

Office of Chief Scientist

Environmental Defense Fund Climate Science Synergies

ECOSYSTEMS

- Revitalize Working Rivers
- Protect Coastal Communities
- Increase Habitat On Working Lands
- Make Fertilizer Pollution Obsolete

CLIMATE & ENERGY

- | | |
|--------------|----------------|
| Clean Energy | Oil & Gas |
| Legal | Global Climate |
- Reducing SLCF & LLCF
 - Advancing Climate Science
 - Scientific Support of Climate & Energy Policy

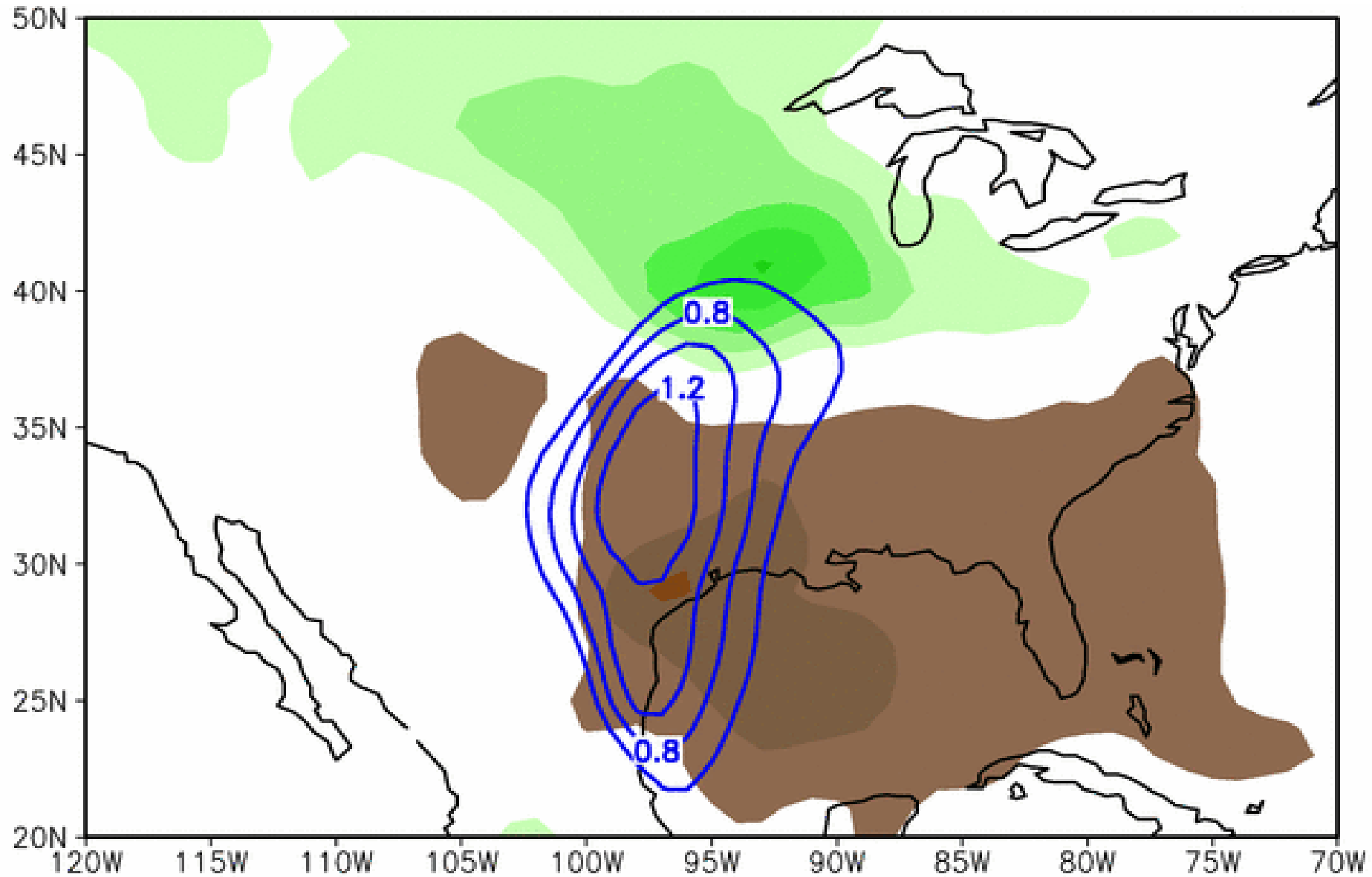
OCEANS

- Fish
- More Fish
- Even More Fish

HEALTH

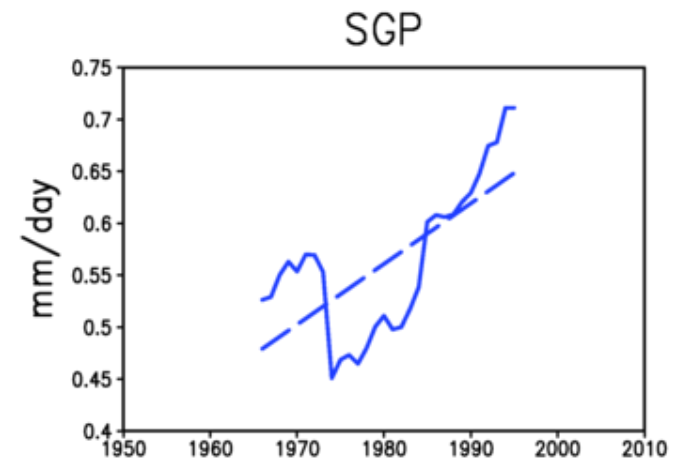
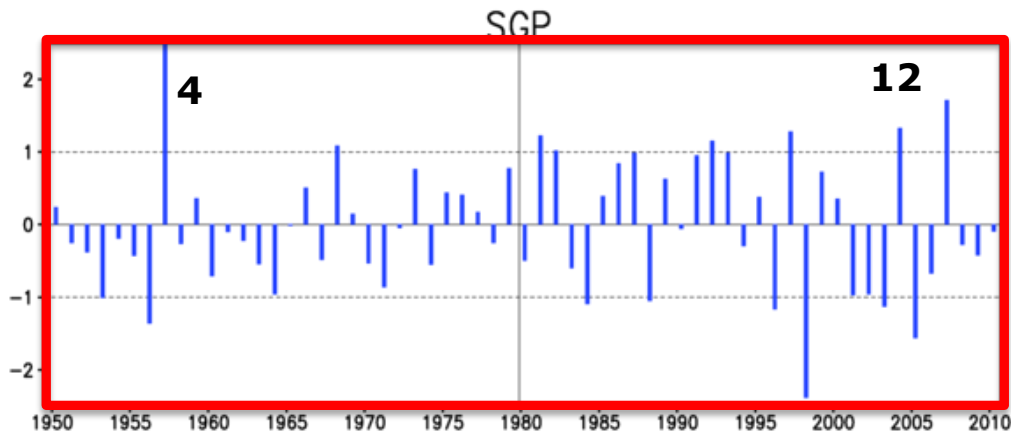
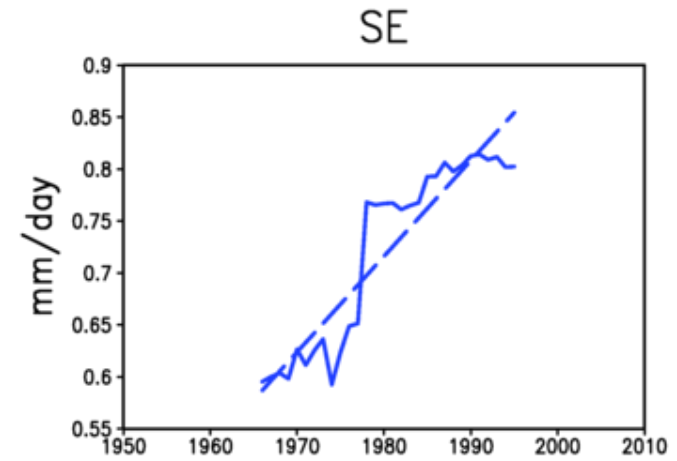
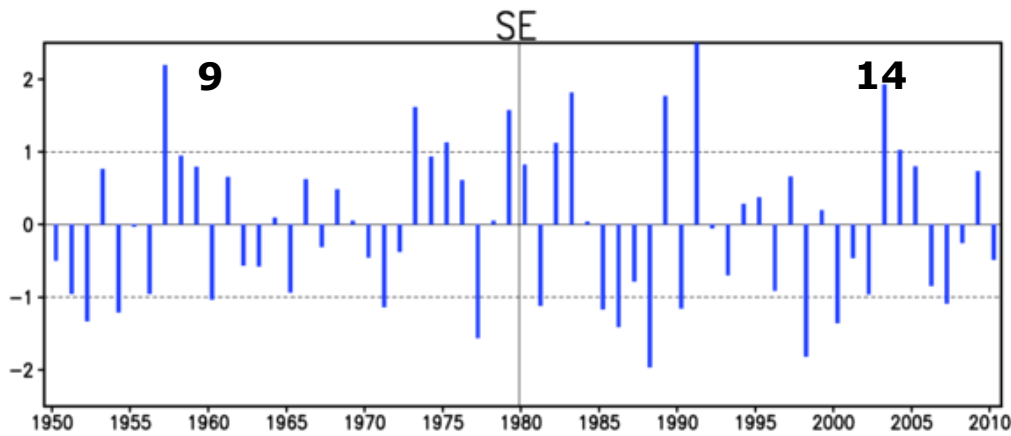
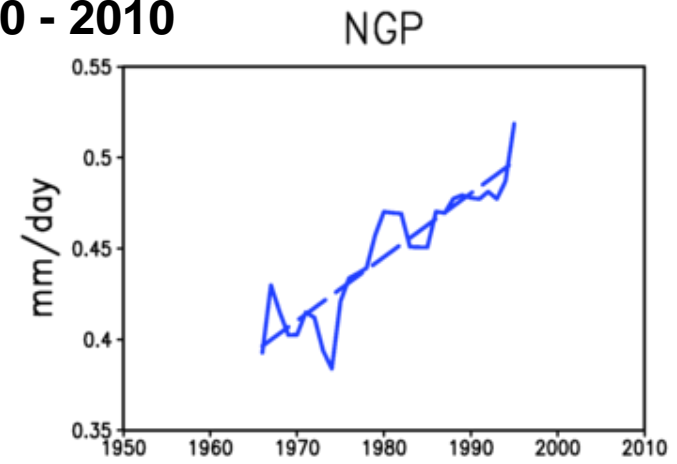
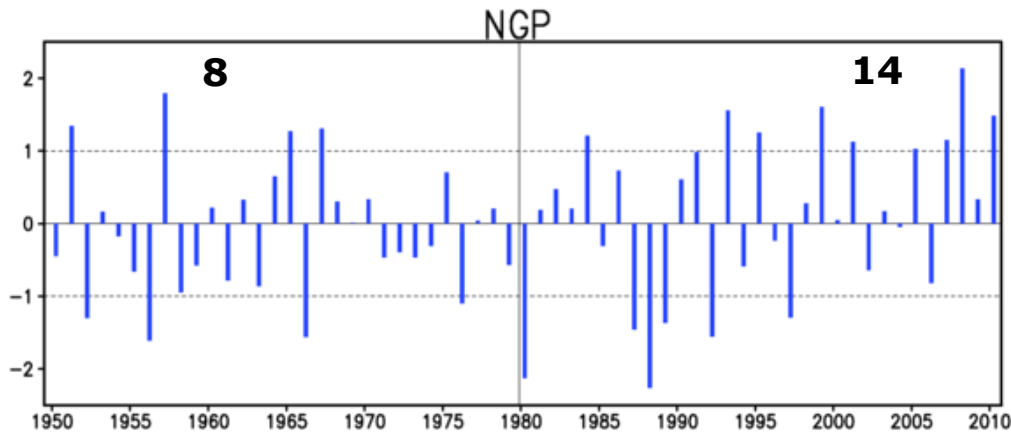
- Water Pollution
- Air Pollution

Variability Warm Season GPLLJ and Precipitation

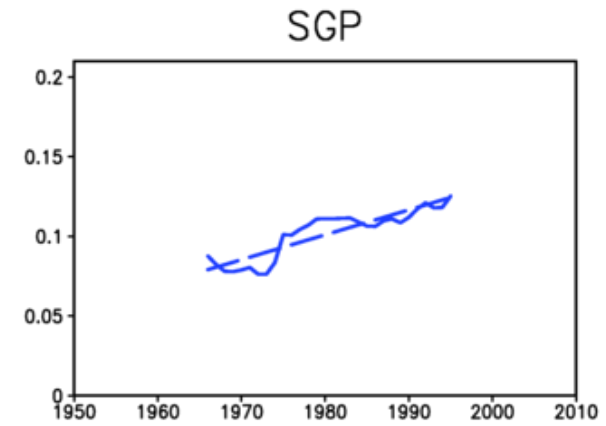
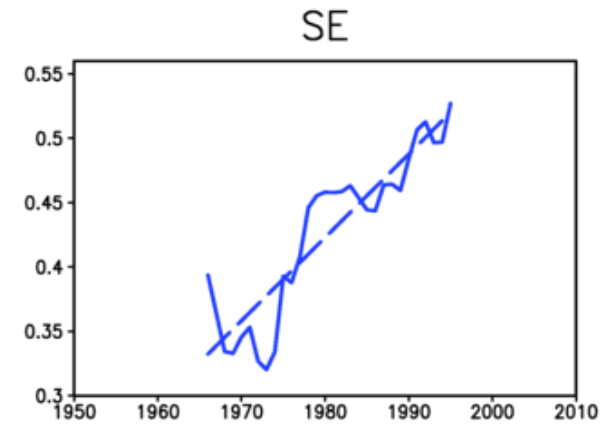
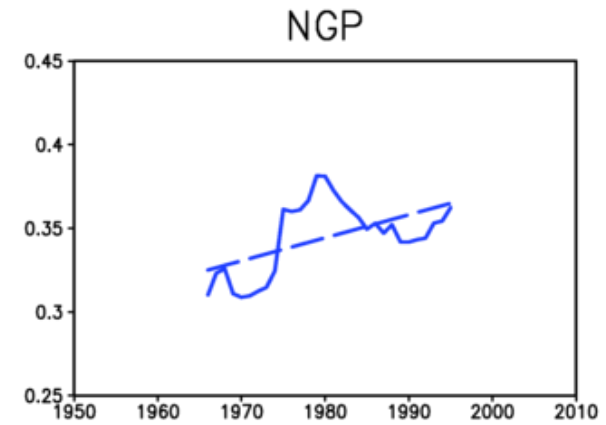
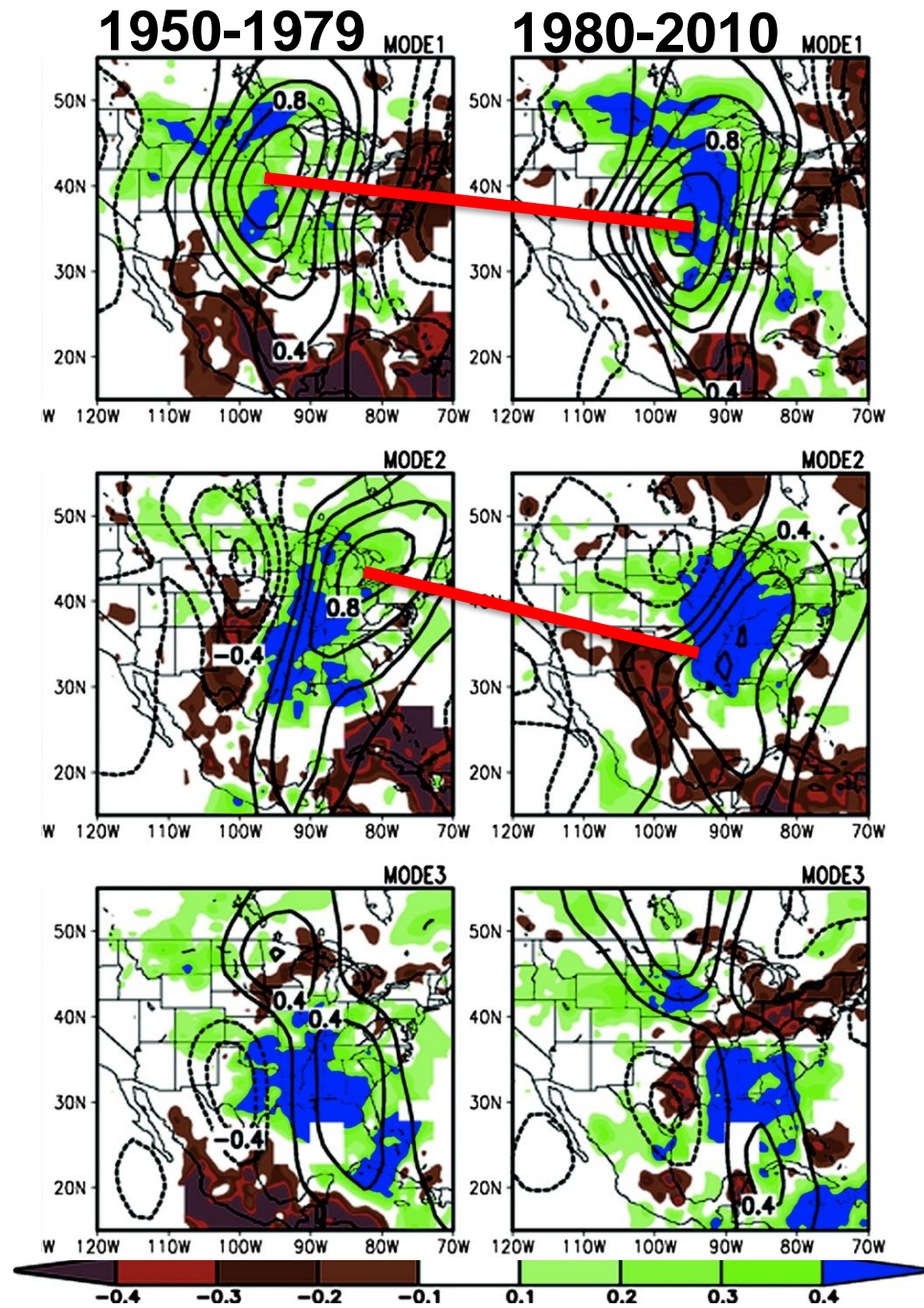


AMJ Precipitation 1950 - 2010

Weaver et al. 2016
Journal of Climate



Weaver et al. 2016
Journal of Climate



- **Water Related Limitations**

- Monitoring of surface and groundwater interactions.
- Improved understanding of the relative roles of natural climate variability and anthropogenic climate change in physical mechanisms of central/western U.S. drought/pluvial.
 - Atmosphere – land surface interactions.
 - Primary causes of observed (and future) changes in temperature & precipitation variability.

- **Key Objectives and Tasks**

- Develop and nurture lines of research to improve monitoring, modeling (large scale circ., downscaling, land surface, predictability), and nat/anthro process studies. Closing the Great Plains terrestrial water budget.

- **Social, Economic, Environmental Benefits**

- Improved water management practices fostering sustainability.
- Improved understanding of regional climate change impacts.
- Better understanding of Nat/Anthro pathways enhance scientific credibility in climate communications leading to improved mitigation and adaptation strategies.