



BERKELEY EARTH™

March 2026 Temperature Update
Monthly Press Briefing
April 23, 2026

Robert Rohde

Berkeley Earth: Independent Climate Science, Trusted Data

BERKELEY EARTH™

- **Who We Are**

Berkeley Earth is an independent, California-based 501(c)3 nonprofit dedicated to open, transparent climate science. Founded in 2013, our peer-reviewed methodology and fully open-source datasets have made us one of the most widely cited independent climate monitoring organizations in the world. Our work is funded through philanthropic grants, commercial licenses, and strategic partnerships..

- **What We Do**

We produce and maintain leading high-resolution global temperature datasets, combining 175+ years of observational records with advanced machine learning to deliver accuracy at scales and resolutions that no other independent source provides.

- **Why We Do It**

We make reliable, independent climate data accessible, transparent, and actionable, supporting evidence-based decision making across local communities, governments, and the private sector.

The Berkeley Earth Team:

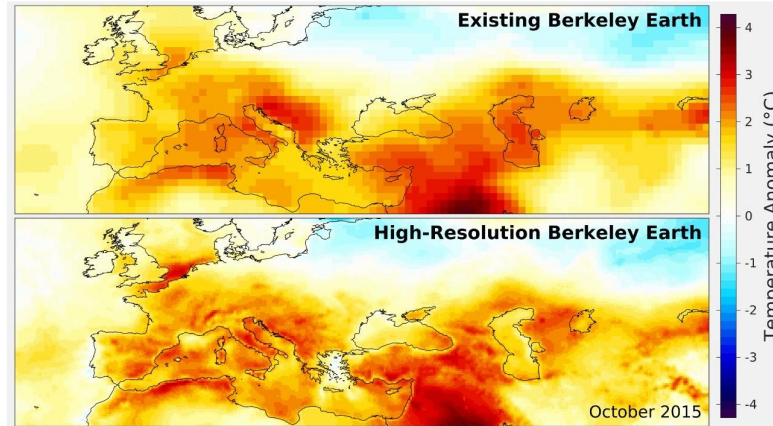
Dr. Robert Rohde – Chief Scientist

Dr. Zeke Hausfather – Research Scientist

Kristen Sissener – Executive Director

Berkeley Earth Surface Temperature – High-Resolution (BEST-HR)

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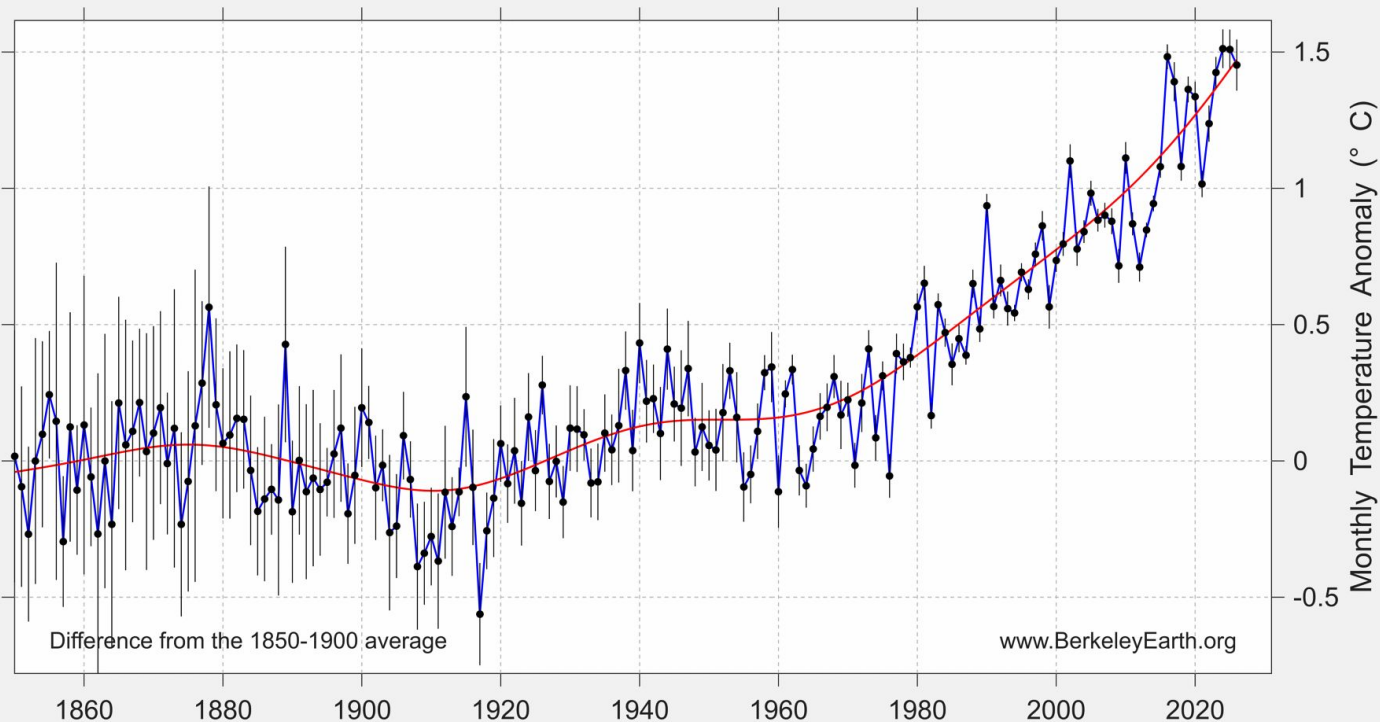
Request access: <https://tinyurl.com/2f7hzedk>

- 0.25° x 0.25° spatial resolution
- Machine-learning enhanced accuracy in complex geographies (coastlines, mountains, oceans)
- Subsets available for more than 8,000 global cities
- National TMIN and TMAX and custom national subsets available for global fields
- Ensemble-based uncertainty quantification on all products
- Updated monthly.
- Commercial licenses are available.

Global Average Temperature

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Berkeley Earth - Global - March

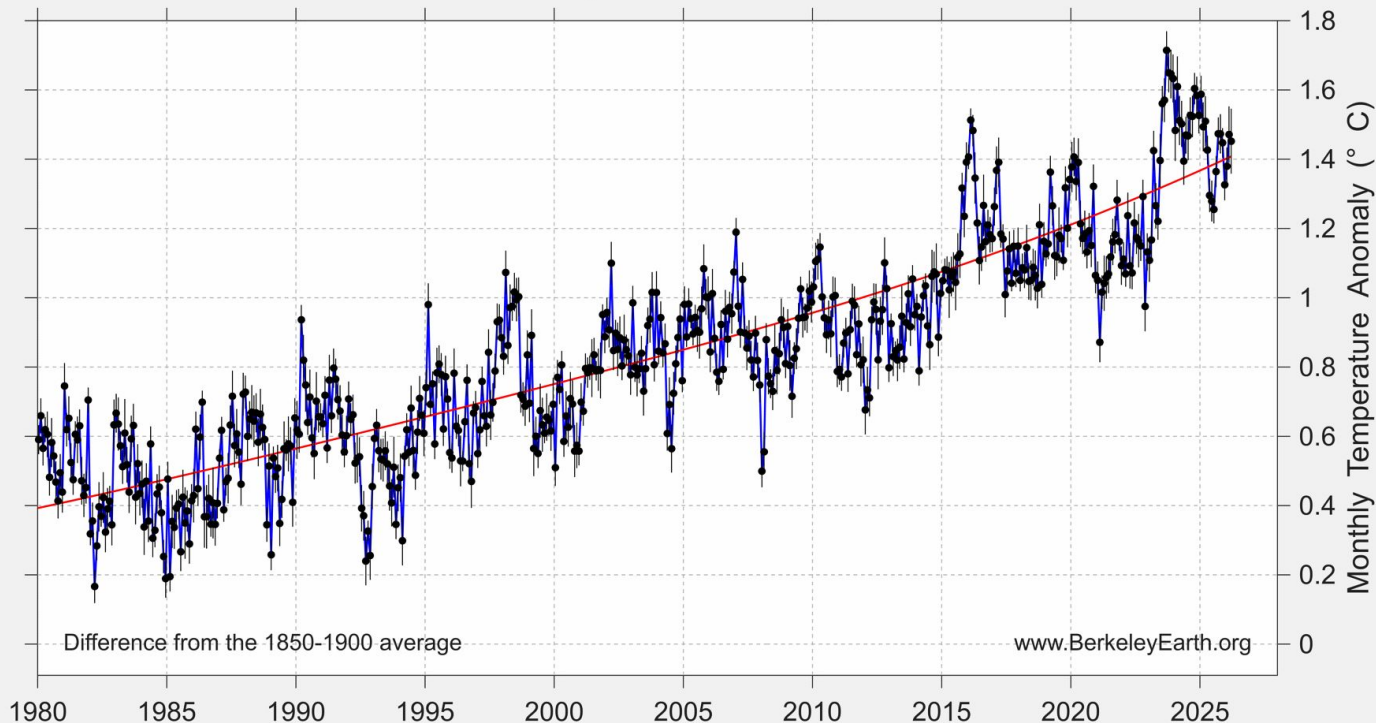


- Fourth warmest March since 1850
- 1.45 ± 0.11 °C (2.61 ± 0.21 °F) above the 1850-1900 average.
- Behind 2025, 2024, and 2016. Slightly ahead of 2023 and 2017.
- Much warmer than any March prior to 2016.

Global Average Temperature

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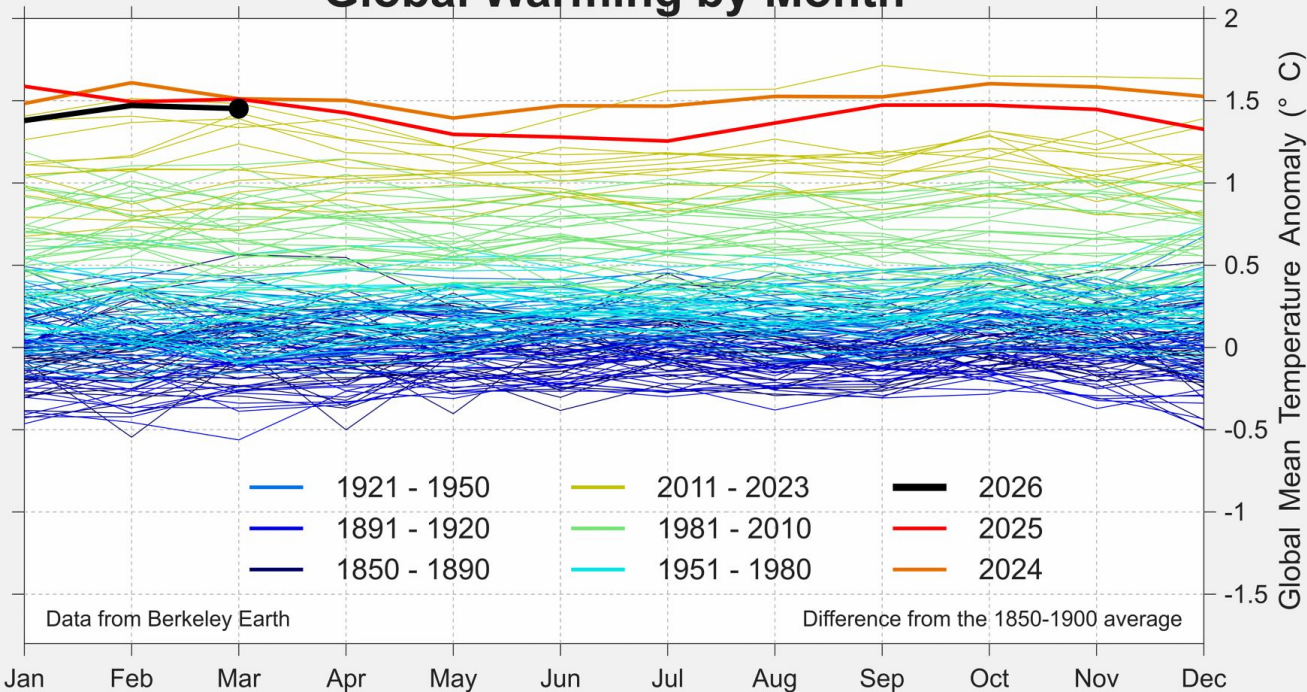
Berkeley Earth - Global



- Fourth warmest March since 1850
- 1.45 ± 0.11 °C (2.61 ± 0.21 °F) above the 1850-1900 average.
- Similar to February and late 2025, but behind most months in 2023 and 2024.

Global Average Temperature

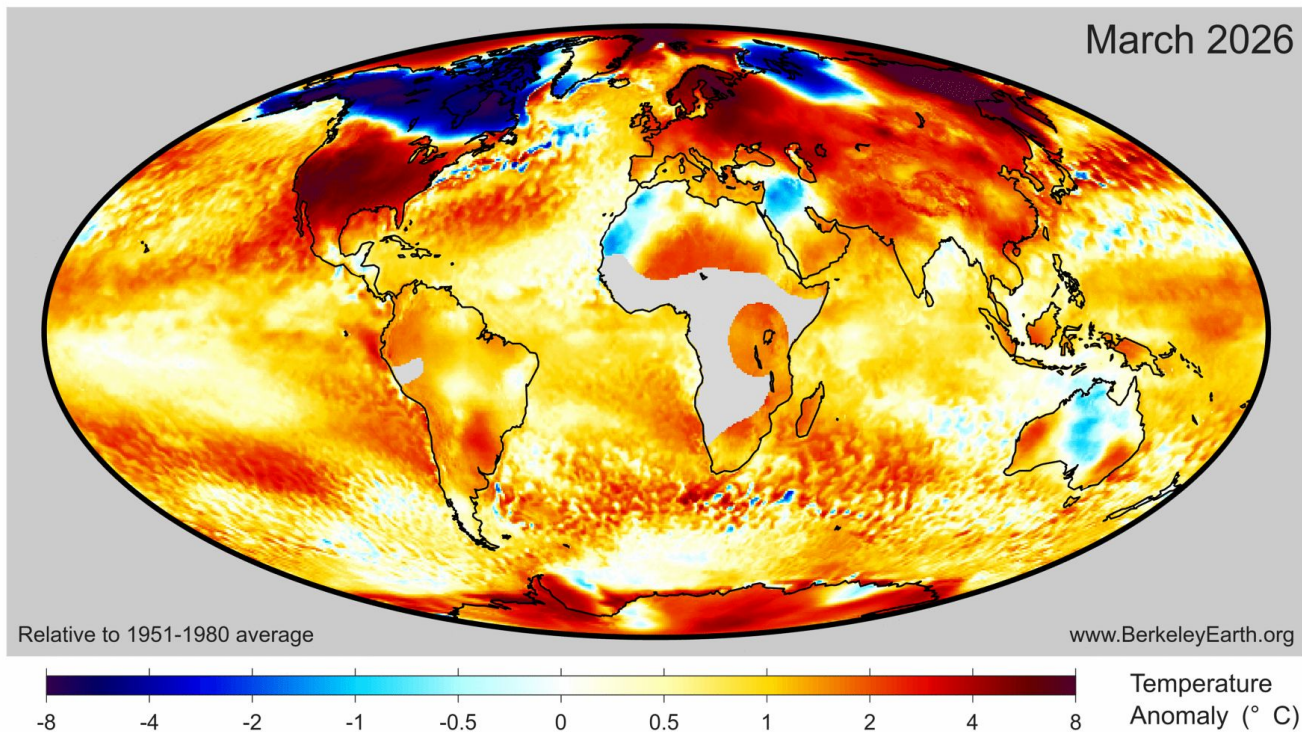
Global Warming by Month



- Slightly behind 2024 and 2025.
- Still among the warmest years to have ever been measured.

Fourth Warmest March on Record

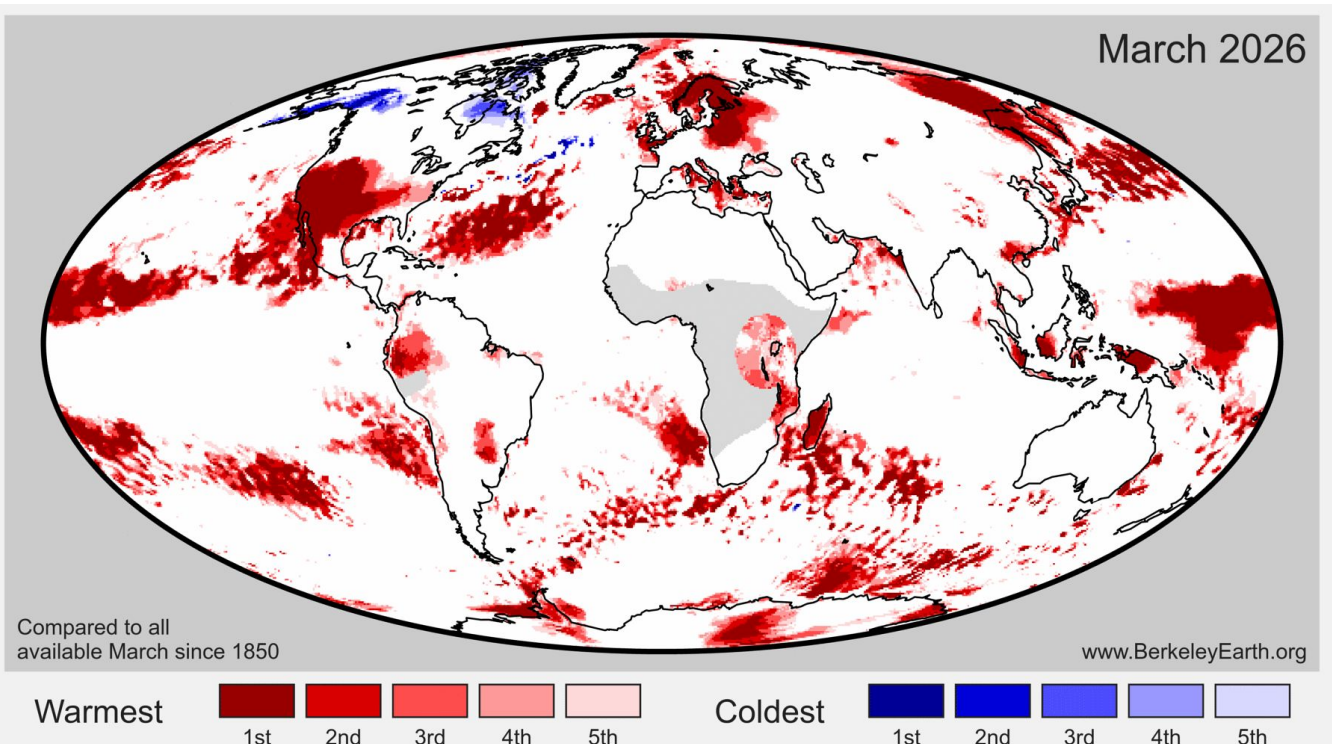
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- Widespread warmth in March.
- Noteworthy warmth in the United States, Northern Europe, and most of Asia, as well as parts of the Atlantic and Pacific.
- Unusual cold in Northern Canada.
- 5.6% of the Earth's surface had a locally record warm March average.

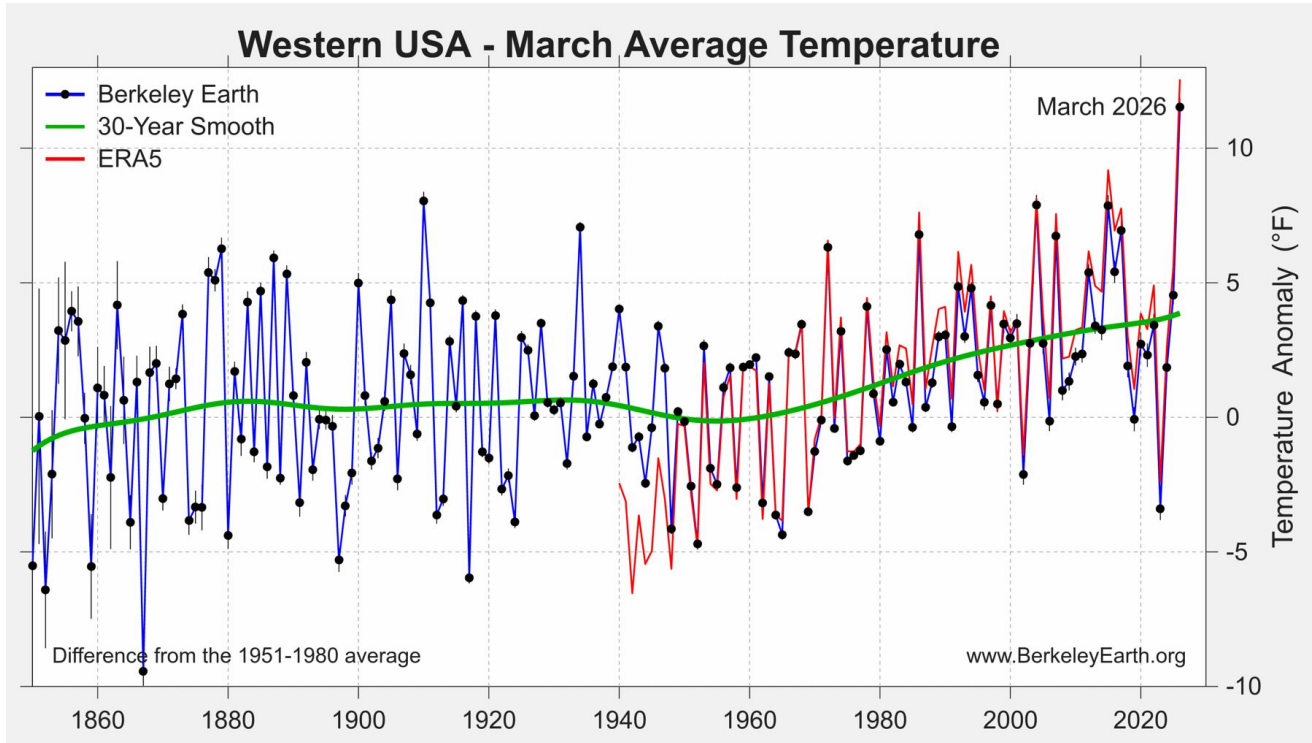
Fourth Warmest March on Record

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- 5.6% of the Earth's surface had a locally record warm February average (4.9% of land and 6.0% of ocean surfaces)
- Small area of record cold near Canada / Alaska border.
- Record national average warmth in 9 countries.

Record March Warmth in the USA

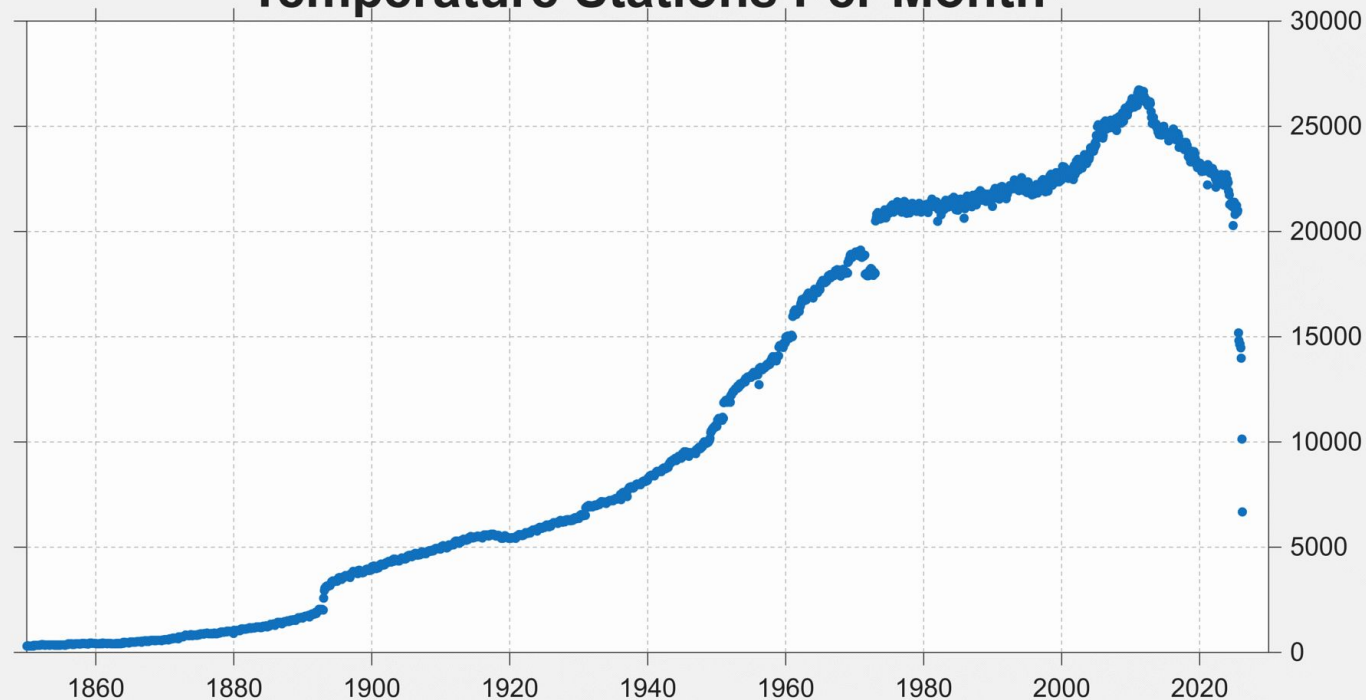


- The March average temperature across the Western USA was about +11.6 °F (+6.4 °C) warmer than the mid-20th century average.
- That's a startling 3.6 °F (2.0 °C) higher than the previous record.
- Since the mid-20th century, the March average temperatures in the Western USA have warmed ~4 °F (2.2 °C).

Unusual Gaps Due to the Loss of NOAA Services

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Temperature Stations Per Month

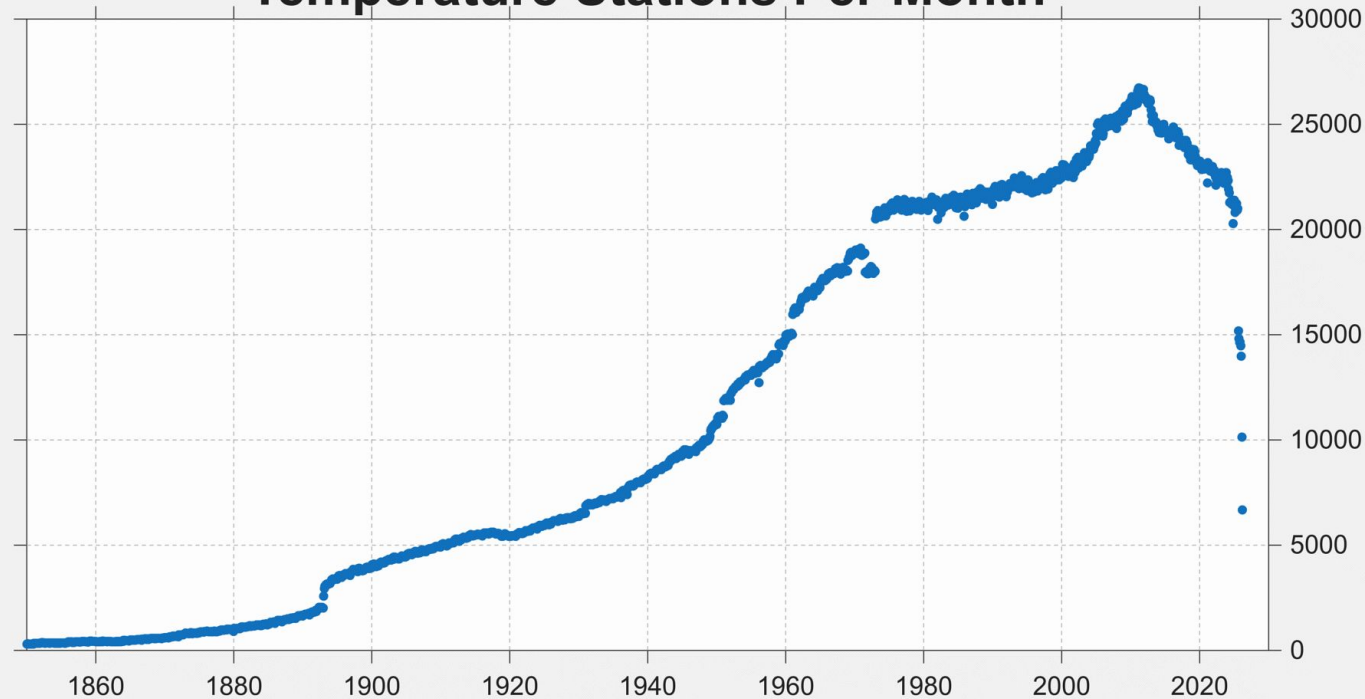


- Since Late August, several NOAA weather data aggregation services have been either partially or fully broken.
- We have alternative data streams, that fill some gaps, but remain impacted by the lack of NOAA data.
- Disruption at NOAA is currently expected to be temporary.

Unusual Gaps Due to the Loss of NOAA Services

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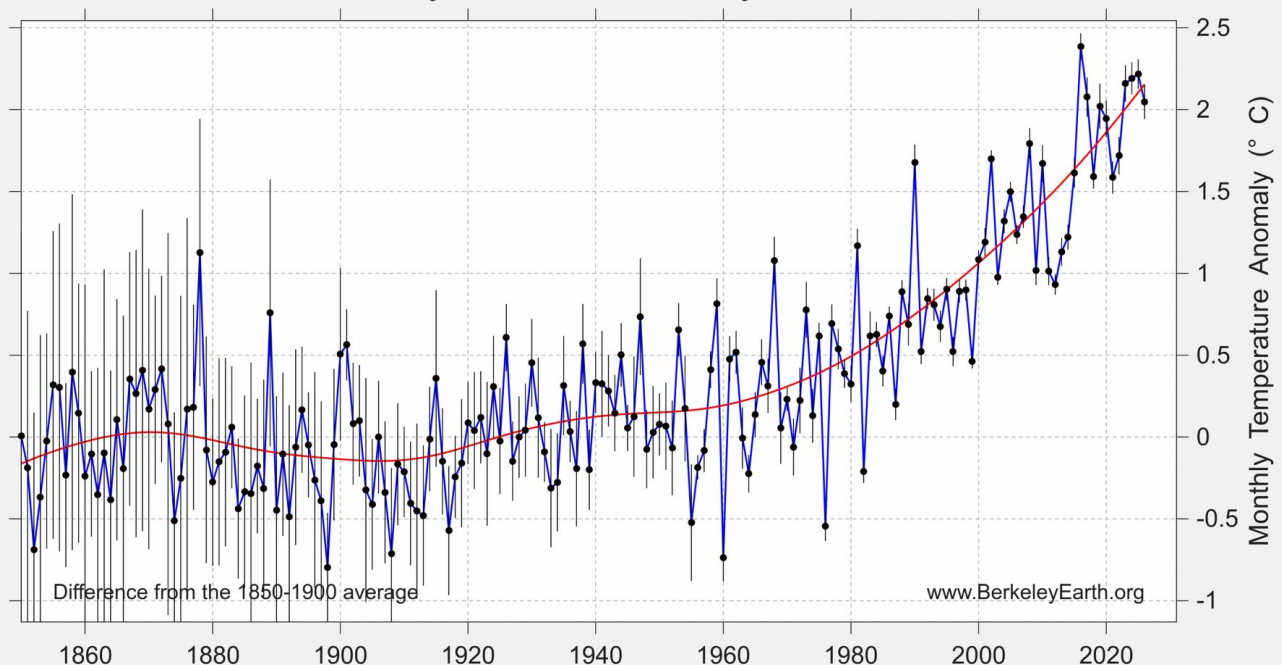
Temperature Stations Per Month



- Working to mitigate this.
- Expanded our near real-time data collection with WIS2, GCOS, and other sources
- Currently raising funds to develop alternative data aggregation that reduces reliance on NOAA.

Land Average Temperature

Berkeley Earth - Land Only - March

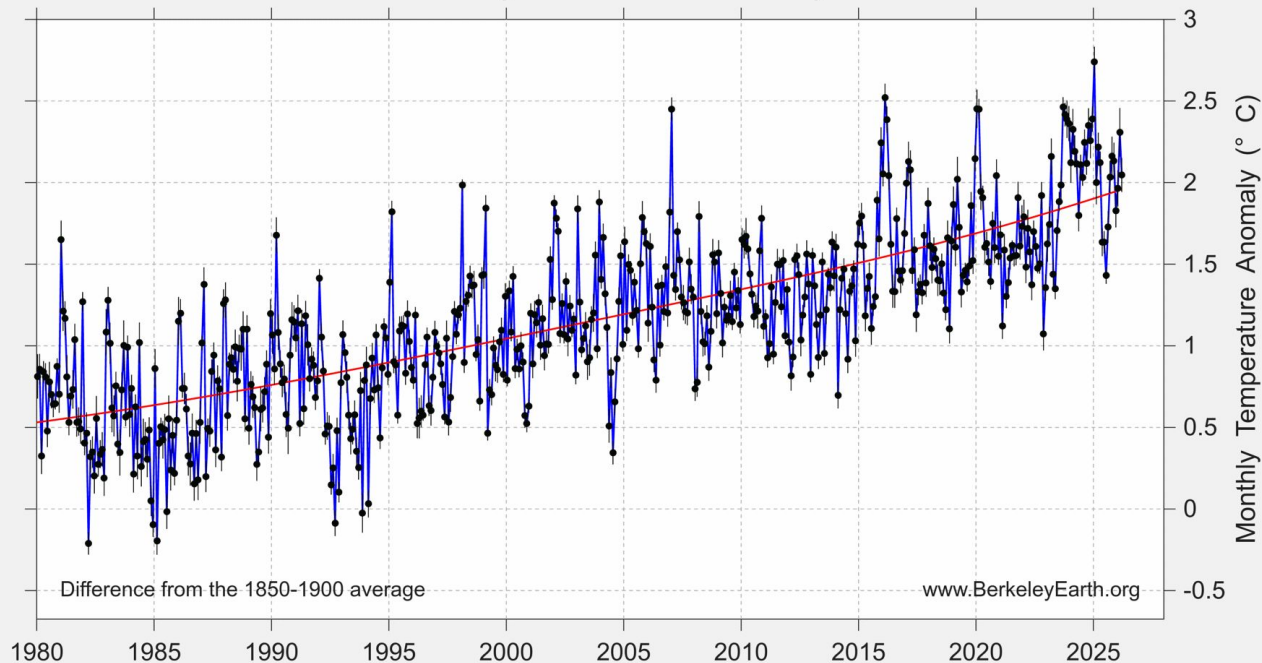


- 2.05 ± 0.17 °C (3.68 ± 0.31 °F) above the 1850 to 1900 average
- Sixth warmest March for land temperatures
- Modestly cooler than 2023 to 2025
- 4.9% of the land-surface had a locally record warm March average

Land Average Temperature

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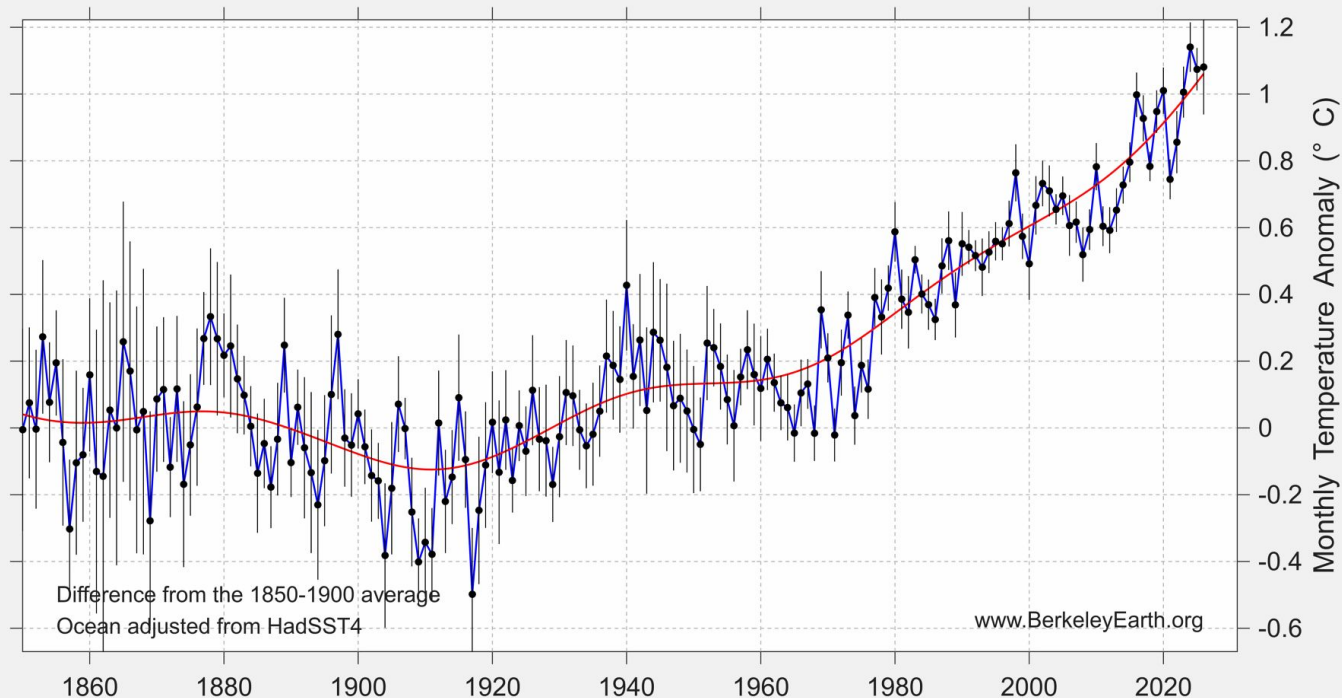
Berkeley Earth - Land Only



- 2.05 ± 0.17 °C (3.68 ± 0.31 °F) above the 1850 to 1900 average
- Sixth warmest March for land temperatures
- Tick down from February
- Close to the long-term trend line

Ocean Average Temperature

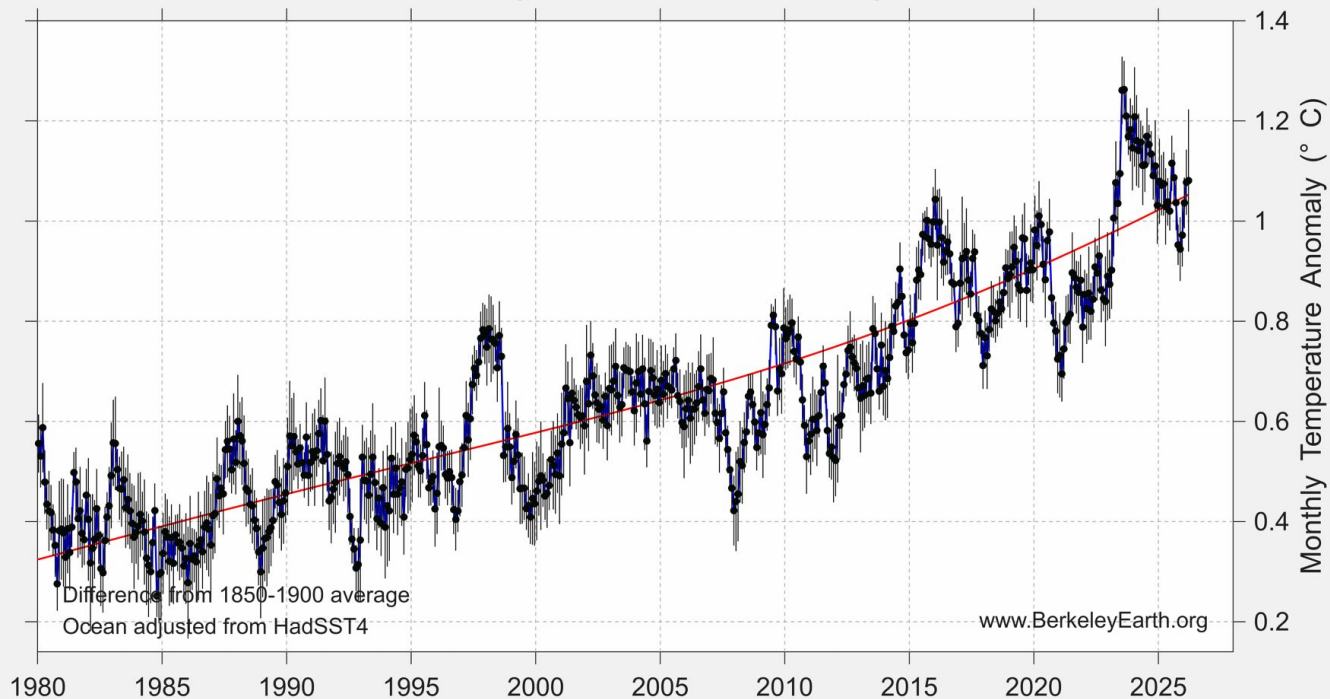
Berkeley Earth - Ocean Only - March



- 1.08 ± 0.15 °C (1.95 ± 0.26 °F) above the 1850 - 1900 average.
- Second warmest March for the ocean, behind 2024, but with wide uncertainty.
- 6.0% of the ocean-surface had a locally record warm March average.

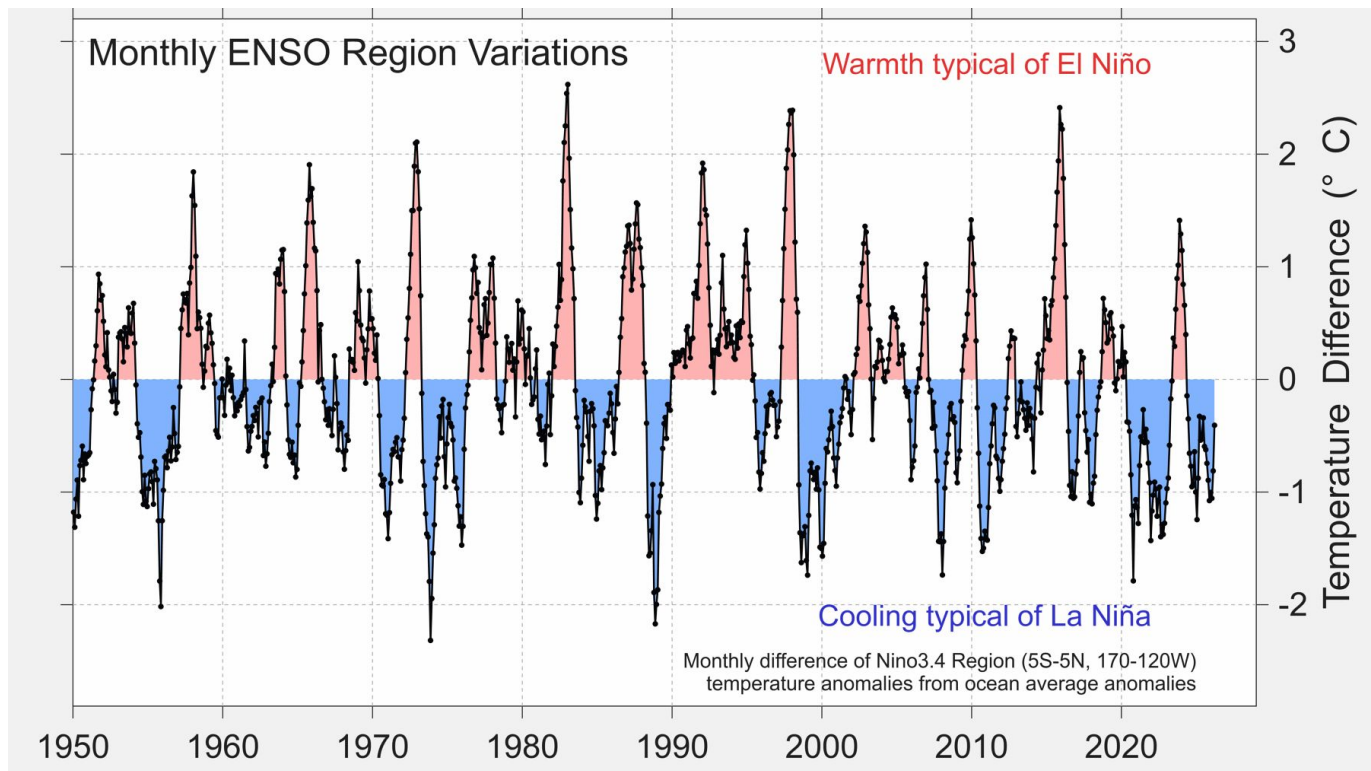
Ocean Average Temperature

Berkeley Earth - Ocean Only



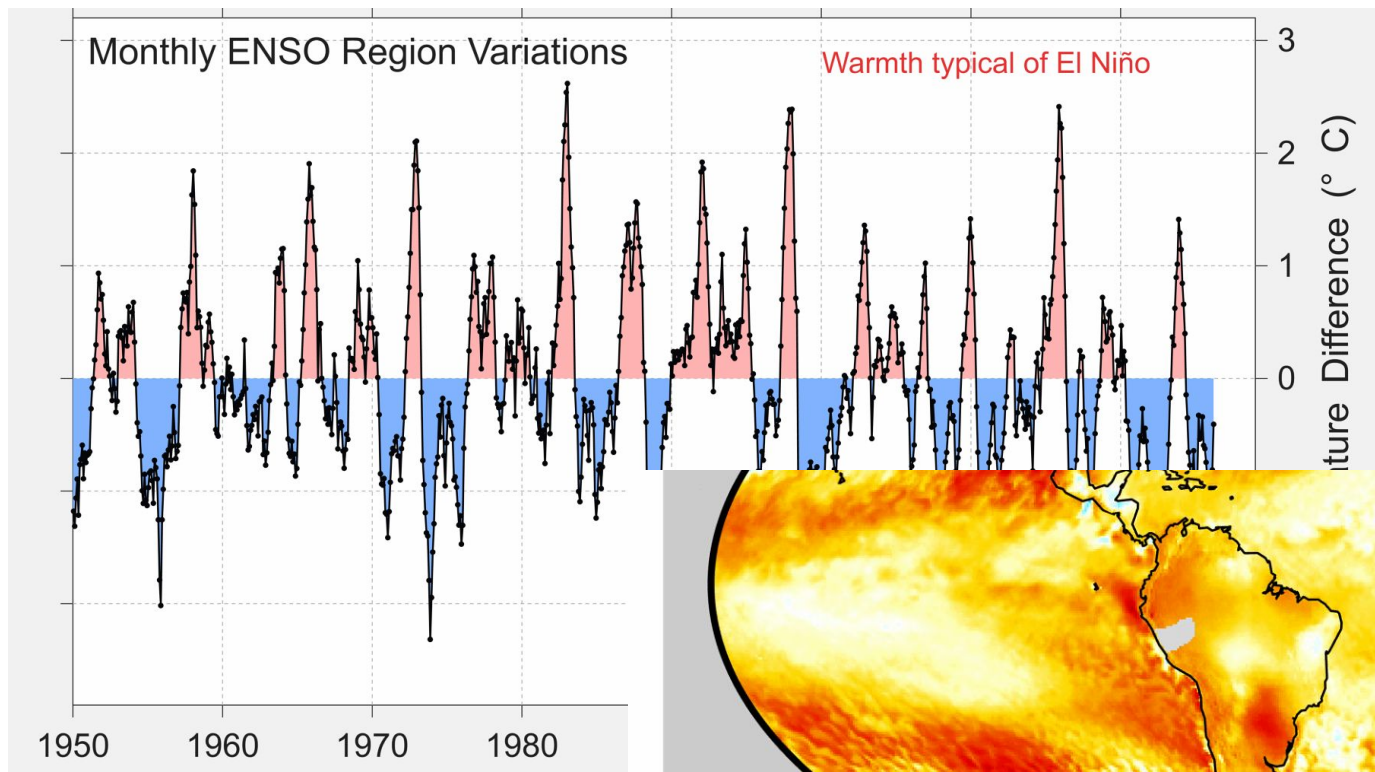
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- Second warmest March for the ocean, behind 2024, but with wide uncertainty.
- 6.0% of the ocean-surface had a locally record warm March average.

Return to Neutral El Niño Conditions



- La Niña has officially ended with an ongoing warming trend.
- A return to El Niño is likely later in 2026.

Weak La Niña on the Way Out



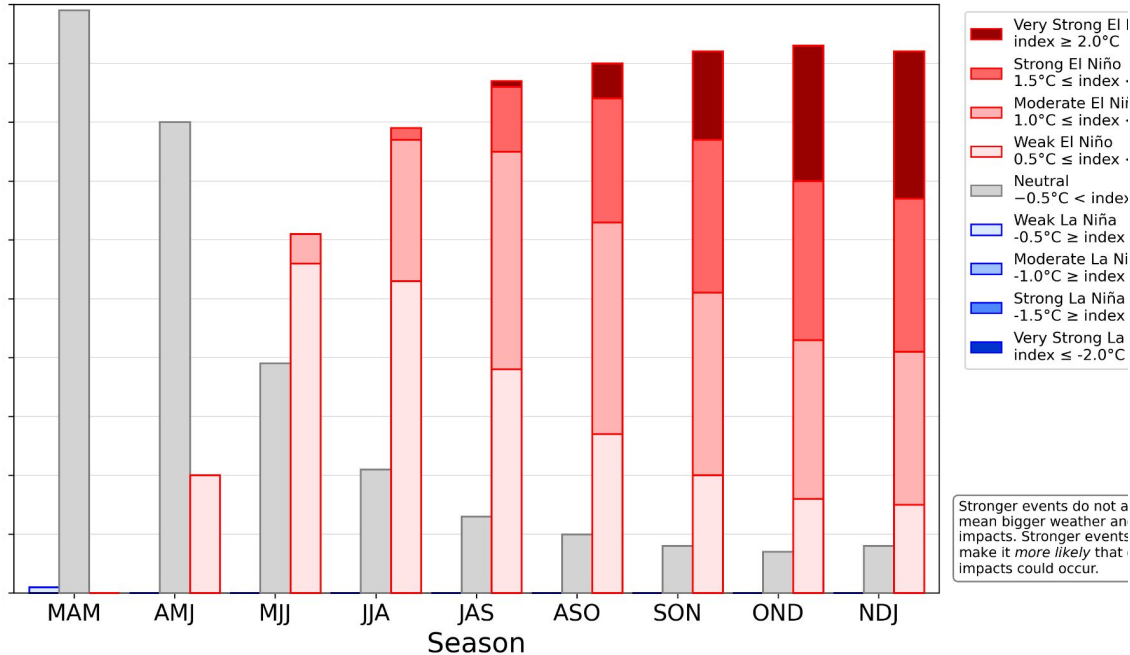
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La Niña is over. El Niño is coming



NOAA CPC ENSO Strength Probabilities (issued April 2026)

based on thresholds in ERSSTv5 Relative Niño-3.4 index



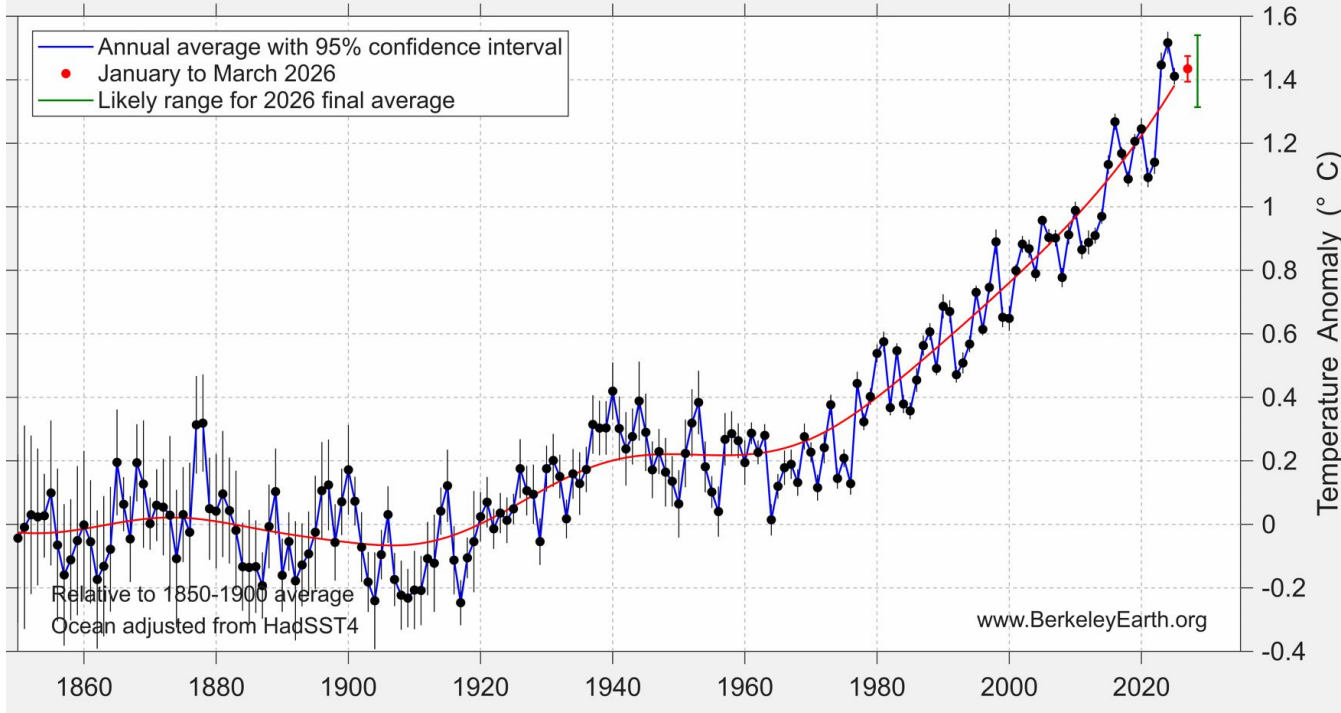
Stronger events do not a mean bigger weather an impacts. Stronger events make it *more likely* that impacts could occur.

- Currently neutral, but El Niño is very likely to return during the next several month.
- >90% chance of El Niño before the end of 2026.
- High risk of a strong (26%) or very strong (25%) El Niño.
- El Niño is likely increase global average temperatures in 2026 and 2027.

5% Chance 2026 is Warmest Year on Record



Berkeley Earth - Global



- 5.2 % chance to be the warmest year.
- 31 % chance to be 2nd warmest year.
- 25 % chance to be 3rd warmest year
- 38 % chance to be 4th warmest year
- < 1 % chance to be 5th or lower.
- 9.5 % chance to be above 1.5 °C.

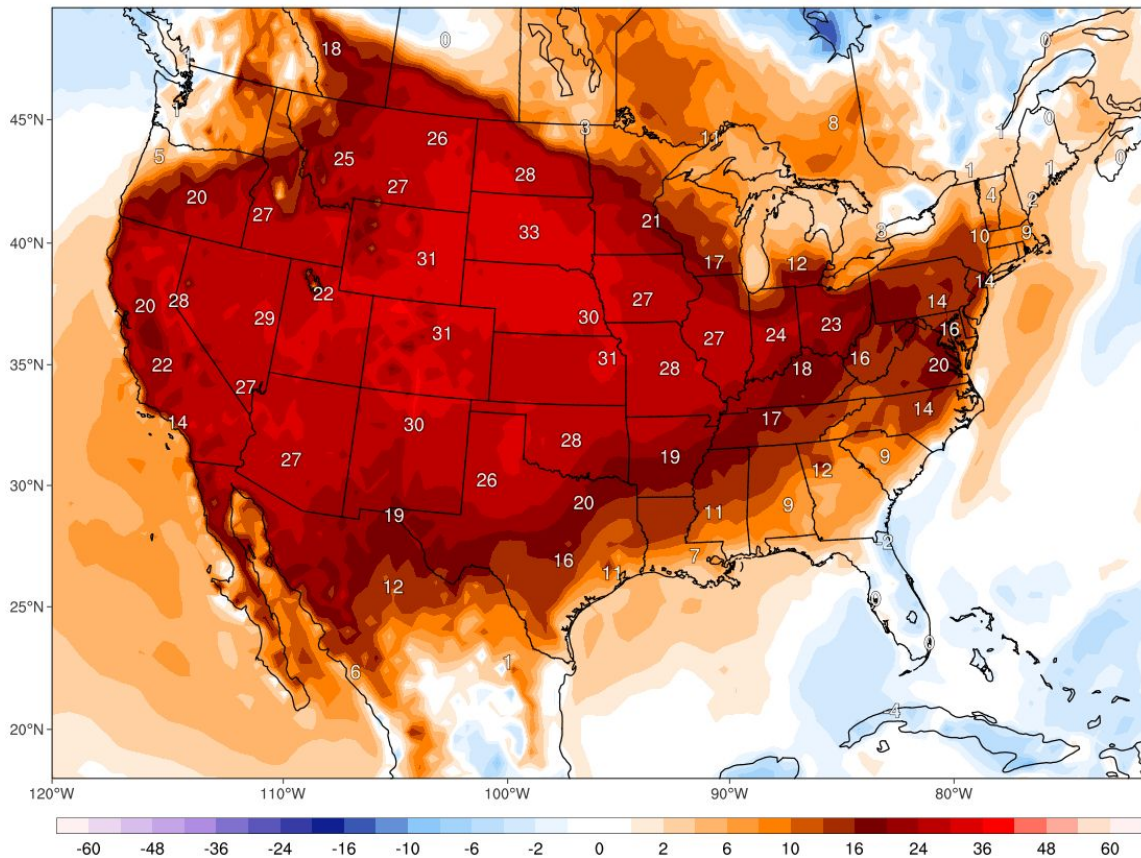
The March Heatwave in the USA

GFS 2m T Anomaly (°F) [CFSR 1979-2000 baseline]

Init 2026/03/21 00Z | f000 Valid Sat 00Z, Mar 21, 2026

ClimateReanalyzer.org

Climate Change Institute | University of Maine

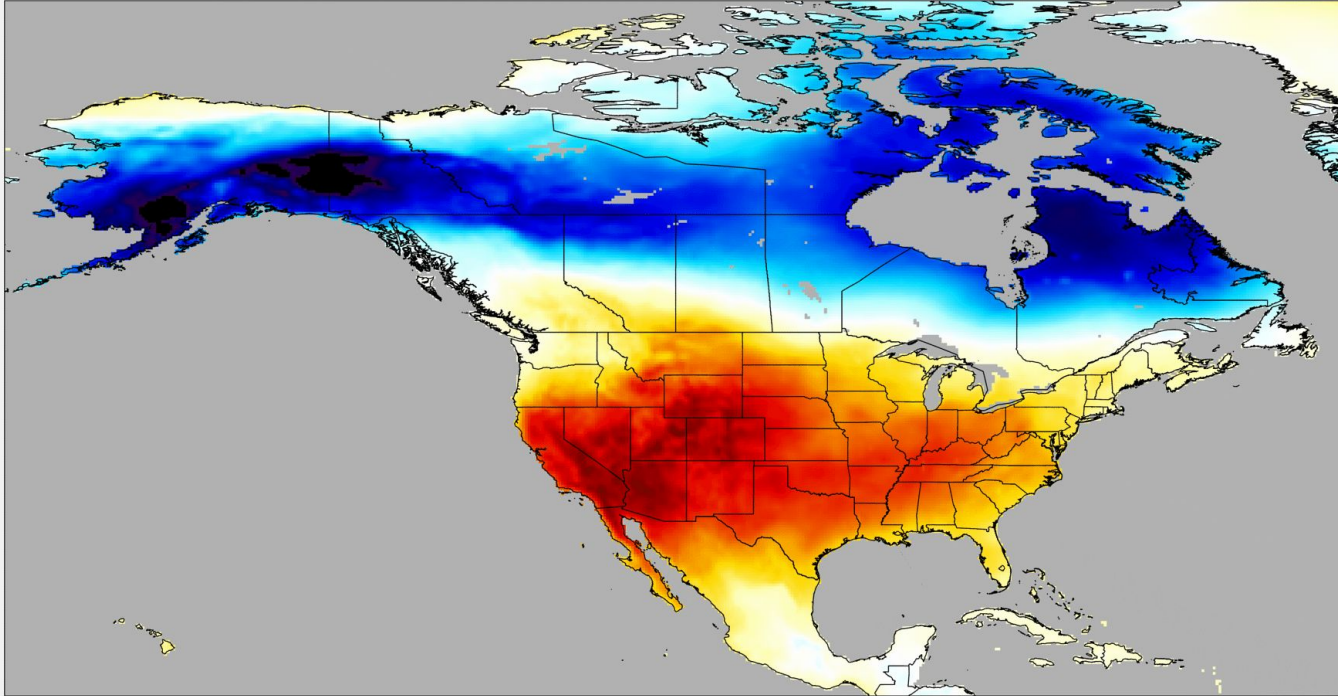


- The March 2026 heatwave in the United States was extraordinary
- Unprecedented in the measured history
- Standard statistical models say this would have been impossible without the boost from climate change

The March Heatwave in the USA

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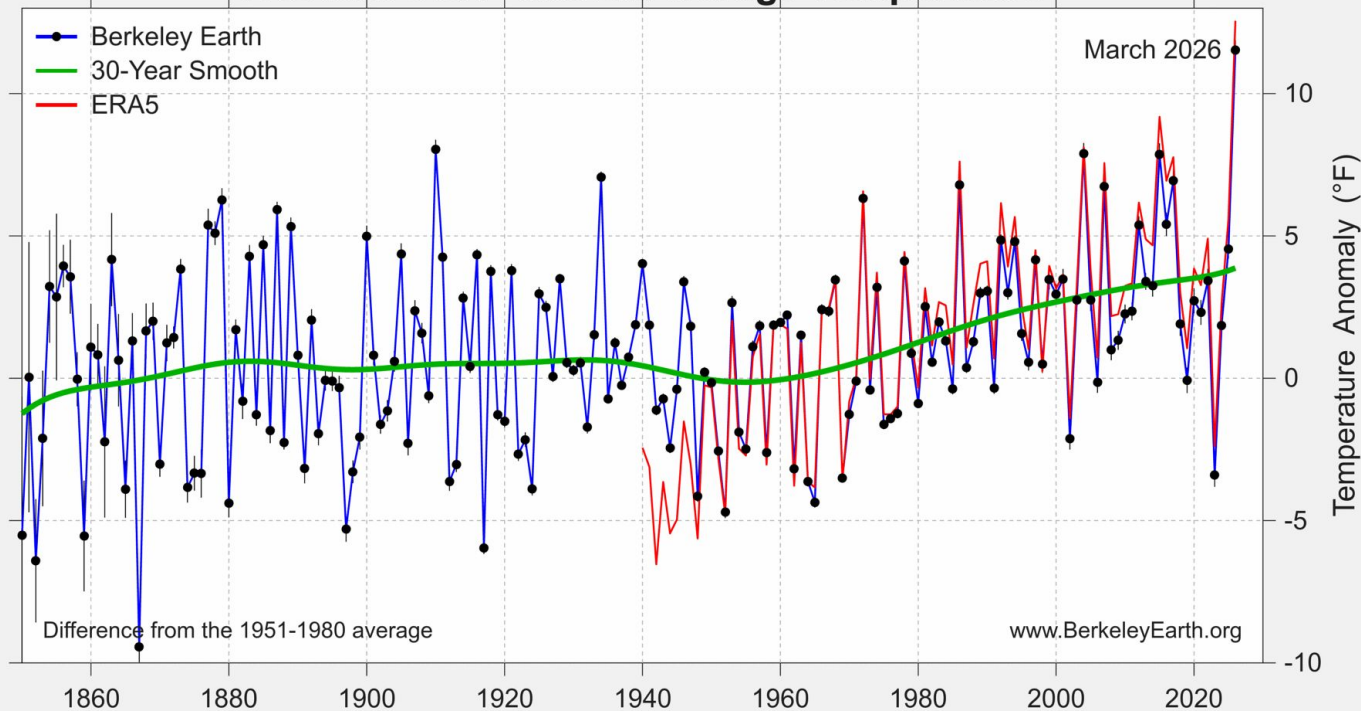
Monthly Temperature Anomalies - March 2026



- Widespread record-breaking warmth across the contiguous USA.
- Contrasted with colder than normal temperatures across Northern Canada and Alaska

The March Heatwave in the USA

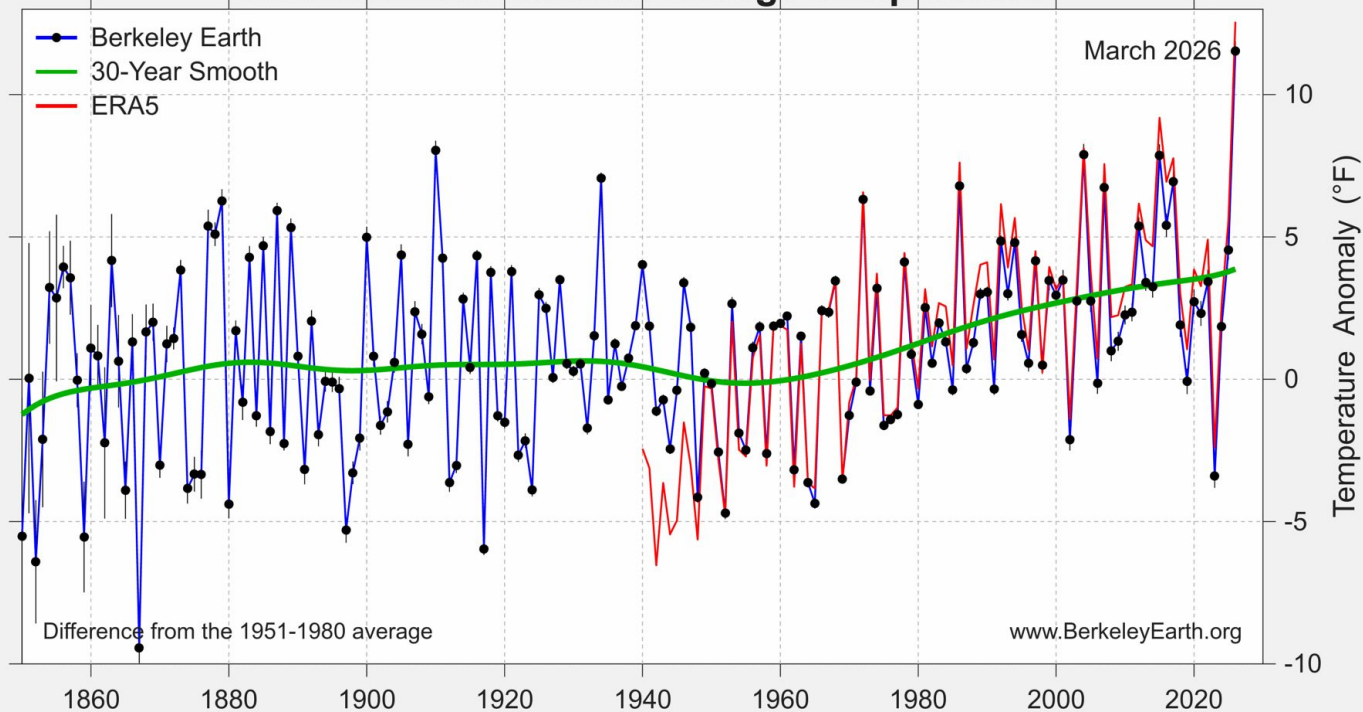
Western USA - March Average Temperature



- The March average temperature across the Western USA was about +11.6 °F (+6.4 °C) warmer than the mid-20th century average.
- That's a startling 3.6 °F (2.0 °C) higher than the previous record.
- Since the mid-20th century, the March average temperatures in the Western USA have warmed ~4 °F (2.2 °C).

The March Heatwave in the USA

Western USA - March Average Temperature

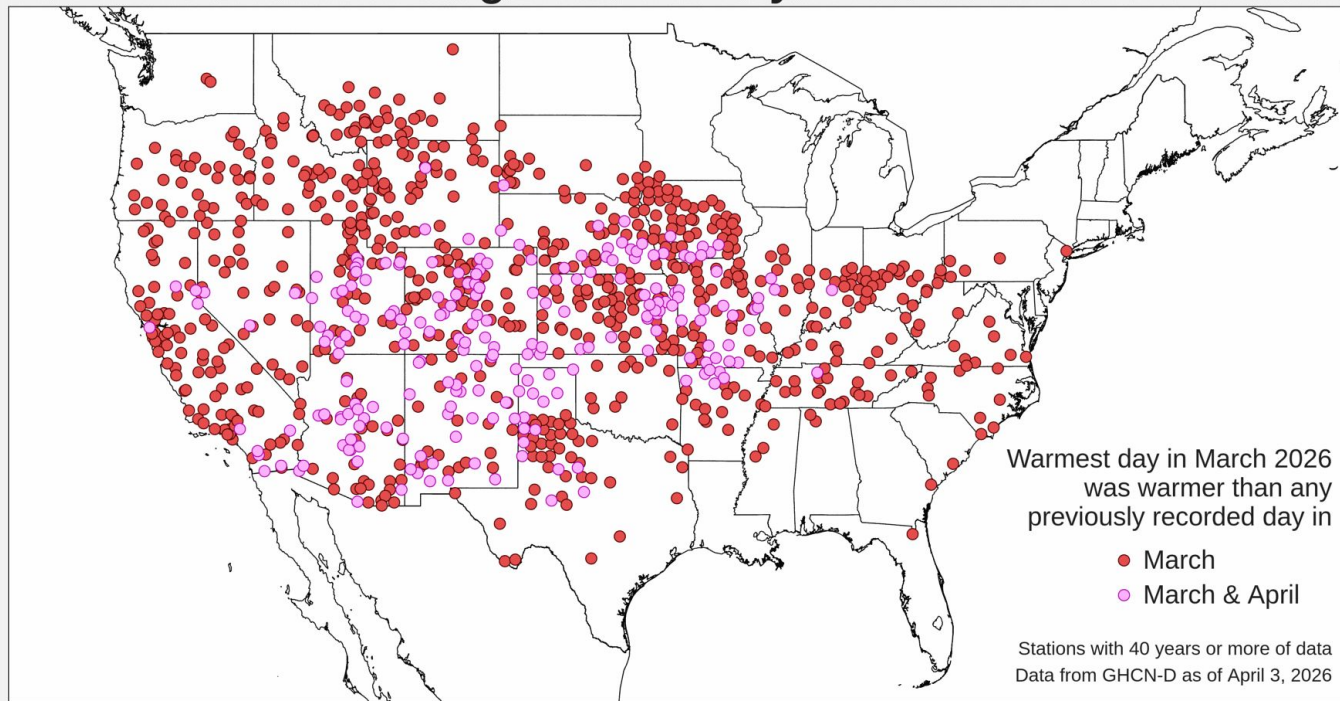


- Largest March average anomaly from trend ever observed in the Western USA
- Since the mid-20th century, the March average temperatures in the Western USA have warmed $\sim 4^{\circ}\text{F}$ (2.2°C).
- Without that global warming, this outcome would likely have been impossible.

The March Heatwave in the USA

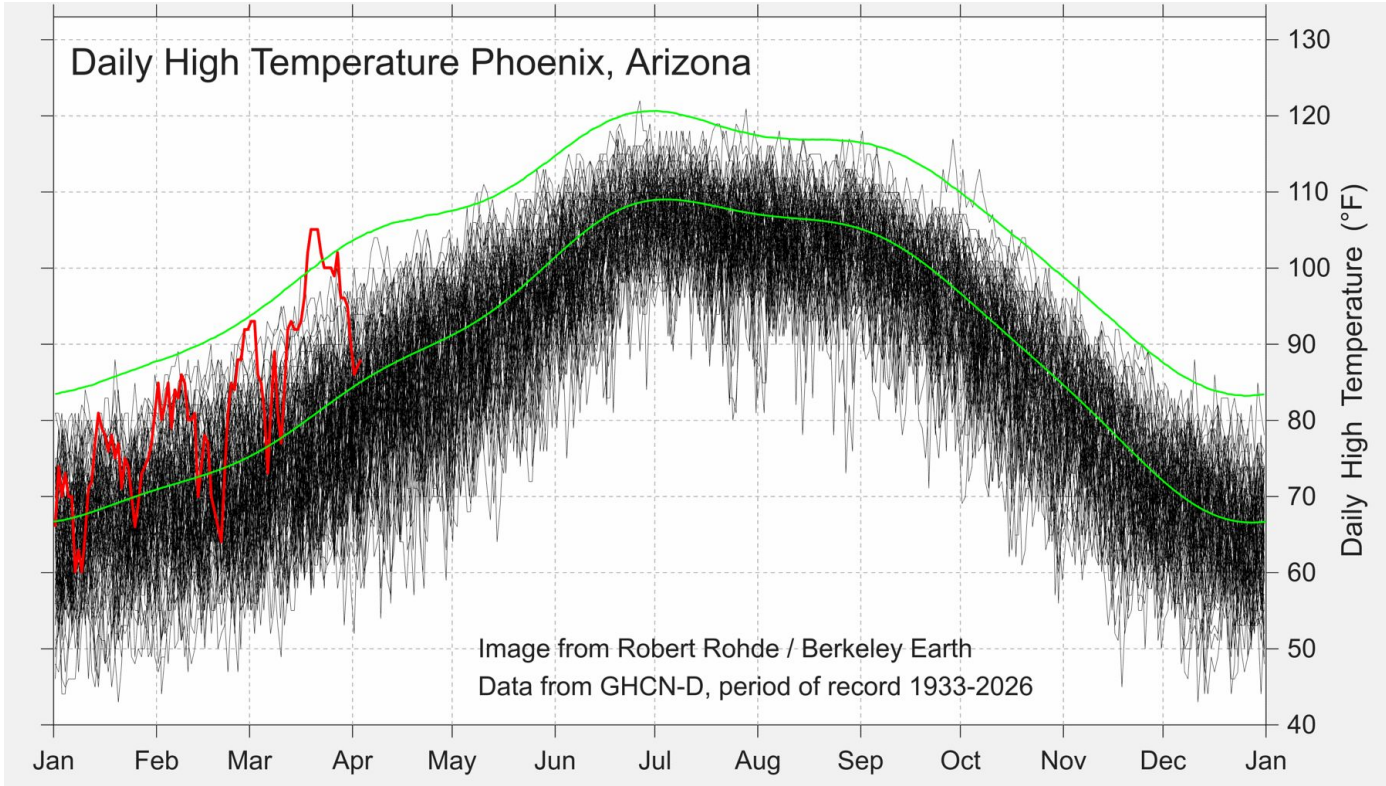
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US Stations Setting New Monthly Record in March 2026



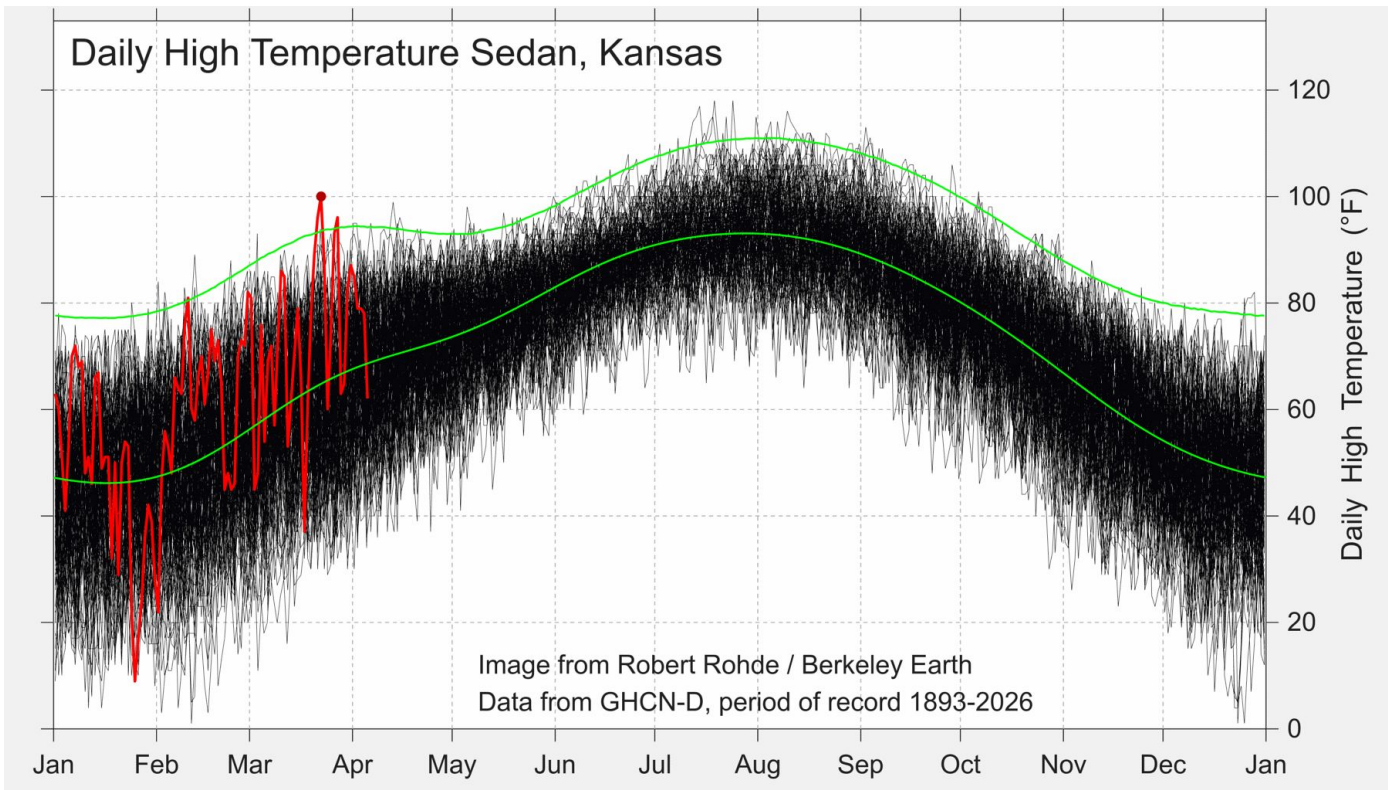
- In March 2026, at least 1008 weather stations in the USA set (or tied) their local record for the warmest day ever observed in March.
- Of these, 229 recorded a new March record so extreme that it would also beat any previously observed day in April.
- 10 stations were at least as warm in March as their May daily record

The March Heatwave in Phoenix, Arizona



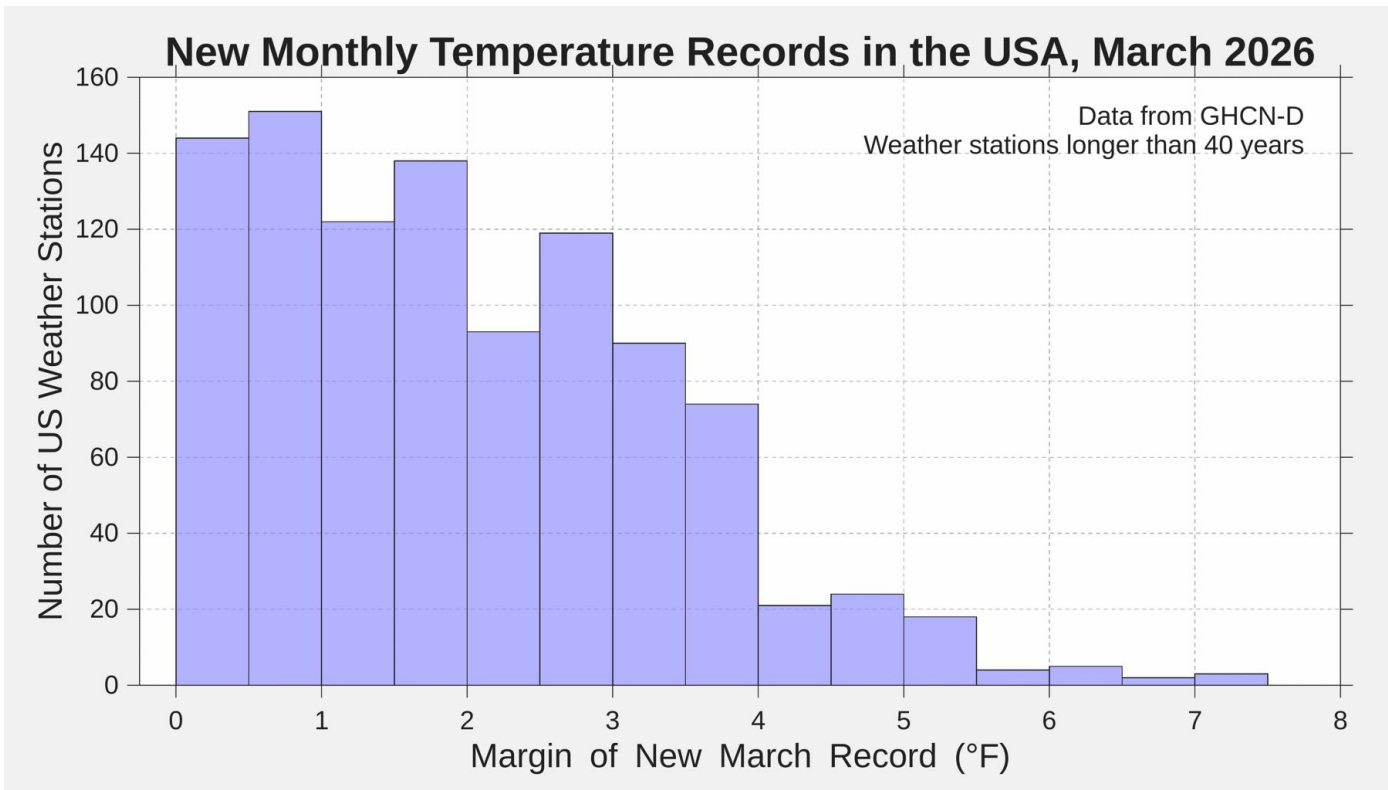
- Three days in March 2026 had a daily high of 105 °F (40.5 °C), beating its previous record for March by 5 °F (2.8 °C).
- This tied the previous record for April in Phoenix

The March Heatwave in Sedan, Kansas



- Reached 100 °F (37.8 °C) on March 22, 2026
- This was more than two months before the previous earliest 100 °F
- This tied the previous record for May in Phoenix

The March Heatwave in the USA



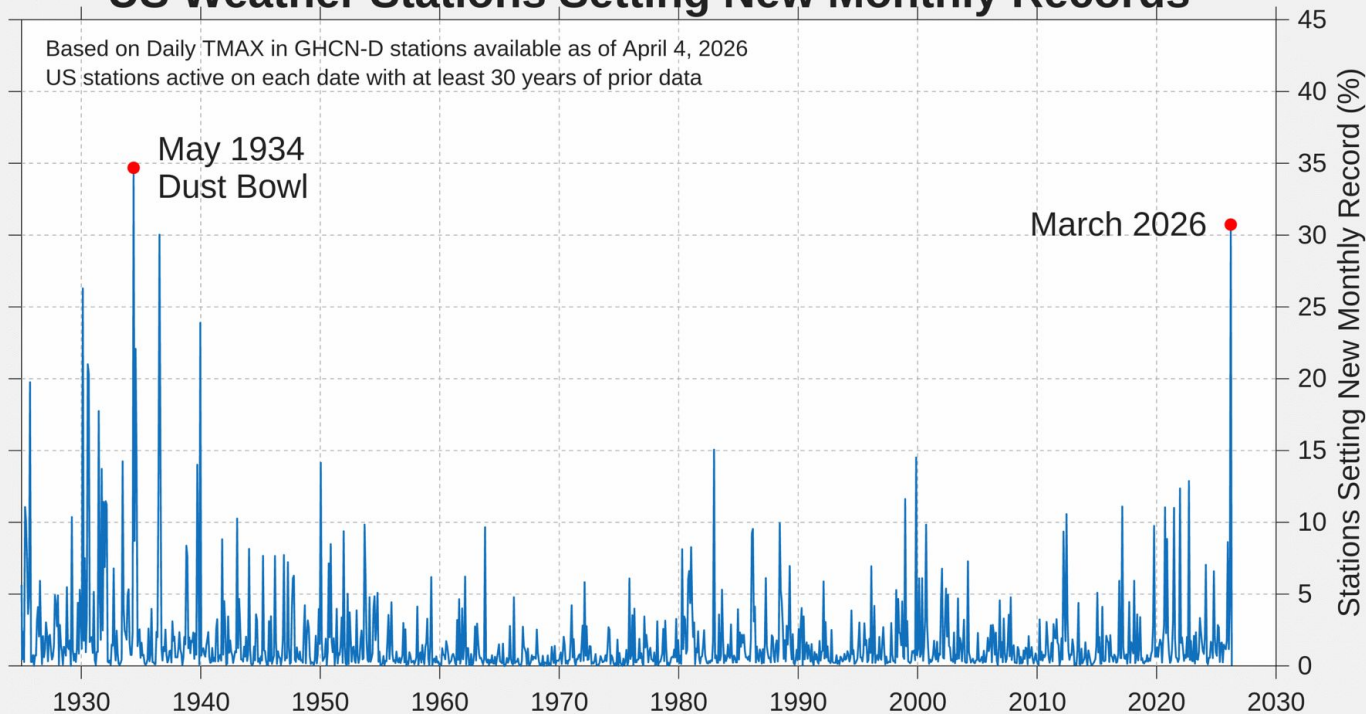
- Usually we see monthly records broken by a fraction of a degree.
- This time, many stations broke their records by 2 or more degrees F.

The March Heatwave in the USA

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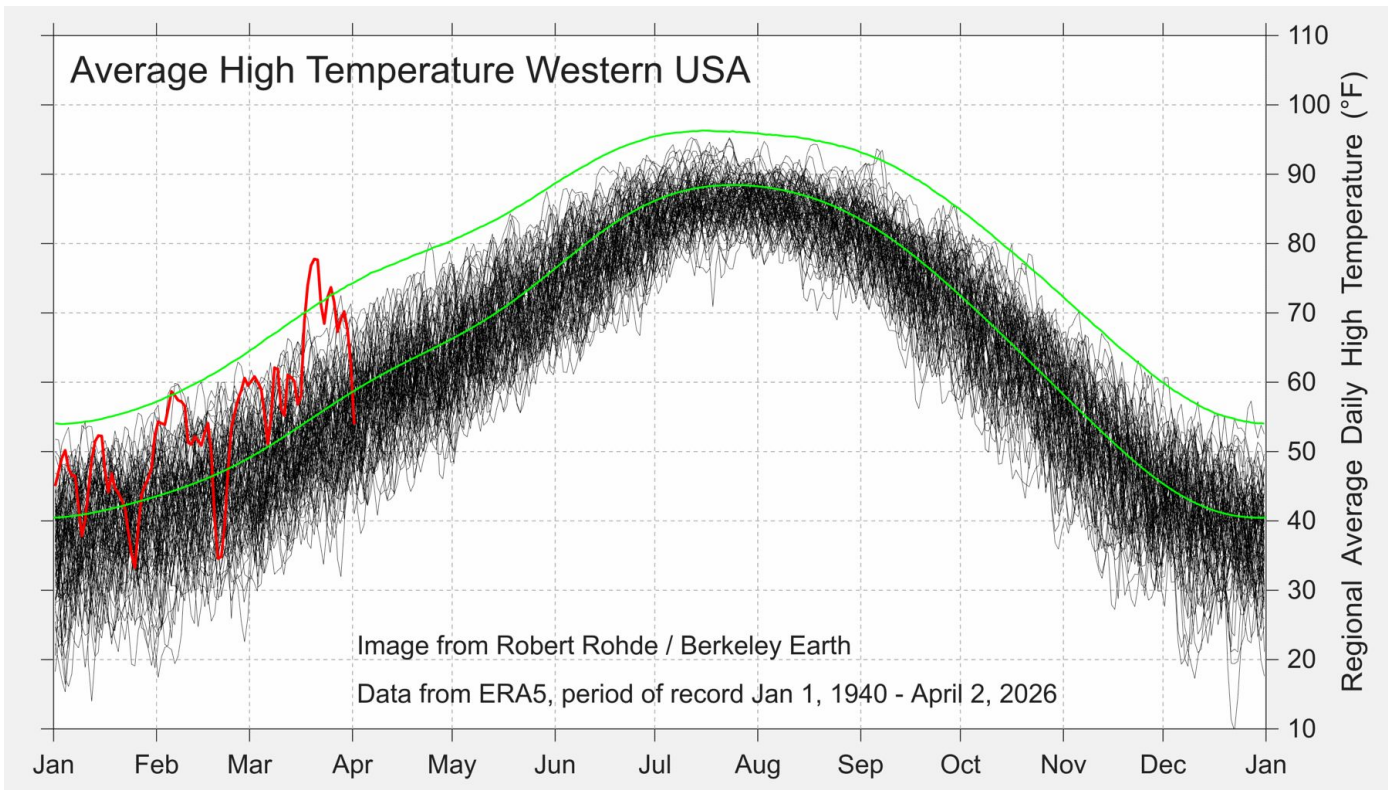
US Weather Stations Setting New Monthly Records

Based on Daily TMAX in GHCN-D stations available as of April 4, 2026
US stations active on each date with at least 30 years of prior data



- The fraction of stations setting new records in March 2026 was the second largest in history, and the largest every in March.
- Beaten only by May 1934, in the middle of the Dust Bowl

The March Heatwave in the USA

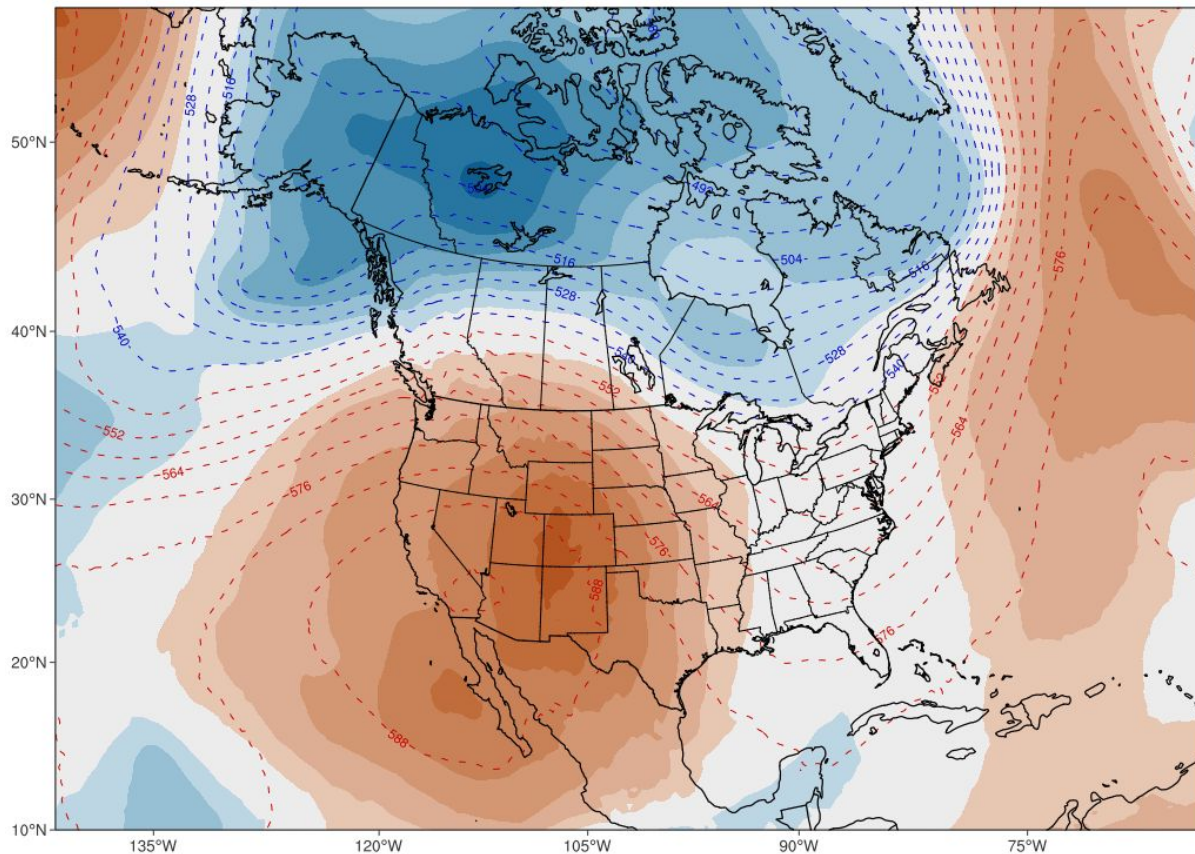


- The temperature spike across the Western USA was the largest positive excursion from normal every observed for this region
- Daily regional average peaked at +23 °F (+12.7 °C) above normal

The March Heatwave in the USA

GFS 500hPa GPH (dam) & Standardized Anomaly [CFSR 1979-2000 baseline]
Init 2026/03/19 00Z | f000 Valid Thu 00Z, Mar 19, 2026

ClimateReanalyzer.org
Climate Change Institute | University of Maine

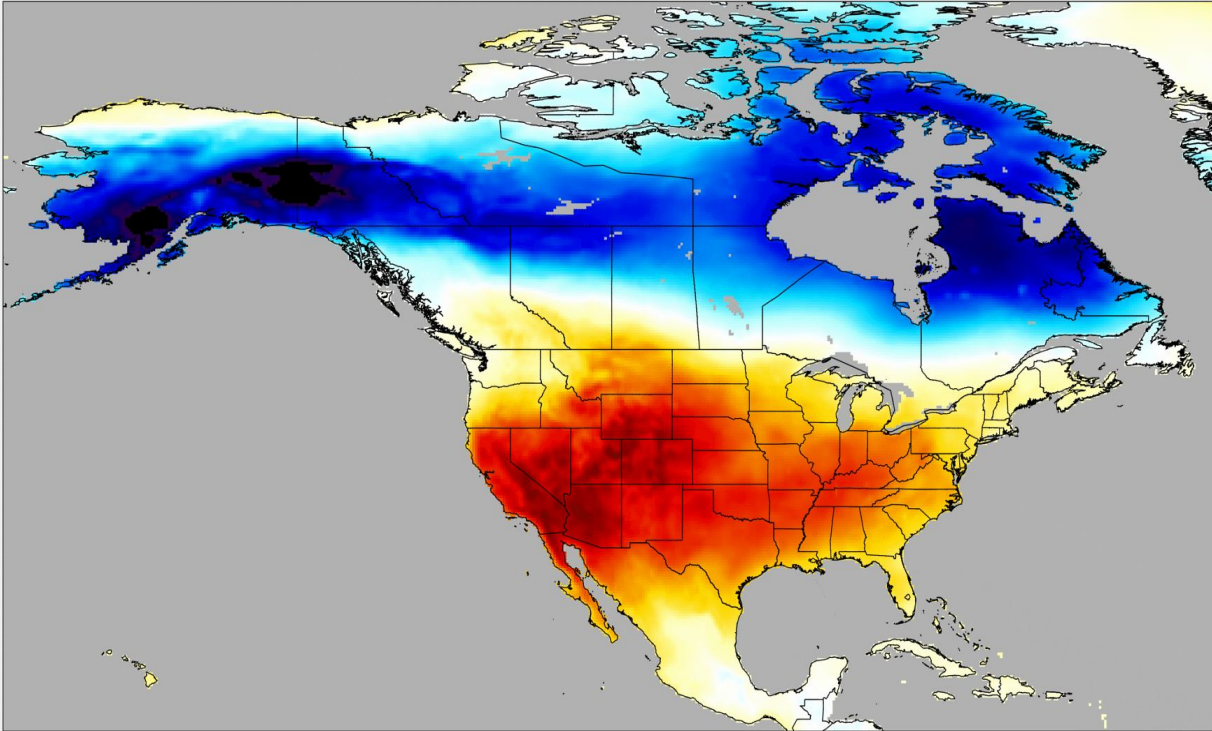


- The basic set up was a circulation pattern that led to high pressure, clear skies and a widespread heat dome.

The March Heatwave in the USA

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Monthly Temperature Anomalies - March 2026

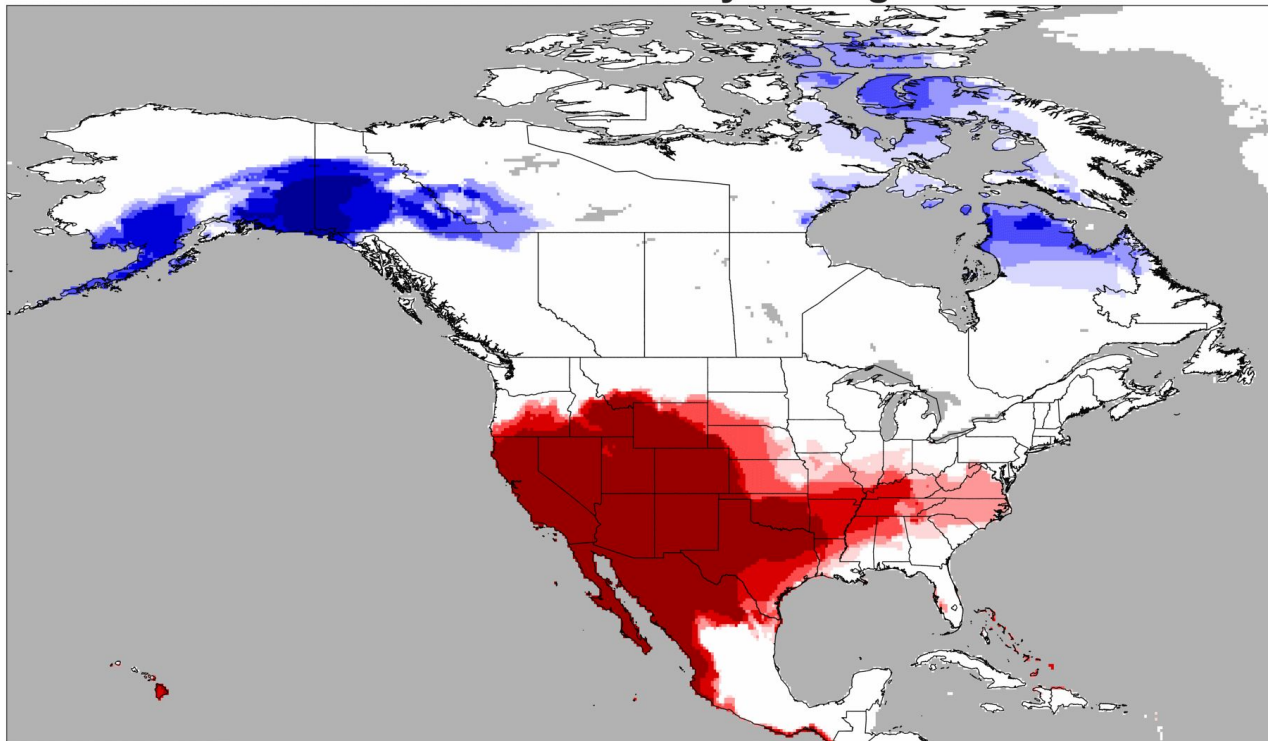


- Widespread heat in the contiguous USA.
- Unusually cold conditions in Alaska and the Canadian North.

The March Heatwave in the USA

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Record and Near-Record Monthly Averages - March 2026



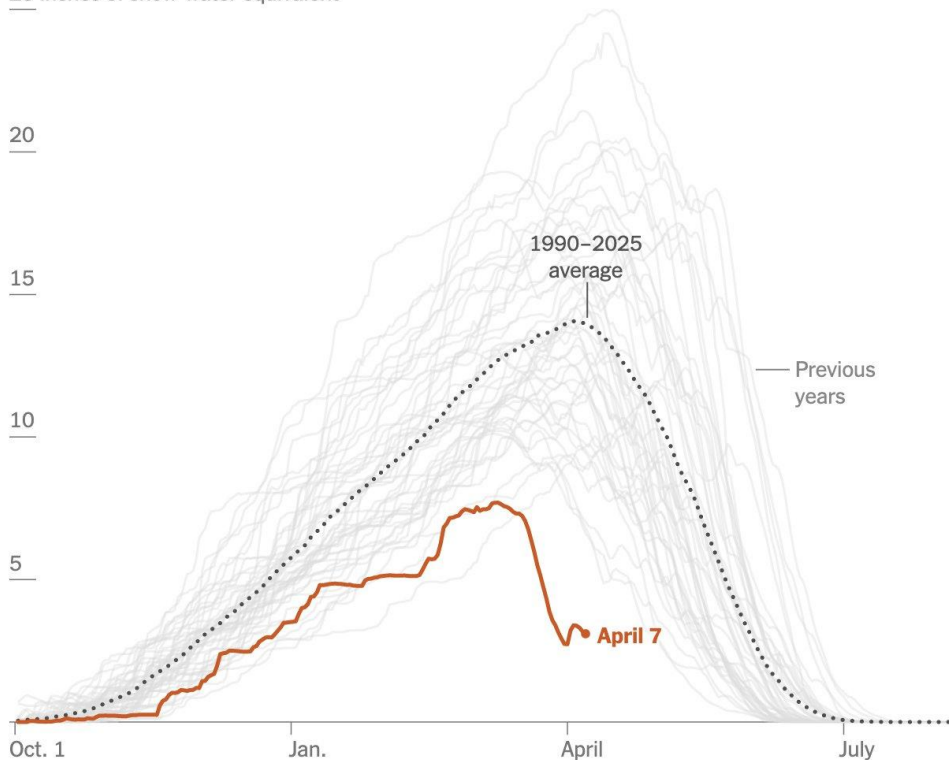
- Record monthly averages affected most of the Western USA and Northern Mexico.
- While cold, the temperatures in Canada were less unusual.
- Record-breaking lows near the Canada-Alaska border
- Nearly 20 times more area of record highs than lows.

The March Heatwave in the USA



Snowpack feeding the Colorado River reaches historic lows

25 inches of snow-water equivalent



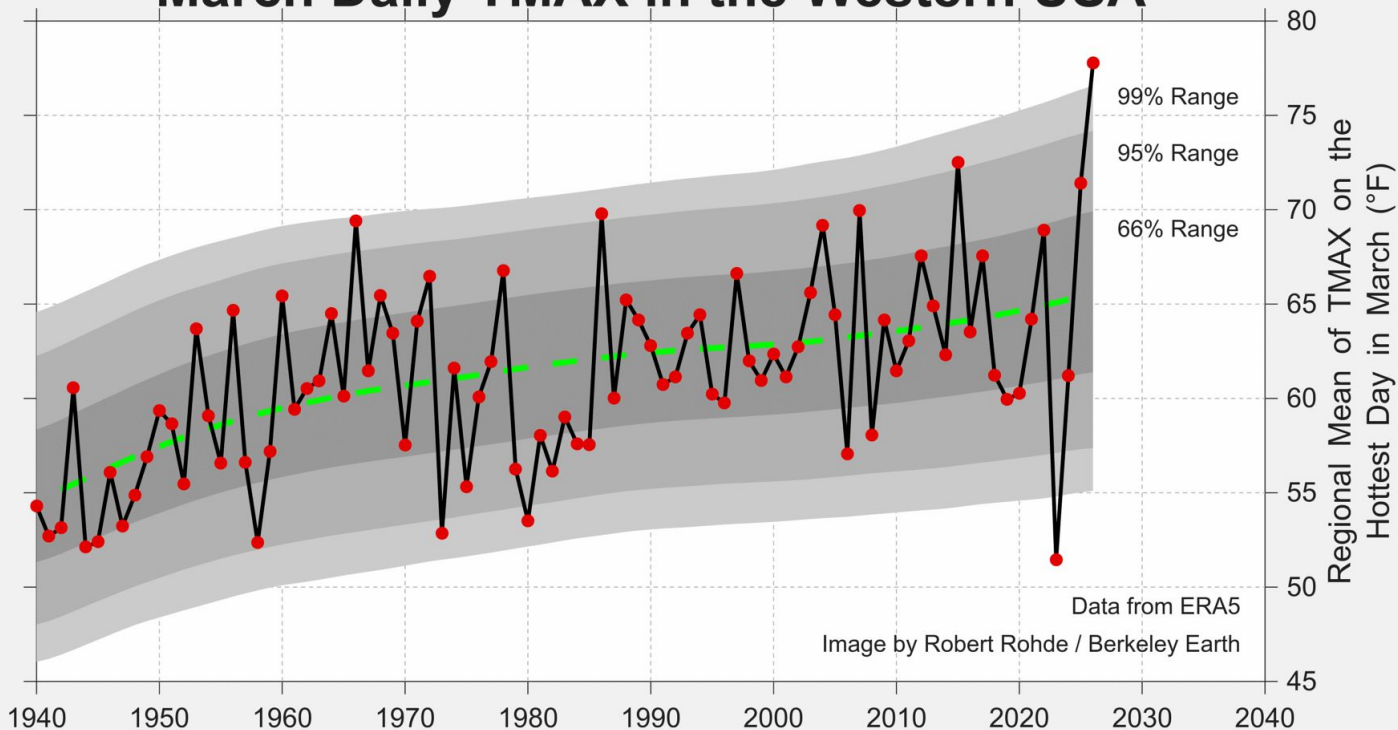
Source: USDA National Water and Climate Center. The New York Times

- Exacerbated the existing drought in the Western USA
- Brought snow pack to record low levels.
- Likely to impact summer fire season and water availability.
- Could have been much worse for health if it occurred in summer.

The March Heatwave in the USA

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March Daily TMAX in the Western USA

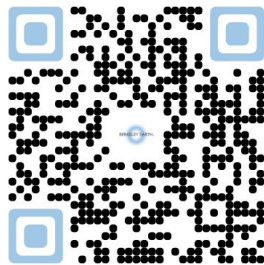


- Daily maximum temperature in the Western USA during March has not only risen
- It also appears to have become more variable.

Data from ERA5

Image by Robert Rohde / Berkeley Earth

Full report available here:



<https://berkeleyearth.org/march-2026-temperature-update/>

Next Briefing: May 2026