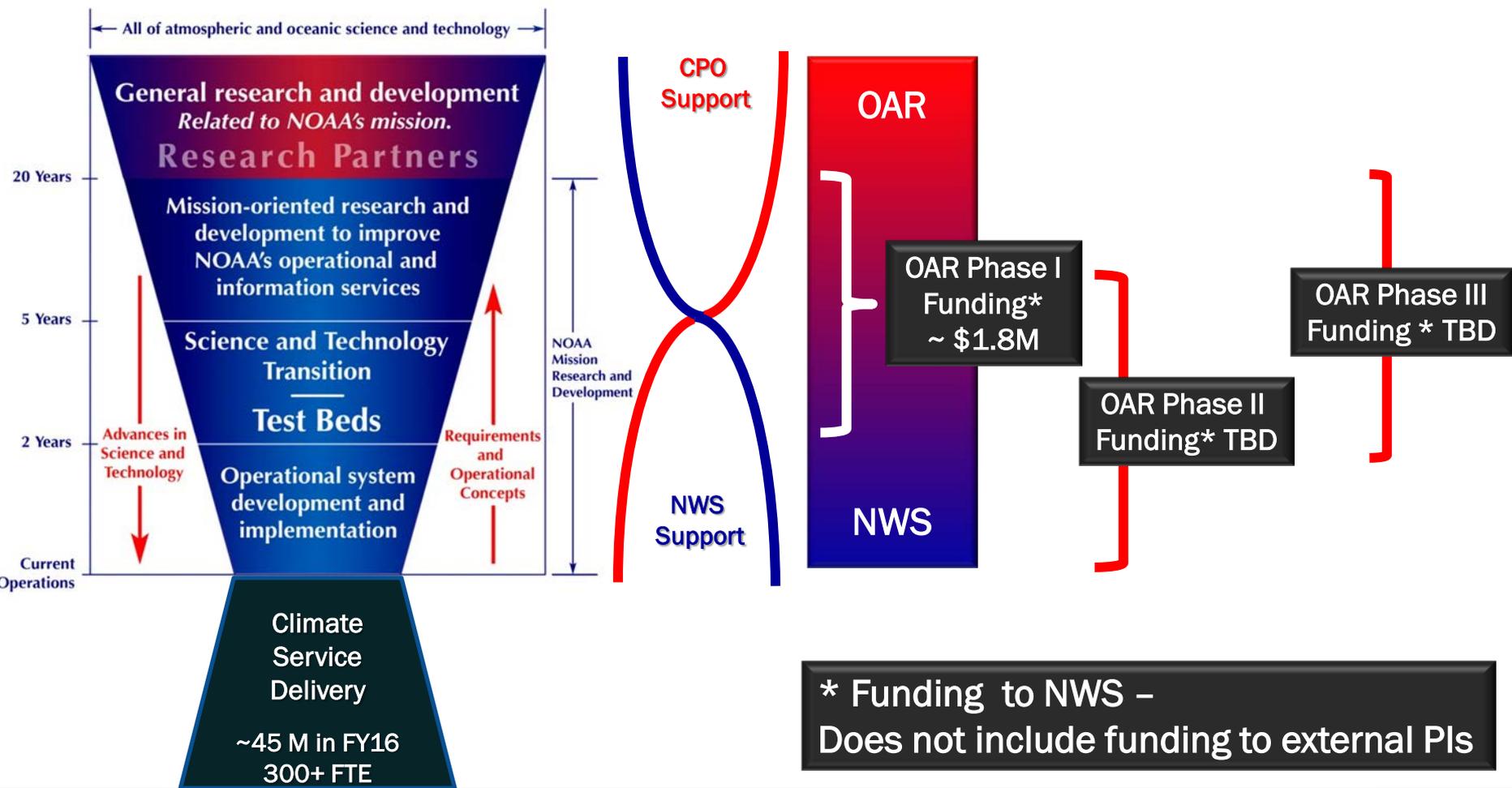
“NOAA is Science-Based Service Organization” Dr. Kathryn Sullivan

- ***NWS and OAR – using the NOAA “R2O funnel” to make changes in funding profile for climate-related R2O***
- **NCEP expertise in CPC & EMC supports R2O process within CTB**
- **CTB is an important catalyst for R2O and will:**
 - **Identify research advances that are at high readiness levels for transition to operations**
 - **Identify gaps and scientific opportunities**
 - **Conduct tests and evaluate new systems/tools before operational deployment**



NOAA Research Funnel

Applied to Climate Resources/OAR-NWS Connections





NWS-OAR Service Level Agreement (SLA)

The NWS/Climate Program – OAR/CPO is evolving as we are establishing a new/improved framework for collaboration which we are employing on annual basis beginning in FY16

- **NWS-OAR MOU provides an overarching framework for NWS and OAR collaborations on R2O**
- **SLA identifies activities to improve service delivery**
- **NWS and OAR jointly set the CTB's R2O priorities and selecting CTB projects**