The Challenges of Addressing Climate Change: Science and Risks

AASHTO/FHWA/FTA Climate Change Symposium

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About the Pew Center

- Founded in May 1998
- Independent, non-profit, non-partisan
- Produces research on policy, economics, science & impacts, and solutions
- Works with policymakers at state, federal, and international levels
- Conducts education and outreach
- Engages the business community through the Business Environmental Leadership Council

BUSINESS ENVIRONMENTAL LEADERSHIP COUNCIL

Challenges of Addressing Climate Change

The public policy issue

- Science is complex and uncertainties are significant
- Impacts and associated costs are long-term, but mitigation costs are near-term
- Lag between emissions and impacts, but impacts are effectively irreversible
  - Focus this morning on science and economics

Scientific Controversies????

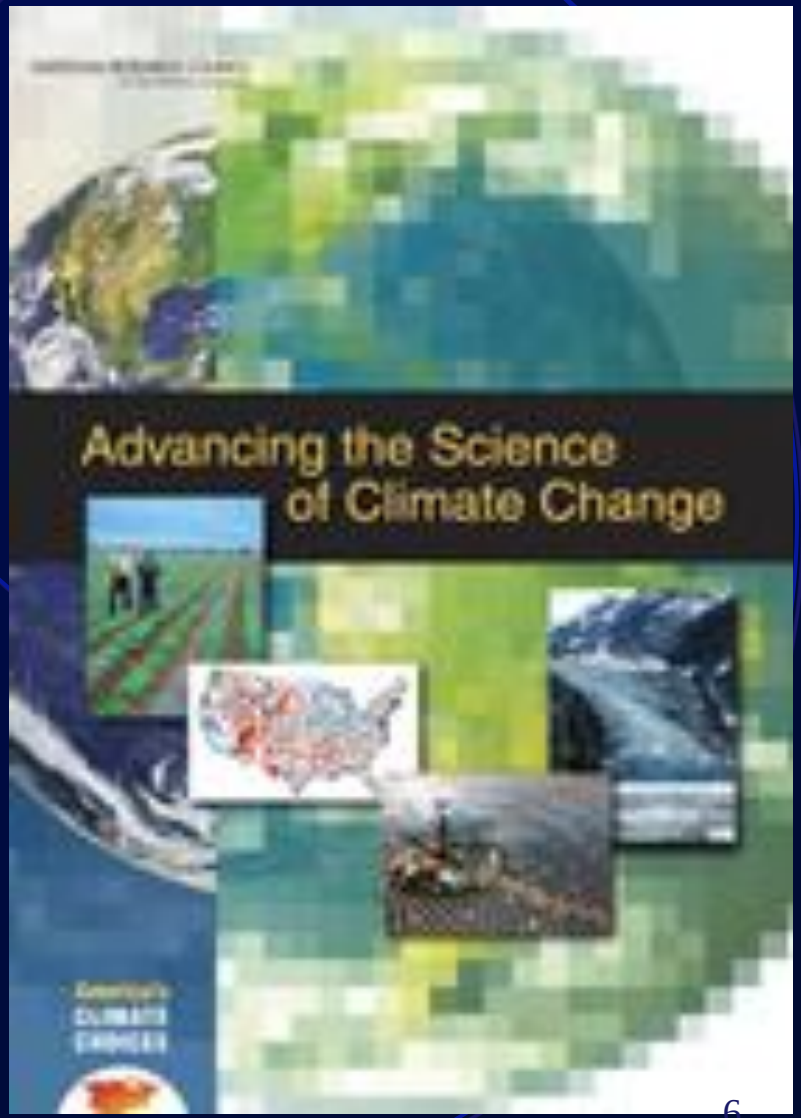
Spent the last 9 months hearing about

- Stolen e-mails from Climatic Research Unit in UK
  - ✓ Scientists cleared in five separate investigations
- Mistakes in the IPCC assessment reports
  - ✓ Two factual mistakes found; do not affect conclusions
  - ✓ Conducting review to improve IPCC processes
- East Coast snowstorms
  - ✓ *"Because precipitation comes mainly from … the water vapour stored in the atmosphere, this has generally increased precipitation intensity and the risk of heavy rain* ***and snow*** *events."* (IPCC 2007)

Latest NAS Report: America's Climate Choices

"A strong, credible body of scientific evidence shows that climate change is occurring, is caused largely by human activities, and poses significant risks for a broad range of human and natural systems."

-- June 2010



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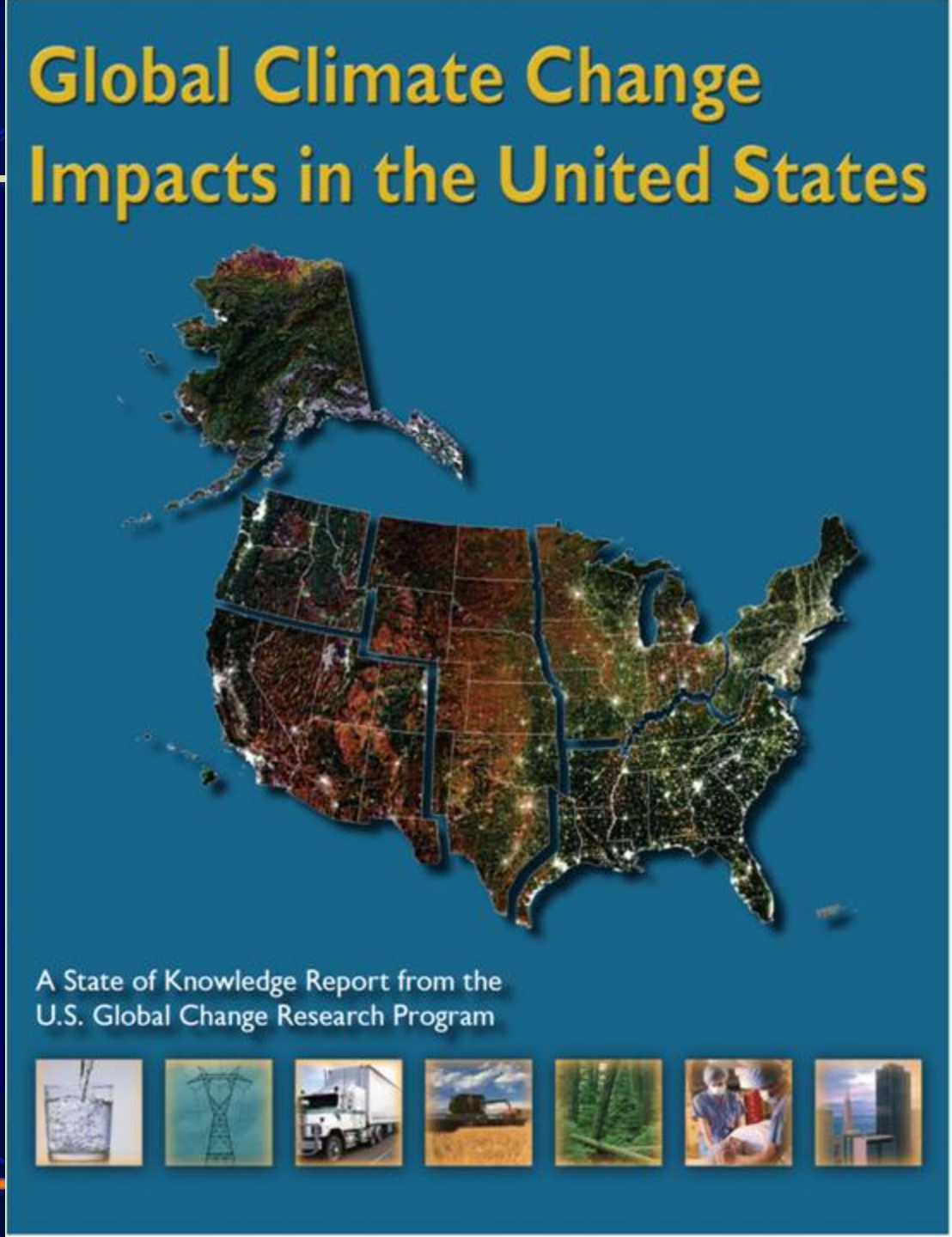
U.S. GCRP Impacts Report

Key Findings

- Global warming is unequivocal and mostly human induced
- Climate changes are underway in the U.S. and projected to grow
- Widespread climate-related impacts are occurring now and are expected to increase



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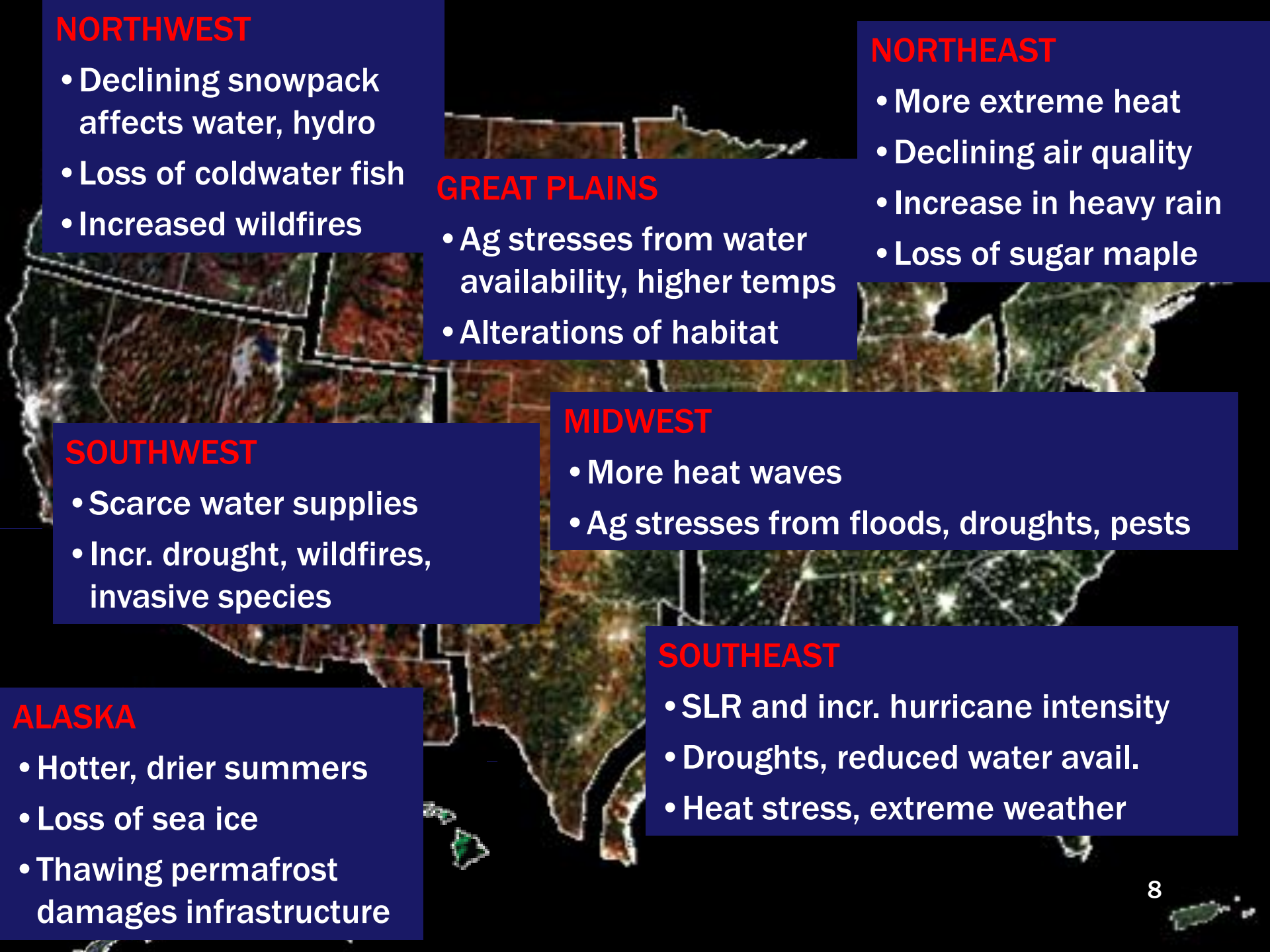


NORTHWEST

- Declining snowpack affects water, hydro
- Loss of coldwater fish
- Increased wildfires

GREAT PLAINS

- Ag stresses from water availability, higher temps
- Alterations of habitat

NORTHEAST

- More extreme heat
- Declining air quality
- Increase in heavy rain
- Loss of sugar maple

SOUTHWEST

- Scarce water supplies
- Incr. drought, wildfires, invasive species

MIDWEST

- More heat waves
- Ag stresses from floods, droughts, pests

SOUTHEAST

- SLR and incr. hurricane intensity
- Droughts, reduced water avail.
- Heat stress, extreme weather

ALASKA

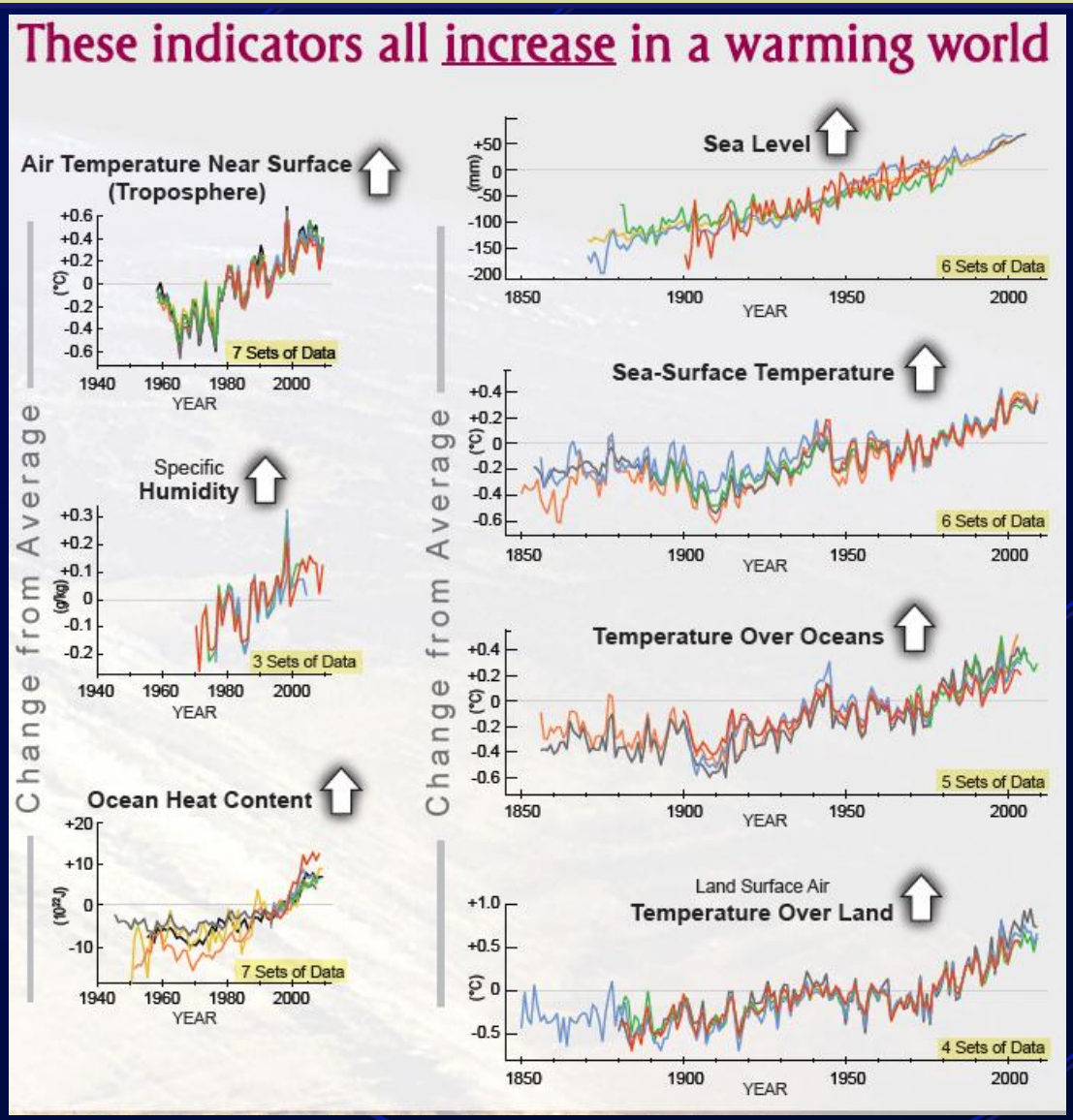
- Hotter, drier summers
- Loss of sea ice
- Thawing permafrost damages infrastructure

The Bottom Line

"I think that much of the foot dragging in addressing climate change is a reflection of the perception that climate change is way down the road … and that it only affects remote parts of the planet. And this report demonstrates … that ***climate change is happening now and it's happening in our own backyards and it affects the kinds of things people care about."***

Dr. Jane Lubchenco, NOAA Administrator
GCRP Press Conference, June 2009

NOAA's Latest on State of Climate



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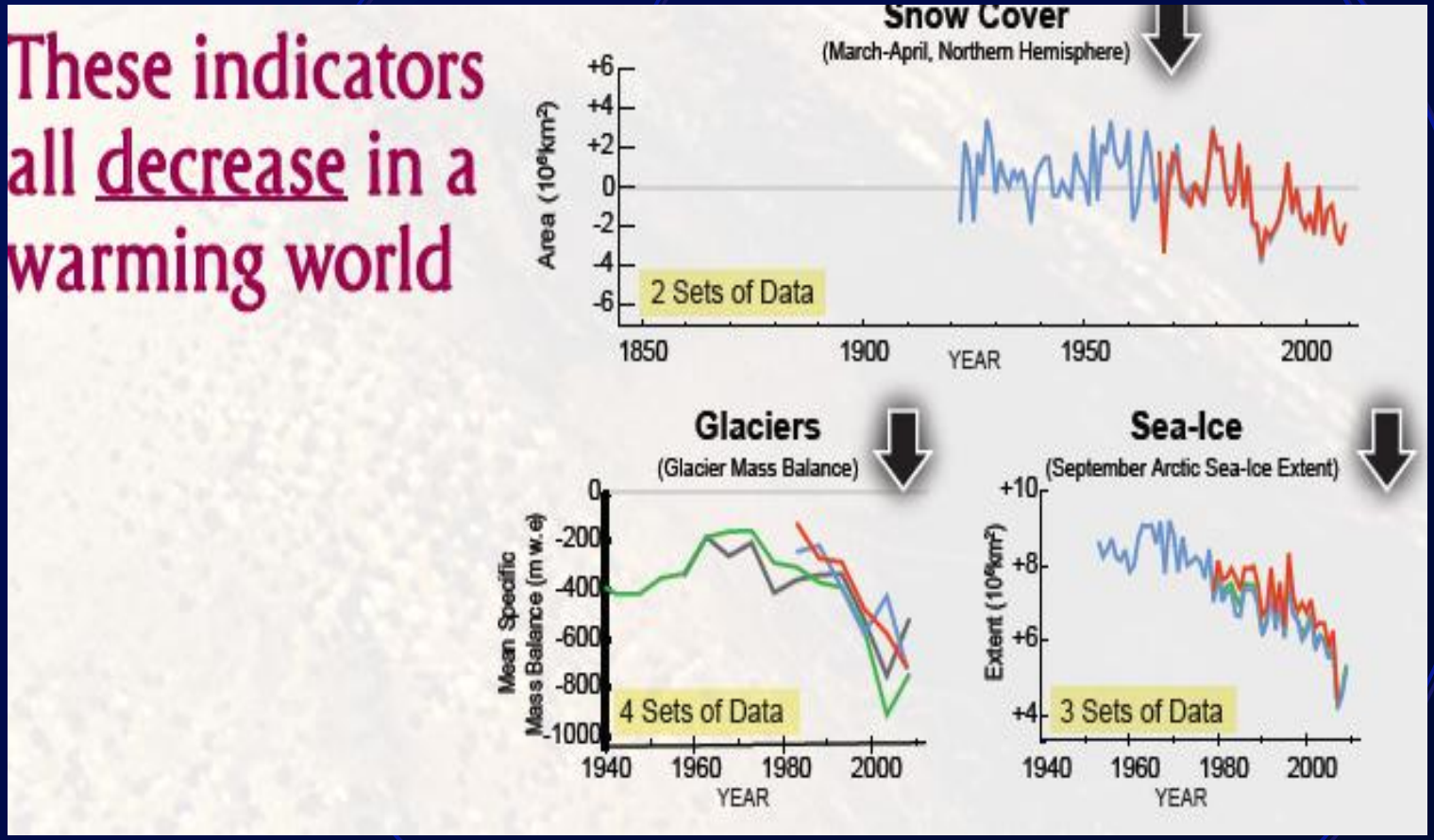
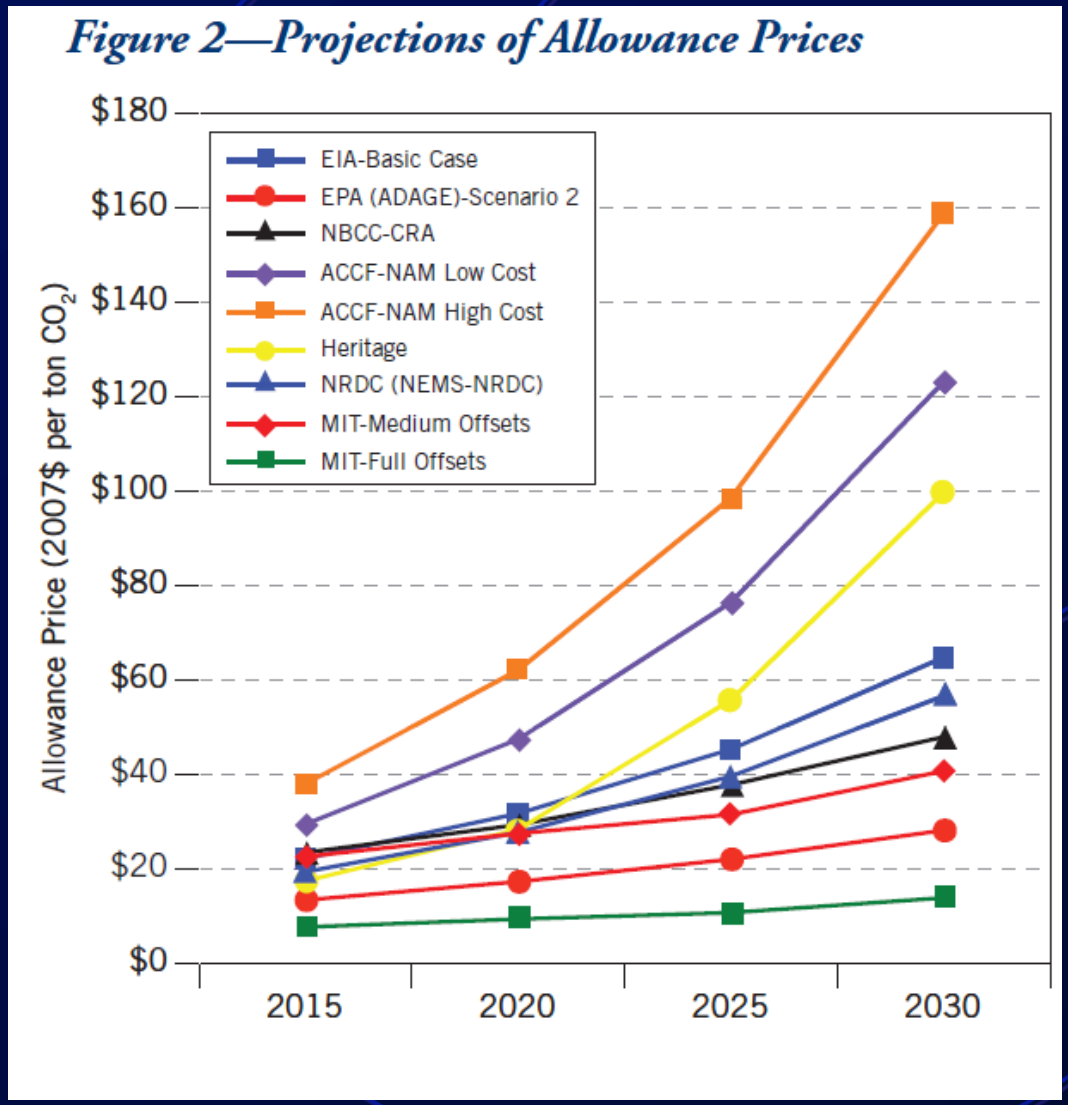
State of the Climate (cont.)

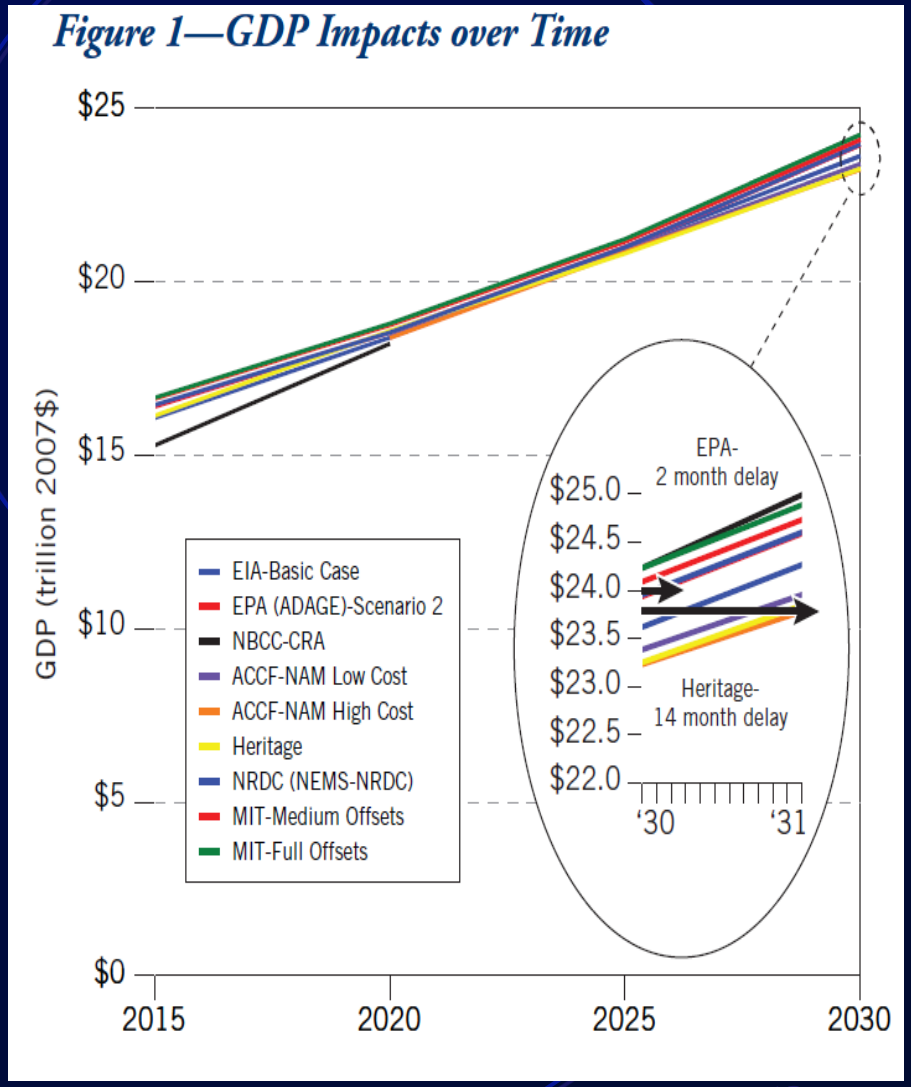


Cost Estimates Vary widely



GDP Impacts of House-Passed Bill

- GDP (and household income) continue to grow robustly in all models
- In 2030, the same level of GDP growth in the "no regulation" case would be reached with a 2-4 month delay across all cases.



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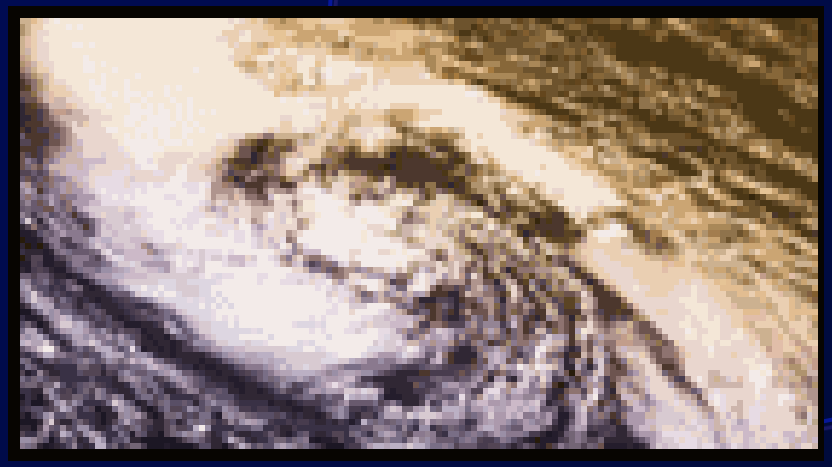
Conclusions

- Given the overwhelming scientific evidence, the risks of not acting would appear to far outweigh the costs of acting now.
- Final advice: "Avoid the unmanageable and manage the unavoidable"

For More Information

www.pewclimate.org



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