NWS CLIMATE SERVICES PROGRAM: LINKING CLIMATE AND WEATHER FOR IMPROVED DECISION SUPPORT

October 2015

Presented by Viviane Silva on behalf of

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Overview

1. NWS Climate Services Program
2. Climate Data Services
3. Regional and Local Climate Services
4. NWS and OAR Addressing Mission Delivery Needs

HQ Organization

New HQ Office | Field Office | Existing HQ Office

★ Explicit climate activities

Office of the Chief of Staff
Tom Graziano

★ International Affairs
Dan Beardsly (A)

★ Office of the Chief Learning Officer
John Ogren (A)

The Office of Assistant Administrator
AA
DAA
Louis UccelliniLaura Furgione

CFO/CAO
John Potts

Enterprise Risk Management & Internal Audit Office
vacant

Assistant CIO
Iftikhar Jamil

Office of Organizational Excellence
Courtney Draggon (A)

Office of Planning & Programming for Service Delivery ★
Kevin Cooley

Office of Chief Operating Officer ★
John Murphy

AR: Aimee Devaris
PR: Ray Tanabe
WR: Grant Cooper
CR: Chris Strager
SR: Mike Coyne (A)
ER: Jason Tuell

Office of Facilities
Deirdre Jones

Office of Obse[illegible]tions ★
Capt. Joe Pica

Office of Central Proc[illegible]sing ★
Dave Michaud

Office of Disse[illegible]nation ★
Luis Cano

Office of Science & Tech[illegible]logy Integration ★
Ming Ji

Analyze, Forecast, & Su[illegible]ort Office ★
Andy Stern (A)

National Centers for [illegible]. Prediction ★
Bill Lapenta

Regional Of[illegible]es ★

National Wa[illegible] Ce[illegible]er ★
Don Cline

NWS Climate Services Program

End-to-end approach to climate services: From observations to prediction to user outreach at national and local levels

- **HQ**
- **National Service Program Management**
  - 8 FTEs
  - 1 Guest Worker
- **NWS Regions**
  - 6 FTEs (not all full time for climate)
- **NWS Field Offices**
  - ½ FTE per office (122 WFOs; 13 RFCs; 15 WSOs) = 75
- **Climate Observations**
  - 126 FTEs

- **NCEP**
  - **Climate Prediction Center**
    - 48 FTEs (44 by June 29 on staff)
    - 29 contractors, 2 Cooperative Institute staff, 3 UCAR staff
  - **Environmental Modeling Center Climate Staff**
    - Mixture of 10 FTEs and contractors – leveraging others
  - **NCEP Central Operations**
    - .2 FTE

TOTAL STAFF ~ 308

National Service Program Roles and Responsibilities

- **Collect requirements from all entities** (field, partners, agency, etc.)
- Facilitate end-to-end strategic and policy execution of Programs
- Maintain/update service Policies, Directives and Instructions
- **Represent field needs** to the service delivery side of the organization
- **Integrate AOP milestones** across service programs and portfolios
- Ensure integrity of service change policies, per 10-102 process
- **Coordinate milestone status across Portfolio** for presentation at QPRs
- Develop/execute HQ programmatic budgets
- **Ensure linkage to cross-cuts** (Int'l, training, social science)
- Serve as a first stop for many OAA taskers
- Represents or recommends NWS SME contact
- **Promote consistency of products and services**
- Leadership in CaRDS requirements process

NWS Chief Operating Officer, Sep 2015

Climate Services Branch – Building Capacity in the Regional and Local Offices

- **Develop Training**
  1. Internal NWS and other NOAA offices
  2. Technical training for national and international partners/users

Training leveraged by Climate Resilience Toolkit - CRT

- **Champion**
  - **Tool development – LCAT**
  - **Local Products**
    - Local 3-Month Temperature Outlook (L3MTO) – now operational CPC product
    - Local 3-Month Precipitation Outlook (L3MPO) – identifying capabilities for development

Climate Services Branch – Building Capacity in the Regional and Local Offices

- Climate Services Seminar Series
- Factsheets on a variety of climate topics
- Outreach
- Partnership development

- **Climate Prediction Application Science Workshop**
  - Key partnership with CPO, including RISAs; NCEI
  - Partnership with academia, state agencies

14th Annual Climate Prediction Applications Science Workshop (CPASW)

March 22-24, 2016 – Burlington, VT with co-hosts

- University of Vermont
- Northeast Regional Climate Center
- USDA Northeast Regional Climate Hub
- DOI Northeast Climate Science Center

Workshop Theme: Climate Services for Addressing Environmental Risks and Hazards."

Abstract deadline: **December 1, 2015.**

http://www.uvm.edu/~cpasw/

Climate Data Services

The Climate Services Branch coordinates various climate data tools in order to provide *Timely, continuous, reliable climate records*

- **WxCoder** provides a means for the NWS Cooperative Observer to provide timely, paperless reporting of observations
- **IV-ROCS** for those observers without internet access to provide their observations
- **NOWData2** provides the NWS Climate Web Pages with the most current data from the NWS Cooperative Observers
- **xmACIS2** provides the local office a robust set of data retrieval tools in order to provide localized service to their customers
- **Health of the Network** reports to help the WFO identify local data errors
- **Datzilla** to help provide corrections to erroneous data
- **ThreadEx** to provide a longer period of extremes data to the local communities

Partners: NCEI, NERCC, SRCC & WRCC

NWS Regional Climate Services

Climate Services Program Managers – CSPMs

- Provide leadership for and manage accountability of local climate services programs
- Coordinate and collaborate with partners and develop new partnerships within regional climate community
- Collect user and field requirements and training needs
- Conduct outreach activities within the regions
- Participate in or lead projects/studies that help further NOAA Climate Services within the region
- Oversee Drought Services and participate in NIDIS projects when appropriate

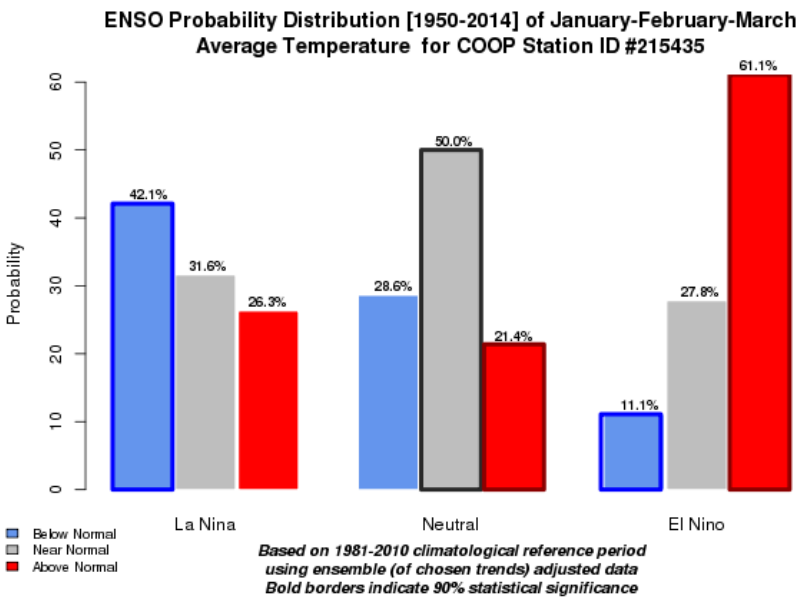
Local Climate Services

Climate Services Focal Points – CSFPs

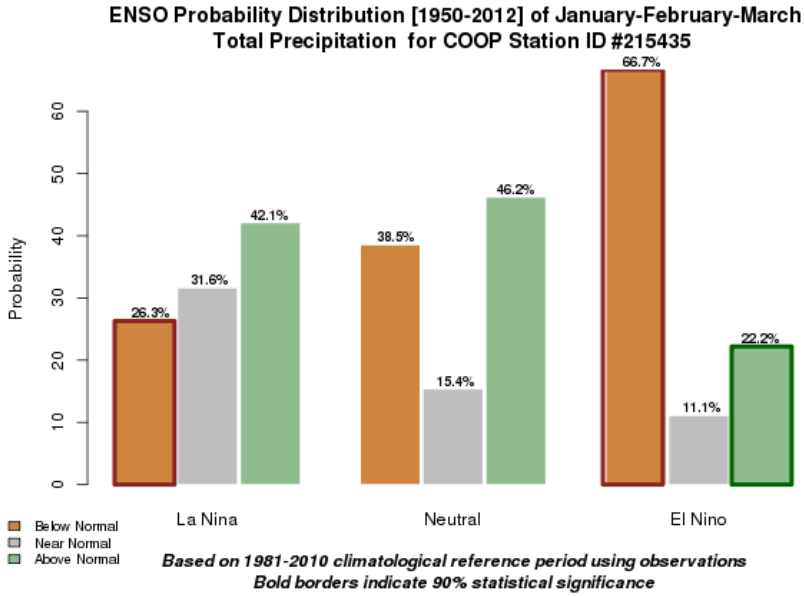
- Deliver products and services to users
- Conduct local education and outreach activities
- Interpret products and data for the local community
- Gather and quality control daily climate data
- Work with partners to develop and deliver products
- Produce local climate studies
- Through CSPMs, provide support for regional climate services

Local Study: ENSO and Winter

TEMPERATURE



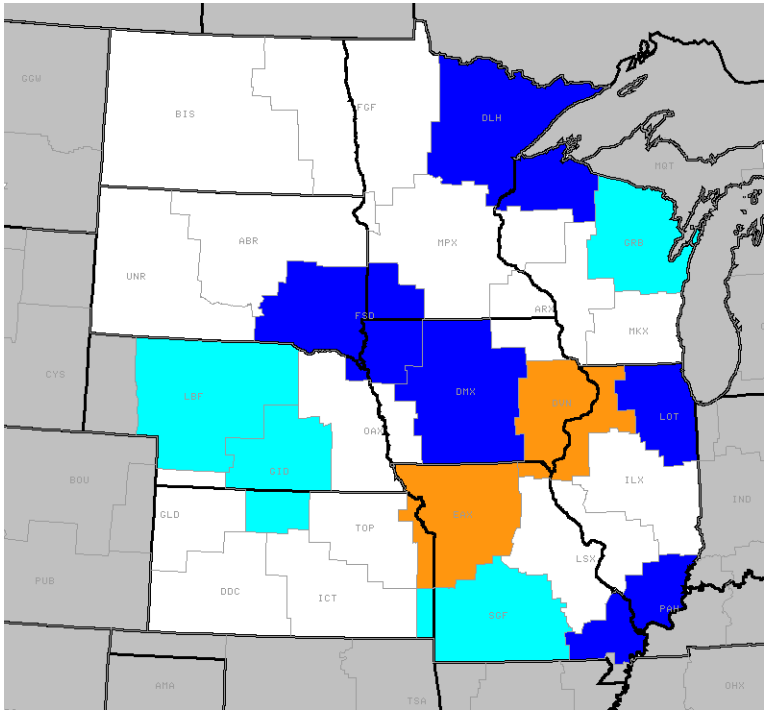
PRECIPITATION



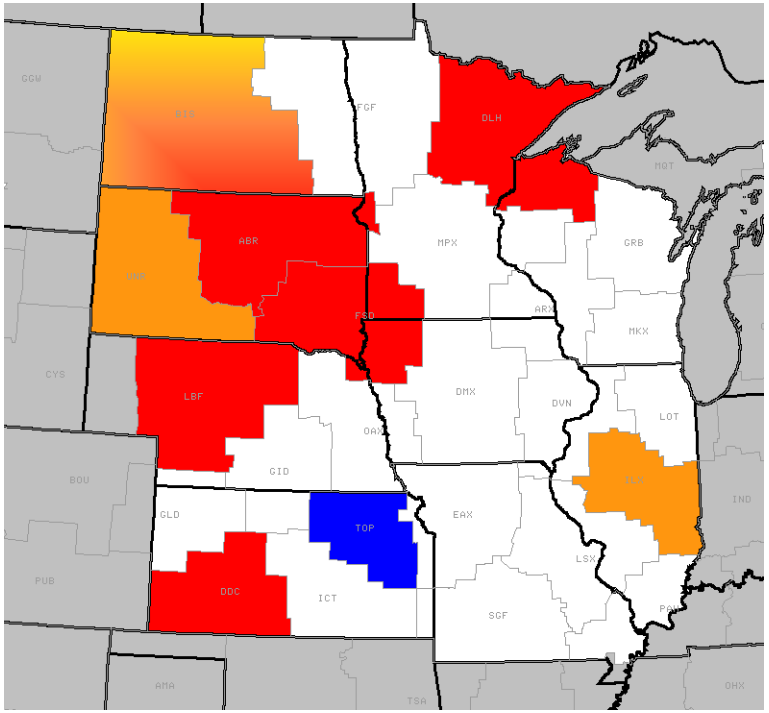
- Sample **LCAT** results for Minneapolis/St. Paul in Jan-Feb-Mar
- During El Nino, there is a significantly higher chance of temperatures falling in the upper third of the distribution and precipitation falling in the lower third of the distribution. (Warmer and drier than average)

NWS Local Office Case Study

Use of historical data to link ENSO phases to tornado activity in upper Mid West.



Impact on tornado activity following a La Niña winter



Impact on tornado activity following an El Niño winter

red=enhanced, blue=suppressed

Barb Mayes Boustead – WFO Omaha

NWS & OAR Addressing Mission Delivery Needs

- MOU in place (Sep 23, 2014)
- Approved by NWS Mission Delivery Council (MDC) **Level 1 requirements being negotiated with OAR/CPO for resourcing in FY16 when possible**
  - **Improve basic NWS forecasting** capabilities from week 2 to seasonal
  - **Provide extended lead-time information and Decision Support Services** for weather and climate extremes for planning and preparedness, including hurricanes, tornadoes, droughts, floods, extreme heat, winter storms
  - **Improve NWS capabilities for decision support in Arctic**
  - Improve NWS capabilities to provide climate information in support of decision making in **coastal regions**
  - **Establish a learning path for making climate-informed decisions** in NOAA field operations and users applications of NOAA climate products, forecasts, and services
- Service Level Agreement to be completed Oct 31

THANK YOU