# Alarming Acceleration of Melting in Alaska's Juneau Icefield



## Accelerating Melting of Alaska's Juneau Icefield

The Juneau icefield in Alaska, which hosts over 1,000 glaciers, is melting at an alarming pace. Recent research indicates that the icefield's snow cover is diminishing nearly five times faster than it did in the 1980s. This significant acceleration has been documented meticulously by researchers, who have tracked snow levels across the approximately 1,500-square-mile area going back to 1948, with data extending to the 18th century.

Bethan Davies, a glaciologist at Newcastle University in England, led the study, which was published in Nature Communications on July 2, 2024. The study reveals that the rate of melting began to accelerate about a decade ago due to changing climate patterns, characterized by shorter winters and extended summers. According to the study's co-author, Mauri Pelto of Nichols College in Massachusetts, the icefield currently loses about 50,000 gallons of ice per second.

Between 1948 and 2005, only four glaciers in the icefield disappeared, but from 2005 to 2019, 64 glaciers melted away. This includes larger glaciers like the Antler glacier. Alaska climatologist Brian Brettschneider noted that the accelerated melt poses significant concerns, potentially leading to a "death spiral" for the icefield.

The study used an extensive array of data sources, including satellite images, aerial photographs, and historical records, to compile a comprehensive history of the icefield's changes. These findings align with other research and observations, indicating that the melting icefield could soon reach a tipping point, beyond which recovery may be impossible.

While the icefield's complete melt would have limited impact on global sea levels, it remains a crucial tourist destination and cultural landmark. The rapid changes underscore broader transformations occurring in the Arctic region due to warming temperatures.

In summary, the Juneau icefield's accelerated melting is a stark indicator of climate change's impact, prompting researchers and experts to warn of irreversible changes if current trends continue.