

ESRL Physical Sciences Laboratory Review

**Organization Overview,
Physical Sciences Research,
Priority Setting**

Earth System Research Laboratory



Dr. Alexander E. MacDonald

*Director, Earth System Research Laboratory
DAA for Laboratories & Cooperative Institutes*

March 9-12, 2010



Earth System Research Laboratory

Talk Overview

- **ESRL - Organizational Overview**
ESRL Role within NOAA & OAR
- **ESRL Mission, Approach**
- **Physical Science Research at ESRL**
Major Foci • Major Drivers
- **Charting Our Way in the NOAA Climate Service**





Earth System Research Laboratory

Who We Are

NOAA's Mission Line Offices

Oceanic & Atmospheric
Research

National Marine Fisheries Service

National Weather Service

National Environmental Satellite,
Data & Information Service

National Ocean Service

Program Planning & Integration

Oceanic & Atmospheric Research

Assistant Administrator

Richard Spinrad

Deputy Assistant Administrator,
Labs & Cooperative Institutes;
Director, Earth Systems Research Lab

Alexander MacDonald

Deputy Assistant Administrator,
Programs & Administration

Craig McLean

Earth System Research
Laboratory

Air Resources
Laboratory

Atlantic Oceanographic &
Meteorological Laboratory

Great Lakes Environmental
Research Laboratory

Pacific Marine
Environmental
Laboratory

National Severe
Storms Laboratory

Geophysical Fluid
Dynamics Laboratory





Earth System Research Laboratory

Overview & Mission



~610 staff
~\$96 M (FY09)

ESRL Directorate
& centralized support



Global Monitoring
Division

Physical Sciences
Division

Chemical Sciences
Division

Global Systems
Division

Cooperative Institute for Research in Environmental Sciences (CIRES)
Cooperative Institute for Research in the Atmosphere (CIRA)

ESRL Mission

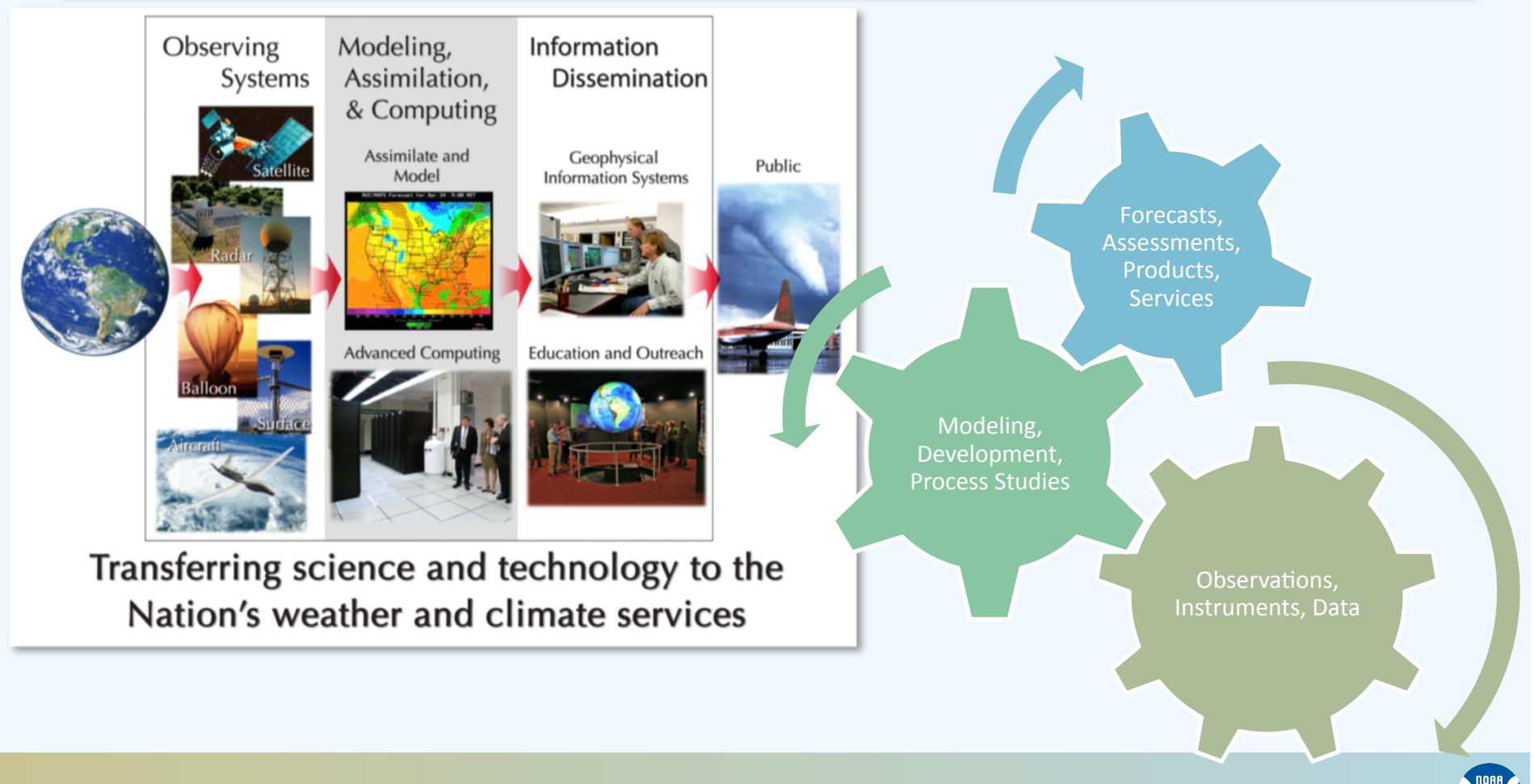
*To observe & understand the Earth system & to develop products
through a commitment to research that will advance NOAA's environmental
information & service on global-to-local scales*



Earth System Research Laboratory

Approach

Comprehensive approach provides for 'end-to-end' science that supports NOAA's operational & information service missions in weather & climate



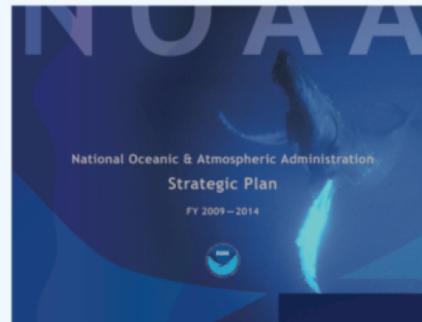


Earth System Research Laboratory

Drivers & Priorities

Major Drivers:

- NOAA Strategic Plan
- NOAA Research Plan
- NOAA Next Generation Strategic Plan
- National Programs
- U.S. Legislation
- Interagency Agreements
- International Agreements



You will hear more details over the next two days...





Earth System Research Laboratory

Partnerships

The complexity of today's issues means 'no one can do it all'
- *the ability to partner is of critical value* -

- Cooperative Institutes - *CIRES, CIRA, CIFAR, ...*
- Other OAR Labs & Programs - *ESRL (GMD, CSD), Climate Program Office, NSSL, PMEL, AOML, ARL, GFDL, ...*
- Other NOAA Line Offices - *NWS, NESDIS, NMFS, NOS*
- Other U.S. Agencies - *FAA, NASA, DOE, EPA, NSF, DOI, ...*
- Academia - *Many longstanding & productive partnerships!*
- Private Industry – *Aerospace/aviation, weather enterprise, museums, ...*
- International - *Australia Bureau of Meteorology, Taiwan Central Weather Bureau, Finnish Meteorological Institute, Roshydromet, Environment Canada, Korean Meteorological Administration, ...*

Specifics will be given in the talks to come...

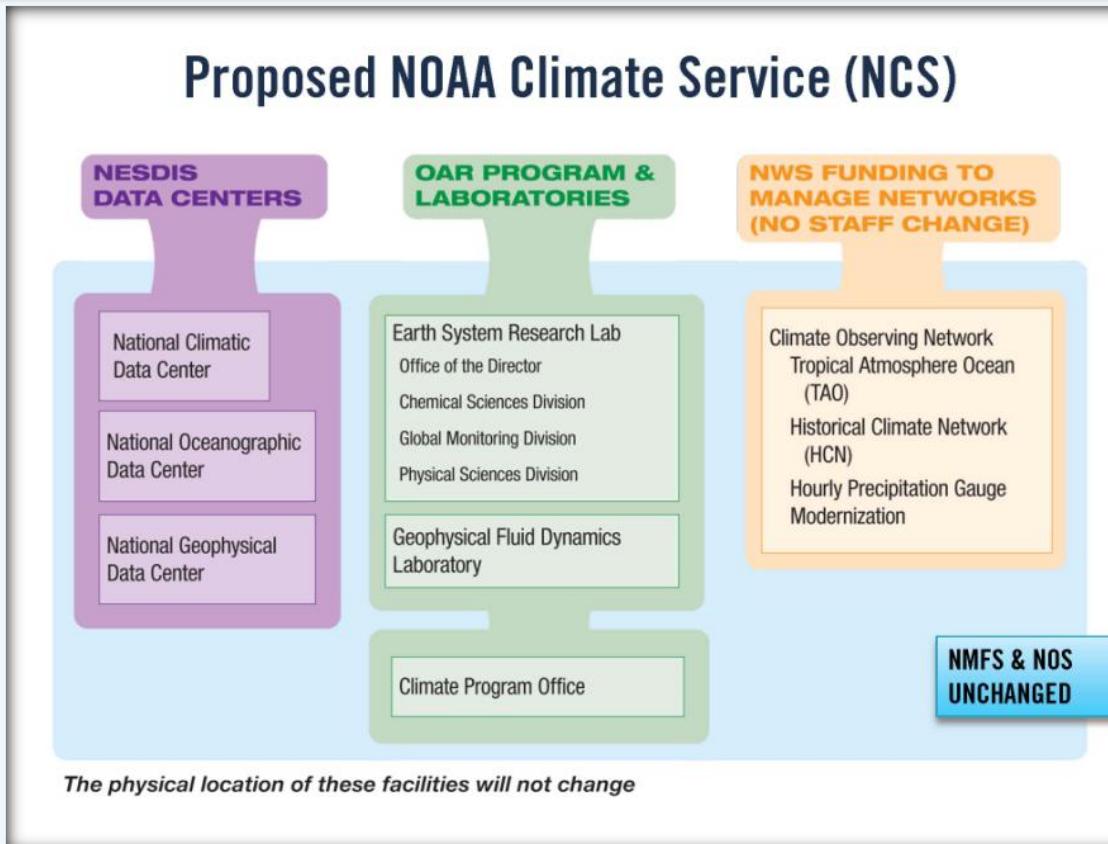




Earth System Research Laboratory

Charting the Future

Providing the Nation with Climate & Weather Services



More will be discussed in our closing remarks ...





Earth System Research Laboratory

Welcome



Up Next --New Advances in Global Assimilation and Modeling