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# Unidata Policy Committee NOAA/NWS Update

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NOAA's National Weather Service



# Outline



- 
- NOAA Budget
  - NOAA Climate Service Status
  - NOAA Renewable Energy
  - MADIS Status
  - NWS Forum on Wireless Weather Services (June 28th)
  - NOAA Data Growth
  - AWIPS II
  - NEXGEN & 4D Cube



# NOAA Budget – FY 11



- \$ 4.5 Billion budget (year long CR, not line item budget)
- \$ -1.0 Billion below President's request
- \$ - 227 Million below FY 10
- NOAA must submit a spend plan by June 15 to Congress
- Spend plan to address not receiving \$1.1 Billion for Joint Polar Satellite System
- Hall amendment – no funds may be used to implement, establish or create a NOAA Climate Service (limitation expires 09/30/11)
  - *Note a proposal to establish a NOAA Climate Service was part of President's FY 12 budget submission*



# NOAA Climate Service



## NCS Core Capability 1: Observing Systems, Data Stewardship, and Monitoring

- NCS. users will obtain *easy* and *timely access* to the nation's trusted data and information about the current state of the climate system in context with the past

**NOAA CLIMATE SERVICES**  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Prototype

Explore: [ClimateWatch Magazine](#) [Data & Services](#) [Understanding Climate](#) [Education](#)

**Past & Present Climate** ▶ **Predictions** ▶ **NOAA Partners** ▶ **Climate & You** ▶ **Data Library** ▶

**Climate at a Glance**  
Read and explore summaries and digests of recent climate-related phenomena from NOAA's distributed climate service community.

**Looking Ahead**  
Explore how climate phenomena are likely to unfold in the coming days, weeks, and months.

**Locate Climate Expertise**  
Use an interactive map to find national and regional climate services.

**Utilizing Climate Data**  
Climate information is essential for business and community planning. These resources focus on needs of specific sectors of society.

**Visualizing & Explore**  
NOAA is a leading provider of access to data from research projects, stations, and satellites to the nation and the world.



# Renewable Energy



- NOAA signed a MOU with Department of Energy (DOE) to spur collaborative work on weather-dependent and oceanic renewable energy.
- DOE funding NOAA to perform the Wind Forecast Improvement Project (WFIP), a year long field campaign in northern Plains and west Texas starting this summer.
- NOAA has \$2M in the FY12 Presidential Budget to perform studies on improving wind characterization and forecasts in the planetary boundary layer in support of wind energy. Additional field tests are expected (both onshore and offshore) as well as in complex terrain .
- NOAA and DOE issued a joint press release on a turbine wake study:  
<https://www.llnl.gov/news/newsreleases/2011/Apr/NR-11-04-06.html>



# Renewable Energy...cont'd



- NOAA is involved in Renewable Energy across the spectrum of our capabilities:
  - Participating in the Offshore permitting process which includes environmental assessments and protection of native species and habitats
  - Research into improving characterization and prediction of onshore/offshore winds, solar, and marine hydrokinetics (e.g., power from waves, currents, tides)
  - Provision of numerical forecasts that serve as the basis for private sector customization for power generation and integration decision making.



# MADIS Status



- Initial Operating Capability (IOC) achieved by NWS in September, 2010.
- IOC MADIS feed through NWS Telecommunications Operations Center (TOC) Gateway
- Both NWS and GSD currently supporting MADIS feeds.
- GSD running MADIS archives from 2001.
- Complete transition of Full Operating Capability (FOC) to NWS in 2013-2015 (budget dependent)
- FOC Archives in NCDC- seamless access



# NWS Forum on Wireless Weather Services – June 28



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## Goals

- Engage NWS, private sector, and core partners in discussions on how best to provide wireless environmental information services.
- Solicit feedback on most appropriate role for NWS in providing wireless weather services.

## Discussion Areas

- How can the enterprise best serve the needs of NWS core partners?
- How can the enterprise best serve the needs of general public?
- What does the private sector need from NWS to support development of low cost wireless weather services?





# Current and Future NOAA Data Rates



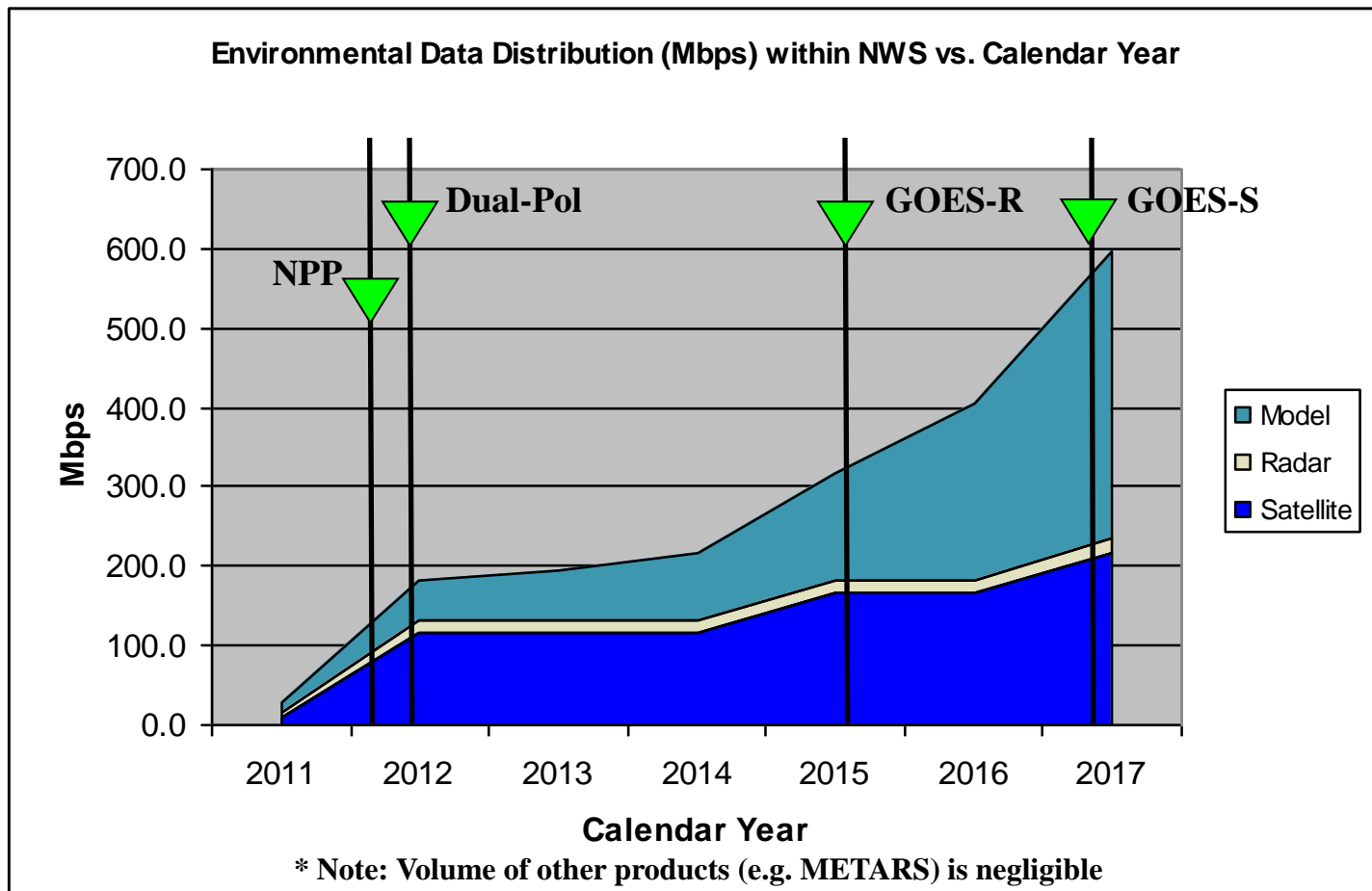
	Today's Data Rates		Future Data Rates <i>(projected)</i>		Notes
	Total Available	Total on AWIPS	Total Available	Total on AWIPS	
<b>Satellite</b>	86 Mbps	1.5 Mbps	741 Mbps 500 Mbps 500 Mbps	4.5 Mbps 23 Mbps 21 Mbps	NPP/JPSS (2011) GOES-R (2015) GOES-S (2016)
<b>Model</b>	68 Mbps	6 Mbps	612 Mbps	40 Mbps	Up to 3x every 3 yrs
<b>Radar</b>	3.9 Mbps (Lev 2) 2 Mbps (Lev 3)	2 Mbps	9 Mbps (Lev 2) 9 Mbps (Lev 3)	3 Mbps	Dual Pol (2011)
<b>Other (e.g. mesonets)</b>	0.4 Mbps	0.3 Mbps	0.5 Mbps	0.4 Mbps	Non specific
<b>Total</b>	<b>160 Mbps</b>	<b>10 Mbps</b>	<b>2372 Mbps</b>	<b>92 Mbps</b>	



# Data Requirements Assumptions



## Data Available to AWIPS, NCEP, and the Gateway





# Environmental Information Mgmt. Challenges



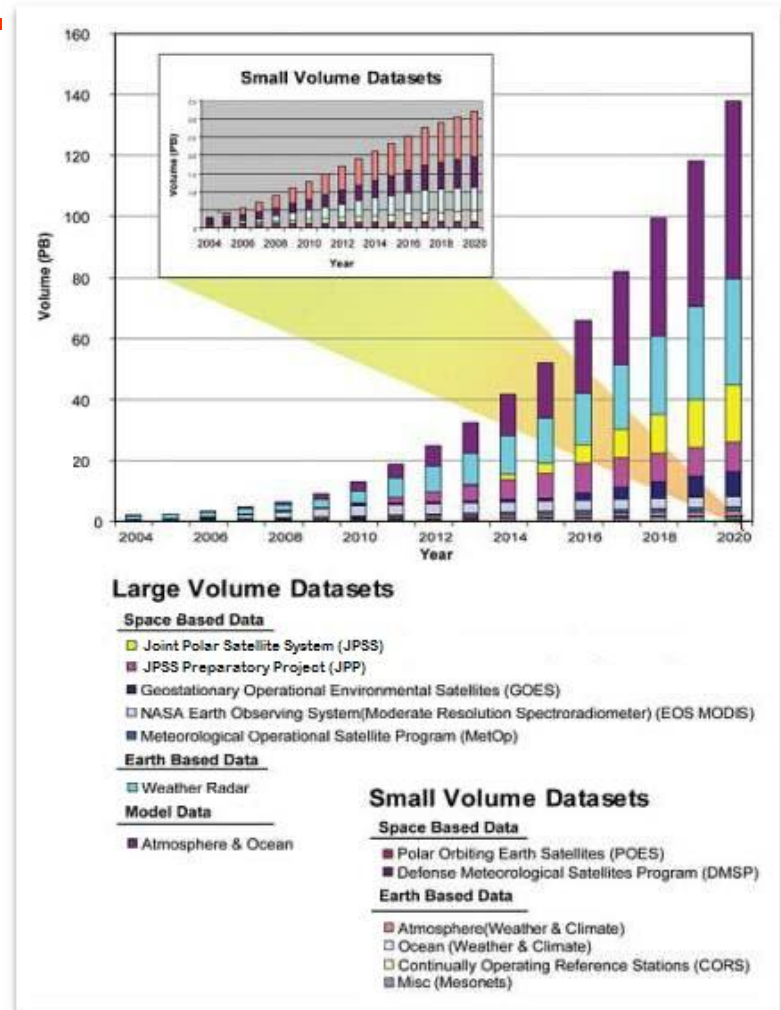
## Broad Scope for Environmental Data Stewardship

• ~150 Research & Operational Observing



## Data Management Challenges are Changing

- No longer just about data volume
- Data discovery and integration
- Data stewardship and information

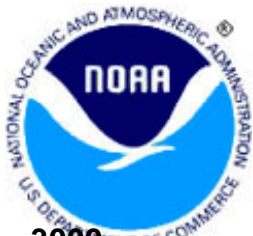




# WFO AWIPS Status



- Last 2 major software releases, all “bug” fixes, and local applications migration scheduled to be completed by June 30 (*both behind schedule*)
- Field OT& E (WFO’s using AWIPS II operationally) to begin in July (*behind schedule due to ongoing “software bugs”, slower than expected local application migration, and workstation stability and performance – which has limited testing of full WFO functionality and backup operations*)
- Goal is to make 1 WFO “deployed” by end of FY 11 – Full deployment phased in during FY 12

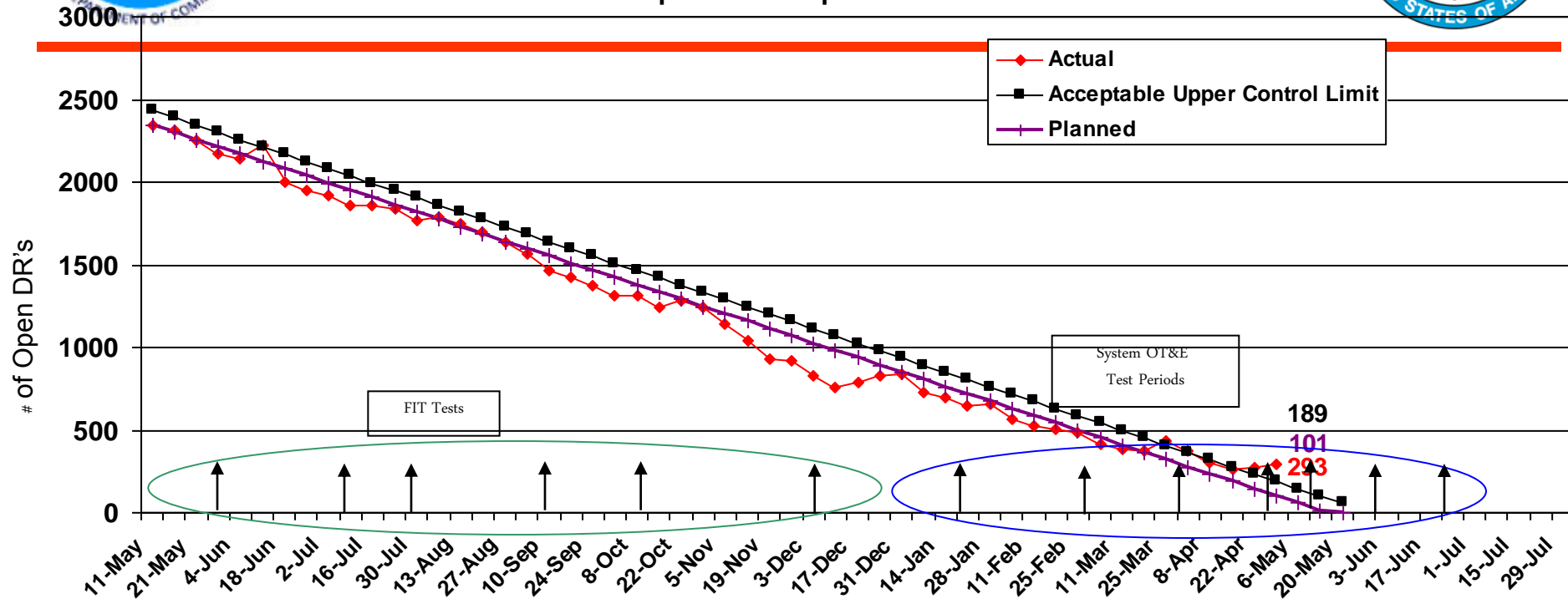


# DR Progress Tracking

## Open Planned v.s. Actual (05/02/11)



Impact 1 --> 3 Open DR's



### Actuals as of (05/02/11)

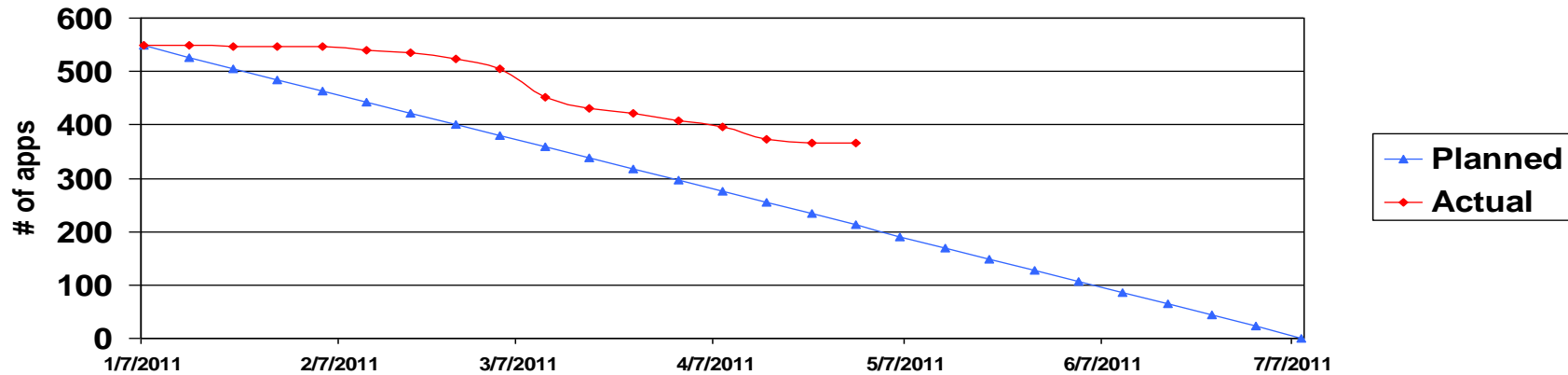
- 19 net DR increase, (v.s. 44 planned decrease)
- 3 wk. rolling avg. = xx net decrease per week
- 2.23 DR's per person per week, for current wk.
  - 1.41 wk. ending 04/22, 1.72 wk. ending 04/15
- Raytheon staff: 39 (unchanged from 6/28/10)
- 87 DR's fixed last week. Avg. 70/wk, last 3 wks.
  - 55 wk. ending 04/22, 67 wk. ending 04/15
- 29% rework rate (13 failed DR's out of 45 tested)
  - 10% wk. ending 04/22, 19% wk. ending 04/15
- 9 New DR's last week Avg. 18/wk, last 3 wks
  - 28 DRs wk ending 04/22, 16 DRs wk. ending 04/15



# AWIPS Technology Infusion Local Application Migration



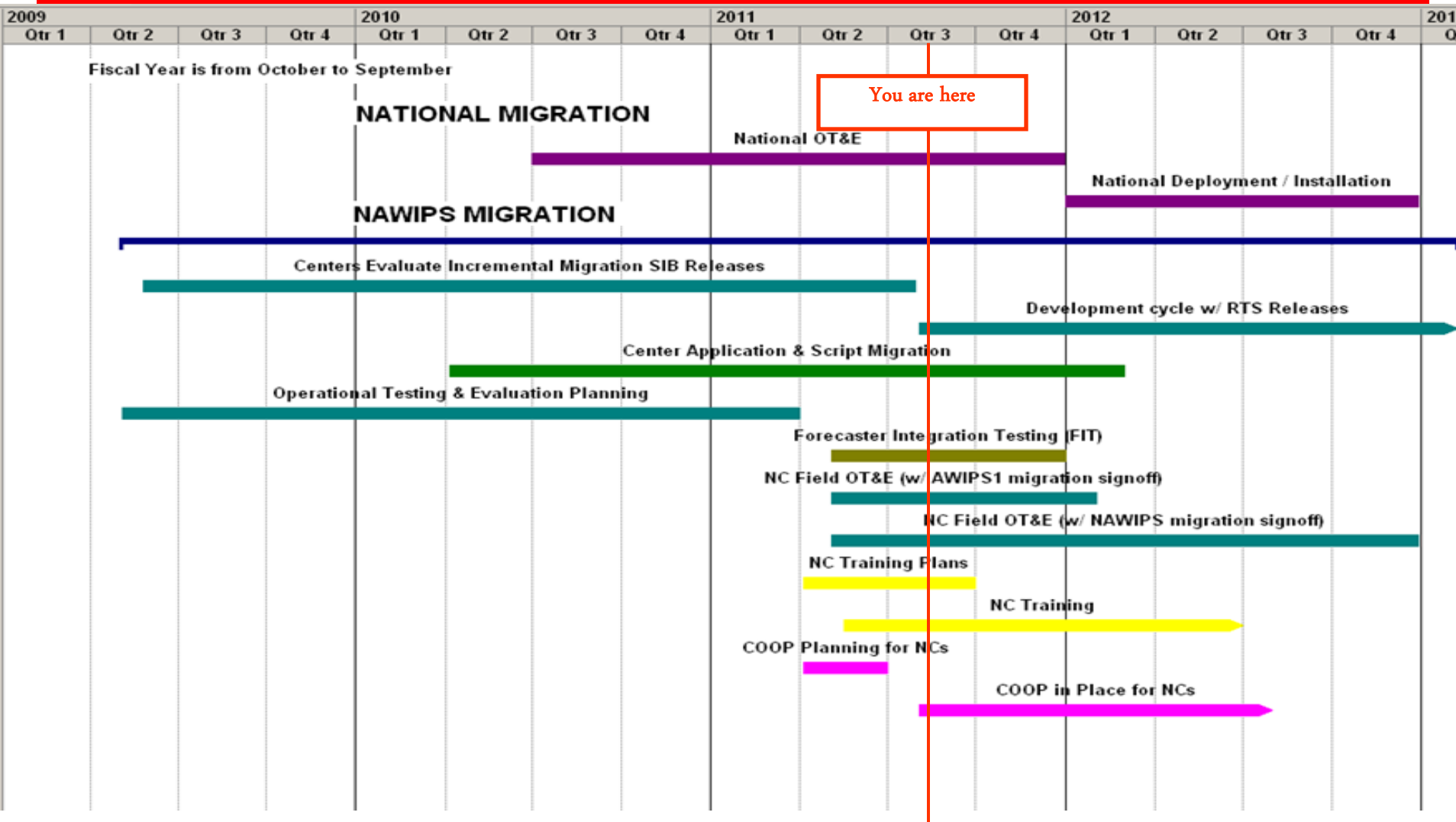
Local Applications to Migrate - Field OT&E  
April 29, 2011



	Open			Cancel (i.e. Dup, OBE)	Complete
	Total	In Progress	Test		
January 28, 2011	549	0	0	44	13
April 29, 2011	365	50	25	56	185
Net Change	- 184			+12	+172



# Current Full AWIPS II Migration Schedule







# NEXGEN & 4D Cube Issues



- Role of Forecasters “over the loop” given 5-15 minutes refresh rates?
- How to determine the Single Authoritative Source?
- Intended to be Open Source Project
- How will interface to external world be managed to other gov, private sector and academia?
- What role will Unidata have?
- How will AWIPS2 evolve into the 4D cube?
- Technical implementation schedules are budget dependent