

NOAA CLIMATE SERVICE

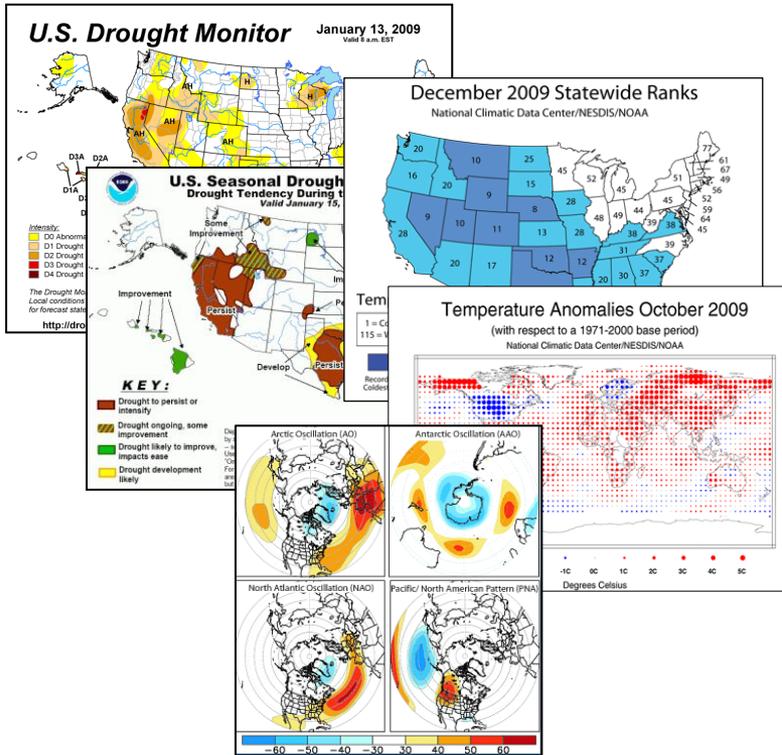
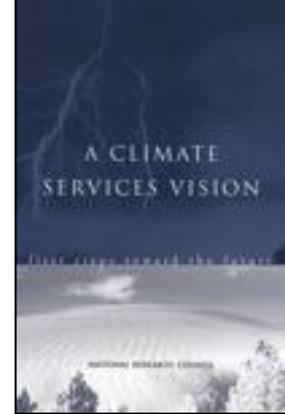


Chet Koblinsky

NOAA Climate Service Transition Deputy Director
Director, NOAA Climate Program Office

Unidata Policy Committee April 2010

A Climate Services Vision (NRC, 2001)



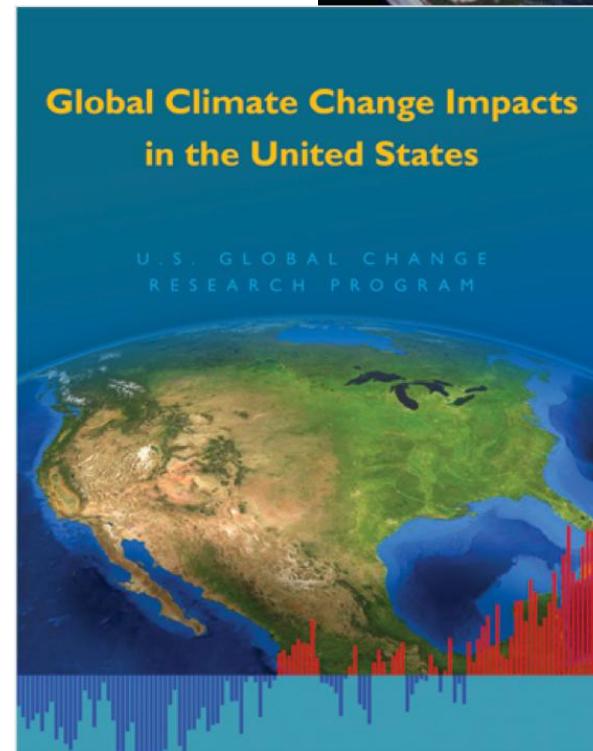
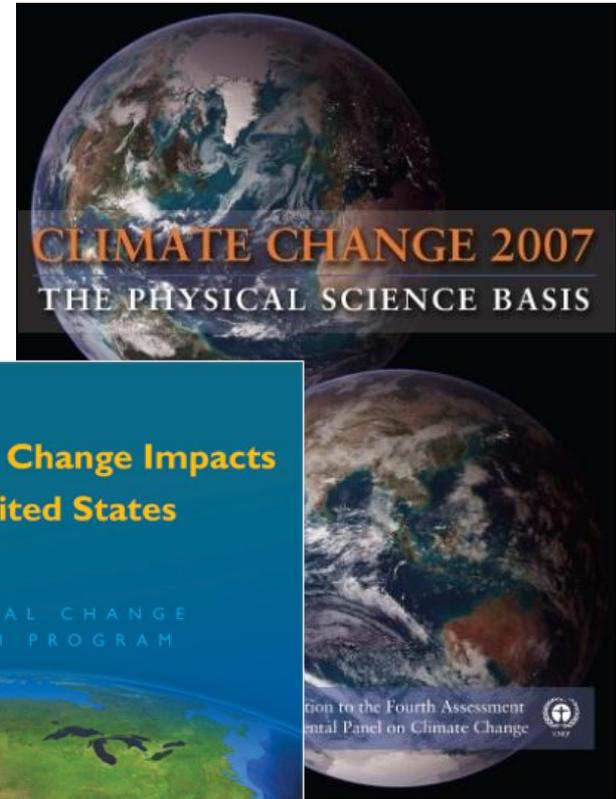
1. The activities and elements of a climate service should be user-centric.
2. If a climate service function is to improve and succeed, it should be supported by active research.
3. Advanced information (including predictions) on a variety of space and time scales, in the context of historical experience, is required to serve national needs.
4. The climate services knowledge base requires active stewardship.
5. Climate services require active and well-defined participation by government, business, and academia.

Climate Services: The timely production of useful climate data, information and knowledge to decision makers.

NOAA has contributed to recent international and national scientific assessments of climate change

NOAA contributed significantly to the development of the IPCC Fourth Assessment series of reports. NOAA scientists shared the 2007 Nobel Peace Prize.

NOAA led the development of the USGCRP Global Climate Change Impacts Report, released in 2009.

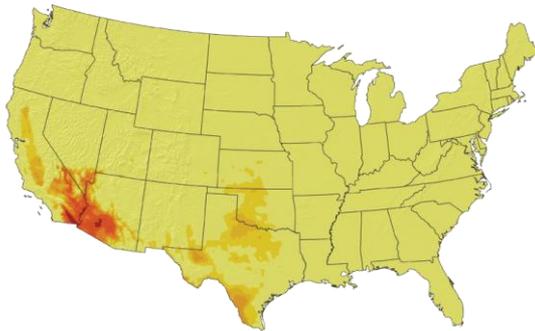


Widespread climate-related impacts are occurring now and are expected to increase.

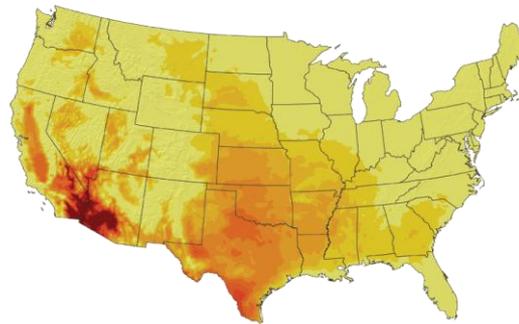


- Temperature rise
- Increase in heavy downpours
- Less snow and earlier snowmelt lead to changes in river flows
- Sea-level rise

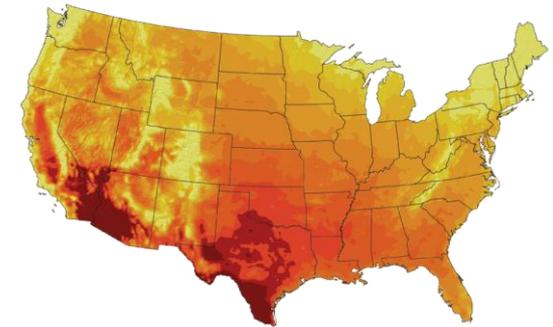
Recent Past, 1961-1979



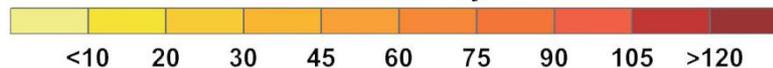
Lower Emissions Scenario, 2080-2099



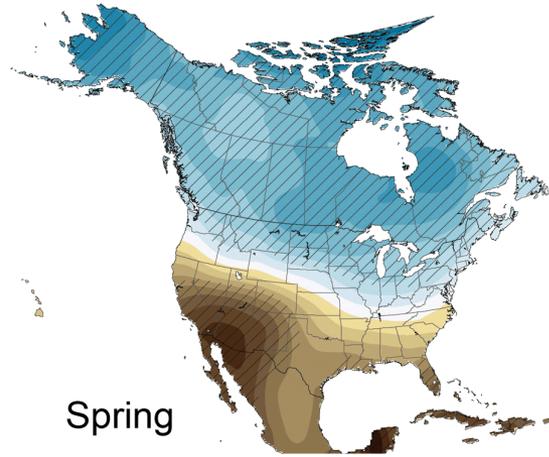
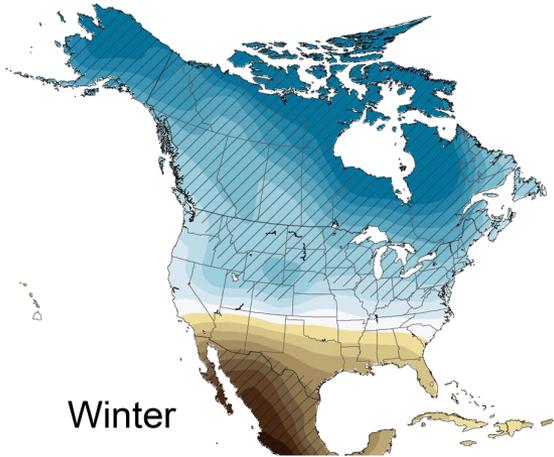
Higher Emissions Scenario, 2080-2099



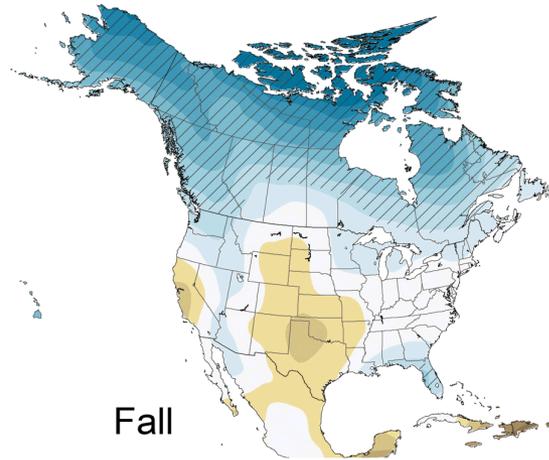
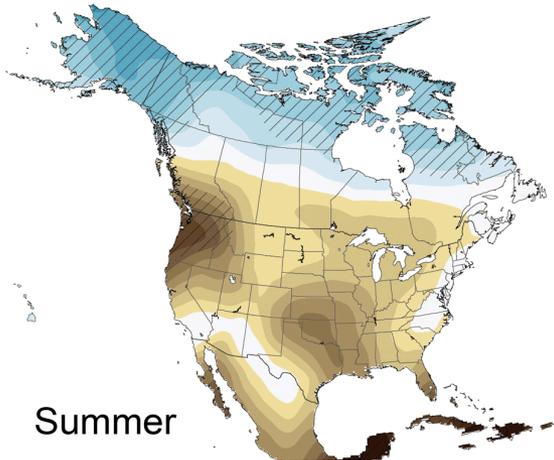
Number of Days



Climate change will stress water resources.



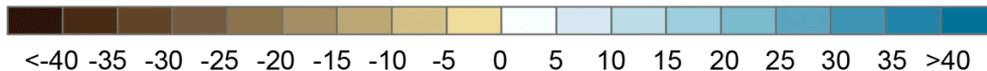
Projected change in precipitation by 2080-90s



The north will see more precipitation and the south will get less.

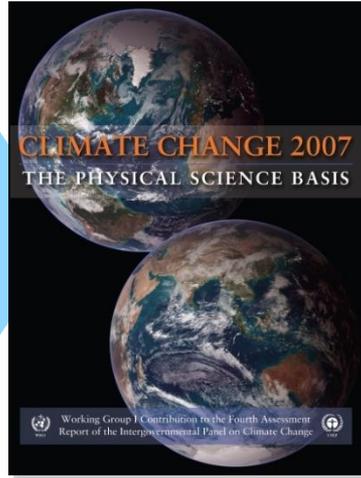
Spring in the Southwest will see a 40 percent decrease in precipitation.

Percent Change

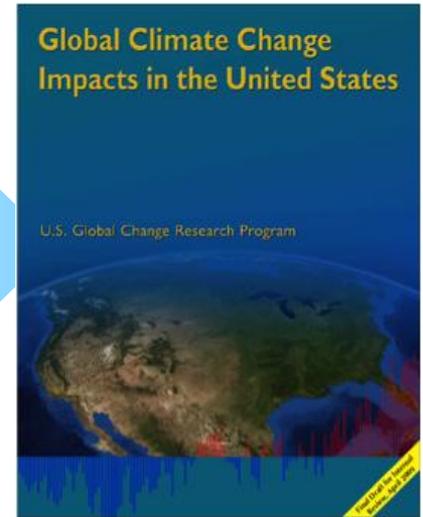


Meeting the Rising Demand

NOAA contributed significantly to the development of the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment series of reports
NOAA scientists shared the 2007 Nobel Peace Prize



NOAA led the development of the USGCRP Global Climate Change Impacts Report (GCCIR)



Commerce



Coasts



Recreation



Ecosystems



Hydropower



Farming



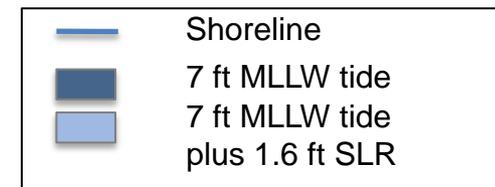
Wind Energy



Private Sector

Meeting the Rising Demand for Climate Services

1. NOAA's existing framework for climate was established before climate services were recognized as essential, and is not optimized for climate service delivery.
2. While NOAA has continued to build its suite of climate services within its existing framework, including our interagency approach to delivering drought information services, much of the demand remains unmet.
3. To meet climate service demands, NOAA must direct efforts to develop a framework that will:
 - Connect users to existing climate products and services, while continuing to develop new authoritative, reliable services;
 - Transform current science and data into understandable, usable and accessible information;
 - Actively engage users in service development.
4. NOAA's climate framework must deliver needed climate services while maintaining leadership in observing, research, modeling and assessments



Lidar-derived data used to map potential area of shallow coastal flooding in Charleston, SC.

NOAA commits to providing critical assets in science and service to a Federal partnership



Information Delivery and Decision Support

NOAA uses its national and regional infrastructure to deliver climate services today

Assessments of Climate Change and Impacts

*NOAA is a leader in national and regional climate impact assessments
Over 70% of Federal IPCC AR4 WG1 authors were from NOAA*

Climate Change Research and Modeling

Internationally recognized models of the global climate

Climate Observations and Monitoring

*NOAA operates over 90 observation and monitoring systems
NOAA is mandated to monitor and provide access to climate data and information*

- Security
- Forestry
- Water
- Health
- Infrastructure
- Global
- Land Management
- Oceans
- Energy
- Other

Proposed NOAA Climate Service (NCS) Entities

NESDIS DATA CENTERS

National Climatic
Data Center

National Oceanographic
Data Center

National Geophysical
Data Center

OAR PROGRAM & LABORATORIES

Earth System Research Lab
Office of the Director
Chemical Sciences Division
Global Monitoring Division
Physical Sciences Division

Geophysical Fluid Dynamics
Laboratory

Climate Program Office

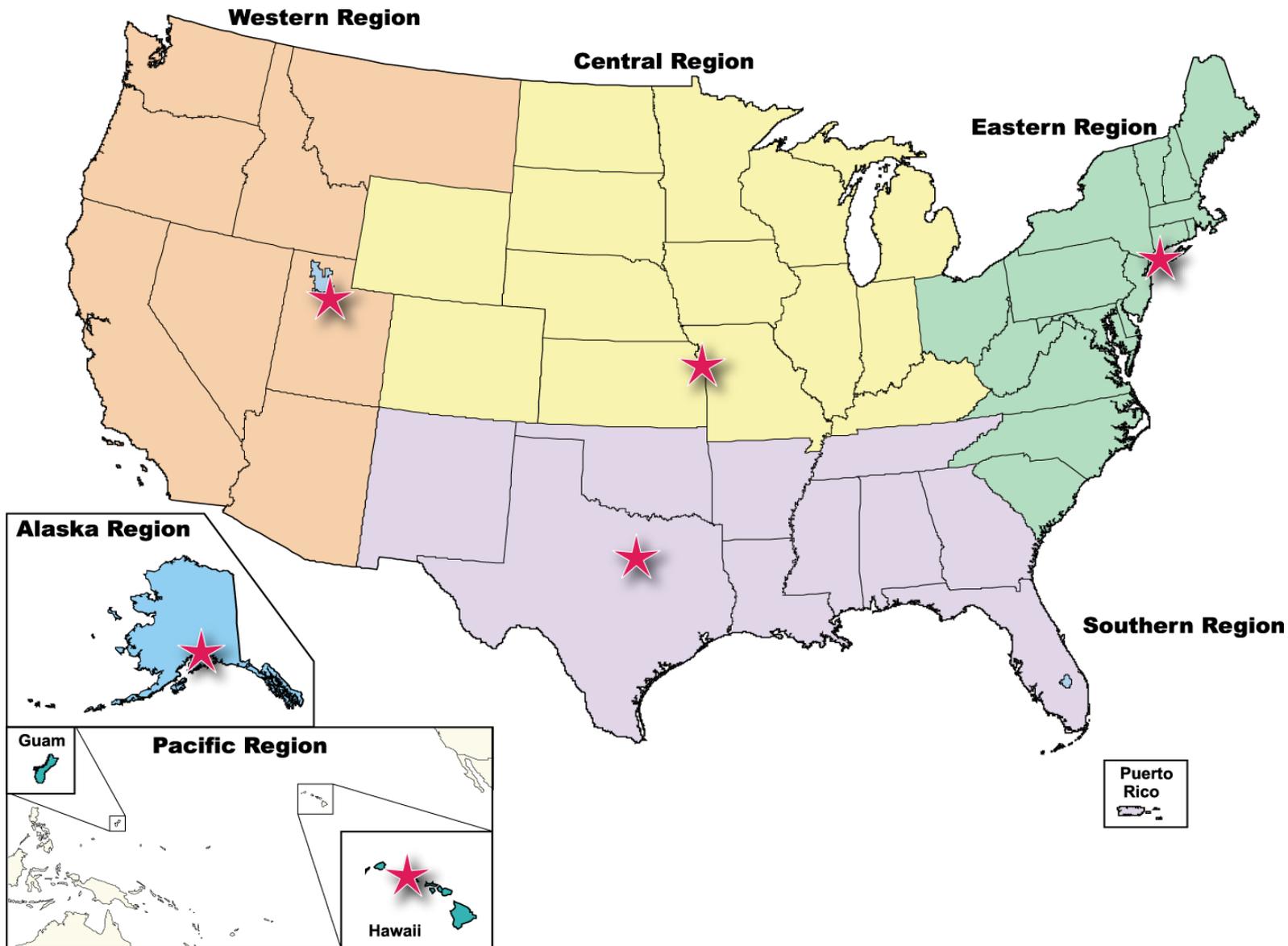
NWS FUNDING TO MANAGE NETWORKS (NO STAFF CHANGE)

Climate Observing Network
Tropical Atmosphere Ocean
(TAO)
Historical Climate Network
Modernization (HCN-m)
Modernization of the Hourly
Precipitation Rain Gauges

**NOS & NMFS
UNCHANGED**

The physical location of these facilities will not change

New Regional Climate Service Directors



Federal Regional Climate Service Enterprise

Connecting Science, Services and People

**State and Local Engagement,
Education & Service Delivery**

**Regional Climate
Services Partnerships**

Regional Climate Science

USER ENGAGEMENT

- *Development, Delivery & Evaluation of Products & Tools*
- *Understanding and Translating User Needs*
- *Informing Program Requirements*



Government
Private Sector
Academia
NGO's

NOAA Climate Service Leadership

Water

Water Issues

- Precipitation Patterns; Drought and Floods
- Changes in snowpack (quantity and timing)
- River stream flow
- Fire outlooks
- Physical Infrastructure (i.e., dams, reservoirs, water delivery systems)
- Planning (e.g., urban, agriculture, health)



NOAA Products and Services

- Monitor and Forecast Drought and Flood Related Conditions
- NIDIS (Including Stakeholder Engagement)

Key Federal Agencies

NOAA, DOI, Army
Corps of Engineers,
USDA, EPA



NOAA Climate Services Portal



NOAA CLIMATE SERVICES
Development Prototype

Explore: ClimateWatch Magazine Data & Services Understanding Climate Education

Articles

Living with an Uncertain Monsoon

Featured Article, Thu, Oct 29th, 2009
by Esther Conrad
In May and June each year, speculation about the coming of the monsoon fills newspapers and conversations across India. Everyone is concerned about if, when, and how much rain will arrive. But none have more at stake than India's over 100 million farming households.
Read Full Article »

Videos

Meet NOAA's climate scientists and get their perspectives on climate.

Watch Susan Solomon Wins 2009 Volvo Environment Prize

Watch What is Causing Global Climate Change?

Watch What Scientists Know Today About Climate

Images

Browse images, photos and visualizations of Earth's climate system.

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Multiple audiences so multiple avenues to access information

- *ClimateWatch* Magazine
- Data and Services
- Understanding Climate
- Education
- Climate Dashboard

Global Climate Dashboard

Climate Change Climate Variability

Adjust the sliders to view different time periods.

1950 2008

Click any graph for more information.

Temperature (C)

0.5

Past Weather

City, State or Zip
01-06-2010
Lookup

News

Tom Karl, Director of NOAA's National Climatic Data Center, Answers Questions About Climate Science

One-stop access for NOAA's climate information

www.climate.gov

NOAA CLIMATE SERVICES
Development Prototype

Explore: ClimateWatch Magazine Data & Services Understanding Climate Education

Past & Present Climate

Climate at a Glance
Reports and summaries of climate and climate related events.

Predictions

U.S. Winter Outlook
Looking Ahead
Short term predictions of how climate is likely to change in coming days, weeks and months.

NOAA Partners

Explore NOAA by Region
Explore the regional climate services and products NOAA and partners offer.

Climate & You

Utilizing Climate Data
Applications of climate information and data to real world issues.

Data Library

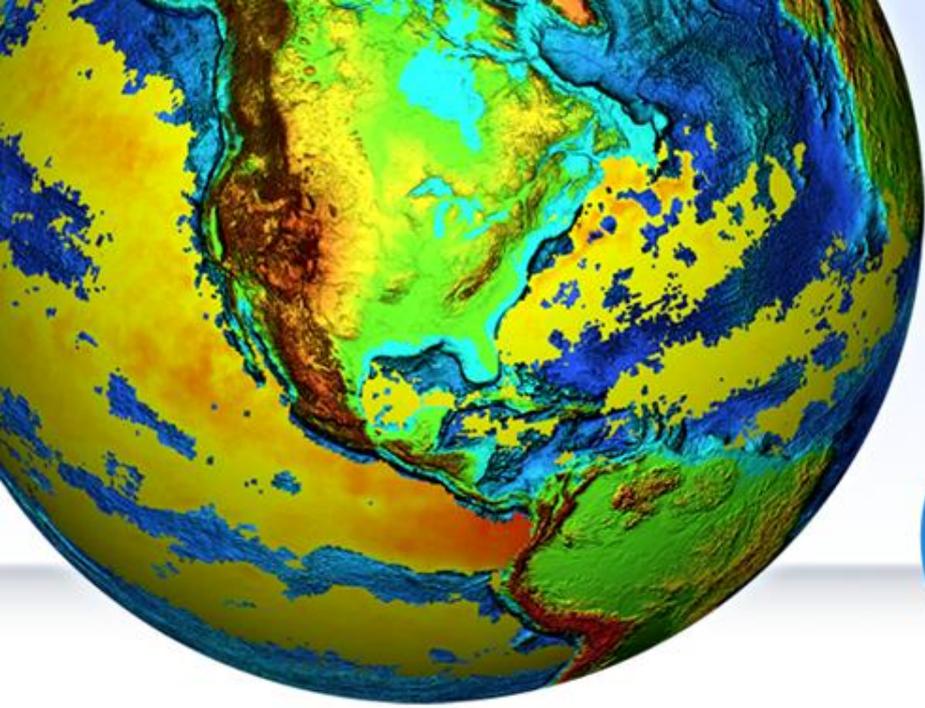
Visualizing & Explore
Find climate data and information by subject or with an interactive map.

For More Information...

- www.noaa.gov/climate
 - Q&As, proposed reorganization chart, a Power Point, climate handouts featuring our science and regional services, and recordings from this Town Hall and a press conference.
- climateservice@noaa.gov
 - New mailbox to address your questions
- www.climate.gov
 - NOAA's new Climate Portal

Next steps...

- Stakeholder Engagement
- National Academy of Public Administration study
- Reprogramming Submission



NOAA CLIMATE SERVICE

Thank you!