

# RAPID CHANGES TO EARTH'S CLIMATE

CO<sub>2</sub> concentration



Highest in at least

2 million years

Sea level rise



**Fastest rates** 

in at least

**3000** years

Arctic sea ice area



Lowest level

in at least

1000 years

Glaciers retreat



Unprecedented

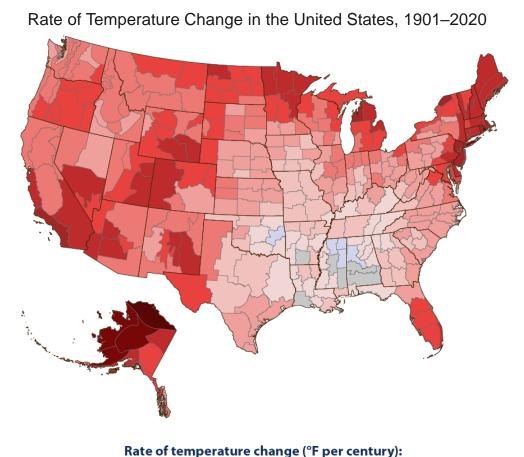
in at least

2000 years



## A CHANGING CLIMATE AFFECTS US ALL

- Temperatures are rising across the United States.
- Heat waves have become more frequent, and cold waves have become less frequent.
- Annual average temperatures will continue to rise.







Gray interval: -0.1 to 0.1°F

## THE CHOICES WE MAKE NOW MATTER

- Mitigation: reducing emissions of greenhouse gases (or removing carbon dioxide from the atmosphere)
- Adaptation: reducing risks from today's changed climate and preparing for future impacts
- Future impacts and risks from climate change are directly tied to decisions made in the present



## FEDERAL ADAPTATION LANDSCAPE

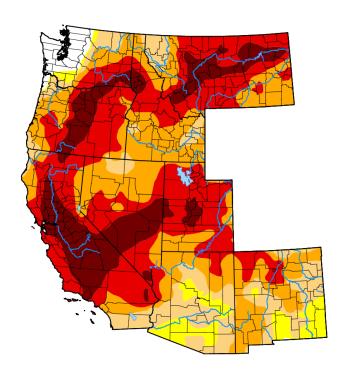
- Integrating resilience into Federal agency efforts
- Providing funding/incentives
- Addressing current and emerging climate-related hazards
- Advancing usable science to inform adaptation decisions



## TACKLING THE CLIMATE CRISIS

- Executive Order 14008
  - Ambitious actions to reduce emissions and enhance resilience
  - https://www.whitehouse.gov/climate/







## ENHANCING ADAPTATION AND RESILIENCE

 Increasing the resilience of Federal agency facilities, procurement, and acquisitions through climate action plans (under EO 14008); agency plans released in October 2021

https://www.sustainability.gov/adaptation/

 Major investments in resilience through the Infrastructure Investment and Jobs Act

 Integrating resilience as a focus for the WH environmental justice; advancing Justice40



### ADDRESSING CURRENT AND EMERGING HAZARDS

#### National Climate Task Force Working Groups:

- Wildfire Resilience
- Coastal Resilience
- Extreme Heat Resilience
- Drought Resilience
- Flood Resilience

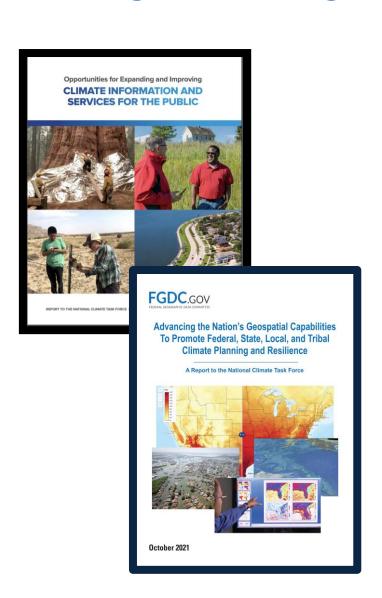




# ADVANCING ACTIONABLE CLIMATE INFORMATION

OSTP, NOAA, and FEMA report on climate information and services

 Federal Geographic Data Committee report on geospatial data and mapping tools





## ADVANCING ACTIONABLE CLIMATE INFORMATION

- Founded by law in 1990, USGCRP is a consortium of 13 Federal agencies mandated to advance understanding, assessment, prediction, and response to global change
  - Coordinates research
  - Informs decisions
  - Oversees the National Climate Assessment
  - Supports international efforts
    - U.S. participation in international assessments (e.g. IPCC, Arctic Council)
    - International secretariats (Future Earth, START, WCRP)



# PRIORITIES FOR FIFTH NATIONAL CLIMATE ASSESSMENT (NCA5)

- Advance the Conversation
- Make it Accessible to a Broad Audience
- Be Creative in Communication
- Make it About People
- Ensure it is Useful and Usable

Importantly, ensure that the NCA is inclusive and representative in participation and engagement.



## NCA5 UPDATE

- Public comment on the Draft Prospectus
- Call for author nominations and technical inputs
- Chapter leadership selection
- Author team selection
- Development of Zero Order Drafts
- Public engagement just completed 34 workshops; thousands of people participated
- Ongoing call for technical inputs: <a href="https://www.globalchange.gov/nca5">https://www.globalchange.gov/nca5</a>



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# LOOKING TO A RESILIENT FUTURE

- Ensuring that Federal Government programs and investments are resilient to climate change
- Adaptive management of natural resources
- Enhancing the climate resilience of infrastructure
- Ensuring that Americans have access to usable climate science information
- Taking action to reduce emissions, to limit what we need to adapt to





