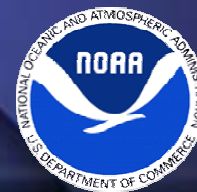


**NOAA's Surface Weather Program:
Safe and Efficient Commerce and Transportation
"Information to Move the Nation"**

CLARUS ICC3
November 15, 2005

NOAA Surface Weather Program



- Surface Weather within NOAA
- Meteorological Assimilation Data Ingest System (MADIS)
- National Surface Weather Observation System (i.e., Operational MADIS)
- The Surface Transportation Enterprise

NOAA Surface Weather Program

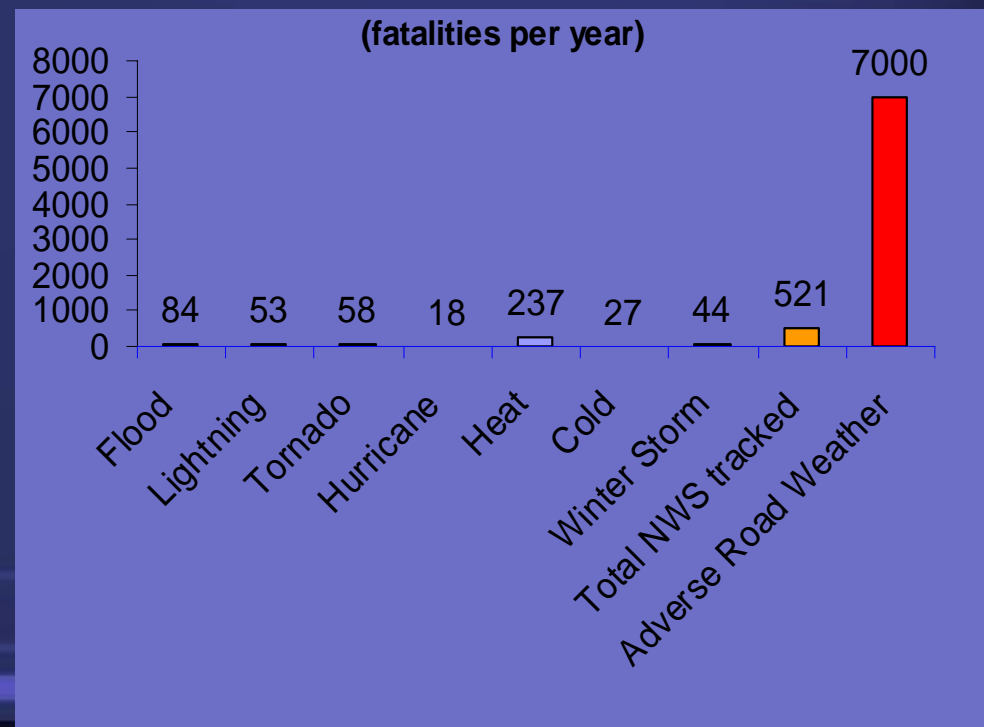


NOAA is responsible for protecting life and property and promoting safe and efficient commerce and transportation

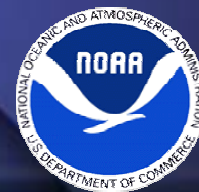
Weather contributes to ~7,000 fatalities, 600,000 injuries and 1,400,000 weather-related highway crashes per year

17% of all highway fatalities occur during adverse weather

Opportunity to improve safety with timely weather information that is transportation-relevant



NOAA Surface Weather Program



- Surface Weather within NOAA
 - Under the Commerce and Transportation Goal
 - Budget plans for FY06-12 completed
 - Charter, Milestones and AOP in place
 - MADIS Transition to Operations
 - National Surface Weather Observing System (NSWOS)
 - Socio-economic study completed
 - FHWA/NOAA MOU

Surface Weather within NOAA

NOAA's Mission Goals



- **Weather and water:** Serve society's needs for weather and water information.
- **Commerce and transportation:** Support the Nation's commerce with information for safe, efficient, and environmentally sound transportation.
- **An ecosystem approach to management:** Protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management.
- **Climate variability and change:** Understand climate variability and change to enhance society's ability to plan and respond.

Surface Weather within NOAA's Commerce & Transportation Goal



C&T Strategic Objectives:



Safe, secure, efficient and seamless movement of people and goods in the U.S. transportation system.



Environmentally sound development and use of the U.S. transportation system

Surface Weather within NOAA's Commerce & Transportation Goal



- C&T Goal Lead – CAPT Steven Barnum, NOAA
- Goal complying with NOAA guidance to continue funding Surface Weather Program's objectives
- “Port to Door”
- MADIS transition/NSWOS is key to providing data management support for C&T mission
 - Integration of other NOAA and non-NOAA networks
 - NOAA essential services and customer requirements

MADIS – An Overview



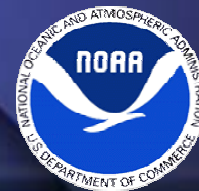
- Data management system that's flexible, expandable and interoperable – an architecture for the future
- Provides government and non-government mesonet, upper-air, and coastal data to the enterprise & WFOs
- Data are stratified – informed by metadata
- Transitioning MADIS to the NWSTG provides 24x7 maintenance support with offsite system backup
 - Leverages NOAA's extensive data management infrastructure and investment

NOAA Surface Weather Program – MADIS Transition



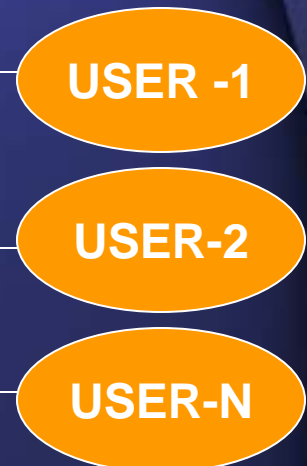
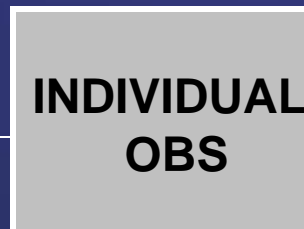
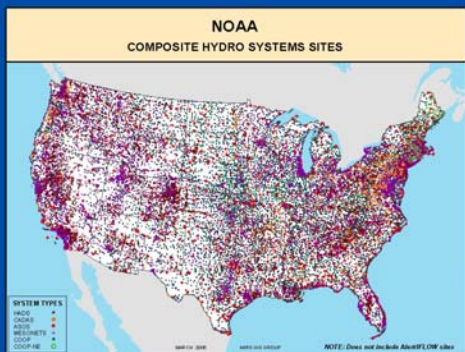
- Proven concept that can be early success for NOAA's Policy on Transition of Research to Application
- MADIS Transition Team (MTT) established
 - Participation from NWS, OAR, NESDIS
- MTT Charter completed
- Work development plan in progress
- First report back to NOAA senior management last week

Why Transition MADIS to Operations?



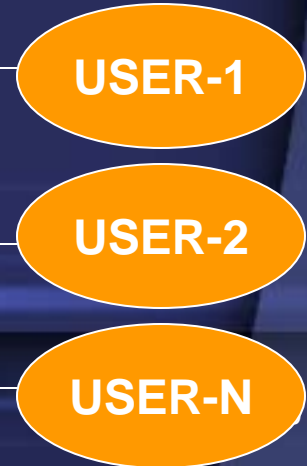
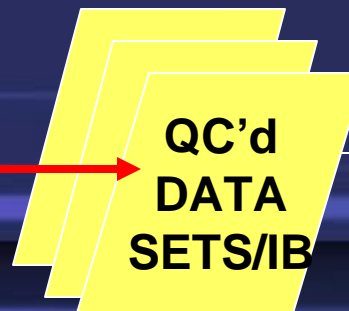
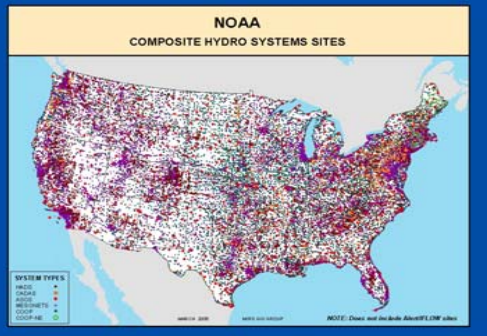
INDIVIDUAL OBS

TODAY



INDIVIDUAL OBS/DATA

NSWOS

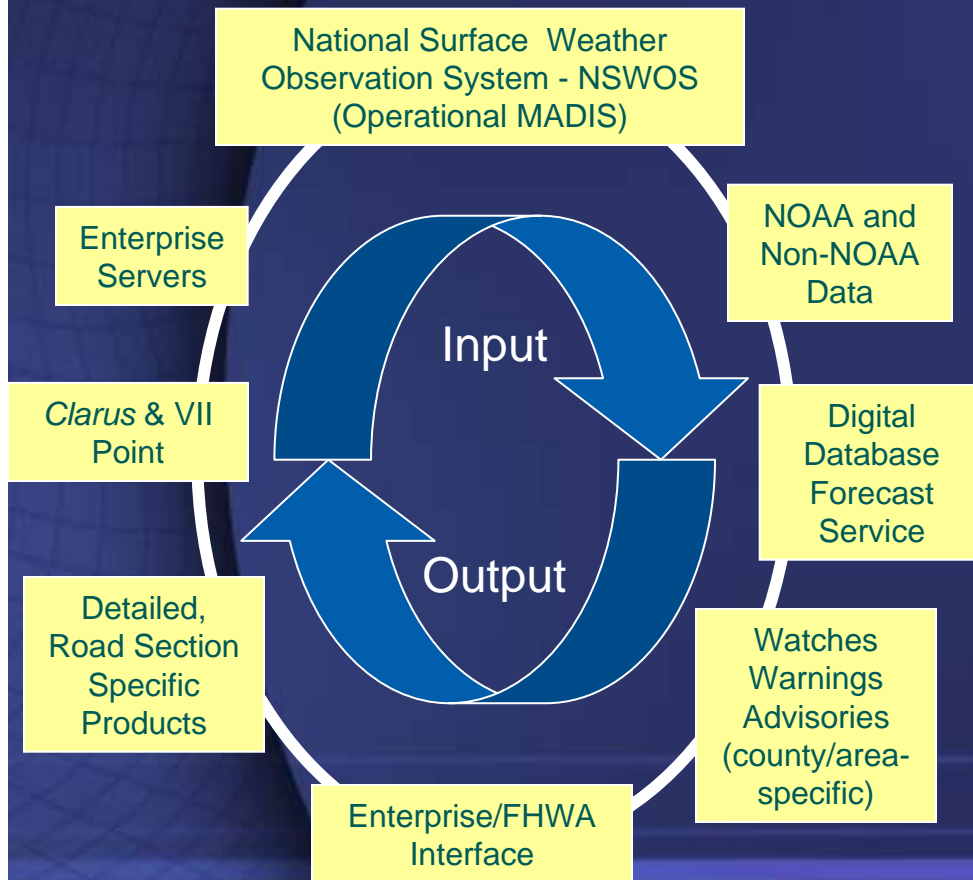


MADIS Transition to Operations – Development Activities



- Policy development: Metadata requirements, archive, proprietary data, intellectual property, formats, etc.
- Reliability/Security: Redundancy of data management and communications systems
- Collaborative improvements in metadata and GIS
- Rapid prototyping at ESRL (formerly FSL)
- Capacity building: Strategic planning for future needs, e.g., VII, addition of more non-NOAA networks, creation of application-specific information bases

NOAA's Enterprise Partnerships: Partnering for Data, Improved Service



- Thousands to millions of observations to assist decisions
- Potential for new GIS applications
- Input to a variety of models
- Supports warnings and forecasts, verification
- Validate remote sensors
- Data sharing