

TEN IMPACTS OF EXTREME HEAT

Crops reach their temperature thresholds and produce less food.

An increase in violent crime as extreme heat affects mood and exacerbates mental health issues.

A decrease in cognitive ability as the brain responds to increased heat.

Increased sickness such as strokes, heart attacks, heat stroke, and asthma.

More frequent and more powerful storms bringing more and more intense flooding.

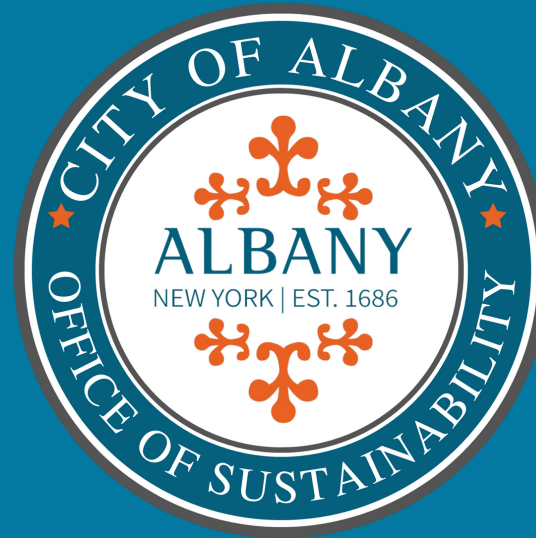
More frequent droughts as the time between rain events increases and evaporation dries the soil.

Sea level rise brought on by melting glaciers and oceans expanding as they heat up. This means a rising Hudson River level.

Mass migration from places too hot to live and work in anymore.

The nutritional value of fruits and vegetables goes down and their sugar content goes up.

Deserts spread as more heat leads to more evaporation and drier soils.



Climate Solutions EXTREME HEAT

✓ sustainability@albanyny.gov

✓ 24 Eagle St., Albany NY 12207

✓ 518.434.2026



albany.gov/sustainability

HOW HOT WILL IT GET?

New York's climate is changing faster than the national or global averages, including more rapidly rising temperatures. Albany is already on average 2°F hotter than it was in 1850.

If humanity keeps using fossil fuels the way we have been, by the year 2100, Albany, New York will be hotter than Albany, Georgia is today.

If we stay on our current high-emissions path, Albany could be on average:

- **5.4°F hotter in the 2030's**
- **8°F hotter by the 2050's**
- **13°F hotter by the 2080's**
- **15.3°F hotter by the year 2100**

A hotter world brings with it a long list of impacts due to the heat.



URBAN HEAT ISLANDS

Steel, concrete and asphalt absorb and re-radiate heat better than plants do. This means that cities are hotter than rural and suburban areas with their fields, lawns, and tree cover. This makes urban areas into 'urban heat islands' as they create pockets from the greater ambient heat radiating from the built environment. Some studies show that cities can be up to 10°F hotter.

Within cities, tree cover can dramatically cool whole neighborhoods if widespread enough. Those areas of Albany with little tree cover -- the South End, Arbor Hill, West Hill, Central Ave, etc. - often correlate with formerly redlined and underinvested neighborhoods.

The City of Albany is working with the Radix Center to study heat islands in the South End, as well as planting more trees city-wide.

HEATWAVES

A heatwave is 3+ days in a row above 90° F. In the past, Albany has averaged 8 days/year over 90°F. If we keep using fossil fuels the way we have, Albany will likely average:

- **23 days above 90°F in the 2020s**
- **50 days above 90°F by the 2050's**
- **82 days above 90°F by the 2080's**
- **Even more days above 90°F by 2100+**

Historically, Albany has averaged 1 heatwave a year, lasting about four days. On our current emissions path, this could increase to:

- **2020's: 4 heatwaves lasting 5 days each**
- **2050's: 7 heatwaves lasting 6 days each**
- **2080's: 9 heatwaves lasting 9 days each**
- **2100+: Even more frequent and longer heatwaves**

Within 50 years, it could be over 90° every day for three months straight, and the urban heat island effect will make it even hotter!

