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## 4th Bowl "Men are scorched with fire and heat"





#### Revelation 16:8-9

And the fourth angel poured out his vial upon the sun; and power was given unto him to scorch men with fire. And men were scorched with great heat, and blasphemed the name of God, which hath power over these plagues: and they repented not to give him glory. (NKJV)



The climate dice are now loaded," NASA's James Hansen says in August 2012. These heat waves used to be exceedingly rare, the team noted. From 1951 to 1980, extremely hot temperatures affected only one-tenth of one percent of the globe, before signs of global warming began turning up in the climate records. But in the last three decades, extreme heat events have become more widespread and now affect about 10 percent of the globe. In another decade, the number could rise to about 17 percent.

See: <a href="http://news.nationalgeographic.com/news/2012/08/120803-global-warming-hansen-nasa-heat-waves-science/">http://news.nationalgeographic.com/news/2012/08/120803-global-warming-hansen-nasa-heat-waves-science/</a>

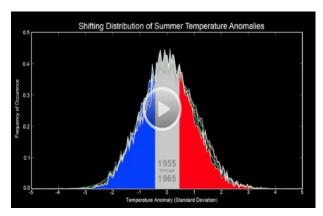


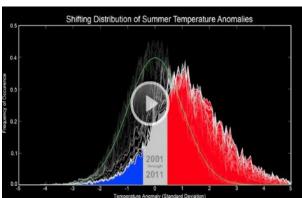
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(The actual global warming theory has been squashed by scientists as a hoax these are an increase of temperature anomalies causing flare ups in various regions this has also happened throughout differing periods in history. There is also ozone hole depletion and variances that have only been recorded since around 1987 prior to this no one knows)

There have been 7 major heat waves in 84 years in the world from 1906 to 2000. There have been 11 major world heat waves since 2000 to 2014 in 14 years an increase of 90% since 2000 with water shortage. There has been the actual Ozone Hole depletion over the Antarctic allowing greater radiation directly into the Earth's atmosphere causing an increase in skin related cancers. The Ozone Hole depletion in the Antarctic is near New Zealand and Australia who both have the highest skin cancer per head of population in the world. Heat waves are becoming hotter, lasting longer and occurring more often with an estimated 11.5 million deaths this century alone from drought and heat waves. There have been huge numbers of people perishing worldwide through freak heat waves the forth bowl manifesting on the earth poured out with increased heat waves in the 21st century. The year 2014 was the hottest worldwide ever recorded with some of the hottest recorded temperatures known since worldwide temperature record keeping began in 1880 and is expected to rise with more heat waves to come effecting millions killing many.

At least 4,500 Australians have died from heat waves since the year 1900. In the European heat wave of 2003, some 70,000 people died. The Russian heat wave of 2010 killed around 55,000 people. In Paris alone in 2003, some 15,000 died in the heat wave. Back in 1961, heat waves with temperatures above the average covered about 1% of our planet's land area. By 2010, this had risen to about 5%. , then to an estimated 10% by 2015 by 2020, it's expected to rise to 10% and by 2040 it is estimated at up to 20%. In other words, before the middle of this century, when heat waves hit, they will cover about one fifth of all the land area on Earth. In early 2015 in southern India 2600 people died in a heat wave near Hyderabad also killing more than 17 million chickens, as reported on world news channels. Another 1200 people died in a heat wave in Pakistan by June 2015. By mid 2015 heat waves had also hit Alaska, north Canada, central Europe, USA, UK, North Africa, Spain, Portugal, France and Russia. See graphs below:





Worldwide summer temp 1955 – 1985

Worldwide summer temp 1985 - 2011

See last part of chapter for heat waves from before 1902 -2021 and there increased rates.

Since early to mid 2019 into 2020 nations around the world began to experience severe drought conditions a lack of rain and extreme heat. You had massive droughts heat waves and temperature changes all around the world recorded causing even further increased weather disasters.

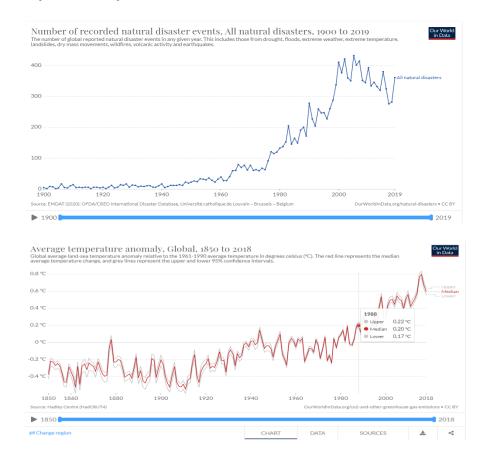
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Weather Madness Insane temperatures as many parts of Europe enjoy summer heat during midwinter Records broken in Spain Italy France and Switzerland Wednesday, 5 February 2020



See: https://www.thebigwobble.org/2020/02/weather-madness-insane-temperatures-as.html

Sea and Surface Temperatures Major Earthquakes Volcano Eruptions Droughts Extreme Temperatures Famine Flooding Wildfires and Cyclones caused by the Sun and will continue increasing Saturday, 18 January 2020



See: <a href="https://www.thebigwobble.org/2020/01/sea-and-surface-temperatures-major.html">https://www.thebigwobble.org/2020/01/sea-and-surface-temperatures-major.html</a>

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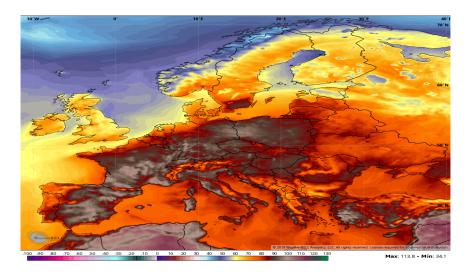
Record breaking drought to record breaking rainfall and Biblical sized locust plagues in just 3 years East and Central Africa torrid period leaves thousands dead from hunger and flooding with millions displaced Tuesday, 4 February 2020

See: <a href="https://www.thebigwobble.org/2020/02/record-breaking-drought-to-record.html">https://www.thebigwobble.org/2020/02/record-breaking-drought-to-record.html</a>

Norway and Scandinavia recorded warmest January day on record with an astonishing 19 deg C 66 deg F Earlier this week UK recorded its hottest December day ever 18.7 deg C, (66 deg F) Friday, 3 January 2020

See: http://www.thebigwobble.org/2020/01/norway-and-scandinavia-recorded-warmest.html

European heat wave France Germany Poland and the Czech Republic set June records and the worst is still to come.



 $See: \underline{https://www.washingtonpost.com/weather/2019/06/26/european-heat-wave-france-germany-poland-czech-republic-set-june-records-worst-is-still-come/?utm\_term=.c2ee6d68455f$ 

You had massive fires all over Australia for several months the driest and hottest season on record for over 131 years. Prophets were stating the fires in Australia were symbolic of the end time's fire of Elijah being released in the next greatest move of Gods Glory (harvest) in the nations. Millions of animals were killed in these fires across Australia smoke traveled over 4500 miles (4050 kms) across the Tasman covering New Zealand turning mountain snow brown in parts of the North and South Island an epic event with thousands of fire fighters active all over Australia, truly a country on fire a sign and wonder.

Joe 2:30 "And I will show wonders in the heavens and in the earth: Blood and fire and pillars of smoke. (NKJV)

Aussie Bushfire Update 2019 was both the hottest and driest on record for Australia 45 deg C temps back tomorrow Authorities have issued new warnings and evacuation notices Thursday, 9 January 2020

# "THE BOOK OF REVELATION UNSEALED" Chapter 23

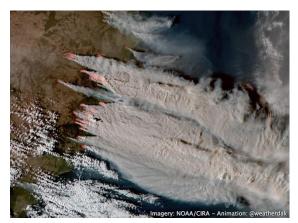




See:: http://www.thebigwobble.org/2020/01/aussie-bushfire-update-no-22-2019-was.html



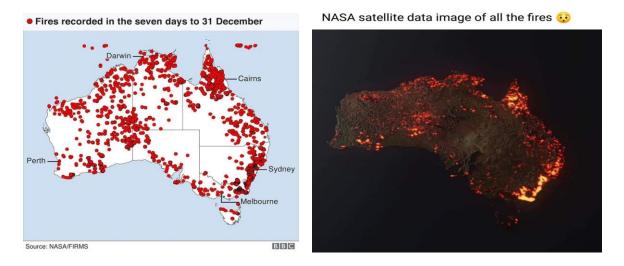
See: <a href="https://www.tomorrowsworld.org/news-and-prophecy/australia-is-on-fire">https://www.tomorrowsworld.org/news-and-prophecy/australia-is-on-fire</a>





See: https://takvera.blogspot.com/2019/11/east-coast-of-australia-literally-on.html

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Australia on fire Sept 2019 –Jan 2020

Australia on Fire A 2017 Word of the Lord on the Fires in Australia by Adam F. Thompson, Adelaide, South Australia

#### Word from 2017:

In 2017, I had a vision in which I saw the power and lightning of God released over Australia. I saw, as it were, the map of Australia from above, where fire was spread throughout the land. Initially, I thought I was seeing a metaphor for the nation burning under the fire of revival, but the Lord corrected me saying, "No, no! The time is coming in the future when you will see this happening, where the whole nation will literally be burning. When you see this take place, it will be a sign that I am sending the spirit of Elijah."



In 2017, I released this revelation at Field of Dreams Church in Adelaide, South Australia, and also on public media (image above), but it didn't attract much response at that time. However, the vision stayed with me while I was writing a new book titled "The Elijah Invitation." This book has taken two years to produce and bring to publication. My heart was for it to be published in 2019, however, the sheer resistance I've experienced has been of an intensity unparalleled with any of my previous books. Only now do I understand that God allowed that opposition.

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#### Fast Forward into 2020

A friend informed me that the Prophet Perry Stone had recently released a prophetic word about a perfect storm coming in 2020 with the spirit of Elijah. That prophecy is coming to pass. This convergence of great fire and the manifestation of the spirit of Elijah is not coincidental. Please note that I am not saying that this terrible burning in Australia is the judgment of God, but I do believe it is a sign; a using of this natural occurrence to alert people to the supernatural.

See: <a href="https://www.elijahlist.com/words/display\_word.html?ID=23070&fbclid=IwAR3e32-e7xi-5le1mh1e2Zp7BB56l0hdqAW-VU902fLaHH2y3xUT7LZKtAs">https://www.elijahlist.com/words/display\_word.html?ID=23070&fbclid=IwAR3e32-e7xi-5le1mh1e2Zp7BB56l0hdqAW-VU902fLaHH2y3xUT7LZKtAs</a>

On the USA 700 Club News programme June 28<sup>th</sup> 2021 the hottest heat wave ever seen in a 1000 years has hit the country according to scientists with 112 degress over the entire North West of the United States where 33 million people in 7 states. The historic heat wave hitting the pacific north west in sates such as Portland and Saettle in California is hitting highs of 112 degrees and getting hotter. This is a region where air conditioning and fans are used only a few days a year with this unusual heat wave fans and air conditioners are runing out of sale, this early heat wave is a very dangerouse time. This heat wave is also movign across states towrads New York with temperatures already at 90 degrees.





Satelite images of Angelos National Forest California one year apart to June 2021 show massive drought



With fresh water supplies in some lakes droped in their levels of water even up to 158 feet.

See U Tube "The 700 Club - June 28, 2021": https://youtu.be/luCLMysw3eA

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## **List of heat waves before 1901 – 2021** (see the increase)

#### **Before 1901**

- 1540 European drought Extreme drought and heat wave lasting 11 months in Europe.
- July 1757 heat wave Europe, hottest summer in 500 years before 2003.
- 1896 Eastern North America heat wave killed 1,500 people in August 1896.
- 1900 historical heat wave of the center of Argentina between the first eight days of February 1900 known as "the week of fire" affected the city of Buenos Aires and Rosario with temperatures of up to 37 °C (99 °F) but with a very high index of humidity that elevated the sensation of heat to 49 °C (120 °F) severely affecting the health of people causing at least more than 478 fatalities.

#### 20th century

- 1901 1901 eastern United States heat wave killed 9,500 in the Eastern United States.
- 1906 during the 1906 United Kingdom heat wave which began in August and lasted into September broke numerous records. On September 2 temperatures reached 35.6 °C (96.1 °F), which still holds the September record, however some places beat their local record during September 1911 and September 2016.
- 1911 1911 Eastern North America heat wave killed between 380 and 2,000 people.
- 1911 1911 United Kingdom heat wave was one of the most severe periods of heat to hit the country with temperatures around 36 °C (97 °F). The heat began in early July and didn't let up until mid September where even in September temperatures were still up to 33 °C (91 °F). It took 79 years for temperature higher to be recorded in the United Kingdom during 1990 United Kingdom heat wave.
- 1913 in July, the hottest heat wave ever struck California. During this heat wave, Death Valley recorded a record high temperature of 57 °C (134 °F) at Furnace Creek, which still remains the highest ambient air temperature recorded on Earth.
- 1921 Hottest July on record across Eastern Canada and parts of the Northeastern US, part of a very warm year in those places. Parts of the United Kingdom also saw recording breaking heat, also part of a very warm year. The Central England Temperature for July was 18.5 °C (65.3 °F), which was the 8th warmest since records began in 1659, and the warmest since 1852. The year of 1921 was the warmest on record at the time, but has since been eclipsed by 15 other years.
- 1923–1924 during a period of 160 such days from 31 October 1923 to 7 April 1924, the Western Australian town of Marble Bar reached 38 °C (100 °F).
- 1930s Almost every year from 1930 to 1938 featured historic heat waves and droughts somewhere in North America, part of the Dust Bowl years.
- 1936 1936 North American heat wave during the Dust Bowl, followed one of the coldest winters on record—the 1936 North American cold wave. Massive heat waves across North America were persistent in the 1930s, many mid-Atlantic/Ohio valley states recorded their highest temperatures during July 1934. The longest continuous string of 38 °C (100 °F) or higher temperatures was reached for 101 days in Yuma, Arizona during 1937 and the highest temperatures ever reached in Canada were recorded in two locations in Saskatchewan in July 1937.
- 1950s Prolonged severe drought and heat wave occurred in the early 1950s throughout the central
  and southern United States. Every year from 1952 to 1955 featured major heat waves across North
  America. In some areas it was drier than during the Dust Bowl and the heat wave in most areas was
  within the top five on record. The heat was particularly severe in 1954 with 22 days of temperatures
  exceeding 38 °C (100 °F) covering significant parts of eleven states. On 14 July, the thermometer

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reached 47 °C (117 °F) at East St. Louis, Illinois, which remains the record highest temperature for that state.

- October 1952 Romania was hit by very hot weather. Temperatures reached 39.0 °C (102.2 °F) on 2 October, with Bucharest reaching 35.2 °C (95.4 °F). Temperatures on the night of 2–3 October were also just under 26 °C (79 °F).
- 1955 1955 United Kingdom heat wave was a period of hot weather that was accompanied by drought. In some places it was the worst drought on record, more severe than 1976 and 1995.
- 1960 on 2 January, Oodnadatta, South Australia hit 50.7 °C (123.3 °F) degrees, the highest temperature ever recorded in the Southern Hemisphere and Oceania.
- 1972 heat waves of 1972 in New York and Northeastern United States were significant. Almost 900 people died; the heat conditions lasted almost 16 days, aggravated by very high humidity levels.
- 1976 1976 United Kingdom heat wave was one of the hottest in living memory and was marked by constant blue skies from May until September when dramatic thunderstorms signaled the heat wave's end.
- 1980 estimated 1,000 people died in the 1980 United States heat wave and drought, which impacted the central and eastern United States. Temperatures were highest in the southern plains. From June through September, temperatures remained above 32 °C (90 °F) all but two days in Kansas City, Missouri. The Dallas/Fort Worth area experienced 42 consecutive days with high temperatures above 38 °C (100 °F), with temperatures reaching 47 °C (117 °F) at Wichita Falls, Texas on 28 June. Economic losses were \$20 billion (1980 dollars).
- 1981 August 1981 heat wave in the Pacific Northwest.
- 1983 during the Summer of 1983 temperatures over 38 °C (100 °F) were common across Iowa, Missouri, Illinois, Michigan, Wisconsin, Indiana, Ohio, Minnesota, Kansas, Nebraska, and certain parts of Kentucky; the summer of 1983 remains one of the hottest summers ever recorded in many of the states affected. The hundred-degree readings were accompanied by very dry conditions associated with drought affecting the Corn Belt States and Upper Midwest. The heat also affected the Southeastern U.S. and the Mid-Atlantic states as well that same summer. New York Times represented articles about the heat waves of 1983 affecting the central United States. This heat wave was associated with the I-94 derecho.
- 1983 United Kingdom experienced a heat wave during July 1983. This was the hottest month ever recorded until it was beaten in 2006.
- 1987 prolonged heat wave from 20 to 31 July in Greece, with more than 1,000 deaths in the area of Athens. The maximum temperature measured was 41.9 °C (107.4 °F) at 23 July at the center of Athens and in the suburb of New Philadelphia, 8 kilometers (5.0 mi) northeast was 43.6 °C (110.5 °F) on 27 July, and were combined with high minima, with the highest being 30.2 °C (86.4 °F) in the center of Athens at 27 July and 29.9 °C (85.8 °F) at 24 July at New Philadelphia. The lowest minimum was 25.6 °C (78.1 °F) at the center of Athens. Moreover, humidity was high and wind speeds low, contributing to human discomfort, even during the night.
- 1988 intense heat spells in combination with the drought of 1988, reminiscent of the dust bowl years caused deadly results across the United States. Some 5,000 to 10,000 people died because of constant heat across the United States although-according to many estimates-total death reports run as high as next to 17,000 deaths.
- 1990 cities across the United Kingdom broke their all time temperature records in the dramatic 1990 United Kingdom heat wave temperatures peaked at 37 °C (99 °F). This led to one of the hottest Augusts on record, records going back to 1659.
- 1995 1995 Chicago heat wave produced record high dew point levels and heat indices in the Chicago area and Wisconsin; temperatures reached as high as 41 °C (106 °F). The lack of emergency cooling facilities and inadequate response from civic authorities to the senior population,

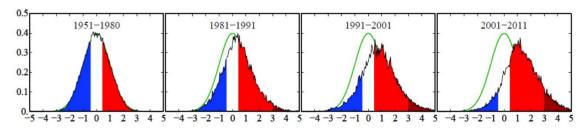
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particularly in lower income neighborhoods in Chicago and other Midwestern cities, lead to at least 778 deaths—mostly which were African American Chicagoans. A series of damaging derechos occurred on the periphery of the hot air dome.

- 1995 United Kingdom experienced its 3rd hottest summer since 1659. August was the hottest on record since 1659. The summer was also the driest on record since 1766. Temperatures peaked at 35 °C (95 °F) on 1 August, which did not break the all-time record.
- 1997 United Kingdom experienced its 3rd major heat wave in 7 years with August 1997 being one of the hottest on record.
- 1999 heat wave and drought in the eastern United States during the summer of 1999. Rainfall shortages resulted in worst drought on record for Maryland, Delaware, New Jersey, and Rhode Island. The state of West Virginia was declared a disaster area. 3.81 million acres (15,400 km²) were consumed by fire as of mid-August. Record heat throughout the country resulted in 502 deaths nationwide. There were many deaths in urban centers of the Midwest.
- 2000 in late Summer 2000, a heat wave occurred in the southern United States, breaking many cities' all-time maximum temperature records.

#### 21st century

#### SHIFTING DISTRIBUTION OF SUMMER TEMPERATURE ANOMALIES



Credit: James Hansen, NASA Goddard Institute for Space Studies

Frequency of occurrence (vertical axis) of local June-July-August temperature anomalies (relative to 1951-1980 mean)

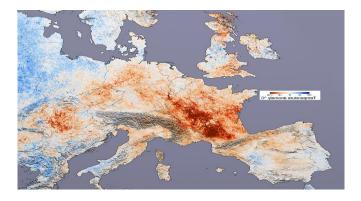
(Before 2001 it was maybe 1or 2 heat wave per year some years missed out completely. From 2001 onwards a huge shift began in summer temperature increases with increased heat wave occurrences around the Earth scorching men. The world began experiencing 2-6 heat waves per year in 2019 alone there were 9 major heat waves around the world, all of Australia was on fire as seen on international news media. In 2021 five major heat waves hit nations by June 2021. These increased heat waves since 2001 have been killing thousands of people around the world.)

#### 2001-2009

- In early August 2001 an intense heatwave hit the eastern seaboard of the United States and neighboring southeastern Canada. For over a week, temperatures climbed above 35 °C (95 °F) combined with stifling high humidity. Newark, New Jersey tied its all-time record high temperature of 41 °C (106 °F) with a heat index of over 50 °C (122 °F).
- In April 2002 a summer-like heat wave in spring affected much of the Eastern United States.

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- In July 2002 a heatwave in China killed at least 7 people, and resulted in hospitalization of over 3500 people.
- During April 2003 there was a summer-like heatwave that affected the United Kingdom however mainly England and Wales where temperature records were broken.
- The European heat wave of 2003 affected much of western Europe, breaking temperature records. Much of the heat was concentrated in France, England and Spain where nearly 15,000 people died. In Portugal, the temperatures reached as high as 47 °C (117 °F) in the south.



Temperature difference in Europe from the average during the European heat wave of 2003

- The European heat wave of 2006 was the second massive heat wave to hit the continent in four years, with temperatures rising to 40 °C (104 °F) in Paris; in Ireland, which has a moderate maritime climate, temperatures of over 32 °C (90 °F) were reported. Temperatures of 35 °C (95 °F) were reached in the Benelux and Germany (in some areas 38 °C (100 °F)), while Great Britain recorded 38 °C (100 °F). Many heat records were broken (including the hottest ever July temperature in Great Britain) and many people who experienced the heat waves of 1976 and 2003 drew comparisons with them. Highest average July temperatures were recorded at many locations in Great Britain, Netherlands, Denmark, Sweden and Germany.
- The 2006 North American heat wave affected a wide area of the United States and parts of neighboring Canada during July and August 2006. Over 220 deaths were reported. Temperatures in some parts of South Dakota exceeded 46 °C (115 °F). Also, California experienced temperatures that were extraordinarily high, with records ranging from 38 to 54 °C (100 to 130 °F). On 22 July, the County of Los Angeles recorded its highest temperature ever at 48 °C (119 °F). Humidity levels in California were also unusually high, although low compared with normal gulf coast/eastern seaboard summer humidity they were significant enough to cause widespread discomfort. Additionally, the heat wave was associated a series of derechos that produced widespread damage.
- The European heat wave of 2007 affected primarily south-eastern Europe during late June through August. Bulgaria experienced its hottest year on record, with previously unrecorded temperatures above 45 °C (113 °F). The 2007 Greek forest fires were associated with the heat wave.
- During the 2007 Asian heat wave, the Indian city of Datia experienced temperatures of 48 °C (118 °F).
- In January 2008, Alice Springs in Australia's Northern Territory recorded ten consecutive days of temperatures above 40 °C (104 °F) with the average temperature for that month being 39.8 °C (103.6 °F). In March 2008, Adelaide, South Australia experienced maximum temperatures of above 35 °C (95 °F) for fifteen consecutive days, seven days more than the previous longest stretch of 35 °C (95 °F) days. The March 2008 heat wave also included eleven consecutive days above 38 °C

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- (100 °F). The heat wave was especially notable because it occurred in March, an autumn month, in which Adelaide averages only 2.3 days above 35 °C (95 °F).
- The eastern United States experienced an early Summer heat wave from 6–10 June 2008 with record temperatures. There was a heat wave in Southern California beginning late June, which contributed to widespread fires. On 6 July, a renewed heat wave was forecast, which was expected to affect the entire state.
- In early 2009, Adelaide, South Australia was hit by a heat wave with temperatures exceeding 40 °C (104 °F) for six days in a row, while many rural areas experienced temperatures hovering around 45 °C (113 °F). Kyancutta on the Eyre Peninsula endured at least one day at 48 °C (118 °F), with 46 and 47 being common in the hottest parts of the state. Melbourne, in neighbouring Victoria recorded 3 consecutive days over 43 °C (109 °F), and also recorded its highest ever temperature 8 days later in a secondary heatwave, with temperatures peaking at 46.4 °C (115.5 °F). During this heat wave Victoria suffered from large bushfires which killed 173 people and destroyed more than 2,500 homes. There were also over half a million people without power as the heatwave blew transformers and the power grid was overloaded.
- In August 2009, Argentina experienced a period of unusual and exceptionally hot weather during 24–30 August, during the Southern Hemisphere winter, just a month before Spring, when an unusual and unrecorded winter heat wave hit the country. A shot of tropical heat drawn unusually far southward hiked temperatures 22 degrees Celsius (70 degrees Fahrenheit) above normal in the city of Buenos Aires and across the northern-centre regions of the country. Several records were broken. Even though normal high temperatures for late August are in the lower 15 °C (59 °F), readings topped 30 °C (86 °F) degrees at midweek, then topped out above 32 °C (90 °F) degrees during the weekend. Temperatures hit 33.8 °C (92.8 °F) on 29 August and finally 34.6 °C (94.3 °F) on 30 August in Buenos Aires, making it the hottest day ever recorded in winter breaking the 1996 winter record of 33.7 °C (92.7 °F). In the city of Santa Fe, 38.3 °C (100.9 °F) degrees on 30 August was registered, well above the normal highs of around 15 °C (59 °F). As per the Meteorological Office of Argentina, August 2009 has been the warmest month during winter since official measurements began.

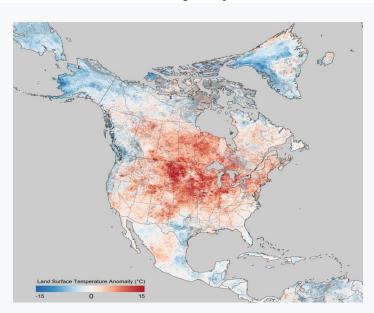
- The Northern Hemisphere summer heat wave of 2010 affected many areas across the Northern Hemisphere, especially parts of Northeastern China and European Russia.
- Starting in May 2010, records were being set. On 26 May, at Mohenjo-daro, Sindh province in Pakistan a national record high temperature of 53.5 °C (128.3 °F) occurred.
- In June 2010, Eastern Europe experienced very warm conditions. Ruse, Bulgaria hit 36.6 °C (97.9 °F) on the 13th making it the warmest spot in Europe. Other records broken on the 13th include Vidin, Bulgaria at 35.8 °C (96.4 °F), Sandanski, Bulgaria hitting 35.5 °C (95.9 °F), Lovech and Pazardzhik, Bulgaria at 35.1 °C (95.2 °F) as well as the capital, Sofia, hitting 33.3 °C (91.9 °F). The heat came from the Sahara desert and was not associated with rain. This helped the situation with high water levels in that part of the continent. On the 14th, several cities were once again above the 35 °C (95 °F) mark even though they did not break records. The only cities in Bulgaria breaking records were Musala peak hitting 15.2 °C (59.4 °F) and Elhovo hitting 35.6 °C (96.1 °F). On the 15th, Ruse, Bulgaria peaked at 37.2 °C (99.0 °F). Although it was not a record, this was the highest temperature recorded in the country. Five Bulgarian cities broke records that day: Ahtopol hit 28.6 °C (83.5 °F), Dobrich was 33.8 °C (92.8 °F), Karnobat hit 34 °C (93 °F), Sliven hit 35 °C (95 °F) and Elhovo recorded 36.1 °C (97.0 °F).
- From 4 to 9 July 2010, the majority of the American East Coast, from the Carolinas to Maine, was gripped in a severe heat wave. Philadelphia, New York, Baltimore, Washington, Raleigh, and even

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Boston eclipsed 38 °C (100 °F). Many records were broken, some of which dated back to the 19th century, including Wilmington, Delaware's temperature of 39 °C (103 °F) on Wednesday, 7 July, which broke the record of 36 °C (97 °F) from 1897. Philadelphia and New York eclipsed 38 °C (100 °F) for the first time since 2001. Frederick, Maryland, and Newark, New Jersey, among others topped the century mark (37.8 Celsius) for four days in a row.

#### 2011

- The 2011 North American heat wave brought record heat to the Midwestern United States, Eastern Canada, and much of the Eastern Seaboard.
- A record-breaking heat wave hit Southwestern Asia in late July and early August 2011, with temperatures in Iraq exceeding 49 °C (120 °F), and an "asphalt-melting, earth-parching, brainscrambling heat of midsummer" in Tbilisi, Georgia. The Iraqis were further challenged by pressure to fast during Ramadan, despite heat of 51 °C (124 °F) in Baghdad and 52 °C (126 °F) in Diwaniya on 4 August. The extreme heat inspired conspiracy theories of the government corruption in Iraq and retaliation from the United States government; and, in Georgia, the Apocalypse, mutant locusts caused by Chernobyl, snakes imported by unseen enemies, and sun spots.
- Most parts of the United Kingdom experienced an Indian summer between September and October 2011. The heat wave resulted in a new record high temperature for October at 30 °C (86 °F).



Land surface temperatures of 8–15 March 2012. Land surface temperatures are distinct from the air temperatures that meteorological stations typically measure.

- In March 2012, the United Kingdom experienced a heat wave with temperatures 10  $^{\circ}$ C (18  $^{\circ}$ F) above normal in many places
- In March 2012, the Midwest experienced one of the biggest heat waves of all time.
- In late June 2012, much of North America began experiencing a heat wave, as heat spread east from the Rocky Mountains. During the heat wave, the June 2012 North American derecho (one within a series) caused violent storms that downed trees and power lines, leaving 3 million people in the

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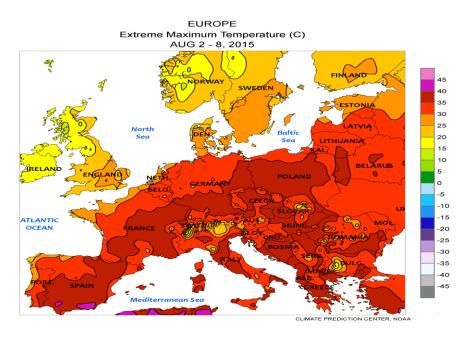
eastern U. S. without power on 30 June. The heat lasted until mid-August in some parts of the country.

- The Australian summer of 2012–2013, known as the **Angry Summer** or **Extreme Summer**, resulted in 123 weather records being broken over a 90-day period, including the hottest day ever recorded for Australia as a whole, the hottest January on record, the hottest summer average on record, and a record seven days in row when the whole continent averaged above 39 °C (102 °F). Single-day temperature record were broken in dozens of towns and cities, as well as single-day rainfall records, and several rivers flooded to new record highs. From 28 December 2012 through at least 9 January 2013 Australia has faced its most severe heatwave in over 80 years, with a large portion of the nation recording high temperature reading above 40 to 45 °C (104 to 113 °F) or greater in some areas, a couple of spots have also neared 50 °C (122 °F). This extreme heat has also resulted in a 'flash' drought across southern and central areas of the country and has sparked several massive wildfires due to periodic high winds.
- In late June 2013, an intense heat wave struck the Southwestern United States. Various places in Southern California reached up to 50 °C (122 °F). On 30 June, Death Valley, California hit 54.0 °C (129.2 °F) which is the hottest temperature ever recorded on Earth during the month of June. It was five degrees shy of the world record highest temperature measured in Death Valley, which was 57 °C (134 °F), recorded in July 1913.
- Around Canada Day 2013, the same heatwave that hit the Southwestern United States moved north and hit southern British Columbia, Washington and Oregon. Temperatures in BC hit 40 °C (104 °F) in Lytton on 1 July 2013, and on 2 July 2013, the city of Penticton hit 38 °C (100 °F), with both Summerland and Osoyoos hitting the same. The Tri-Cities in Washington were among the hottest, with temperatures around 43 °C (110 °F).
- In China from July to August 2013, the South continued to experience an unusually severe heat wave with exceptionally high temperatures. In multiple regions of Zhejiang, Chongqing, Shanghai, Hunan, and other areas the temperatures soared to over 40 degrees Celsius and lasted for a long time. Xinchang, Zhejiang endured extreme hot weather of 44.1 °C (111.4 °F), on 8 August Fenghua, Zhejiang reached a new all-time record high temperature of 43.5 °C (110.3 °F), Changsha, Hunan in July 2013 achieved a high temperature "Grand Slam", all 31 days in July set a new daily record high temperature of over 35 °C (95 °F). Hangzhou experienced 14 consecutive days over 40 °C (104 °F) while Xujiahui Station of Shanghai shattered 140 years of meteorological records to set a new all-time record high temperature of 40.8 °C (105.4 °F). Sustained high temperatures caused many people, especially the elderly to get heatstroke or sunstroke, seriously affecting millions of lives. Many areas throughout China endured record high temperatures resulting in multiple continuous meteorological department issued high-temperature orange or red alerts. 2013 saw a wide range of abnormally hot temperatures not seen for the past 60 years of national meteorological records dating back to 1951.
- In July 2013, the United Kingdom experienced the warmest July since 2006.
- The Argentina heatwave of 2013 was a historical phenomenon that occurred from 11 December 2013 to 2 January 2014 in the north and center of the country, as well as in northern Patagonia. It was the longest heat wave experienced in Argentina since records began in 1906 affecting many cities throughout the country. For the first time since the creation of the heat alarm system, a red level alert was issued for several days consecutive for both the city of Buenos Aires and the city of Rosario, which are the cities for which the National Meteorological Service conducts heat waves. From 11 December began to register a marked increase in temperatures, especially the maximum in a vast area of the central and northern Patagonian region, affecting southern Córdoba, southern Santa Fe, southern Entre Ríos, much of the province of Buenos Aires, La Pampa, east of Mendoza, east

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of Neuquén and Río Negro. From day 19 this anomalous situation began to expand towards the north of Argentina and returned to intensify on the central part, arriving to affect to 18 provinces, yielding the same towards 30 December in the central part and between 1 and 2 January in the extreme north of the country with the passage of a cold front that produced a change of mass of air. The long persistence of this heat wave (22 days), made the event an exceptional one, breaking several brands in regard to more consecutive days with minimum and maximum temperatures above the average in several meteorological stations of the affected zone. The National Meteorological Service communicated, through its daily reports, reports on the development of the heat wave. The strongest point of heat was registered in the city of Chamical, province of La Rioja with 45.5 °C (113.9 °F) in the city of Santiago del Estero (provincial capital) was 45 °C (113 °F) and in Buenos Aires (national capital) was 39 °C (102 °F). The extensive heat wave severely affected the health of thousands of people who needed medical assistance during those days, the historic heat wave caused at least 1.877 deaths in different points of the center and north of the country.

- Between April to May 2015, a heat wave occurred in India, killing more than 2200 people in that country's different geographical regions. Daytime temperatures hovered between 45 and 47 °C (113 and 117 °F) in parts of two states over the weekend, 3–7 °C (5.4–12.6 °F) above normal. Andhra Pradesh was hardest hit, with 1,636 people dying from the heat since mid-April, a government statement said. A further 561 people have died in neighboring Telangana.
- Starting 20–21 June 2015, a severe heat wave has killed more than 2500 people in Karachi, Pakistan.
- Between 28 June 3 July 2015, in The Northwest United States, and southern British Columbia, a heat wave
- Between 30 June 5 July 2015, a heat wave, brought upon by a Spanish plume, occurred in Western Europe, which pushed hot temperatures from Morocco to England. Temperatures in England reached 37 °C (99 °F), beating the previous July record from 2006 but the all-time record of 38.5 °C (101.3 °F) stayed unbeaten. Continuing:



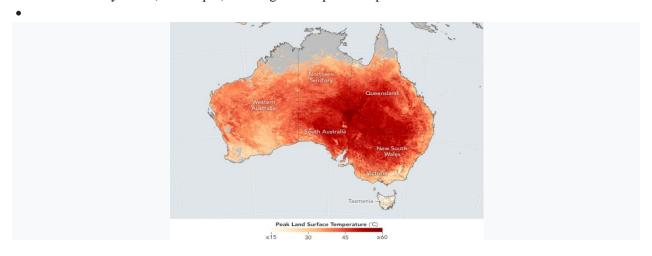
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Maximum temperatures from 2–8 August 2015. Dark red represents temperatures between 35 and 40 °C (95 and 104 °F).

- From late June to mid-September 2015, unusual and prolonged heat waves occurred across Europe. With temperatures above 40 °C (104 °F), new record temperatures have been measured since the start of weather recording in many locations. The Maghreb Mediterranean coast, south-western, central and south-eastern Europe experienced one of the biggest heat waves of recent decades.
- In August 2015, a heat wave affected much of the Middle East causing almost a hundred deaths in Egypt. Temperatures reached above 50 °C (122 °F) in Iraq and Qatar.

## 2016 was the warmest year on record.

- During June 2016, record heat appeared in Arizona, southern Nevada, and southern California. Burbank, California reached 44 °C (111 °F), Phoenix, Arizona reached 48 °C (118 °F), Yuma, Arizona reached 49 °C (120 °F) and Tucson, Arizona reached 46 °C (115 °F), its warmest temperature in more than 20 years, on 19 June. Riverside, California reached 46 °C (114 °F), Palm Springs, California reached 50 °C (122 °F), Las Vegas, Nevada reached 46 °C (115 °F), Death Valley reached 52 °C (126 °F), Needles, California tied its all-time record high of 52 °C (125 °F) while Blythe, California set a new all-time record high of 51 °C (124 °F) on 20 June.
- In July 2016, Mitribah, Kuwait reached 54 °C (129 °F) and Basra, Iraq reached 53.9 °C (129.0 °F). These are the highest temperatures ever recorded in the Eastern Hemisphere and on planet Earth outside of Death Valley.
- During September 2016, the United Kingdom experienced its hottest September day since 1911 with temperatures as high as 34.4 °C (93.9 °F) on the 13th. However the all time September record still stands at 35.6 °C (96.1 °F) from 1906.
- 2016 Indian heatwave was a record heatwave in April and May of that year. A national record high temperature of 51.0 °C (123.8 °F) was set in the town of Phalodi, in the state of Rajasthan. Over 160 people died with 330 million affected to some degree. There were also water shortages with drought worsening the impact of the heat wave. In India, the month of May is typically one of the hottest and driest. In 2016, the heat came early, with 111 heat-related casualties reported by 8 April 2016 the heat was coupled with drought which further devastation. Schools were shut down in Odisha and Telangana weeks ahead of summer holidays. Hospitals stopped performing surgeries. A ban on day-time (9am 6pm) cooking was imposed to prevent accidental fires.



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Peak land surface temperatures from 7–14 February 2017, as mapped by satellite during the 2017 Australian heat wave.

#### 2017

- In January 2017, Chile had the most intense heat wave covered on 25, 26 January and 27, the 26th being where the highest temperatures occurred. The event was concentrated between the Metropolitan Region of Santiago and La Araucanía Region, being more intense in the region of Maule and Biobío Region. The meteorological phenomenon broke the records of maximum temperatures ever recorded in the cities of Santiago, Chillán, Concepción and Quillón, the latter being the highest maximum temperature recorded nationwide since data exists: 44.9 °C (112.8 °F).
- In February 2017, Australia experienced an extreme heat wave with temperatures as high as 47.2 °C (117.0 °F) in Taree, New South Wales and 47.6 °C (117.7 °F) in Ivanhoe, New South Wales.
- In April 2017, a severe heat wave affected Pakistan, with temperatures peaking at 51.0 °C (123.8 °F).
- In June 2017, more than 40 airline flights in the United States were grounded, with American Airlines reducing sales on certain flights to prevent the vehicles from being over the maximum weight permitted for safe takeoff and Las Vegas tying its record high at 47 °C (117 °F).
- In June 2017 again, a heatwave in Iran broke record high temperature. On 28 June 2017, the city of Jask had a dew point of 33 °C (91.4 °F) degrees, which is rare. Combined with the high air temperature, the heat index was 69 °C (156 °F). But the highest temperature in Ahvaz soared to 54 °C (129.2 °F) degrees and the humidity created a heat index of 61 °C (142 °F).
- Also, on 21 June 2017, the United Kingdom experienced a heat wave where temperatures reached the hottest since 28 June 1976, hitting 34.5°C at London Heathrow Airport.
- June 29 ,2017 Greece heat wave hot air mass from Sahara dessert extended to the Balkans resulting in temperatures of 42°C to 45°C for three consecutive days .
- In July 2017, most parts of China experienced a severe heat wave. Xi'an experienced the hottest July with the average high of 36.6 °C (97.9 °F). Additional record highs were set in Chongqing (42.0 °C, 107.6 °F), Xi'an (41.8 °C, 107.2 °F), Hangzhou (41.3 °C, 106.3 °F), Hefei (41.1 °C, 106.0 °F), Xujiahui Station of Shanghai (40.9 °C, 105.6 °F), Nanjing (40.0 °C, 104.0 °F), and Wuhan (39.7 °C, 103.5 °F). Xunyang, Shaanxi set a new record for southern China at 44.7 °C (112.5 °F). Erbaoxiang, Turpan set a new record for the whole of China at 50.5 °C (122.9 °F). The average temperature for China in July 2017 was 23.2 °C (73.8 °F), which was also a new record.
- In September 2017 a heat wave affected a large portion of the Eastern United States; it is notable for producing unusually hot temperatures the latest in a calendar year in places. The heat wave also affected parts of Eastern Canada.

#### 2018 Further information: 2018 heat wave

- In May and June 2018 a heat wave affected Pakistan and a significant portion of India. At least 65 people have died due to the heat as of 28 May. Temperatures have reached as high as 48 °C (118 °F). The health dangers to a large part of the population are exacerbated by the thenongoing Ramadan fast.
- 2018 British Isles heat wave. In April 2018, a heat wave affected the United Kingdom and Ireland. A brief cooling interlude in early May, and temperatures rose again to 25–30 °C (77–86 °F) for the rest of May and in to June. In July 2018, many areas of the UK saw temperatures exceed 30 degrees for over 15 days in a row, and other areas still affected by a heat wave. The hot weather continued into early August before temperatures returned closer to the average during the second half of the month.

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- 2018 North American heat wave. The heat wave started in Mexico in late May 2018. By June 2018, the Mexican government issued a state of emergency to more than 300 municipalities. In early July 2018, the heat wave in Quebec, Canada caused about 74 deaths. In July, the heat wave in Southern California caused many power outages, where over 34,000 Los Angeles customers serviced by LADWP had no power for over one week. In south western states such as Arizona and Colorado were above 38 °C (100 °F).
- 2018 Japan heat wave. In mid-July 2018, the heat wave in Japan arrived after a major flood. It caused over 22,000 hospitalization and 80 deaths.
- 2018 European drought and heat waves. Much of Europe experienced above-average temperatures and drought, which resulted in wildfires in Sweden and wildfires in Greece.

- Australian heat wave
  - From 25 December 2018, Australia was faced with constant record-breaking heat waves with few breaks. December 2018 was recorded as the hottest December on record, while New South Wales had their warmest January since 2011. Adelaide recorded its hottest day on record on 24 January, surpassing the previous record from 1939, reaching 46.6 °C (115.9 °F) at 3:36pm local time, and many settlements across South Australia set new records the same day. At least one man, 90 feral horses and 2,000 bats died, while 25,000 homes lost power.
  - Melbourne was forecast to have its hottest day since the 2009 Black Saturday bushfires on 25 January (although this failed to eventuate), while over 200,000 homes across Victoria lost power due to load shedding. On 25 January Melbourne had its hottest day of either January or February: 43 °C (109.4 °F).
  - o On 25 January the temperature of The Treasure Coast reached 45.0 °C (113 °F).
- In late-May 2019, an unusually strong early-season heat wave affected the southeastern United States, breaking all-time May record high temperatures in several cities. Many locations also broke the record for the earliest-in-season 38 °C (100 °F) temperature.
- Also in late-May, an early-season heat wave affected parts of Japan. The town of Saroma in Hokkaido reached 39.5 °C (103.1 °F), the highest May temperature ever recorded anywhere in Japan.
- The 2019 Indo-Pakistani heat wave reached a near record high temperature of 50.8 °C (123.4 °F) in Churu. The Indian and Pakistani media reported dozens of deaths due to the heat wave.
- June 2019 European heat wave: Starting from 25 June, very hot air masses from the Sahara desert moved over Europe, leading to heat advisories in several European countries, including France, Germany and the UK. The extent and intensity of the heat wave was unusual for its earliness in the summer season. In France, numerous cities broke the old all-time national record of 44.1 °C (111.4 °F) set in Conqueyrac in 2003. The final new record was higher by 2 °C (3.6 °F). [96]
- July 2019 European heat wave: One month later, a similar event occurred, which also broke high temperature records in cities across several northwestern European countries. All-time national heat records were broken by 2.1 °C (3.8 °F) in the Netherlands, 3 °C (5.4 °F) in Belgium, 2.9 °C (5.2 °F) in Luxembourg, 2.1 °C (3.8 °F) in Germany and by 0.2 °C (0.36 °F) in the United Kingdom.

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- August 2019 European heat wave: On 27 August, the Royal Netherlands Meteorological Institute (KNMI) officially confirmed that the Netherlands were experiencing yet another heat wave when a temperature of 30 degrees was measured in De Bilt at 12.40. It was the fourth time ever since recordings began in 1901 that the country experienced two national heat waves in a single year. The same day, the Royal Meteorological Institute (KMI/IRM) declared the third heat wave of 2019 in Belgium. Since official temperature readings began, it has happened only once before (in 1947) that three heat waves were detected in a single year.
- A prolonged drought and heat wave affected the eastern United States from September to October 2019. September was one of the warmest and driest on record in many locations. All-time record high temperatures for October are also broken in numerous cities.
- A heatwave in Australia occurred in December 2019 with a record average temperature across the country of 40.9 °C (105.6 °F) on the 17th. This was surpassed on 18 December by an average temperature of 41.9 °C (107.4 °F). The prior record was from 2013 at 40.3 °C (104.5 °F). The heat exacerbated the 2019–20 Australian bushfire season.

#### 2020

- A late spring heat wave hit Northern New England and Eastern Canada: On May 27, Montreal broke its all-time May record high, reaching 36.6 °C (97.9 °F), which was also the second-highest temperature ever recorded in the city. Nearby Ottawa and Burlington, Vermont reached 35 °C (95 °F) on the same day. In mid-June, a second heat wave hit the same regions. Montreal and Burlington reached 32 °C (90 °F) for 6 consecutive days, one of the longest streaks on record in these locations. In New Brunswick, numerous cities broke all-time June record highs, with the hot spots Bathurst and Miramichi hitting 37.2 °C (99.0 °F). Caribou, Maine tied its all-time record high of 36 °C (96 °F) on June 19. The heat wave, combined with abnormally dry conditions, led to numerous forest fires in the province of Quebec. The heat wave continued into July, where Toronto, Ottawa, and Montreal recorded their second hottest July on record.
- Siberia heat wave: A Russian heat wave smashed an all-time record high in one Siberian town on June 20, reaching a scorching 38 °C (100 °F) possibly the hottest temperature on record so far north in the Arctic, continuing an off-the-charts warm year in what is typically one of coldest places on Earth. If that reading is found to be correct, that would break the town's all-time record of 37.3 °C (99.1 °F) set on July 25, 1988. Temperature records in Verkhoyansk date to 1885.
- Western United States: Period of intense heat throughout the Western and Midwestern United States, starting in early-mid August. Death Valley reached 54.4 °C (129.9 °F) on August 16, the highest temperature since a reported 57 °C (134 °F) at the same location in July 1913. If this temperature is verified, it will be one of the highest temperatures recorded on earth.

- Around mid-February, a jet-stream of Sahara dust brought a winter heatwave in Europe with daily temperatures nearly similar to max high during spring. In Berlin, a high temperature of 20 °C (68 °F) was reported on Wednesday and the next day it reached 19 °C (66 °F). Paris reported the same high temperature of 20 °C (68 °F) while Warsaw and London had it around 18 °C (64 °F). In Asia, a record-high winter temperature was declared in Beijing on February 21st at 25.6 °C (78.1 °F).
- On May 20, the May record 31.9 °C (89.4 °F) was reported north of the Arctic Circle at 67.6° North, 53° East. On June 20, the land surface temperature had widely exceeded 35°C across Siberia.

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- From June 3 to 6 the northern Great Plains and southern Canadian Prairies experienced a heat wave. On June 4, Gretna, Manitoba reached a temperature of 41.3 °C (106.3 °F), the highest recorded temperature in Manitoba since the 1980s and the earliest in the year occurrence of above 40 °C (104 °F) temperatures in Canada.
- In mid-June, record temperatures were recorded in multiple parts of the Southwestern United States, reaching a maximum of 128 °F (53 °C) at Death Valley, CA on June 17.
- In late June, the 2021 Western North America heat wave occurred, causing temperatures to soar above 38 °C (100 °F) in the Pacific Northwest. All-time record high temperatures were recorded in cities such as Portland 116 °F (47 °C) and Seattle 108 °F (42 °C). Lytton, British Columbia reached 49.6 °C (121.3 °F), surpassing the day prior 47.9 °C (118.2 °F), which had exceeded the all-time high temperature ever recorded in Canada.

See: <a href="https://en.wikipedia.org/wiki/List\_of\_heat\_waves">https://en.wikipedia.org/wiki/List\_of\_heat\_waves</a> (see citations and references on website)

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