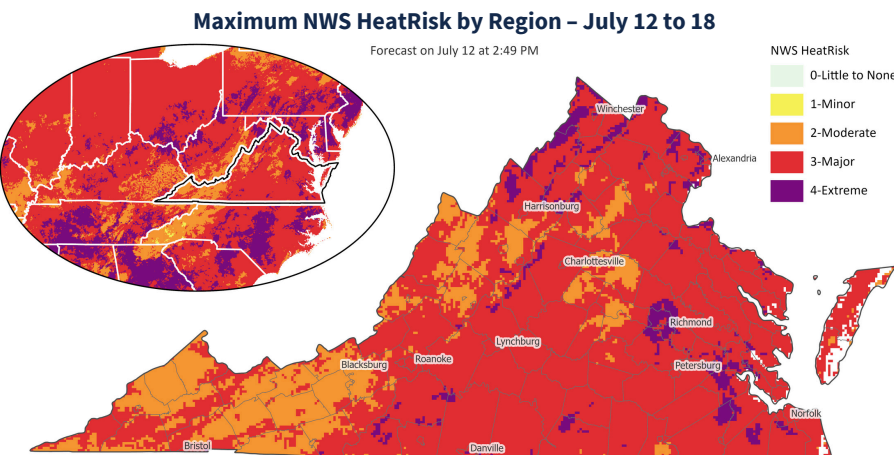


July 12, 2024

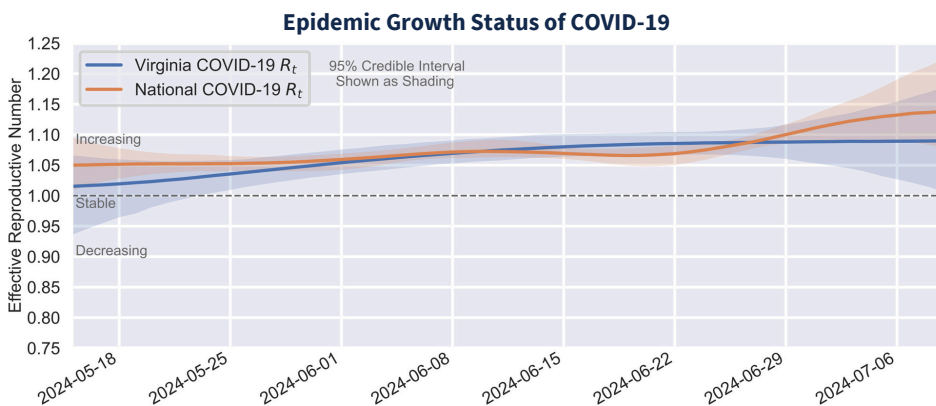
Key Takeaways

- Extreme heat is expected to impact Virginia in the coming week. The entire Commonwealth will experience at least ‘moderate’ heat risk. Most regions will experience ‘major’ or ‘extreme’ risk.
- A new study suggests that HPAI A(H5N1) could be transmitted by raw milk. The same study found that the virus may be better adapted to infecting humans than other avian influenza strains.
- COVID-19 viral activity continues to grow. Diagnosis rates in Virginia are now comparable to those from early March. The CDC notes that COVID-19 surges can happen any time of year.
- NIH begins trial of nasal COVID-19 vaccine.
- New mpox cases in South Africa and Connecticut, along with the ongoing outbreak in DR Congo, highlight the ongoing threat from the disease.

Key Figures



High heat continues to affect the Commonwealth. Some regions will experience ‘Extreme’ HeatRisk in the coming week, especially on Wednesday. Please take appropriate precautions to protect against heat-related illness. Data Source: NWS.



Models suggest that COVID-19 activity has been growing in Virginia since May. They forecast continued growth in the Commonwealth and nationally. Data Source: CDC.

COVID-19

98%

The likelihood that COVID-19 is growing in Virginia, according to CDC models as of July 9.

Measles

167

The number of new measles cases in the US detected since the start of 2024, as of July 11.

HPAI A(H5N1)

146

HPAI A(H5N1) detections in dairy cattle herds in the United States as of July 12.

Heat Illness

1,846

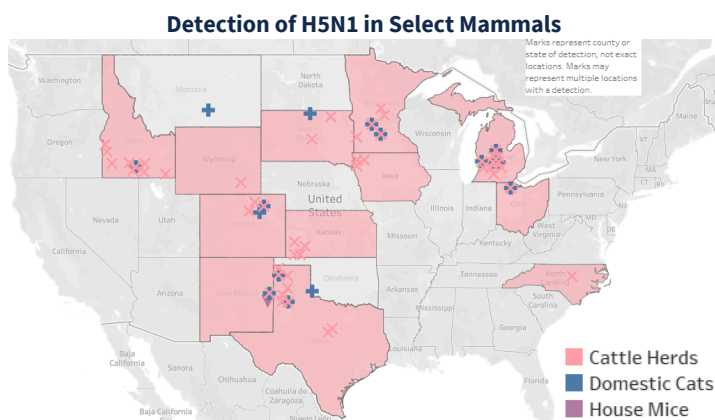
The number of heat-related illness visits to Virginia Emergency Departments from May 1 to July 11.

Spotlight:
Extreme Heat

Ongoing Monitored Situations

Avian Influenza A(H5N1)

- **Nature study suggests raw milk may transmit HPAI A(H5N1).** The [study](#), which has not yet been peer reviewed, showed that raw milk contaminated with the virus sickened mouse and ferret models. The FDA [notes](#) that pasteurization is shown to destroy the virus and make dairy products safe.
- **Research suggests HPAI A(H5N1) may be suited to human transmission.** The same [study](#), concerning milk referenced above, also found that HPAI A(H5N1) has a unique advantage. Unlike most avian influenza viruses, it is capable of attaching to receptors found in the upper respiratory tracts of humans. This may suggest it is well adapted to infecting people, but other researchers have found [contradictory](#) results.
- **Colorado declares emergency following outbreak.** The governor's declaration comes after HPAI A(H5N1) was [found](#) in a poultry facility north of Denver.
- **HPAI A(H5N1) may become endemic.** Despite efforts to track and root out the virus, it has already affected 146 herds across 12 states, as well as other mammals including domestic cats and mice. This has prompted [some](#) to suggest the virus could become endemic.



New outbreaks of HPAI A(H5N1) were detected in dairy cattle in Colorado, Iowa, Michigan and Texas this week. Data Source: USDA.

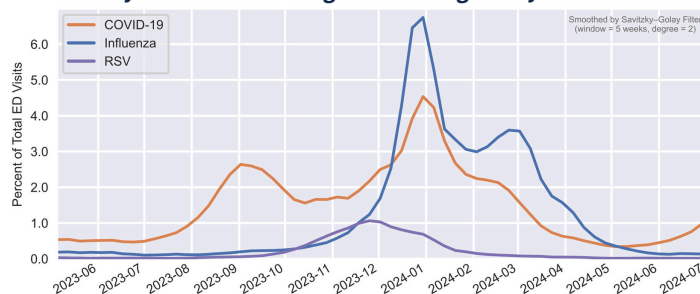
Mpox

- **Mpox cases on the rise nationally and globally.** Though Virginia has only [reported](#) two cases since the start of June, [Connecticut](#) is reporting an uptick of the virus. Mpox is also causing a significant [outbreak](#) in DR Congo as well as in [South Africa](#).

Seasonal Respiratory Illness

- **COVID-19 activity is moderate, growth continues.** Diagnoses of COVID-19 in Emergency Departments are up another 30% in [Virginia](#) and 23.5% [nationally](#) this week. This makes four straight weeks of increases in the Commonwealth. CDC [wastewater](#) activity levels are 'moderate' in Virginia, and [WastewaterSCAN](#) finds an 'upward trend' in the American South. [Models](#) suggest these trends will continue in the short term.

Weekly Percent of ED Diagnoses in Virginia by Viral Illness



The diagnosis rate of COVID-19 in Virginia continues to increase slowly. Rates are now comparable to those of early March. Data Source: CDC.

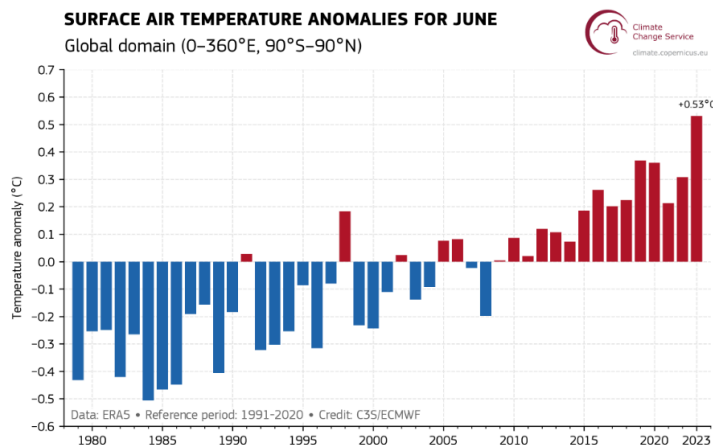
- **NIH opens trial of nasal COVID-19 vaccine.** The experimental [vaccine](#) uses a murine pneumonia virus modified to carry the SARS-CoV-2 spike protein. It is hoped that this vaccine will induce a robust mucosal immunity not elicited by traditional jabs.
- **CDC says COVID-19 can surge throughout year.** The agency [notes](#) that though environmental conditions do play a role, the combination of waning immunity, behavioral patterns, and novel variants could cause a surge any time of the year.
- **KP.3 and LB.1 variants continue to out-compete peers.** KP.2 continues to remain stable. Together, the three JN.1 descendants now account for an [estimated](#) 76% of new cases in the United States. LB.1 may exhibit stronger immune escape characteristics, but there is no [evidence](#) that it causes more severe illness.

Measles

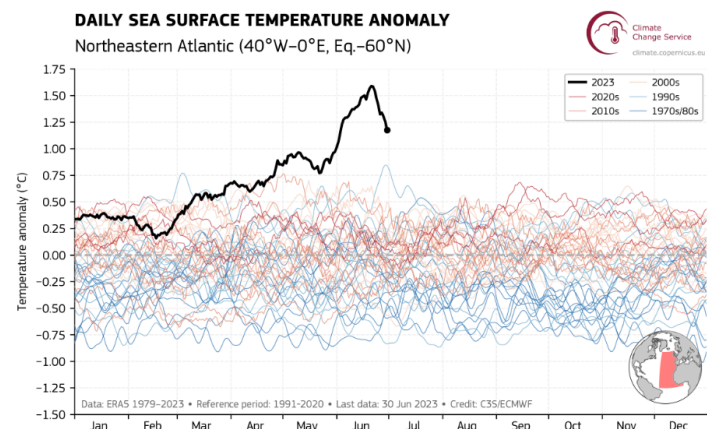
- **Sporadic outbreaks continue across U.S.** The CDC [reports](#) a total of 16 national cases since June 2. Three cases were identified in a recent [outbreak](#) in New Hampshire and Vermont, while San Jose [reports](#) an exposure event associated with air travel.

Spotlight

SURFACE AIR TEMPERATURE ANOMALIES FOR JUNE
Global domain (0–360°E, 90°S–90°N)



DAILY SEA SURFACE TEMPERATURE ANOMALY
Northeastern Atlantic (40°W–0°E, Eq.–60°N)



Source of Images: [Copernicus Climate Change Service](#)

Extreme Heat

- **Last month was the hottest June on record globally** according to the [Copernicus](#) Climate Change Service. It was the 13th consecutive month to hit that milestone, another record. Sea surface temperatures were also the highest on record for June, the 15th consecutive month for that metric.
- **The U.S. experienced a record number of heat-related deaths in 2023.** Over 2,300 people died, the highest number in 45 years of record-keeping. More than half occurred in Arizona and Texas. Virginia recorded no heat-related deaths in 2023 according to the analysis.
- **142 million people around the U.S. were under heat alerts Wednesday**, mostly in Western states. A heat wave affecting much of the country is exacerbating drought conditions, increasing wildfire risk. Virginia is also experiencing drought conditions, with parts of the state experiencing severe drought.
- **All of Virginia is expected to experience moderate or higher risk of heat-related impacts next week** according to the National Weather Service (see map page 1). Most of the Commonwealth will experience major risk levels, with a sizable portion experiencing extreme risk. At these levels, impacts are likely in some or most health systems, as well as heat-sensitive industries, and infrastructure.

Other News

- **A fire at a fertilizer and pesticide facility caused a hazmat situation in South Hill.** At least 15 firefighters were transported to the hospital due to chemical exposure, heat exhaustion, burns and other minor injuries. Although runoff entered local streams, drinking water was not affected, though a fish consumption advisory was issued. Air and water monitoring are ongoing.
- **A main water line break in Petersburg left some residents without water or with low water pressure on Sunday.** A boil water advisory was announced on Sunday and later lifted on Thursday afternoon.
- **Cambodia reports two human cases of H5N1.** The patients are cousins, both under the age of five, and had close contact with poultry. Though the clade is not yet known, H5N1 clade 2.3.2.1c routinely circulates in the region. This is distinct from the HPAI A(H5N1) clade 2.3.4.4b virus that is currently circulating in American dairy cattle (see page 2).
- **Hurricane Beryl struck Texas Monday as a category 1 hurricane** causing at least ten deaths and over two million residents to lose power. Service has been restored for about a third of those affect, but hundreds of thousands could be without power until next week.
- **Two recently published reports provide an assessment of the country's ability to prevent, counter, and respond to nuclear and chemical terrorist threats.** The reports recommend increasing efforts to mitigate the evolving risk of nuclear threats and reducing access to hazardous chemicals that could be used for chemical terrorism.