



ENVIRONMENTAL PORTFOLIO 3

- STONE MOUNTAIN, GEORGIA

Global Climate Systems
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GEOS 6097
GSU Summer 2020



WEATHER

MEAN ANNUAL PRECIPITATION

The average
rainfall

- 52.6 in.

The average
snowfall

- 1.5 in.

The average
precipitation

- 108.4 Days



MEAN ANNUAL TEMPERATURE

The average high temperature in July is

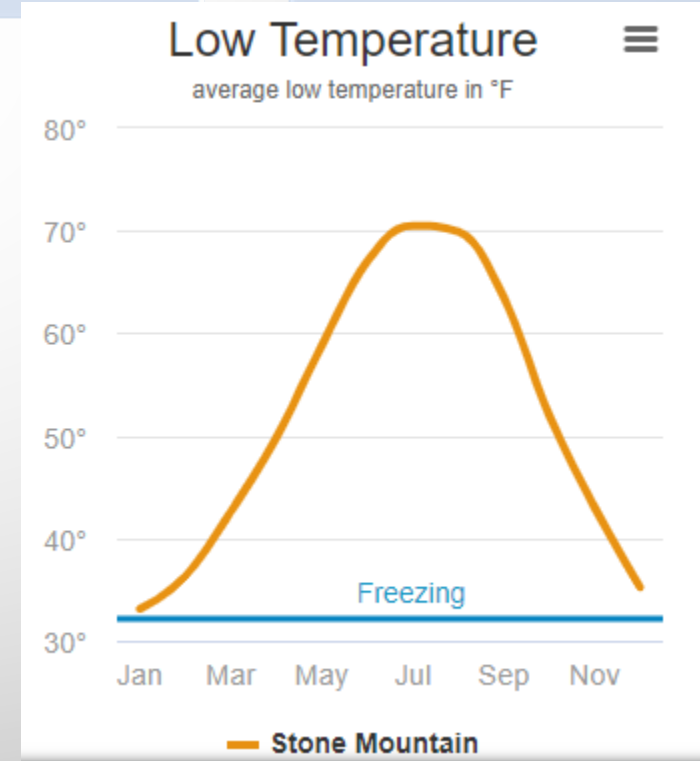
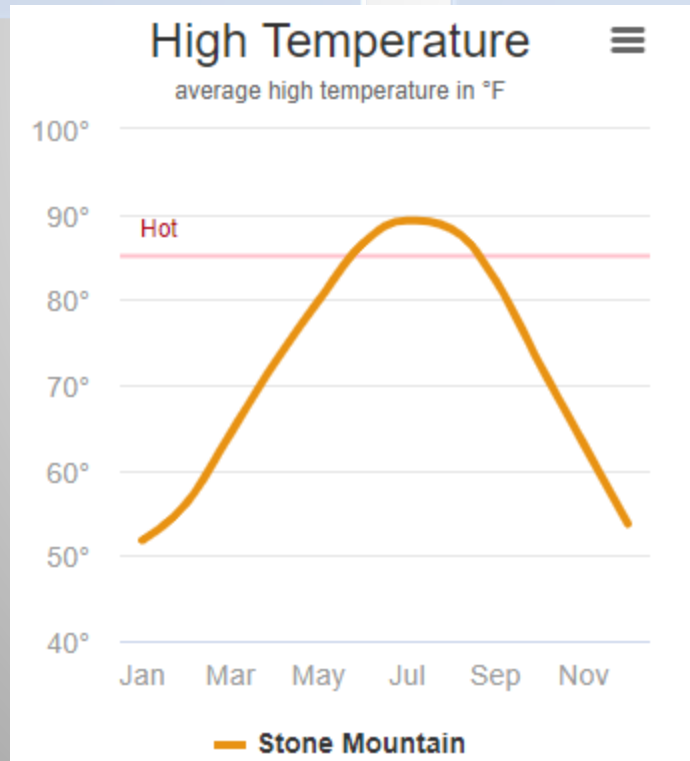
- Temperature = 89 °F

The average low temperature in January is

- Temperature = 33 °F

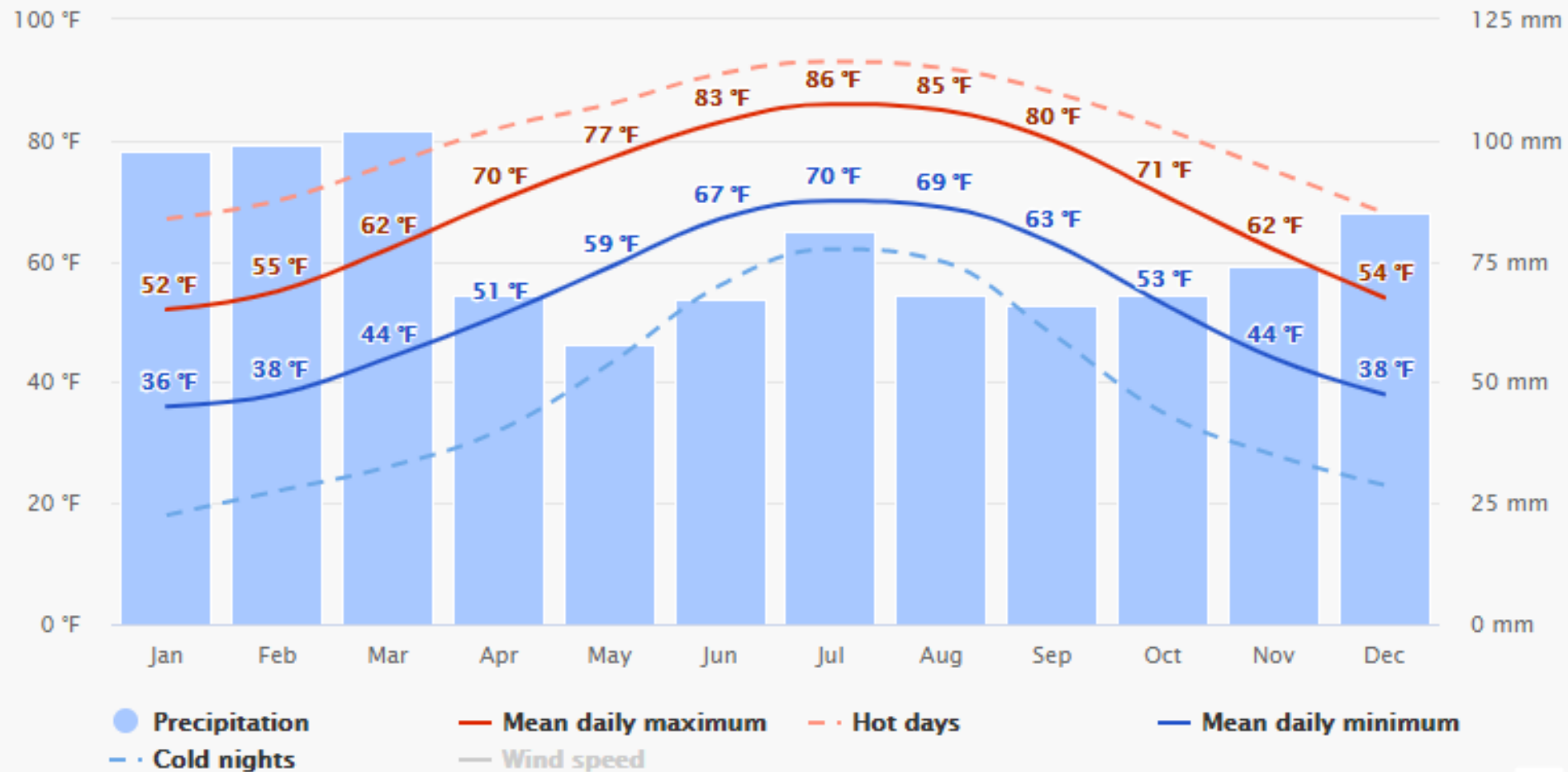
The yearly variation is

- 18 F to 86 °F



MEAN ANNUAL TEMPERATURE AND PRECIPITATION

Average temperatures and precipitation



WEATHER MEASURED DAILY TEMPERATURE FLUCTUATIONS FOR THREE DAYS AND COMPARE THESE FLUCTUATIONS TO TYPICAL FLUCTUATIONS IN WINTER MONTHS.

Daily Temperature 1

- Temperature in F
- High 64 °F
- Low 37 °F
- Dec. 11, 2020

Daily Temperature 2

- Temperature in F
- High 66 °F
- Low 49 °F
- Dec. 12, 2020

Daily Temperature 3

- Temperature in F
- High 67 °F
- Low 57 °F
- Dec. 13, 2020

Typical fluctuations in the Winter

- Mean Daily Max-54°F
- Mean Daily Min-38 °F



KOPPEN CLIMATE CLASSIFICATION

- **HUMID SUBTROPICAL CLIMATE**

- coldest month averaging above 0 °C (32 °F) (or –3 °C (27 °F)),
- Minimum one month's average temperature above 22 °C (71.6 °F)
- Minimum four months averaging above 10 °C (50 °F)
- The summer with no dry months.
- The Stone Mountain lies 318m above sea level. The climate is warm and temperate in Stone Mountain. There is significant rainfall; even during the driest months in the summer have precipitation. The climate in Stone Mountain is classified as Cfa by the Köppen-Geiger system.



SEASONALITY IS EXPRESSED LOCALLY IN TERMS OF BOTH PRECIPITATION AND TEMPERATURE.

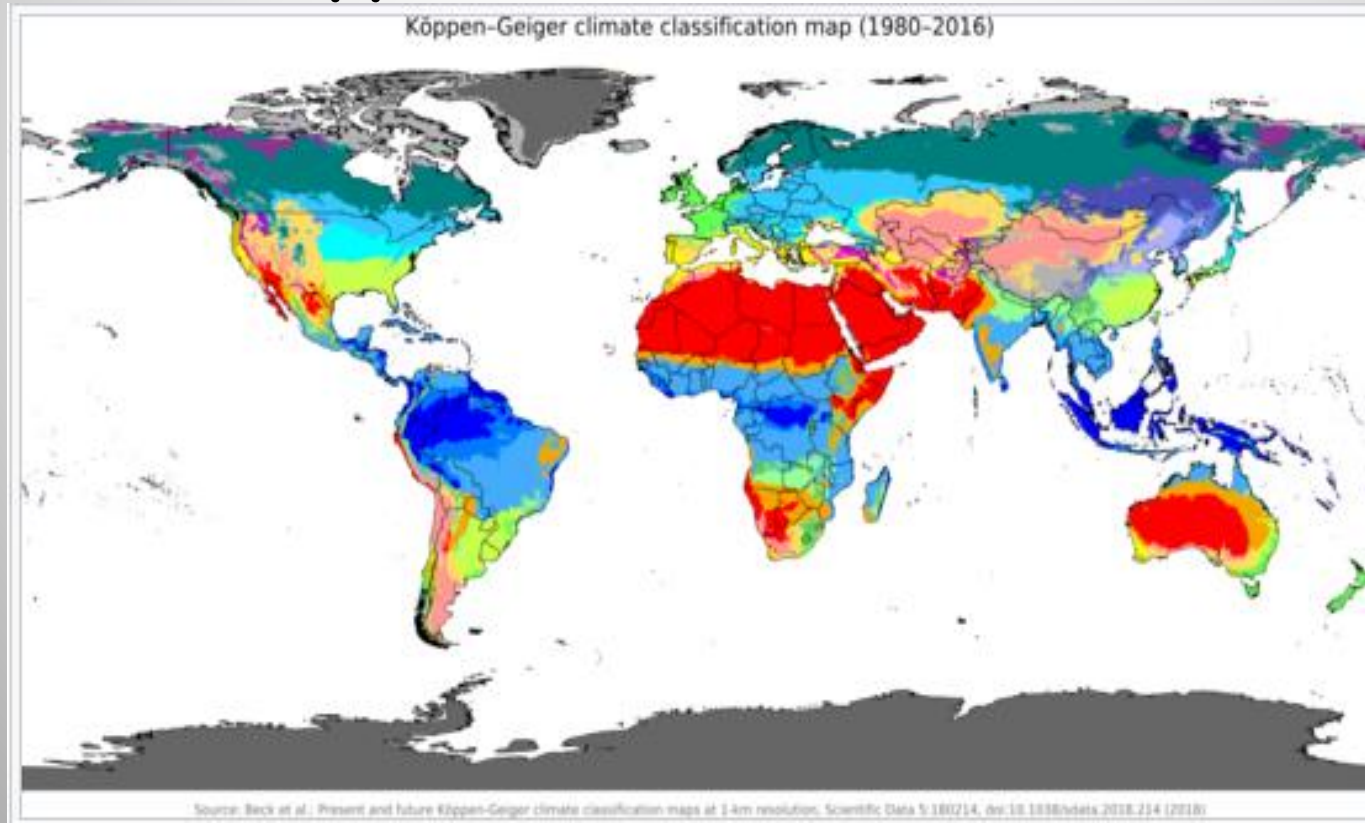
PRECIPITATION

- The rainfall is 1332 mm | 52.4 inch.

TEMPERATURE

- Averages 15.6 °C | 60.0 °F

Köppen Climate Classification



LAST DROUGHT IN STONE MOUNTAIN, GA

April 11, 2006 to May 5, 2009

- The most intense period of drought occurred the week of December 11, 2007 where D4 affected 49.86% of Georgia land.

D4 - Exceptional Drought

- Exceptional and widespread crop/pasture losses
- Shortages of water creating water emergencies
- Discussion of Water in Lake Lanier



Environmental Portfolio -Global Climate Systems

For this environmental portfolio submission, for your field area, please submit a report with brief description and discussion for each of the following:

1. Mean Annual Precipitation
2. Mean Annual Temperature (including average daily highs, average daily lows, and variation through the year).
3. How seasonality is expressed locally in terms of both precipitation and temperature.
4. Koppen climate classification for the field area.
5. Measure the daily temperature fluctuations for three days (either measure yourself, or use online resources), and compare these fluctuations to typical fluctuations in winter months.
6. Discuss the last time drought occurred in the field area, and local impacts of that event.

Some of the following websites can assist your work citations/References:

<https://www.drought.gov/drought/states/georgia>

<https://www.weather.gov/phi/localclimate.html>

https://en.wikipedia.org/wiki/K%C3%B6ppen_climate_classification

https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/stone-mountain_united-states-of-america_4224745

https://www.bestplaces.net/climate/city/georgia/stone_mountain#:~:text=Stone%20Mountain%2C%20Georgia%20gets%2053,inches%20of%20snow%20per%20year.