

Weekly Cat Report

April 12, 2024



Executive Summary



Event	Affected Region(s)	Fatalities	Economic Loss (\$)	Page
Flooding & SCS	United States	1	100s of millions	3
Flooding	Russia, Kazakhstan	5	100s of millions	6
Wildfire	Mexico, Guyana	0	Unknown	8
Windstorms Kathleen & Pierrick	Western Europe	2	10s of millions	9
SCS & Flooding	Australia	0	10s of millions	11
Earthquake	United States	0	Negligible	11
Flooding	Tanzania	15	Unknown	11
Wildfire	Greece	0	Negligible	11
Flooding & Landslide	Indonesia	2	Unknown	11
SCS & Wildfire	South Africa	1	Millions	11

Please note that any financial loss estimate is preliminary and subject to change. These estimates are provided as an initial view of the potential financial impact from a recently completed or ongoing event based on early available assessments. Significant adjustments may inevitably occur. All losses in US dollars (\$) unless noted otherwise.

Along with this report, we continue to welcome users to access current and historical natural catastrophe data and event analysis on Impact Forecasting's Catastrophe Insight website: <http://catastropheinsight.aon.com>

United States: Flooding & Severe Convective Storm

Overview

Strong winds and severe storms from two slow-moving weather systems brought significant impacts to the central and southern United States on April 6-11. A high-wind event in the Great Plains caused notable property damage, especially in Colorado. Persistent showers and severe weather generated large hail, strong winds, multiple tornadoes, and significant flash flooding incidents from Texas to South Carolina. Total economic and insured losses may reach into the hundreds of millions USD, possibly higher with future damage assessments.

Meteorological Recap

April 6-7

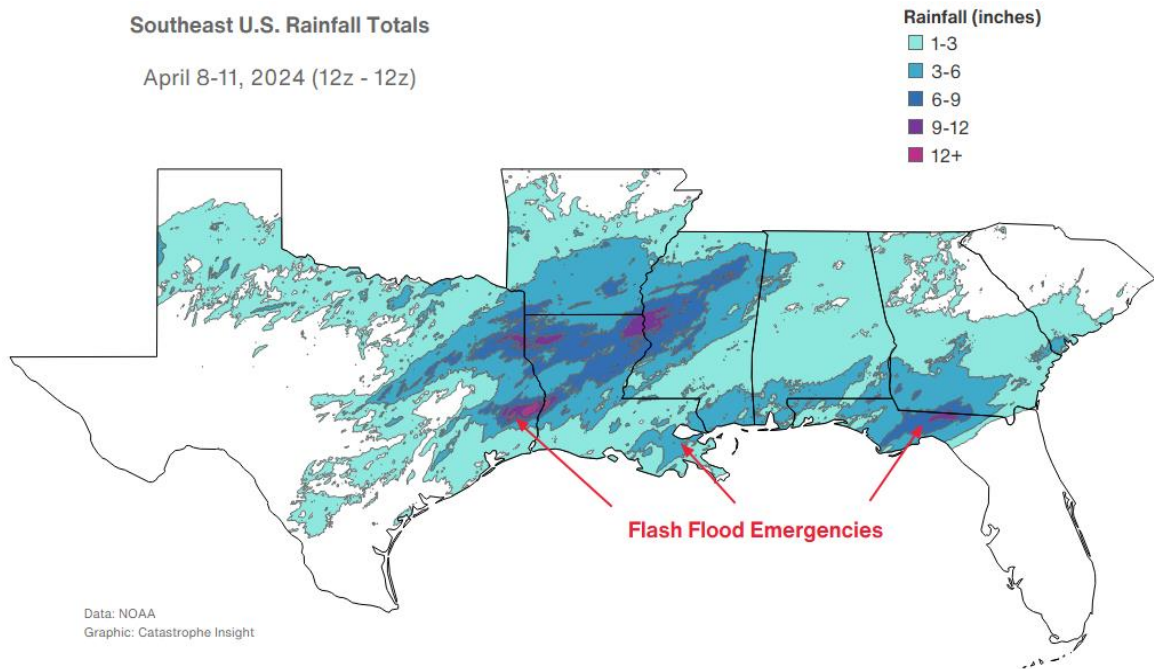
A deep surface low-pressure system initiated severe storms and extremely intense winds over the central U.S. on April 6-7. Severe weather impacts were limited across Iowa, Illinois, and Tennessee, while widespread wind gusts exceeding 75 mph (120 kph) were seen mainly over Colorado, Nebraska, and Wyoming. Some locations along the Rocky Mountain front range even measured gusts up to 96 mph (155 kph).

Location	Date	Peak Wind Gust (mph / kph)
Coal Creek Canyon, CO	April 6	96 / 155
Marshall, CO	April 7	95 / 153
Buckeye, CO	April 6	93 / 150
Sidney, WY	April 6	90 / 145
Boulder, CO	April 7	89 / 143

April 8-11

As the initial system moved into southern Canada, a new low-pressure system began developing over western Texas on April 8. The slow progression of this system, along with the advection of rich moisture from the Gulf of Mexico, sparked a prolonged period of continuous severe storms and intense rainfall over the southern United States. Around 450 storm reports were submitted to the Storm Prediction Center (SPC) from April 8-11, all spanning from Texas to South Carolina. This large area saw hailstones up to 4.25 inches (10.8 cm), wind gusts up to 88 mph (140 kph), and around 10 tornado reports. Notably, most of the Southeast U.S. experienced torrential rainfall, especially parts of Texas, Louisiana, Mississippi, and





Florida. Incredibly, localized rainfall totals in eastern Texas exceeded 1 foot (305 mm). Flash flood emergencies, the highest flood alert available from the National Weather Service (NWS), were issued for parts of eastern Texas including Kirbyville, the New Orleans-Metairie metro area (LA), and parts of northern Florida including Tallahassee.

At the time of writing, this system is progressing through the eastern U.S., where more heavy rain, flash flooding, and strong winds are possible across the Midwest, Mid-Atlantic, and New England. As of the afternoon of April 11, recent reports have emerged of a large tornado impacting parts of St. Augustine (FL) as well as daily rainfall records being broken in Charleston (SC) and Savannah (GA).



Severe weather damage in Katy (left) and Port Arthur (right) in southern Texas

Source: NOAA DAT

Event Details

The most extensive damage seen over the past week was due to extreme rainfall, primarily in Texas, Louisiana, Mississippi, and Florida. Widespread flooding inundated numerous homes, businesses, and vehicles in several eastern Texas counties, including Jasper, Newton, Hardin, and Tyler counties. Notably, all main roads leading into the town of Kirbyville (TX) were closed due to high flood waters, prompting officials to issue a local disaster declaration. Substantial flooding damage was also seen in Florida and Louisiana, including within the cities of Tallahassee (FL) and New Orleans (LA). Additionally, a combination of flooding and severe weather impacts in Mississippi caused 1 death in Scott County and extensive damage to at least 72 homes across 6 other counties. More localized flooding incidents were seen elsewhere, including in Charleston (SC) where over 3 inches (76 mm) of rain fell on April 11.

Destruction due to severe weather was also apparent across the Southeast. Strong winds and multiple tornadoes ripped roofs off of several homes, downed power lines and trees, and caused widespread power outages, particularly within the cities of Slidell (LA), Lake Charles (LA), Port Arthur (TX), and Katy (TX). More tornado damage was reported in the World Golf Village in St. Augustine (FL), while several towns near Austin (TX) experienced significant hail damage.

Elsewhere, hurricane-force wind gusts across Colorado led to over 150,000 power outages, widespread downed trees, and notable property damage mainly within the Denver metro area.

Financial Loss

While the latest weather system is still moving through the eastern U.S., the remarkable damage already seen across the central and southern U.S. may drive economic and insured losses into the hundreds of millions USD. This loss estimate may increase further as loss adjustments and many damage assessments are still pending.

Russia, Kazakhstan: Flooding

Overview

Severe flooding triggered by rapid snowmelt and worsened after a dam failure has affected southwestern Russia and northwestern Kazakhstan since early April, resulting in casualties and material damage to thousands of buildings across the impacted area. Total economic losses are expected to be in the hundreds of millions USD, while insured losses will be significantly lower as take-up rates remain low across the affected area.

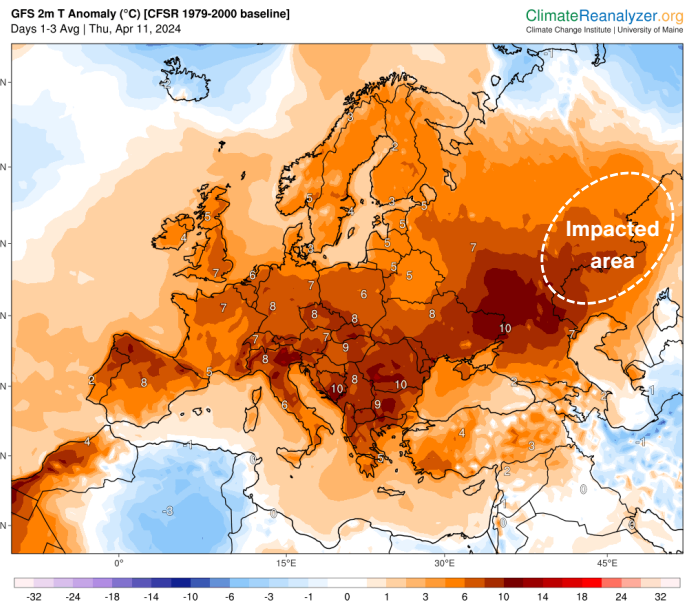
Meteorological and Hydrological Recap

Above-average temperatures together with heavy rainfall have caused widespread snowmelt, leading to damaging floods across northwestern Kazakhstan and adjacent parts of Russia. The flooding situation was further exacerbated by the dam and river embankment failures, affecting particularly locations along the rivers of Ural, Volga, Tobol, and Ishim.

Event Details

In **Russia**, the Orenburg Region has been especially impacted by rising flood waters. The situation worsened after the Irilka dam failure on April 5 as water levels rose twice above the dam's maximum capacity. Additional severe flooding occurred in the regions of Kurgan and Tyumen. As of this writing, local authorities and media report at least 3 fatalities, and more than 12,000 evacuated people, along with widespread damage to thousands of buildings that were inundated. The total number of flooded houses stands at 10,500 as of April 11. Additional losses were incurred to local infrastructure. The cities of Orsk, Krasnokholm, and Sorochinsk suffered the worst impact of flooding.

Widespread flooding was also seen in neighboring **Kazakhstan**, where 2 people died and over 97,000 more were affected across



Source: Climate Reanalyzer



Severe flooding in Orsk City
Source: Orsk Administration

10 regions, including Aqmola, Atyrau, Kostanay, and North Kazakhstan, which were among the worst affected and declared a state of emergency. According to the Ministry of Emergency Situations, nearly 3,400 private homes and 180 residential homes were affected. Several bridges and roads were also damaged. Local emergency services received about 1,130 flood-related calls.

Financial Loss

On April 7, a regional government damage assessment for areas in southern Russia affected by flooding estimated 21 billion Rubles (\$227 million) in total damages. Given the deteriorating conditions, along with unaccounted damage in nearby Kazakhstan, total economic losses will likely be in the hundreds of millions, possibly higher. Insured losses are expected to be significantly lower as take-up rates remain low in the impacted region.

Mexico, Guyana: Wildfire

Overview

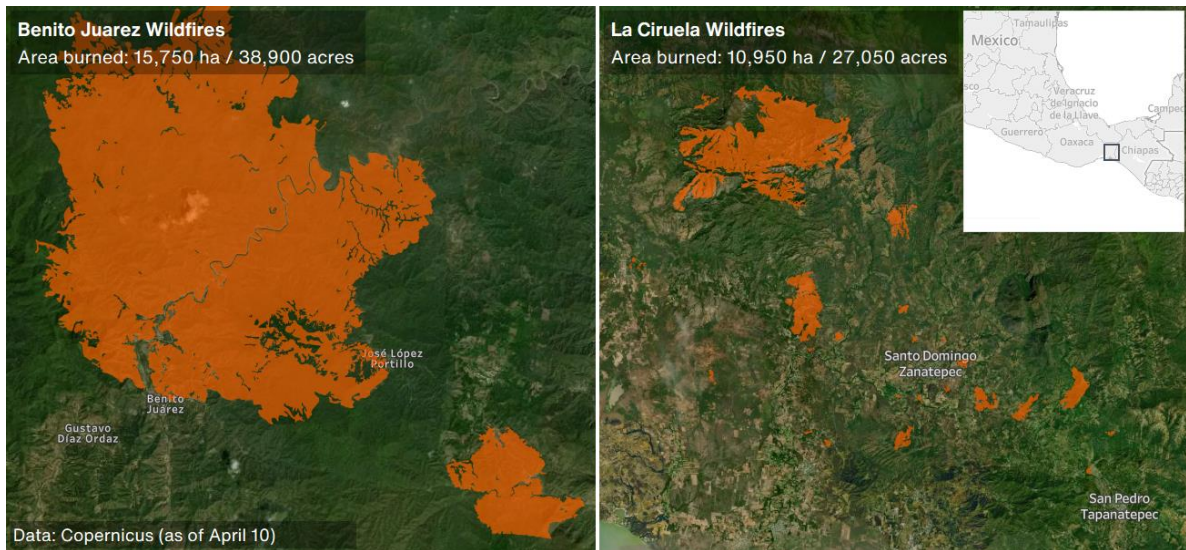
Wildfires are currently affecting several regions across Central and Southern America, including Mexico and Guyana, where large fires have been ignited in recent days.

Meteorological Recap

A prolonged period of dry and warm weather created favorable wildfire conditions. This environment further aggravated fire risk that rose from high to extreme in most parts of Mexico in recent days, particularly over the central states, according to the JRC Global Wildfire Information System (GWIS).

Event Details

Since April 6, more than 70 wildfires have been burning across 19 states of **Mexico**. Widespread fires have already burned more than 26,000 hectares (64,200 acres) of land with the largest extents in the states of Oaxaca, Chiapas, Michoacán, and Guerrero. In Oaxaca, the active fire is located in a natural reserve of great biological importance. The fires are feared to cause notable damage to forestry and infrastructure in the areas of Benito Juárez and La Ciruela.



Several wildfires have been affecting the Timehri Community in north-eastern **Guyana** since April 4, causing displacement and damage. According to the JRC GWIS, the total burnt area is more than 16,500 ha (40,800 acres).

Wildfires are currently affecting the whole region of Central America and southern parts of South America, including Costa Rica, El Salvador, Honduras, Nicaragua, Guatemala, Venezuela, and Panama with a significant increase in the number of detected fires compared to the same period in 2023.

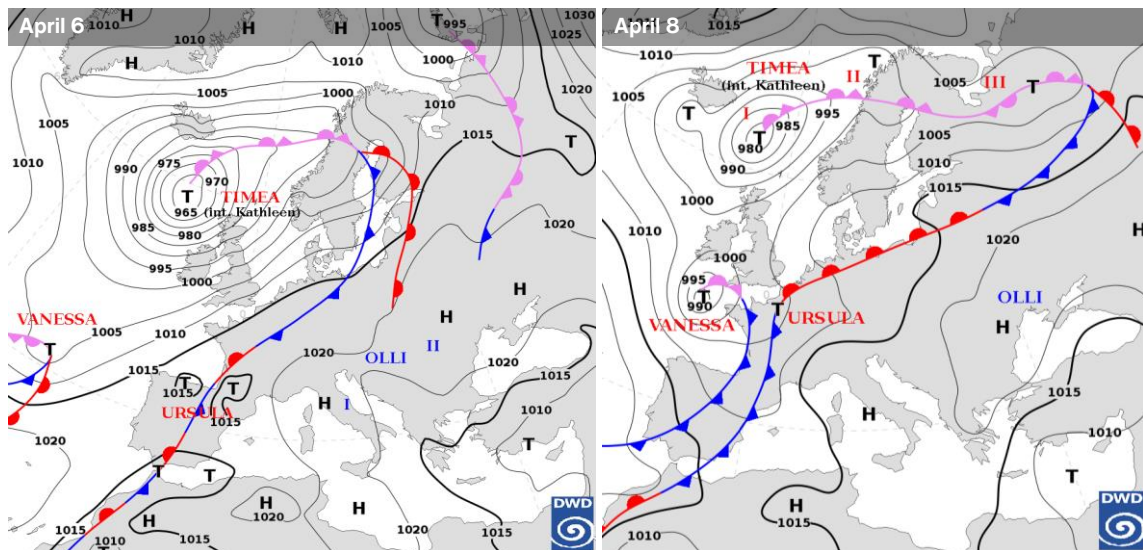
Western Europe: Windstorms Kathleen & Pierrick

Overview

An active cyclonic pattern characterized by several successive lows and frontal boundaries continues to affect Western Europe. Associated hazards included renewed bouts of flooding in parts of the United Kingdom, Ireland, and France, as well as episodes of strong winds and larger hail in several countries.

Meteorological Recap

An active pattern with multiple successive lows and associated fronts generated localized strong winds up to 110 kph (70 mph), heavy rainfall, and larger hail between April 6 and 10. These hazards were associated with low **Kathleen / Timea** (named by Met Éireann and FU Berlin) that affected western Europe on April 6-8, and successive low **Pierrick / Vanessa** (named by Météo France and FU Berlin) that started to impact the continent on April 8. On April 8, storms that developed along the frontal system resulted in a relatively high number of hail reports for early April, however, hailstones up to 4 cm (1.5 inches) did not cause property or vehicle damage.



Synoptic situation showing both storms in effect

Source: DWD

Event Details

An orange wind warning was in effect in parts of Ireland due to the storm Kathleen. Western parts of the United Kingdom were under yellow wind warnings. The storm caused minor damage to several buildings, widespread downed trees, and more than 12,000 power outages across Ireland. Heavy rainfall also triggered renewed flood risk in parts of England.

Following the previous windstorm, low-pressure system Pierrick / Vanessa forced the UK's Met Office to prolong wind warnings across the country. The strongest wind gusts were reported in Cornwall County, where some material damage was seen. The yellow wind warning level was issued also in France, with

several regions that were under an orange level. Exposed locations across the Normandy region experienced coastal flooding and severe weather-related incidents, that resulted in 2 fatalities and several injured people in the Department of Manche, according to authorities.

Financial Loss

Hazards associated with the active synoptic situation were relatively localized and unlikely to result in significant losses.

Natural Catastrophes: In Brief

Severe Convective Storm & Flooding (Australia)

Torrential rainfall on April 5 caused flash flooding in parts of New South Wales and Queensland in eastern Australia. Some surrounding suburbs in Sydney were especially hit hard as 111 mm (4.4 inches) of rain fell in just 24 hours. Authorities reported that over 150 people were rescued from flooding, mostly from Sydney. The Hawkesbury-Nepean and Illawarra regions of New South Wales were most severely impacted by heavy rainfall, damaging winds, and flash flooding. As of April 10, insurers have received more than 11,500 claims related to this event, with most from damage to buildings and content, according to the Insurance Council of Australia (ICA).

Earthquake (United States)

A rare M4.8 earthquake struck near the town of Whitehouse Station in northern New Jersey early on April 5. This was the strongest quake in New Jersey in 240 years, and over 220,000 people were likely exposed to at least moderate shaking, according to the USGS. While over 50 aftershocks have been observed since the initial quake, no major damage or casualties have been reported.

Flooding (Tanzania)

Heavy rainfall and flash flooding have been affecting several regions of Tanzania since April 1. At least 15 people have died, and notable material damage was incurred across the regions of Mbeya, Geita, Coast, Tanga, Rukwa, Lindi, Njombe, and Manyara, according to media reports.

Wildfire (Greece)

On April 6, at least 70 wildfires broke out across Greece, causing officials to issue a “high risk” wildfire alert. The largest of these fires occurred on the island of Crete as 2,500 acres (1,000 hectares) of land burned near the town of Lerapetra. According to media reports, at least 4 people were injured, multiple homes and structures were damaged, and dozens of people from nearby villages were evacuated. All fires have been brought under control since April 7.

Flooding & Landslide (Indonesia)

Heavy rainfall, flooding, and landslides since April 7 have heavily impacted parts of central Indonesia, especially the islands of Java and Sulawesi. According to the National Disaster Management Agency (BNPB), 2 people were killed in East Java while 2 more were injured in North Sulawesi. Over 1,900 homes have been flooded and nearly 800 people have been displaced or evacuated in North Sulawesi.

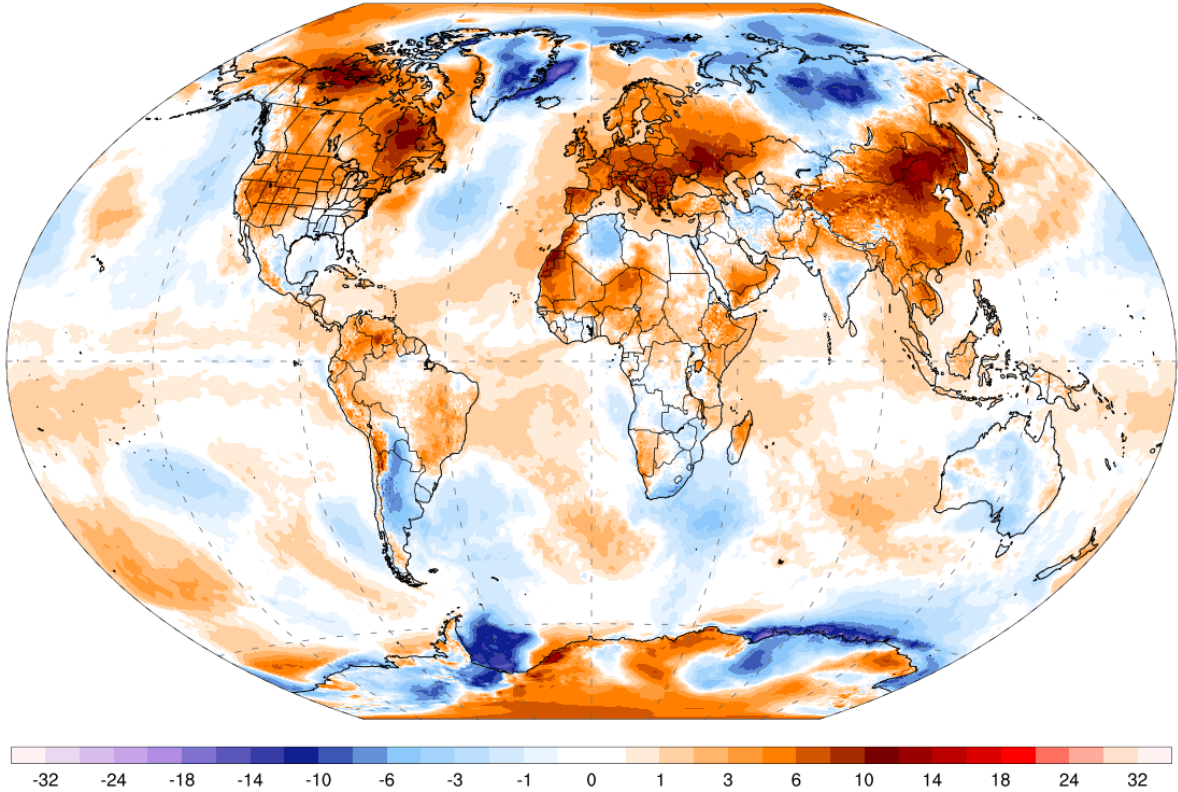
SCS & Wildfire (South Africa)

Intense winds and strong storms on April 8 were seen over the Western Cape province of South Africa. One person was killed and notable damage to many homes and public infrastructure was reported across the Cape Winelands, Overberg, and West Coast regions. Strong winds also promoted wildfire growth in the Glencairn neighborhood of Cape Town, where at least 8 homes were destroyed.

Global Temperature Anomaly Forecast

GFS 2m T Anomaly (°C) [CFSR 1979-2000 baseline]
Days 1-3 Avg | Thu, Apr 11, 2024

ClimateReanalyzer.org
Climate Change Institute | University of Maine

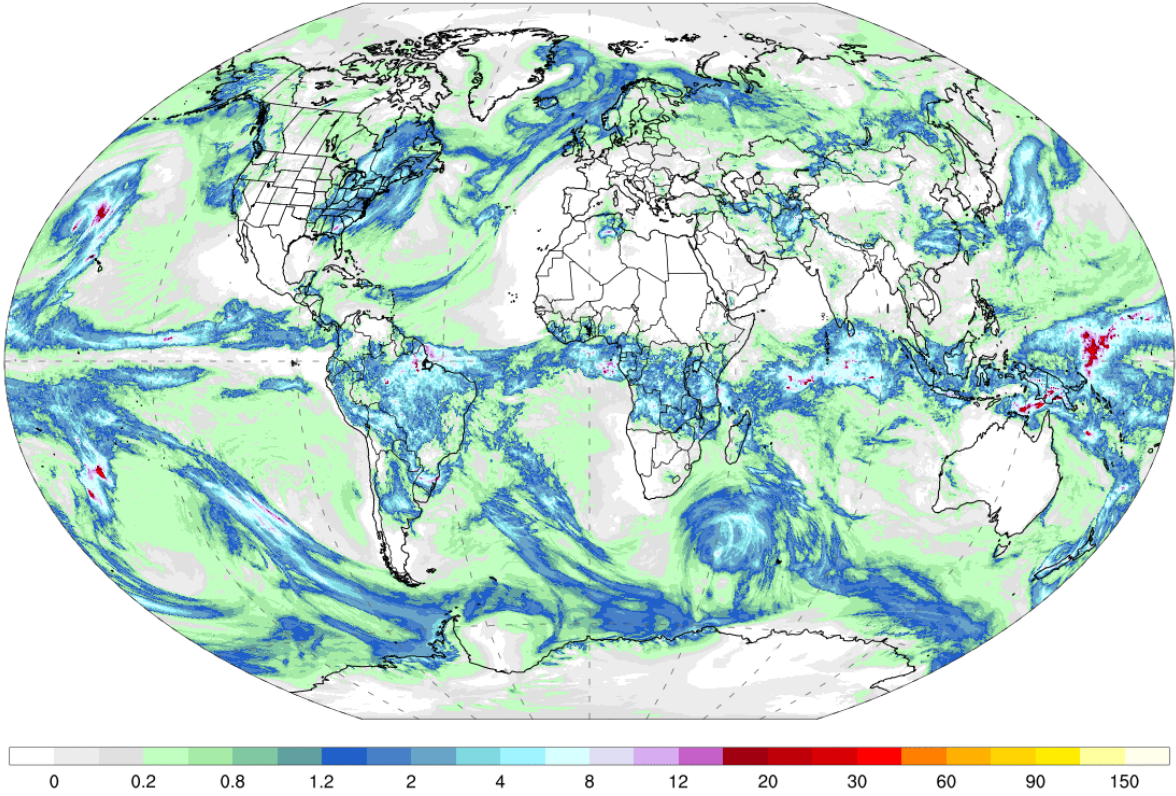


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Global Precipitation Forecast

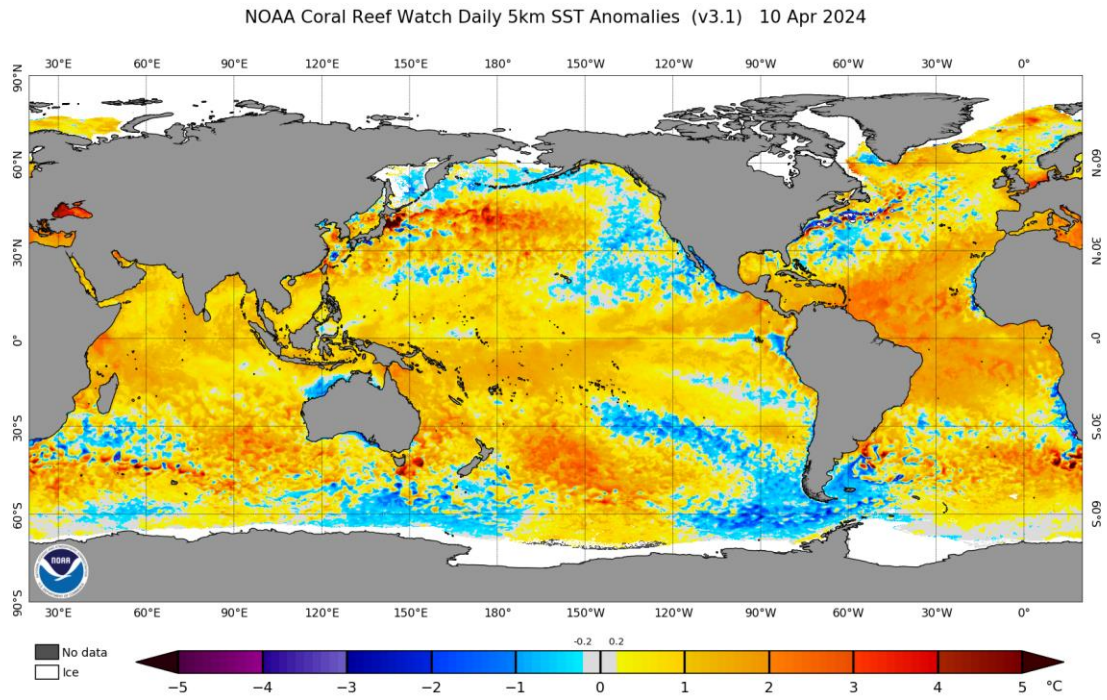
GFS Accumulated Precipitation (cm)
Days 1-3 Total | Thu, Apr 11, 2024

ClimateReanalyzer.org
Climate Change Institute | University of Maine



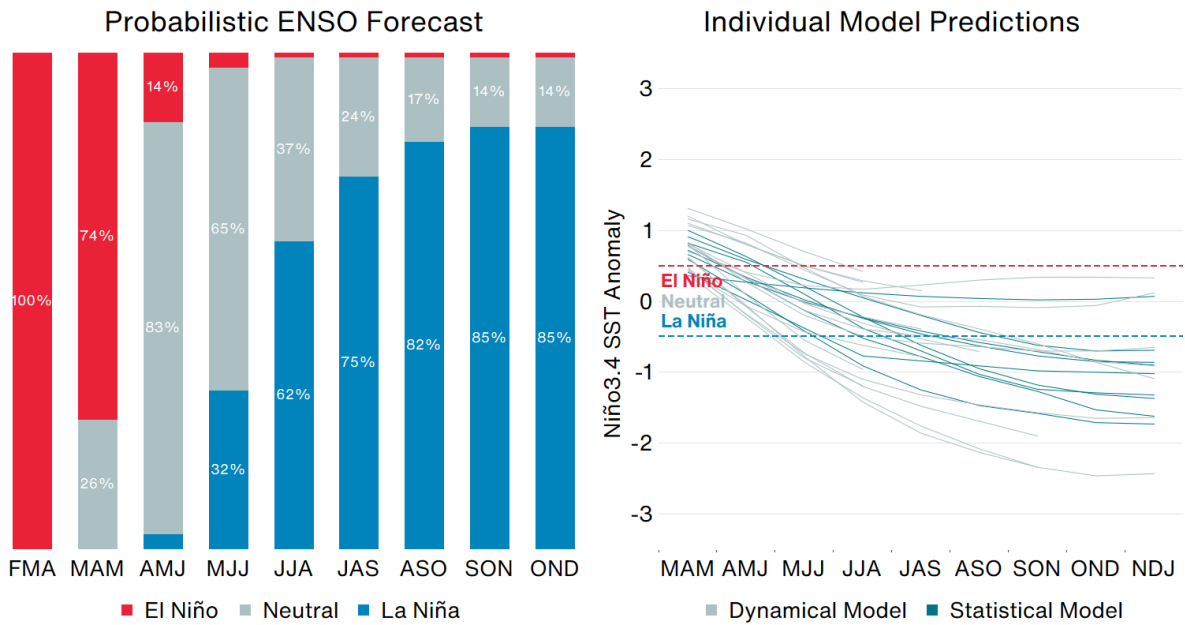
Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Weekly Sea Surface Temperature (SST) Maps (°C)



El Niño-Southern Oscillation (ENSO)

Probabilistic ENSO Model Projections: March 2024



El Niño: Warm phase of an ENSO cycle. Sea surface temperatures of +0.5°C occur across the east-central equatorial Pacific.

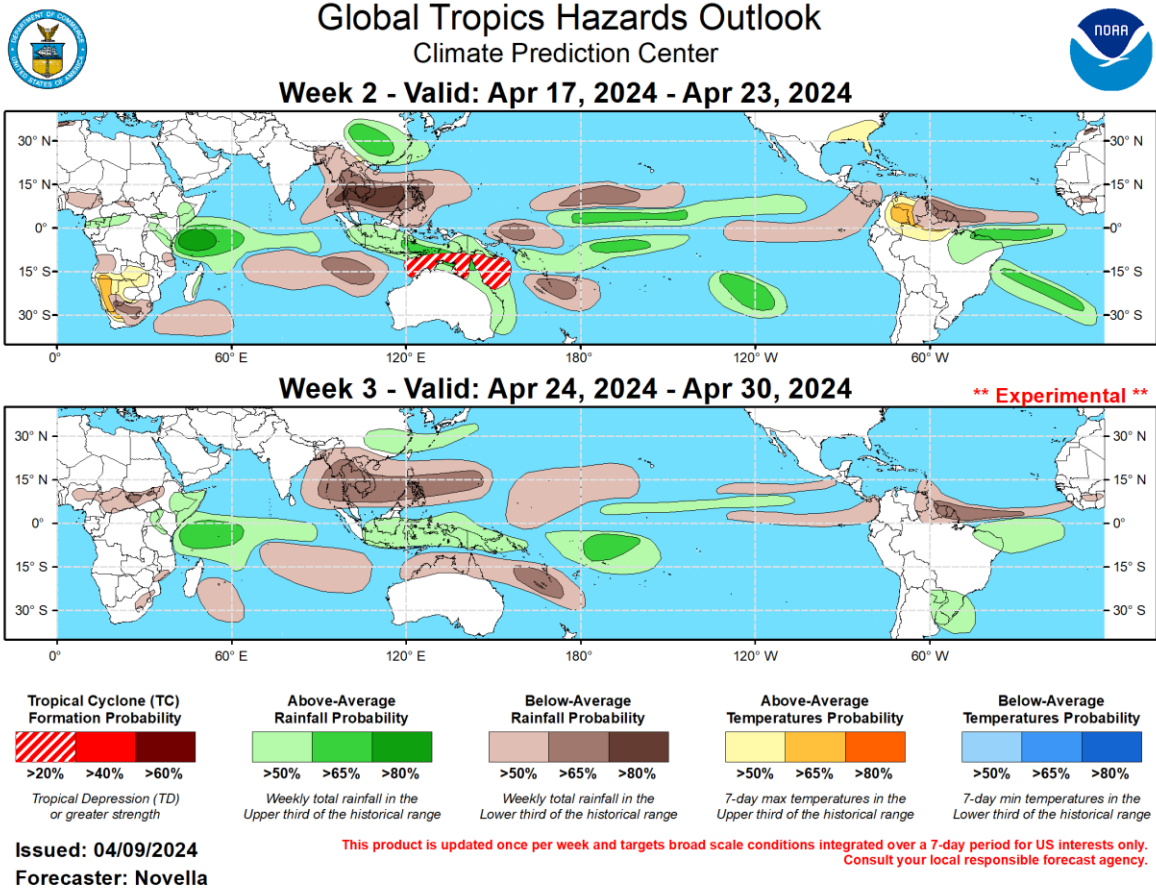
La Niña: Cool phase of an ENSO cycle. Sea surface temperatures of -0.5°C occur across the east-central equatorial Pacific.

Neutral: A period when neither El Niño nor La Niña conditions are present.

El Niño (La Niña) is a phenomenon in the equatorial Pacific Ocean characterized by a five consecutive 3-month running mean of sea surface temperature (SST) anomalies in the Niño 3.4 region that is above the threshold of +0.5°C (-0.5°C). This is known as the Oceanic Niño Index (ONI).

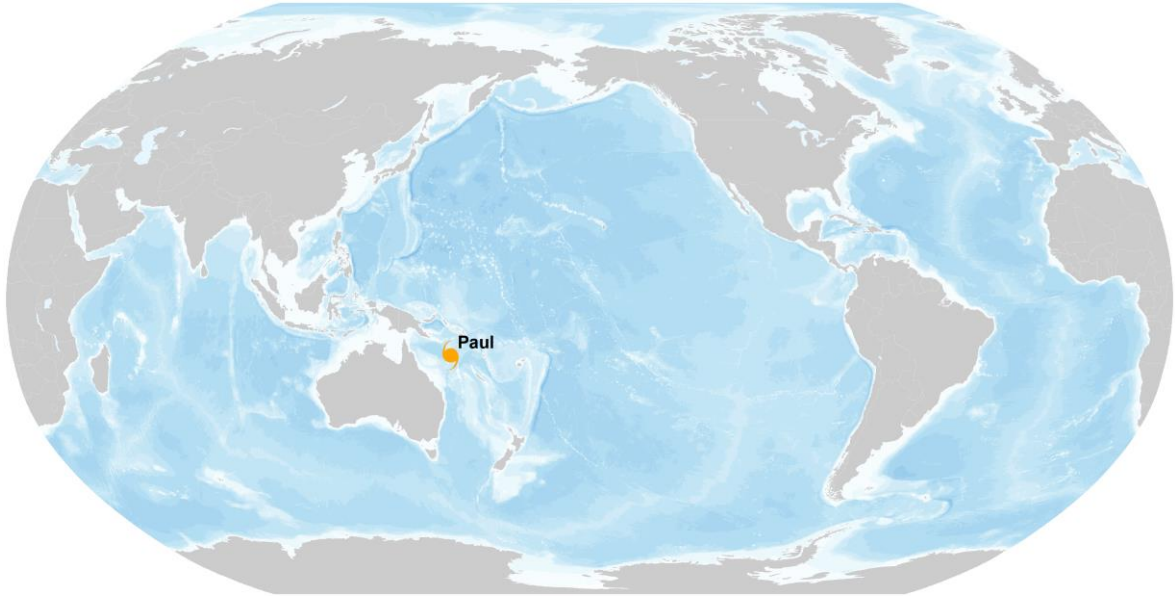
Source: NOAA, Columbia University | Graphic: Aon Catastrophe Insight

Global Tropics Outlook



Source: Climate Prediction Center (NOAA)

Current Tropical Cyclone Activity



● Tropical Depression
 ● Tropical Storm
 ● Category 1
 ● Category 2
 ● Category 3
 ● Category 4
 ● Category 5

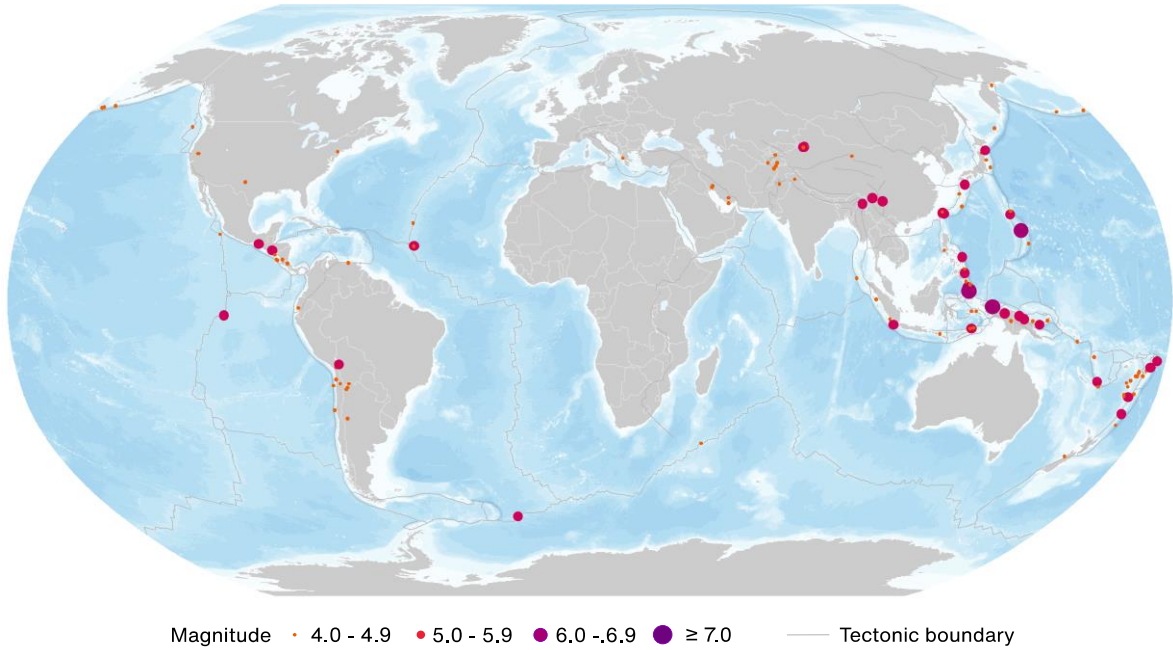
Name	Location	Winds	Center
CY Paul	15.3S, 156.7E	40	460 mi (740 km) SW from Honiara, Solomon Islands

* TD: Tropical Depression, TS: Tropical Storm, HU: Hurricane, TY: Typhoon, CY: Cyclone

** N: North, S: South, E: East, W: West, NW: Northwest, NE: Northeast, SE: Southeast, SW: Southwest

Source: National Hurricane Center, Joint Typhoon Warning Center, Central Pacific Hurricane Center (NOAA)

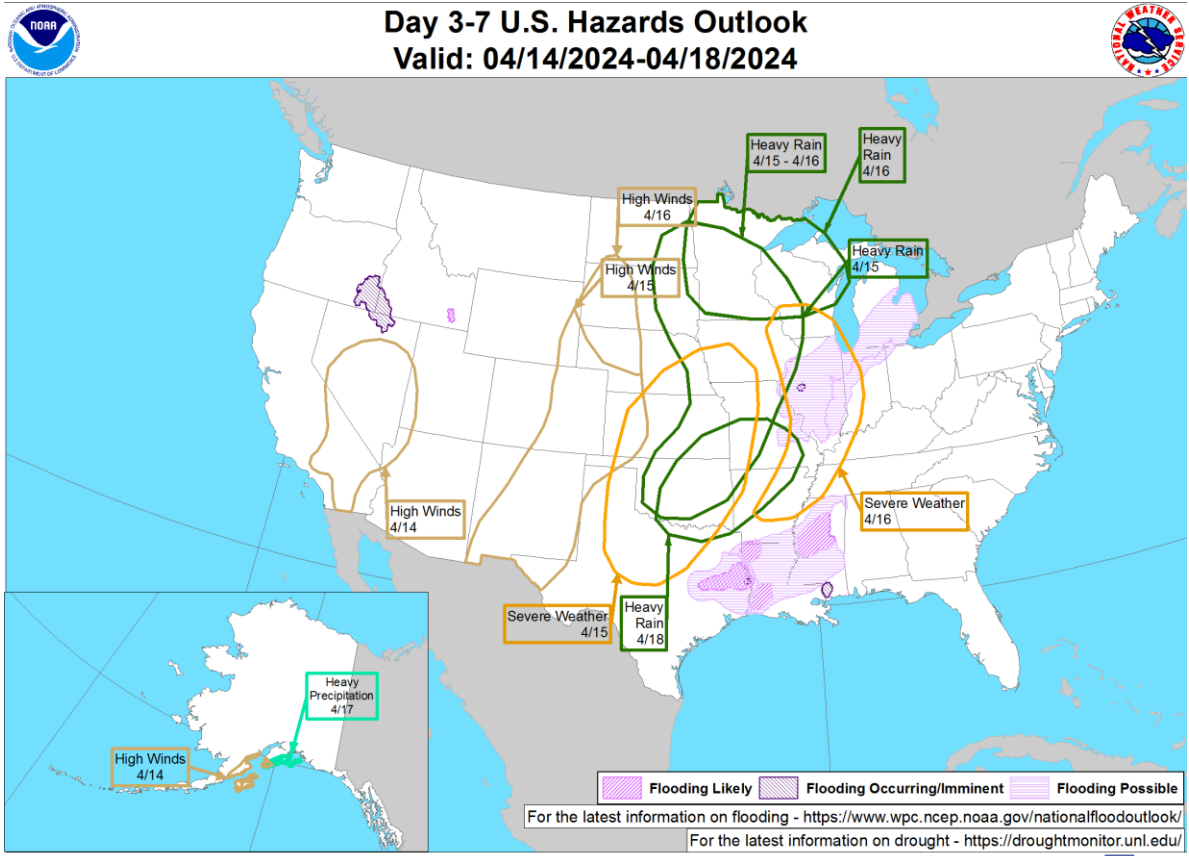
Global Earthquake Activity ($\geq M4.0$): April 5-11



Date (UTC)	Location	Magnitude	Epicenter
4/5/2024	19.10N, 145.39E	6.8	Maug Islands region, Northern Mariana Islands
4/9/2024	1.68S, 134.44E	6	35 km (22 mi) ESE of Ransiki, Indonesia
4/9/2024	2.71N, 127.09E	6.6	14 km (9 mi) NW of Tobelo, Indonesia

Source: United States Geological Survey

U.S. Hazard Outlook

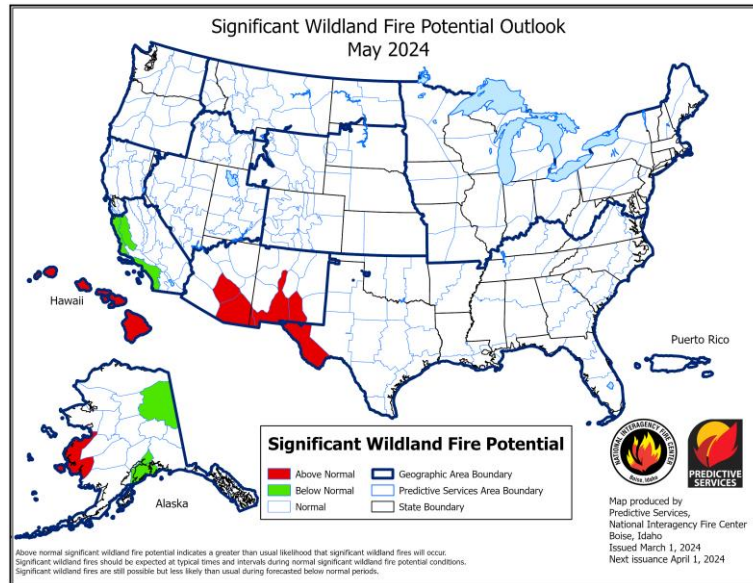
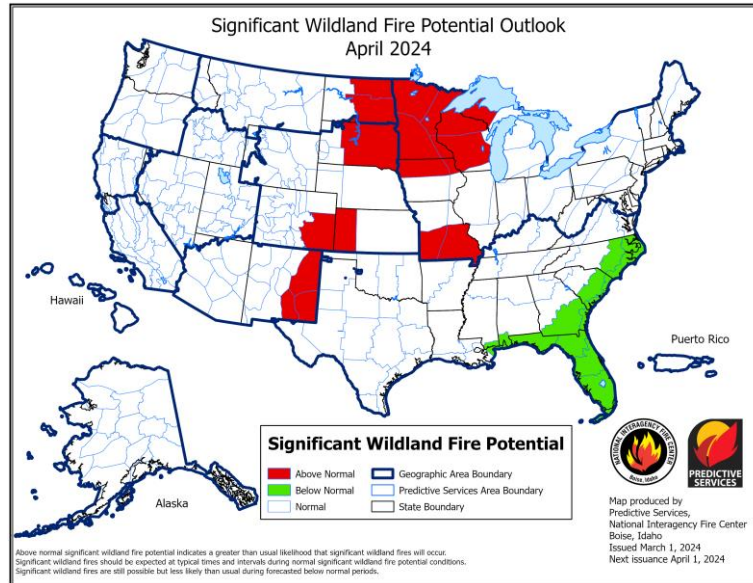


Weather Prediction Center
Made: 04/11/2024 03:42 PM EDT

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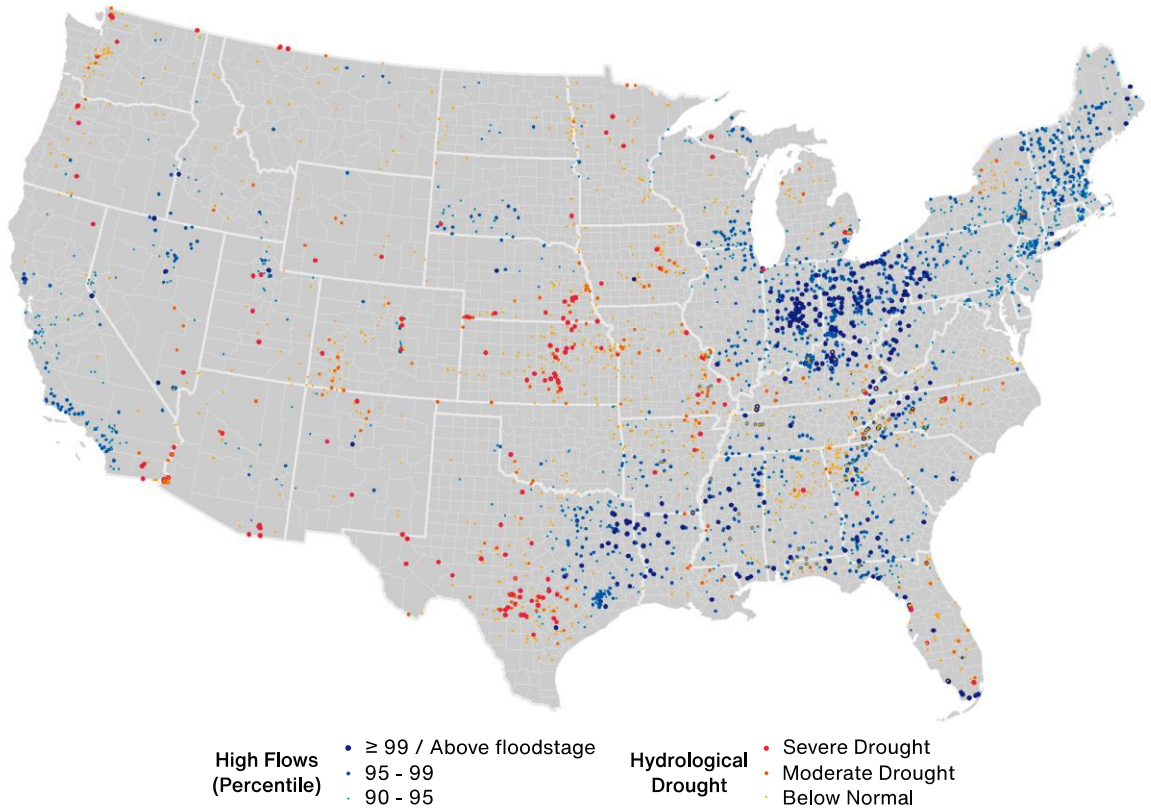
Source: Climate Prediction Center (NOAA)

U.S. Wildfire: Significant Fire Risk Outlook & Activity



Source: NIFC

U.S. Current Riverine Flood Risk



A $\geq 99^{\text{th}}$ percentile indicates that estimated streamflow is greater than the 99th percentile for all days of the year. This methodology also applies for the other two categories. A stream in a state of severe drought has 7-day average streamflow of less than or equal to the 5th percentile for this day of the year. Moderate drought indicates that estimated 7-day streamflow is between the 6th and 9th percentile for this day of the year and 'below normal' state is between 10th and 24th percentile.

Source: United States Geological Survey

Source Information

United States: Flooding & Severe Convective Storm

Storm Prediction Center (SPC)

National Weather Service (NWS)

Tornadoes hit Louisiana and Texas as severe weather causes damage in South, *NBC News*

Flooding swamps South with rare Flash Flooding Emergencies in Texas, New Orleans, *Fox Weather*

PHOTOS: Damaging hail falls across Central Texas on April 9, *KXAN News*

Strong winds topple trees, cause damage and power outages in Denver area, *ABC 7 Denver*

Possible tornado hits Louisiana, police describe 'unbelievable' damage, *KFOR News Oklahoma*

'We can't go home': Tallahassee swamped by torrential rains; 'overwhelming' ordeal ahead, *Tallahassee Democrat*

Russia, Kazakhstan: Flooding

Ministry of Emergency Situations of Kazakhstan

Orsk Administration

Climate Reanalyzer

Anger boils over for some amid record floods in Russia's Urals, *Reuters*

Russia floods: Record water levels threaten Orenburg city, *BBC*

Flood in Orsk: The biggest flood in history or technical flaws in the dam? *Rossiyskaya Gazeta*

Water levels rise and homes flood in Russia after a dam bursts near the Kazakhstan border, *AP News*

Mexico, Guyana: Wildfire

JRC Global Wildfire Information System (GWIS)

Copernicus Rapid Mapping System (RMS)

Western Europe: Windstorms Kathleen & Pierrick

European Severe Weather Database (ESWD)

Clean-up after Storm Pierrick causes damage across Cornwall, *BBC*

Natural Catastrophes: In Brief

United States Geological Survey (USGS)

The Insurance Council of Australia (ICA)

More than 150 rescued from floods in eastern Australia, *Reuters*

U.S. Federal Emergency Management Agency (FEMA)

Brace for more flooding, TMA warns as rains kill 15 people, *The Citizen*

Greece raises wildfire alert amid early blazes, *Deutsche Welle*

Wildfire in south Crete contained; suspect arrested, *Keep Talking Greece*

National Disaster Management Agency (BNPB)

Extreme winds and rainfall wreak havoc across South African coast, killing at least 1, *AP News*

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