Your National Weather Service: Evolving to Build a Weather-Ready Nation

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AMS Partners Meeting

August 9, 2018

What We Heard the Past 2 Days

Strategic Plan

Strategic Plan

Building a Weather-Ready Nation Remains the Strategic Outcome

3 Goals:

1. Reduce the impacts of weather, water, and climate events by transforming the way people receive, understand, and act on information

2. Harness cutting-edge science, technology, and engineering to provide the best observations, forecasts, and warnings

3. Evolve the NWS to excel in the face of change through investment in our people, partnerships, and organizational performance

Evolve strategy based on three pillars

What we do to Evolve NWS

Vision: Weather-Ready Nation: Society is prepared for and responds to extreme weather, water, climate events

The vision of a WRN is **realized through the NWS Mission:** Provide forecasts and warnings for the protection of life and property and to enhance the national economy

Deepen our service to core partners: Testing and implementing the Operations and Workforce Analysis (OWA) recommendations through the NWS Program Management Office (PMO)

Enhancing our science and technology capabilities: Ensure NWS operational infrastructure remains at the "cutting edge" (e.g., next generation modeling and data assimilation systems)

Engage strategically with and grow the broader enterprise: NWS fosters partnerships at all levels, proactively harnesses external advances that benefit the mission, and enables the enterprise to grow

Implemented through updated NWS Strategic Plan and Roadmap

How we manage it

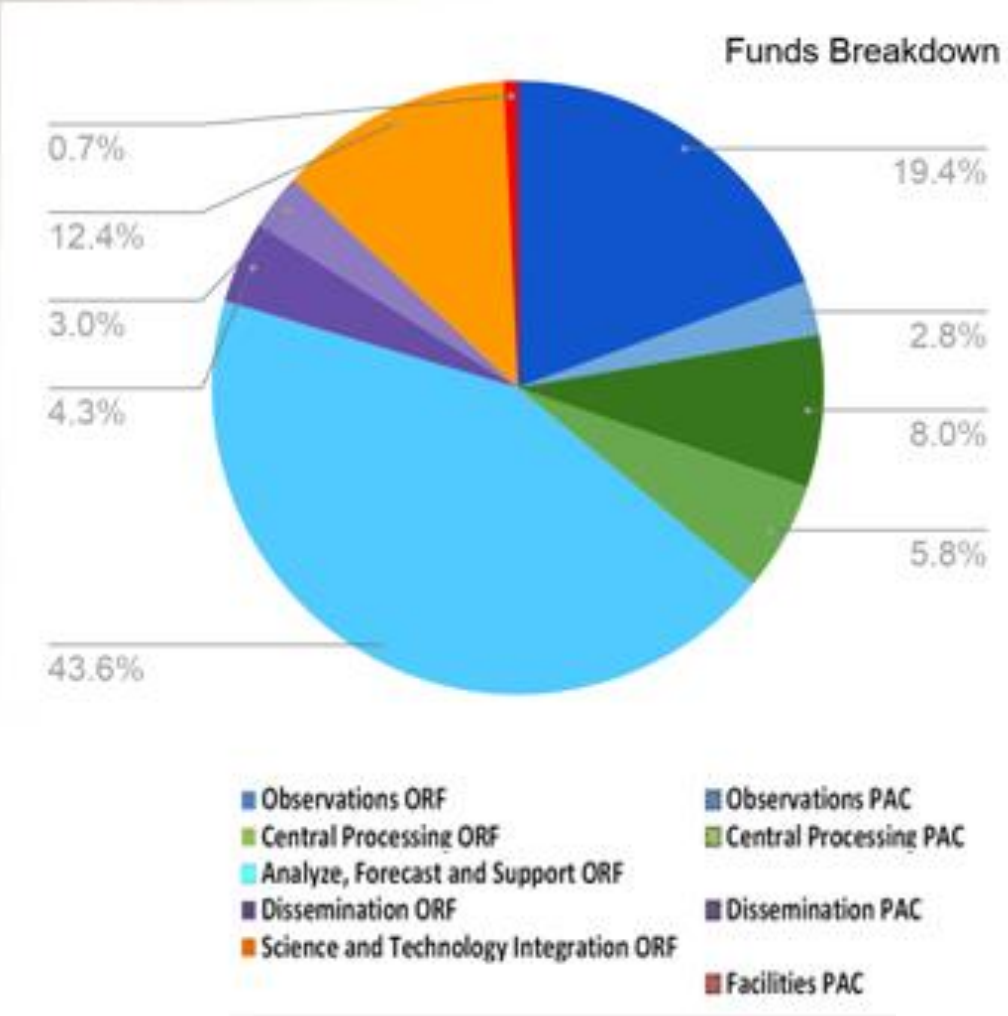
- Build the Roadmap into a phasing diagram and placemat for near and long term planning
- Incorporate into the NWS Annual Operating Plan and annual budget planning
- Integrate organization health and culture initiatives (OHI, FEVS)

Budget

FY 2018 Omnibus Budget

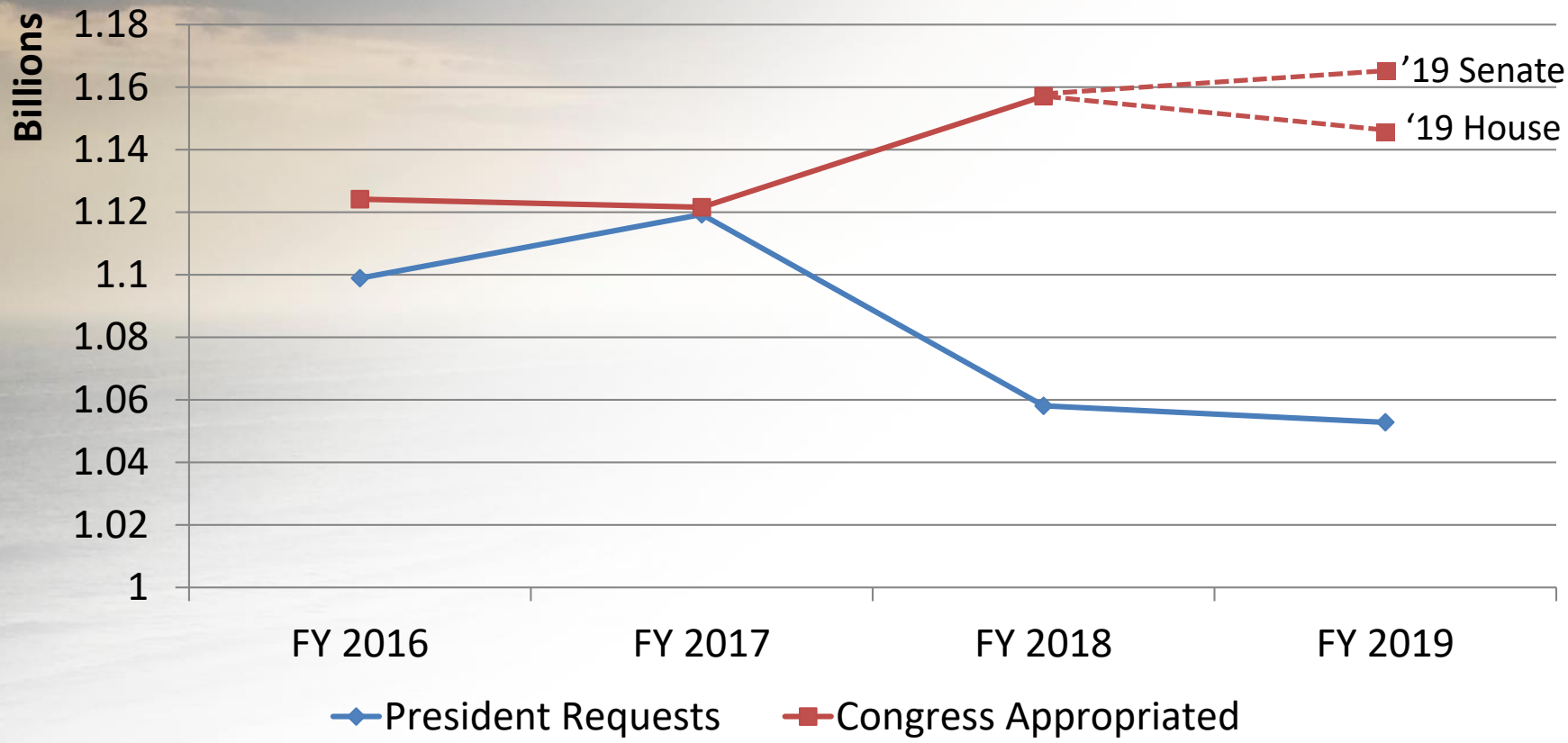
Portfolio	Funds ($K)	Position Estimate*
Observations ORF	$224,363	780
Observations PAC	$32,953	-
Central Processing ORF	$92,790	227
Central Processing PAC	$66,761	24
Analyze, Forecast and Support ORF	$503,938	3,048
Dissemination ORF	$50,028	88
Dissemination PAC	$34,619	-
Science and Technology Integration PAC	$143,000	456
Facilities PAC	$8,650	-
TOTAL	$1,157,102	4623

*NWS Staffing Plan revised



Budget Status

Comparison of Requested and Enacted Amounts



Highest Priorities

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

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

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

FY 2018

WRN

WRN Ambassador Initiative
8100+ Ambassadors

Facilities

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

Dissemination

- OneNWS upgrades for all WFO 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

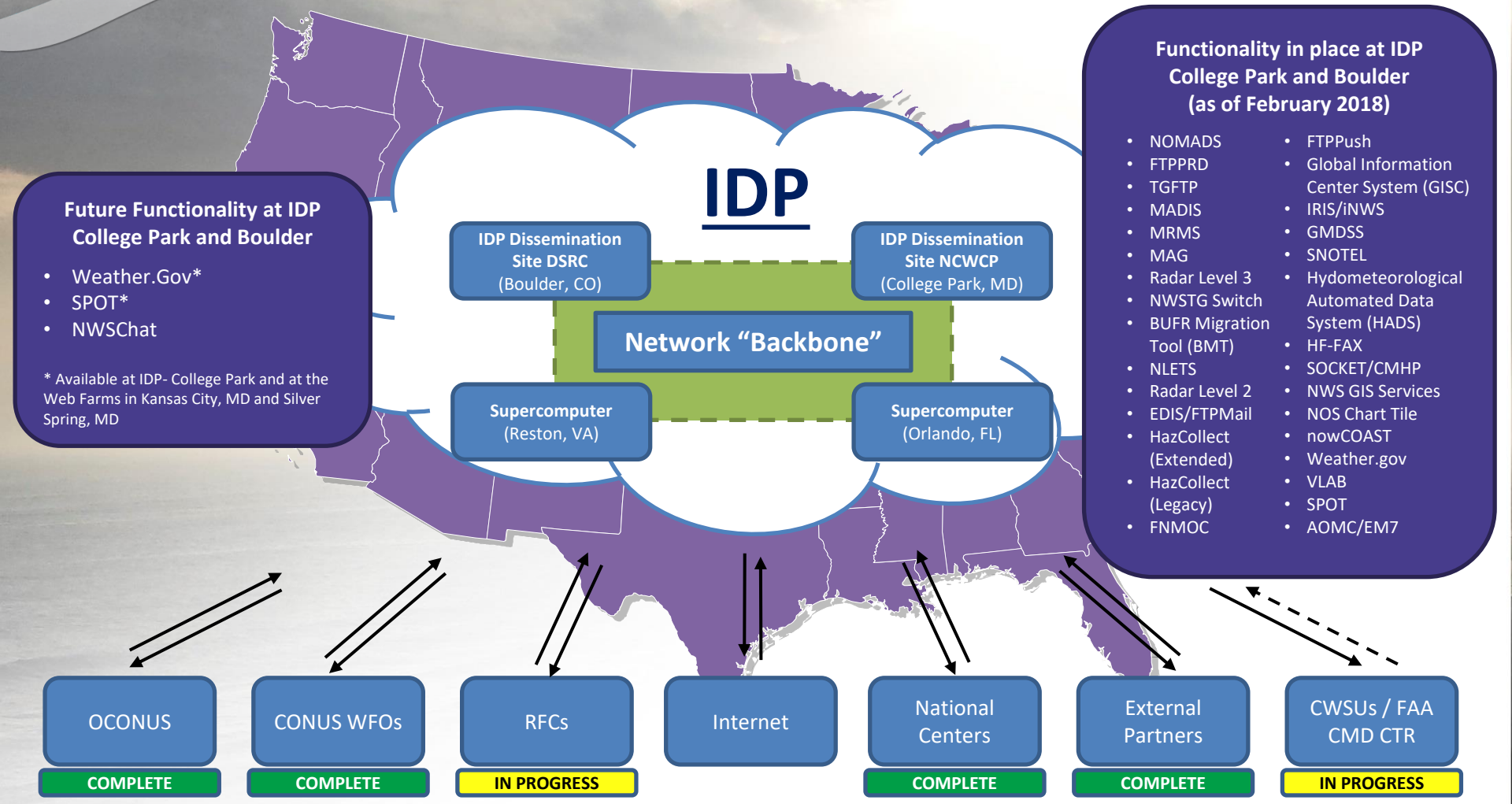
Implementation Plans for FV3 Global Forecast System (GFS V15.0) and Global Ensemble Forecast System (GEFS V12.0)

Timeline	FY17				FY18				FY19				FY20		% Complete
Component	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
FV3 GFS Development	Implement FV3 dycore in NEMS & couple to GFS Physics + GFDL Microphysics; Evaluate, and document FV3 dycore for GFS														100%
FV3 GDAS Development			4D Hybrid GSI/EnKF DA for FV3; Assimilation of new satellite datasets (GOES-16/17, NOAA-20 etc.); Cycled DA testing, tuning and optimization												100%
Post-Processing, Downstream applications			Pre- and post-processing, verification & downstream product generation, real-time data dissemination						GFS V15 in operations						100%
GFS v15.0 Implementation						retrospective + real-time parallels, evaluation and transition to operations									75%
FV3 GEFS Development		Develop and test low resolution FV3GFS with FV3GDAS, configure it for reanalysis (ESRL)													100%
FV3 GEFS Reanalysis							Produce ~20-year reanalysis datasets using FV3GFS/GDAS (ESRL)								30%
Ensemble configuration		Configure FV3GFS ensemble resolution, perturbations, members, physics, and extend forecasts to weeks 3&4 (EMC)													98%
FV3 GEFS Reforecasts								Produce ~30-year reforecasts (extended to 35 days) (EMC)					GEFS V12 in operations		0%
GEFS v12.0 implementation							Today				retrospective evaluation of FV3GEFS V12 and transition to operations				0%

IDP – Focus on Dissemination

Integrated Dissemination Program (IDP)

Long-Term Sustainable Solution



Future Functionality at IDP College Park and Boulder

- Weather.Gov*
- SPOT*
- NWSChat

* Available at IDP- College Park and at the Web Farms in Kansas City, MD and Silver Spring, MD

Functionality in place at IDP College Park and Boulder (as of February 2018)

- NOMADS
- FTPPRD
- TGFTP
- MADIS
- MRMS
- MAG
- Radar Level 3
- NWSTG Switch
- BUFR Migration Tool (BMT)
- NLETS
- Radar Level 2
- EDIS/FTPMail
- HazCollect (Extended)
- HazCollect (Legacy)
- FNMOC
- FTPPush
- Global Information Center System (GISC)
- IRIS/iNWS
- GMDSS
- SNOTEL
- Hydometeorological Automated Data System (HADS)
- HF-FAX
- SOCKET/CMHP
- NWS GIS Services
- NOS Chart Tile
- nowCOAST
- Weather.gov
- VLAB
- SPOT
- AOMC/EM7

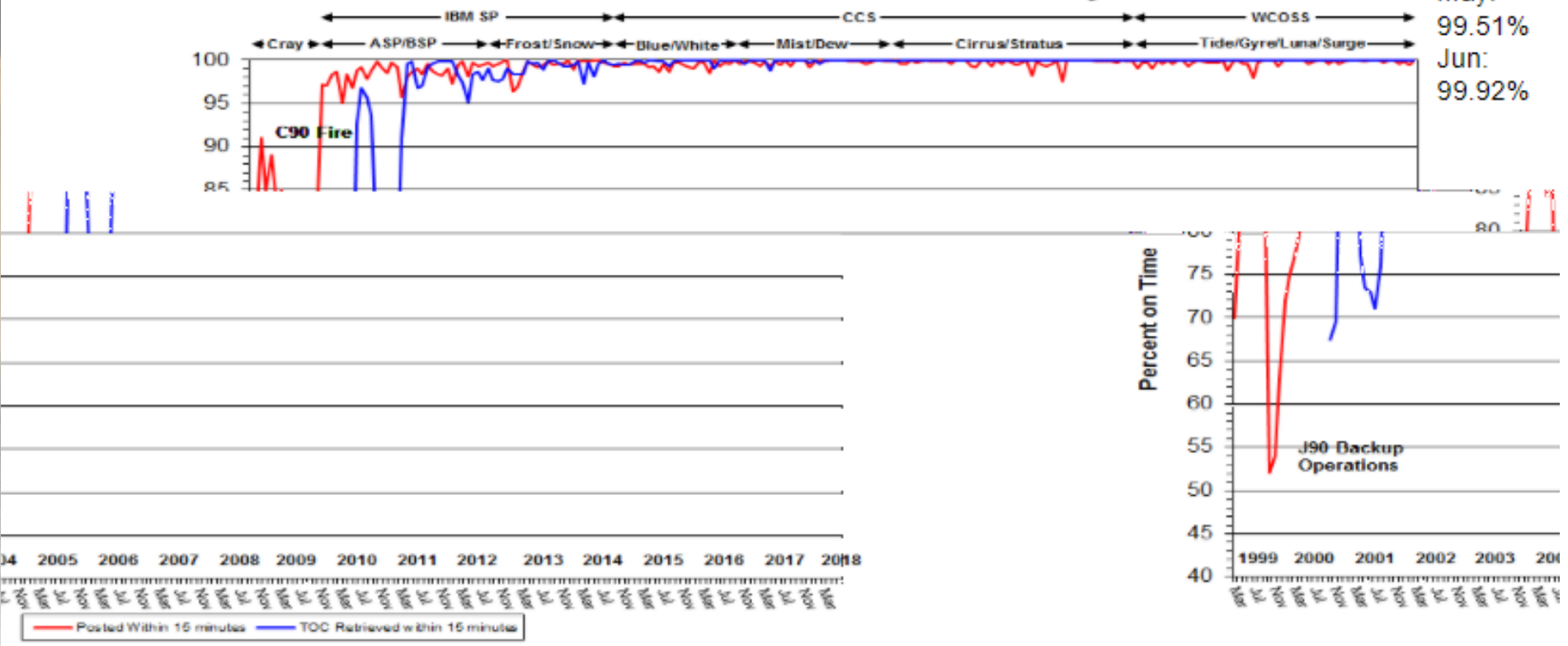
"OneNWS" Network

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

Weather and Climate Operational Supercomputing System (WCOSS)

Project Status as of: 30 Jun 2018

Product Generation Summary



Apr: 99.82%
May: 99.51%
Jun: 99.92%

l supercomputers

20

FY18 NOAA AOP Milestone– WCOSS

Sustain 99% on-time product generation on 90% of the time

Other Topics

- Private sector status within WMO.
  Key interactions now:
  - Assessment of NGGPS prior to implementation
  - Ongoing during R2O
  - Ongoing interactions on IDP.

Thank You