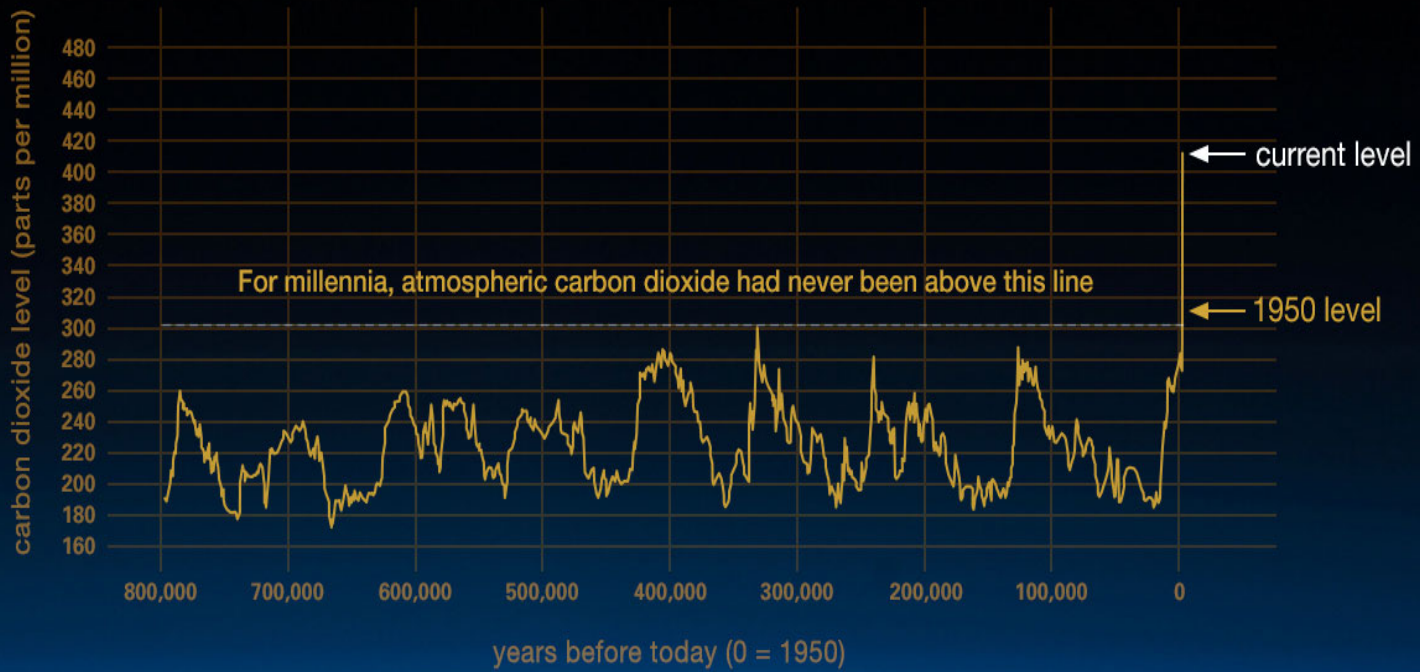


**FEELING THE EFFECTS OF TOO MUCH CARBON?  
CONSIDER DIET, SURGERY, AND/OR HOW TO  
LIVE WITH IT ... CIVIL AND ENVIRONMENTAL  
ENGINEERING ACTIONS**

**NAE Section 4  
2021 Annual Meeting Symposium**

**October 4, 2021**



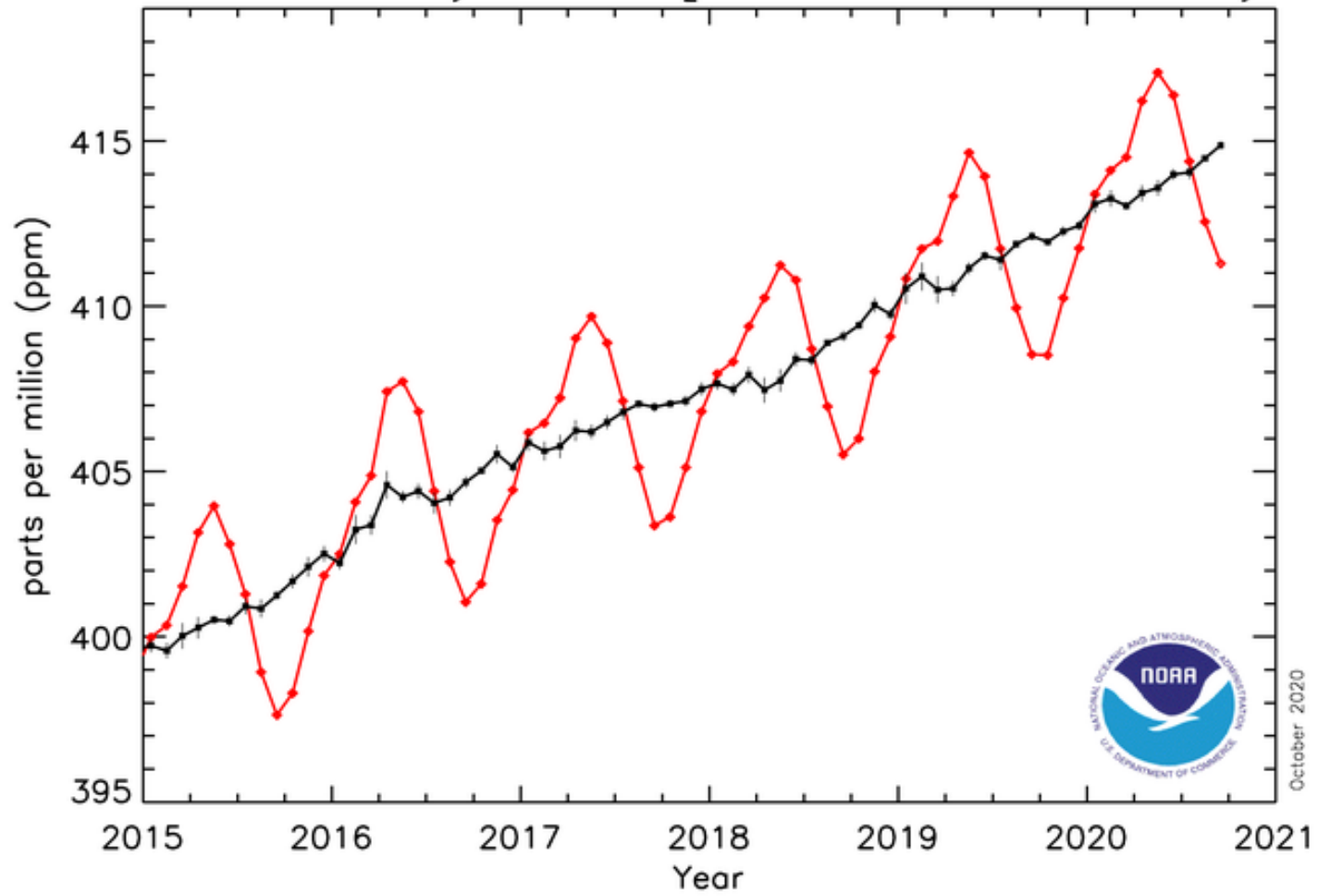
CO2 in atmosphere = 414 ppm

Sept 29, 2021

[climate.nasa.gov](https://climate.nasa.gov)

OF ENGINEERING

Recent monthly mean CO<sub>2</sub> at Mauna Loa Observatory

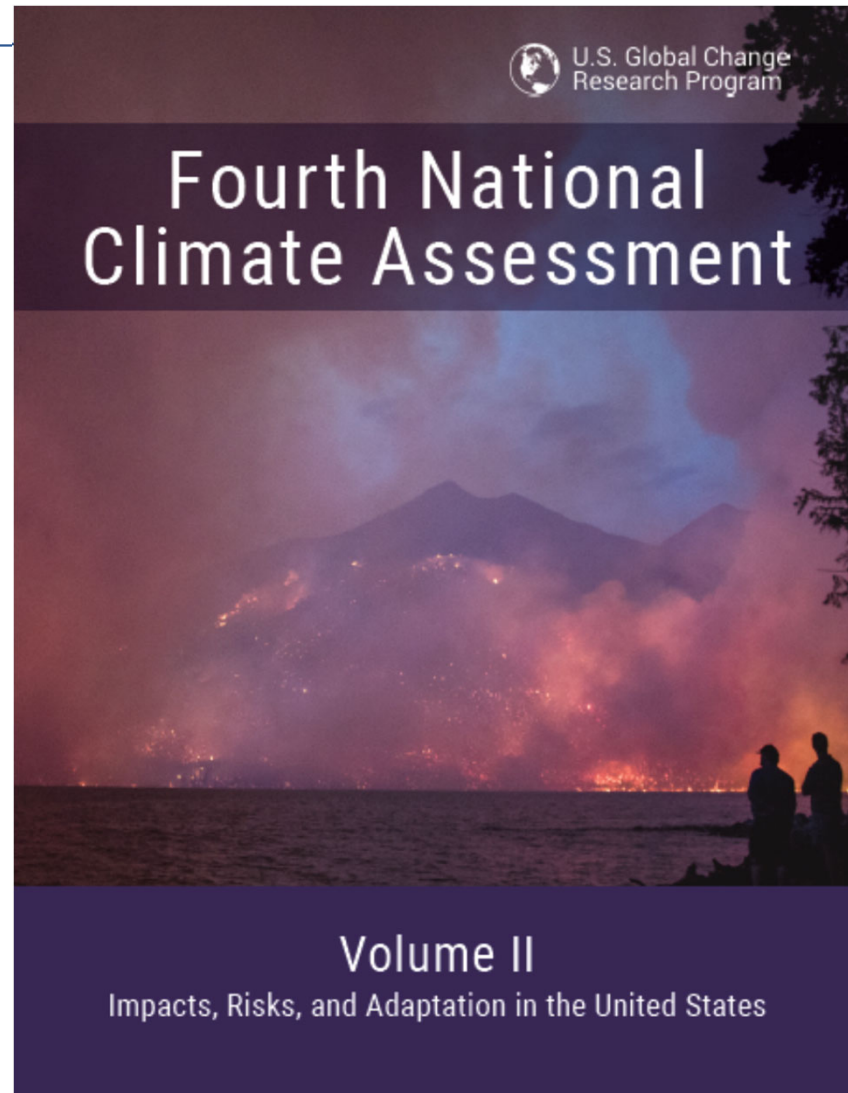


**NCA4 Volume II 2018  
Impacts, Risks, and Adaptation**

**[nca2018.globalchange.gov](http://nca2018.globalchange.gov)**

NCA4 Volume I 2017  
Climate Science Special Report

[science2017.globalchange.gov/](http://science2017.globalchange.gov/)



# AGENDA

- **3:05-3:35 DECARBONIZATION**
- **3:35-4:05 SEQUESTRATION**
- **4:05-4:45 ADAPTATION**
- **4:45-5:00 FINAL Q&A AND CLOSING**

# DECARBONIZATION

## Embodied Carbon: Opportunities for Engineers to Lead on Climate Action

- ***Kate Simonen***, Exec Director, Carbon Leadership Forum; Prof and Chair, Dept of Architecture, University of Washington
- ***Don Davies***, President, Magnusson Klemencic Associates

# SEQUESTRATION

## Working Towards Climate Mitigation and Resilience through Conserving, Restoring, and Growing Forests

- *Kevin O'Hara*, Lead, 1t.org US Chapter, American Forests

# SEQUESTRATION

## Looking Underground for a Climate Solution

- ***Catherine Peters***, George J. Magee Professor of Geosciences and Geological Engineering, Chair and Professor, Dept of Civil and Environmental Engineering, Princeton University



# ADAPTATION

## Where the Swamp Meets the Sea; the Sacramento-San Joaquin River Delta in a Changing Climate

- ***John Andrew***, Assistant Deputy Director, California Dept of Water Resources

# ADAPTATION

## Predicting Future Coastal Flood Hazards Under a Changing Climate

- ***Rick Luettich***, Alumni Distinguished Professor and Director, Center for Natural Hazards Resilience, University of North Carolina at Chapel Hill

# ADAPTATION

## Examining the United States' Infrastructure Vulnerability to Current and Future Weather and Climate Extremes and Assessing Resilience Options

- ***Mari Tye***, Project Scientist, Climate and Global Dynamics Lab, National Center for Atmospheric Research; Chair, ASCE Committee on Adaptation to a Changing Climate

**OPEN Q&A  
ON CIVIL AND ENVIRONMENTAL ENGINEERING  
AND CLIMATE MITIGATION AND ADAPTATION**