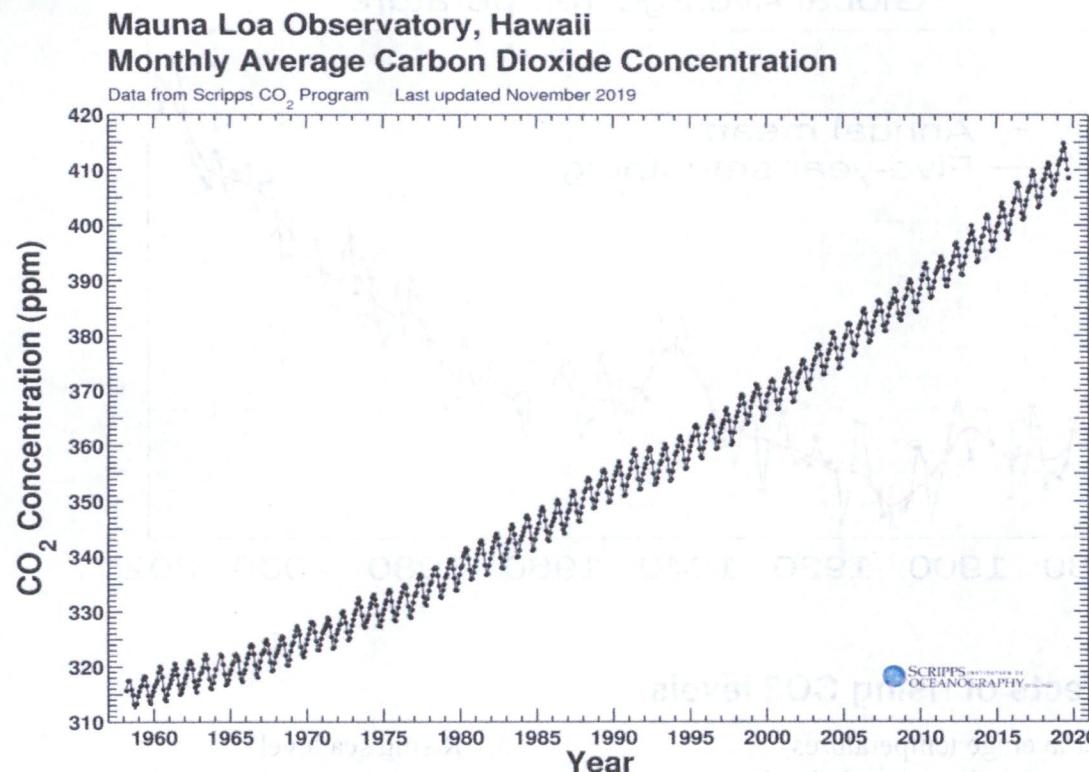


*Donna
Williams.*

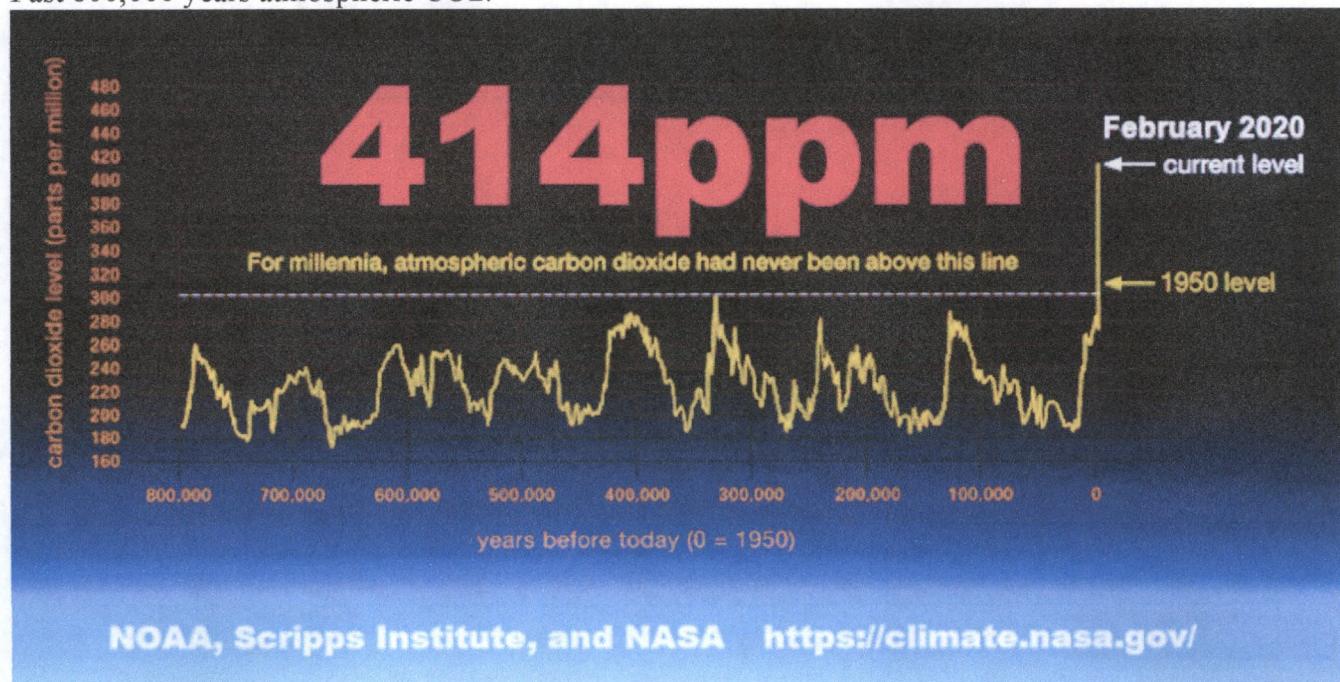
How much carbon dioxide is in the atmosphere?

The Keeling Curve – from NASA, NOAA, Scripps Institute and the Mauna Loa Observatory https://scrippsc02.ucsd.edu/assets/graphics/png/mlo_record.png or www.co2.earth.



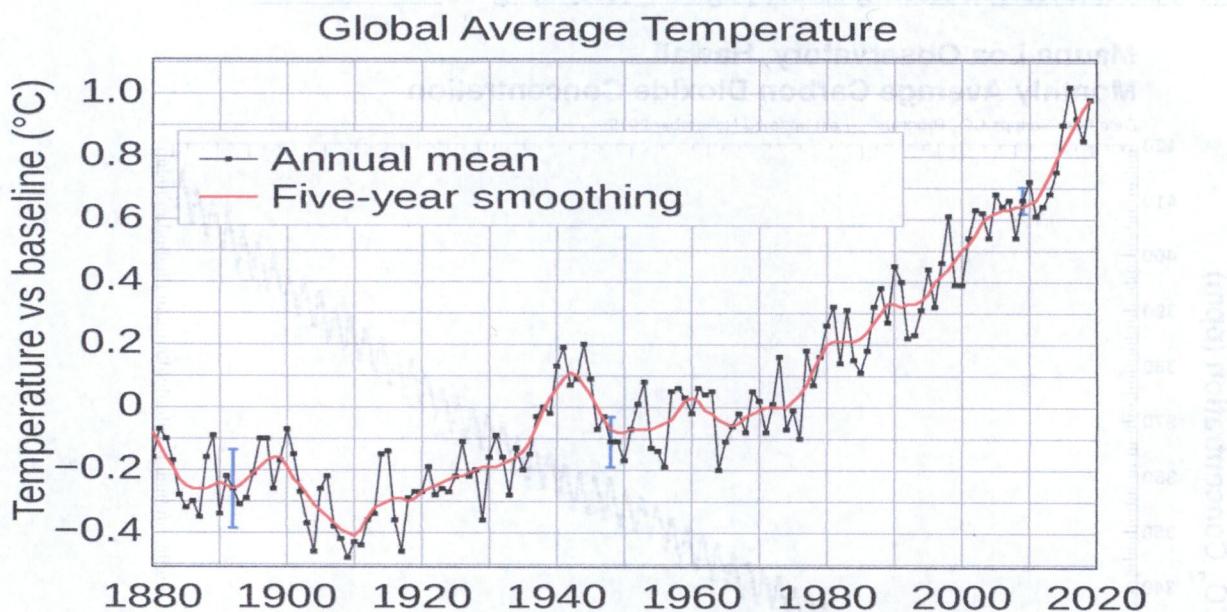
Is this a normal?

Past 800,000 years atmospheric CO₂.



Global Annual Mean Surface Air Temperature Change

https://data.giss.nasa.gov/gistemp/graphs_v4/



Current effects of rising CO₂ levels

1. Warmer average temperatures
2. Weird weather (see chart below)
3. Decline in bird and bee populations
4. Mass extinction of species
5. Rising sea level
6. Retreating glaciers and ice sheets
7. Change in pH of ocean
8. Coral bleaching

Weird weather with more frequent natural disasters.

<https://www.economist.com/graphic-detail/2017/08/29/weather-related-disasters-are-increasing>

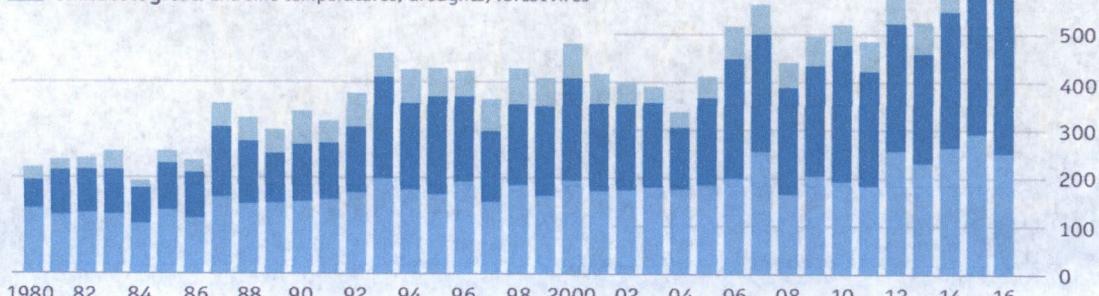
A rising tide

Natural disasters by cause

Meteorological: Storms

Hydrological: Floods, landslides and avalanches

Climatological: Extreme temperatures, droughts, forest fires



Source: Munich Re

Economist.com

Donna Williams, Presentation to City Commission, March 3, 2020.