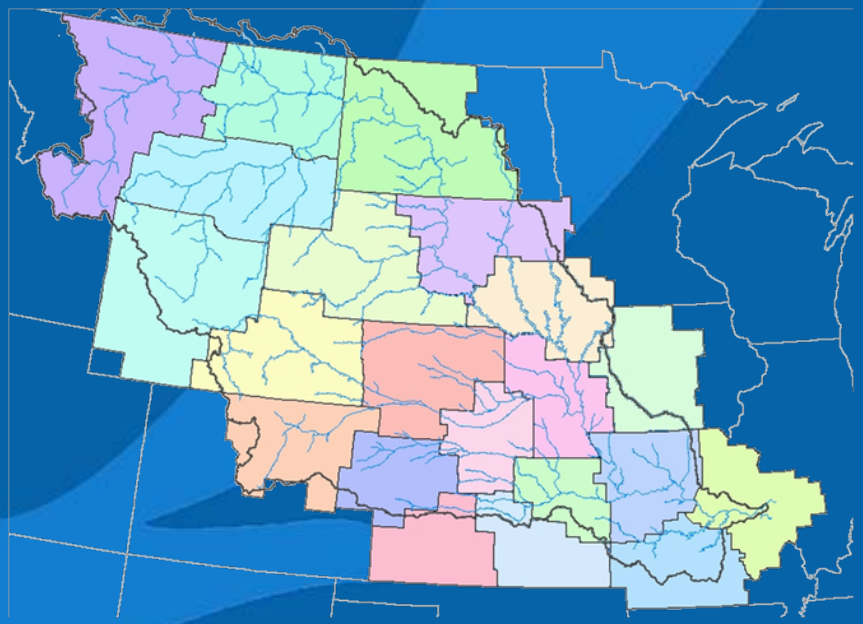
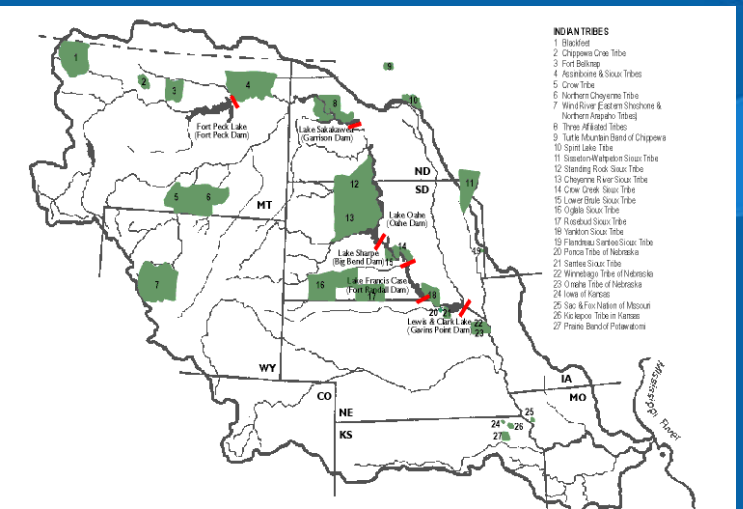
Climate Collaboration in the Missouri Basin (1st Meeting)





Doug Kluck
Regional Climate Service Director
Central Region
Doug.kluck@noaa.gov

The Rising Demand for Climate Services

Commerce

Coasts

Recreation

Ecosystems

Hydropower

Farming

Wind Energy

Private Sector

"All our greatest challenges are pervasive around the globe, and all are local in their solution." -*A stakeholder from Missouri*

The National Climate Service Partnership

- no single agency can address the climate challenge on its own

Observations/Monitoring

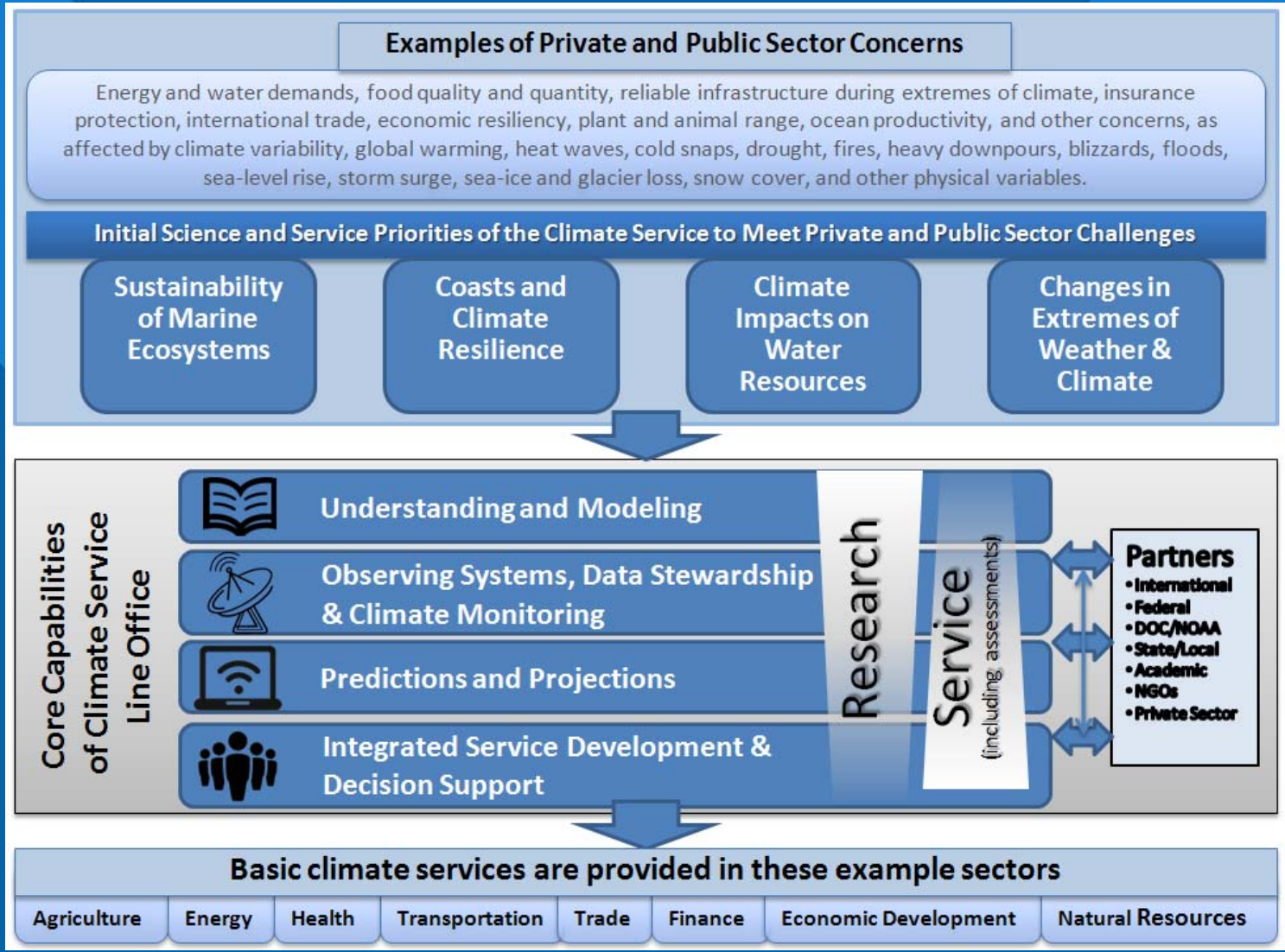
Research, Modeling & Assessments

National Climate Service

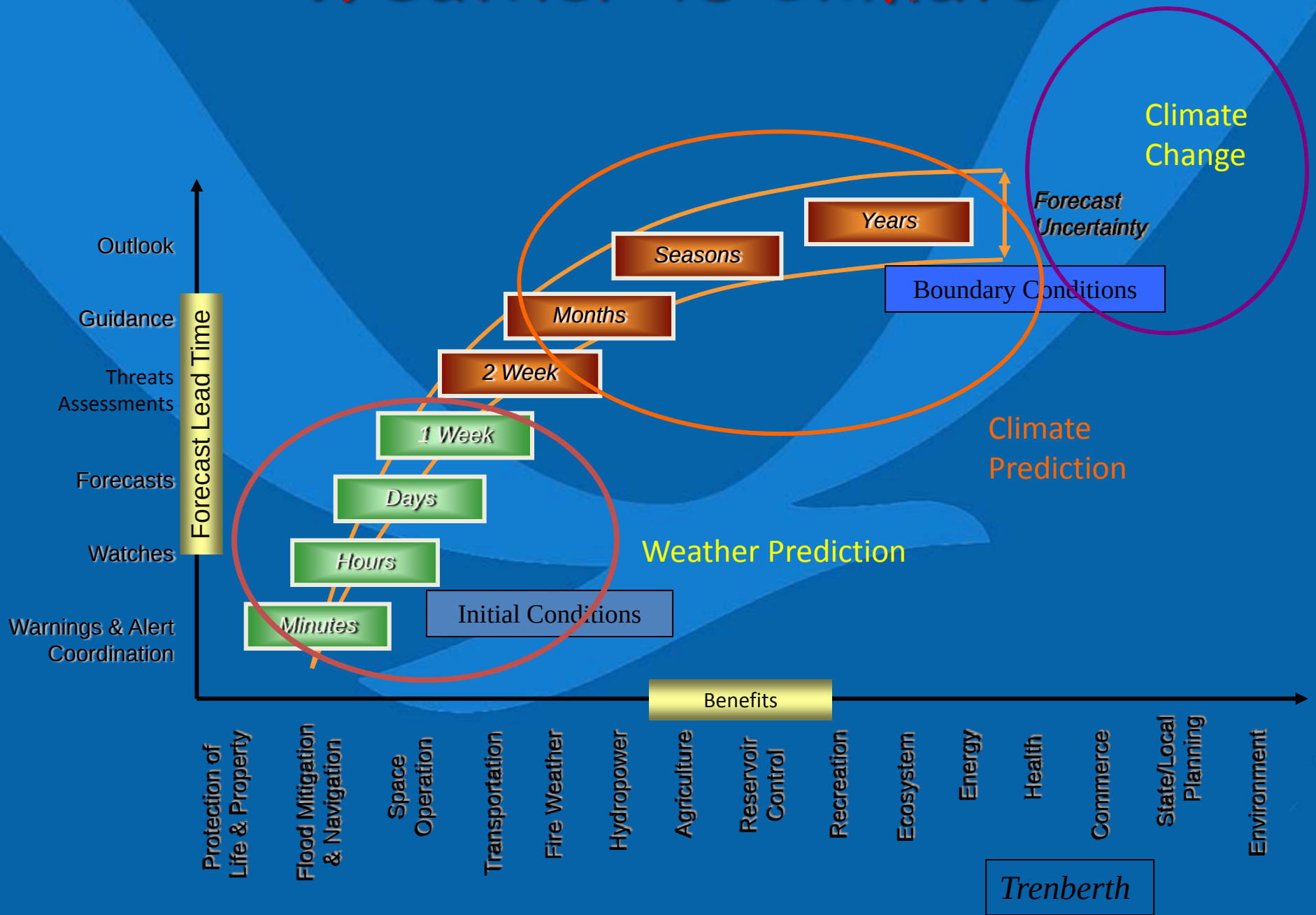
Resource Risk Management

Adaptation & Mitigation

Climate Service Core Capabilities Address Societal Challenges



Weather vs Climate



Effectively Anticipating and Responding to a Changing Climate Requires…

A continuously evolving understanding of the integrated "*climate-society system" (Glantz)* to address today's challenges and plan for the future

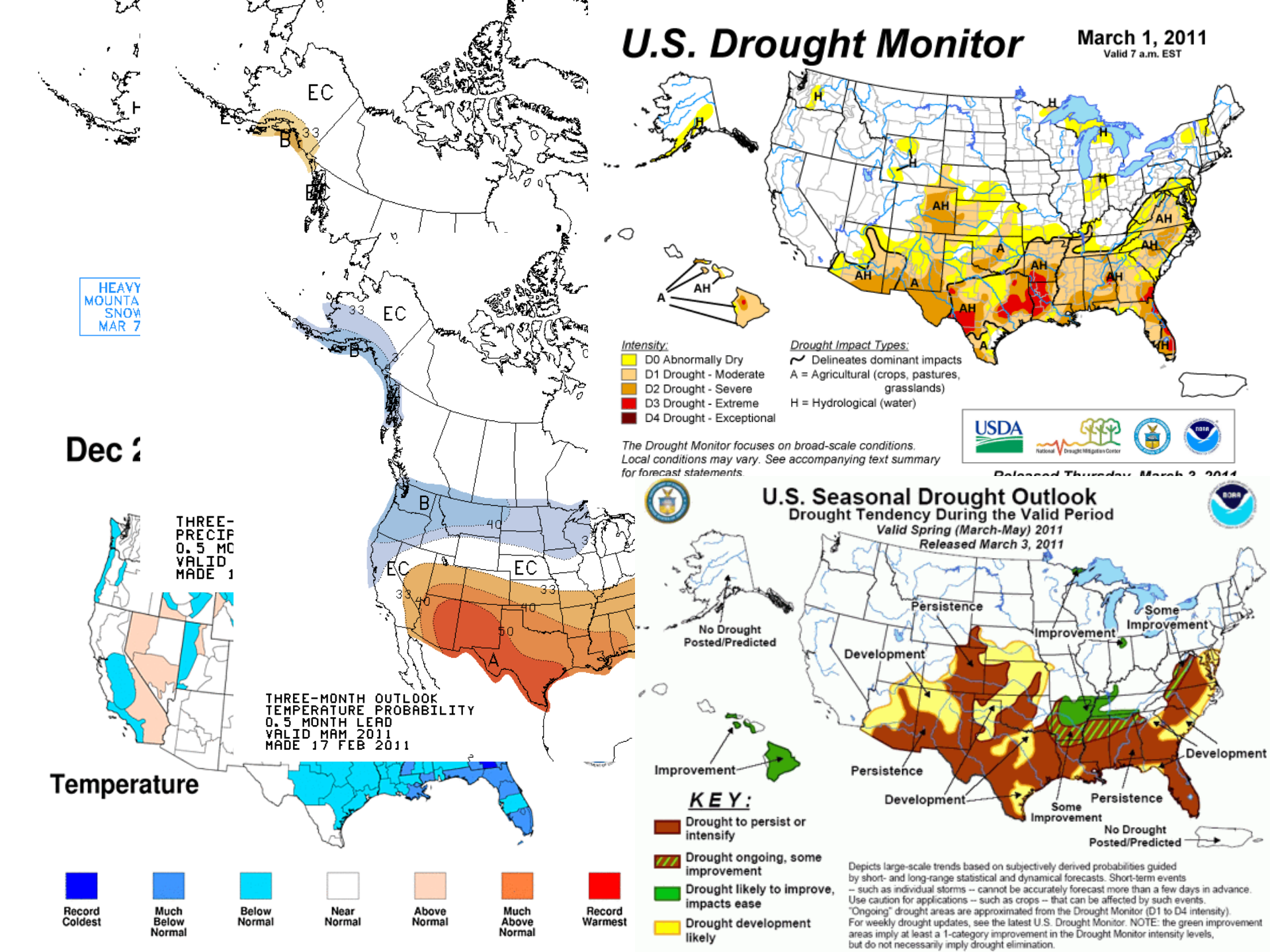
and

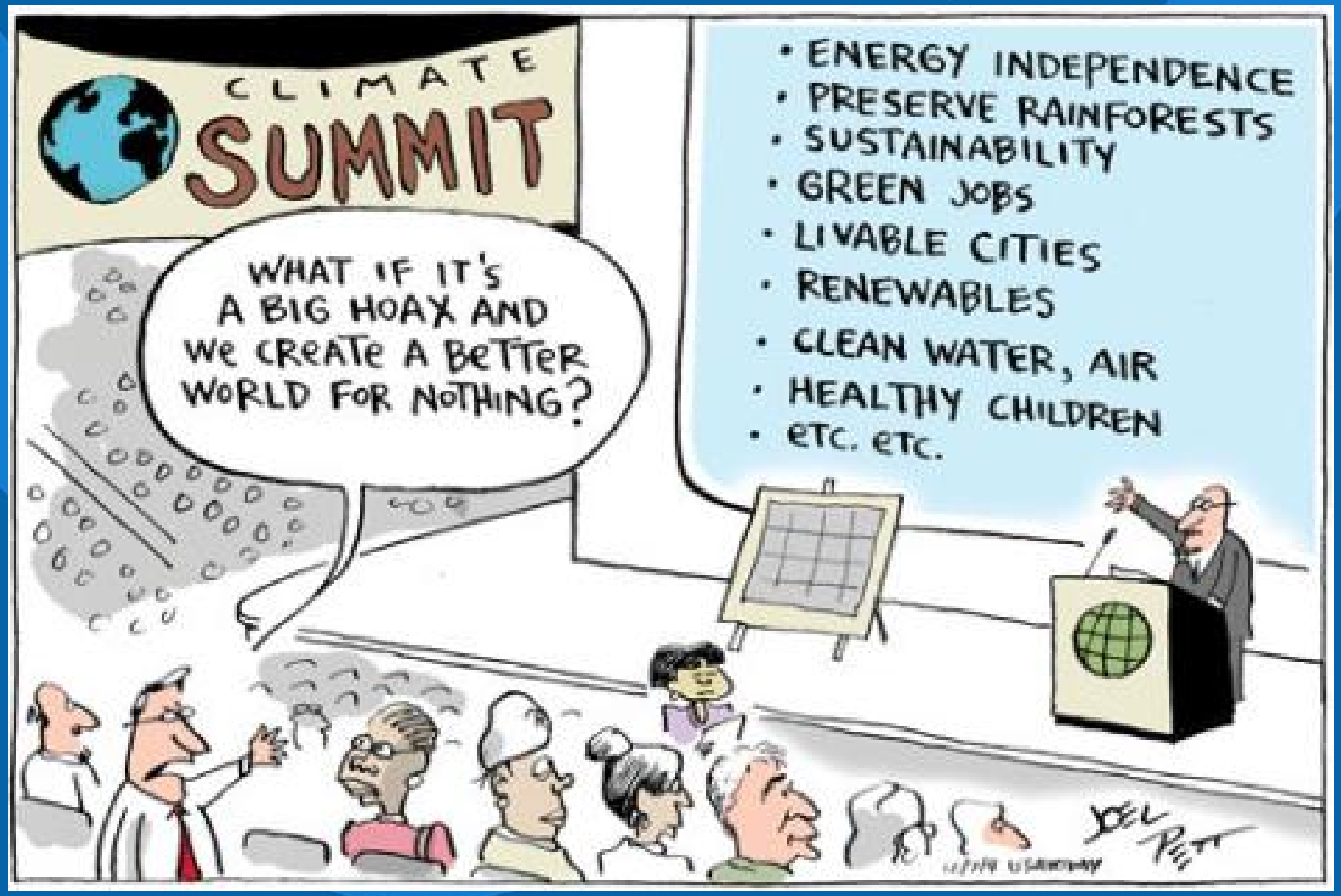
An adaptive management approach that provides for regular evaluation and adjustment of decisions as new scientific insights emerge and socio-economic conditions change

People, Places, Possibilities, Partnerships: Understanding Risks & Enhancing Resilience

Regional Priorities

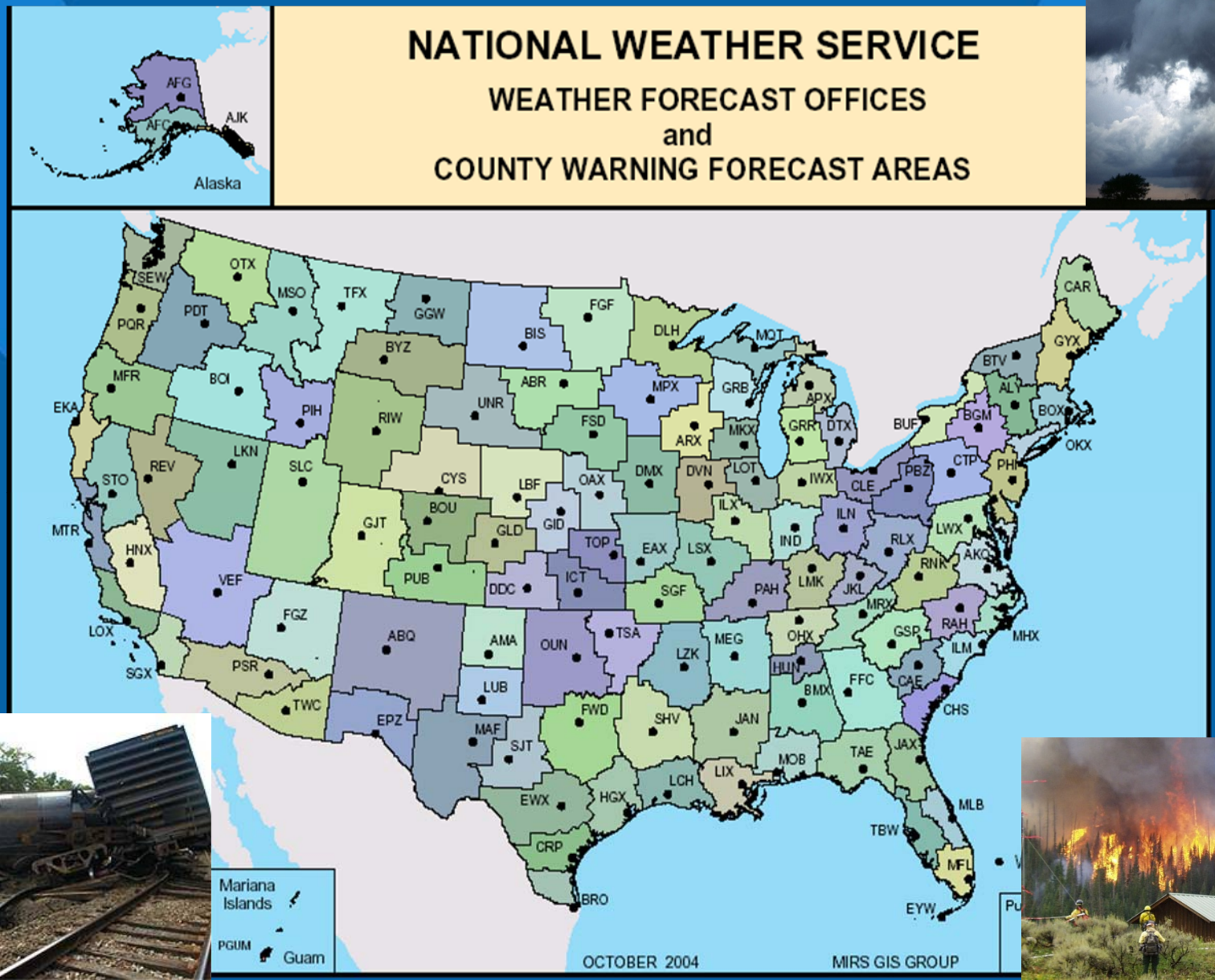
- Organize and build regional climate collaboration networks
  - Mo Basin-Plains states & Midwest/Great Lakes states (West & East)
  - Feds (including LCC & CSC) , RCCs, SCs, tribal, academic, RISA, NGO, city & state organizations
- Assessment – both regional and national (USGCRP)
  - For: Need, Changing Climate, Adaptation Response


U.S. Drought Monitor
March 1, 2011
Valid 7 a.m. EST
Intensity:
D0 Abnormally Dry
D1 Drought - Moderate
D2 Drought - Severe
D3 Drought - Extreme
D4 Drought - Exceptional
Drought Impact Types:
Delineates dominant impacts
A = Agricultural (crops, pastures, grasslands)
H = Hydrological (water)
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
USDA
HEAVY MOUNTA SNOW MAR 7
Dec 2
THREE-PRECIP 0.5 MO VALID MADE 1
THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID MAM 2011
MADE 17 FEB 2011
Temperature
Record Coldest
Much Below Normal
Below Normal
Near Normal
Above Normal
Much Above Normal
Record Warmest
U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid Spring (March-May) 2011
Released March 3, 2011
No Drought Posted/Predicted
Persistence
Development
Improvement
Some Improvement
KEY:
Drought to persist or intensify
Drought ongoing, some improvement
Drought likely to improve, impacts ease
Drought development likely
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

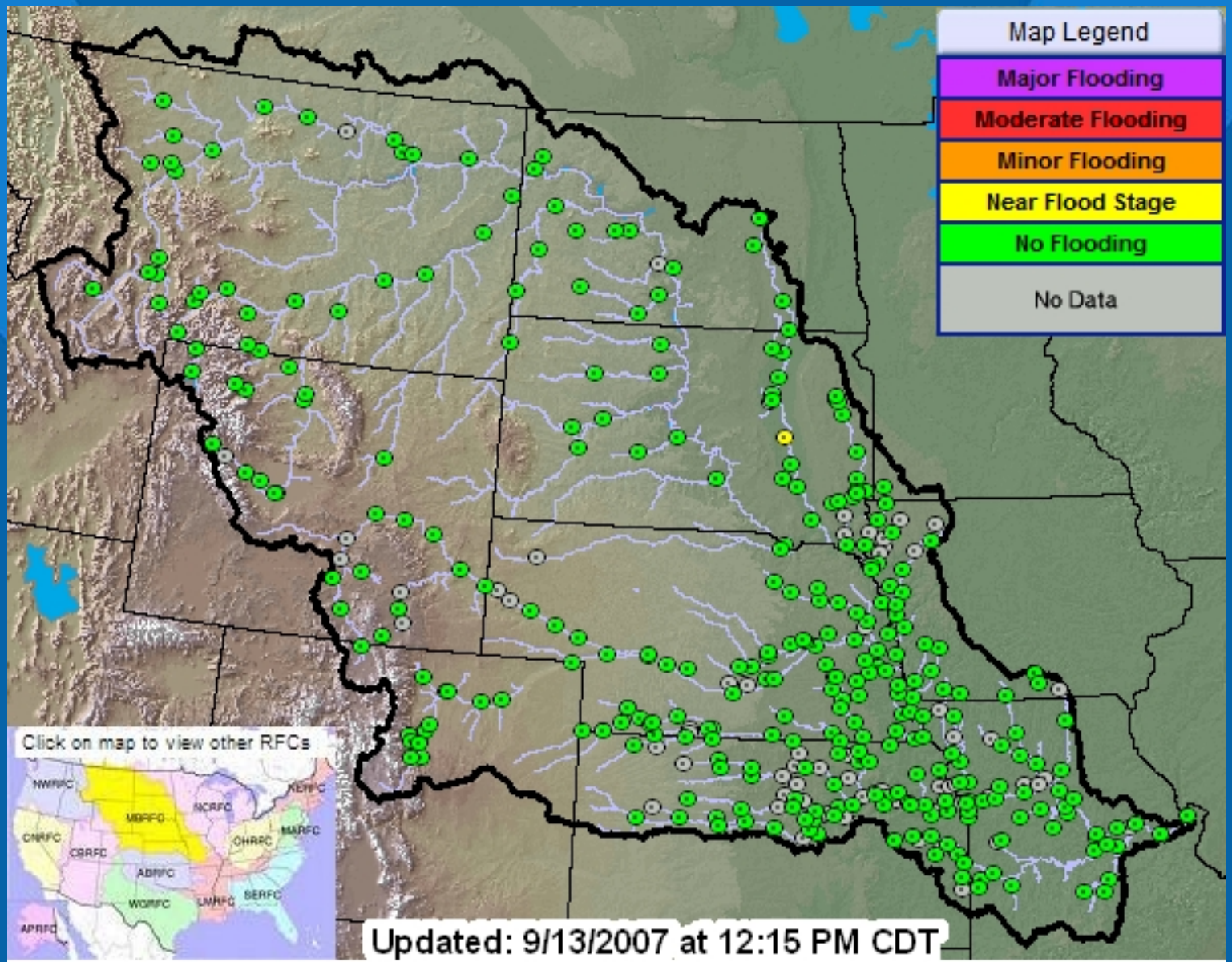

CLIMATE
SUMMIT
WHAT IF IT'S A BIG HOAX AND WE CREATE A BETTER WORLD FOR NOTHING?
• ENERGY INDEPENDENCE
• PRESERVE RAINFORESTS
• SUSTAINABILITY
• GREEN JOBS
• LIVABLE CITIES
• RENEWABLES
• CLEAN WATER, AIR
• HEALTHY CHILDREN
• ETC. ETC.

Thank You

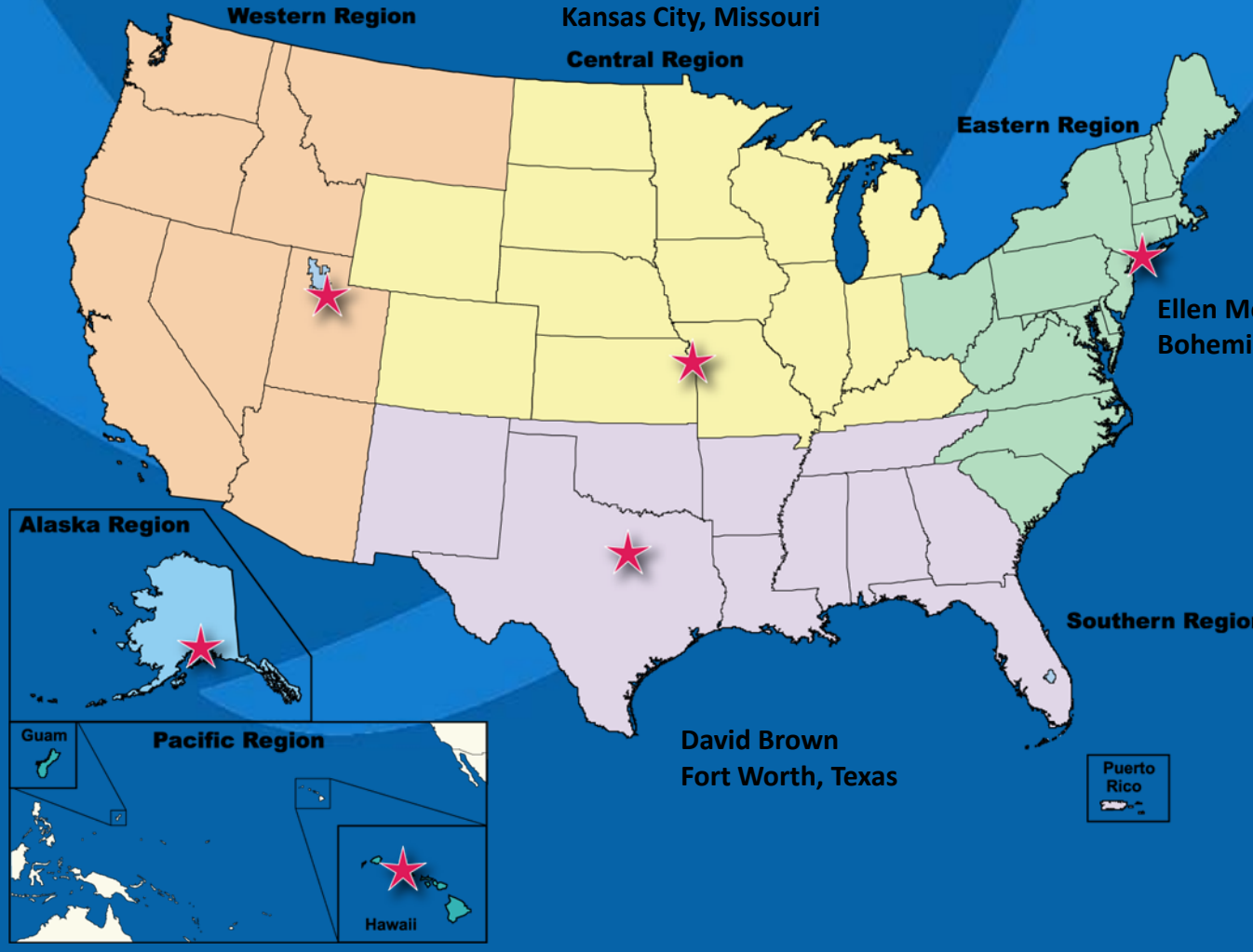
Weather


NATIONAL WEATHER SERVICE
WEATHER FORECAST OFFICES
and
COUNTY WARNING FORECAST AREAS
Alaska
AFG
AFC
AJK
SEW
OTX
MSO
TFX
GGW
FGF
BIS
DLH
MQT
PQR
PDT
BYZ
MFR
BOI
ABR
MPX
GRB
APX
EKA
PIH
RIW
UNR
FSD
ARX
MKX
GRR
DTX
BUF
BTV
GYX
ALY
BGM
BOX
OKX
LKN
SLC
REV
STO
CYS
LBF
OAX
DMX
DVN
LOT
IWX
CLE
PBZ
CTP
PHI
CAR
MTR
GJT
BOU
GID
GLD
TOP
EAX
LSX
ILX
IND
ILN
RLX
LWX
AKQ
RNK
HNX
VEF
PUB
DDC
ICT
SGF
PAH
LMK
JKL
MRX
GSP
RAH
ILM
MHX
LOX
FGZ
ABQ
AMA
OUN
TSA
LZK
MEG
OHX
HUN
SGX
PSR
TWC
LUB
BMX
FFC
CAE
CHS
EPZ
MAF
SJT
FWD
SHV
JAN
MOB
TAE
JAX
LIX
LCH
HGX
EWX
MLB
TBW
CRP
MFL
BRO
EYW
Mariana Islands
PGUM
Guam
OCTOBER 2004
MIRS GIS GROUP

River Forecast Points



Regional Climate Service Directors



Doug Kluck
Kansas City, Missouri

DeWayne Cecil
Salt Lake City, Utah

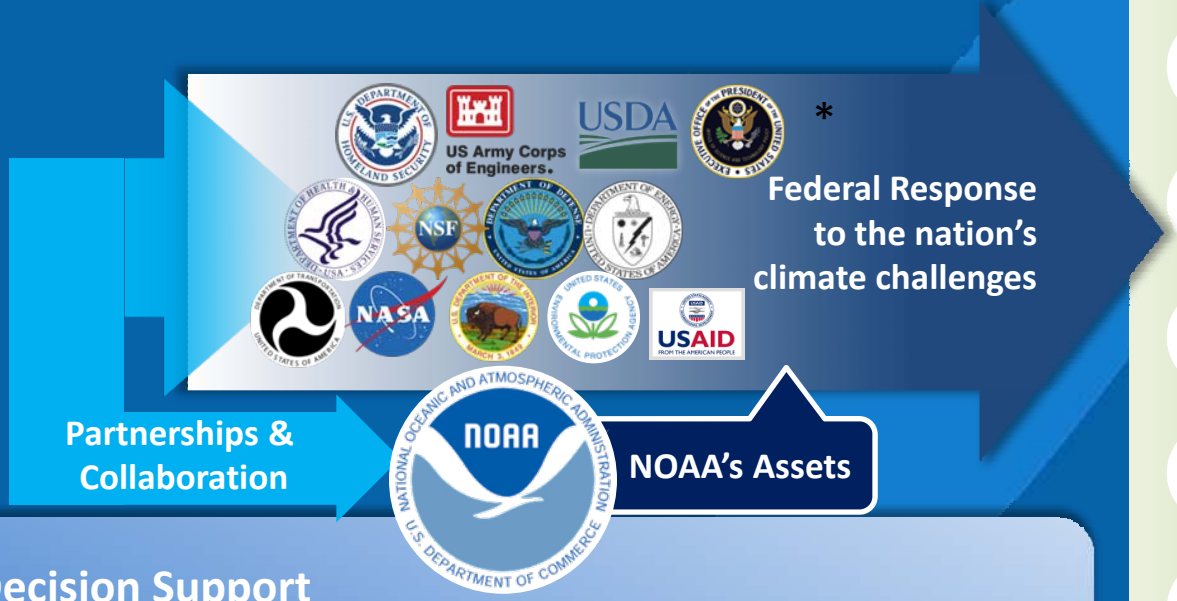
Ellen Mecray
Bohemia, New York

James Partain
Anchorage, Alaska

David Brown
Fort Worth, Texas

John Marra
Honolulu, Hawaii

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

*Representative Organizations & Sectors