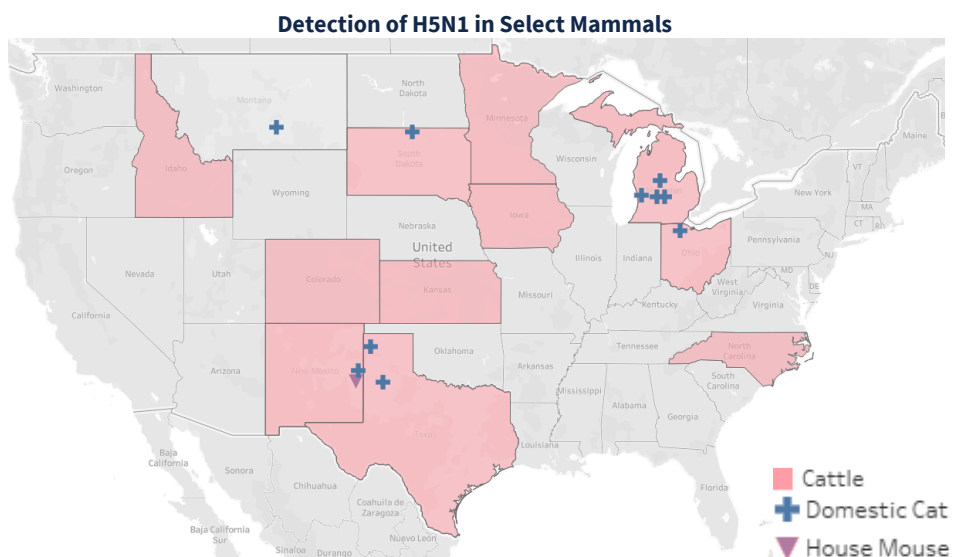


June 7, 2024

Key Takeaways

- HPAI (A)H5N1 has been detected for the first time in dairy cattle in Iowa and Minnesota.* The virus has now been detected in dairy cattle in at 11 states. It was also detected in house mice this week, prompting concerns they could spread the virus.
- The USDA detected HPAI (A)H5N1 viral particles in meat from dairy cattle, but could not determine if these particles were infectious. It is thought that cooking beef to 'medium' or hotter will eliminate the virus from meat if present.
- The USDA announced \$824 million in funding for livestock and wildlife surveillance, as well as livestock vaccine development.
- HHS has ordered 4.8 million HPAI (A)H5N1 vaccines to be stockpiled. Production could reach 150 million in six months if needed.
- COVID-19 activity continues to increase nationally. Yet, models suggest it has stabilized in Virginia.
- Water main breaks disrupted drinking water supply in much of Atlanta over the past week, prompting concern about aging pipelines nationally.

Key Figure



VDH OEP staff are monitoring HPAI A(H5N1) detections in select mammals. States with cattle detections are shaded pink. Marks show counties with detections in domestic cats (blue) and house mice (purple).

Image Source: USDA [APHIS](#).

* Note that detections in Iowa and Minnesota are not yet included in public USDA APHIS data, but are included in both counts and maps in this situation update.

Mpox

22

The number of mpox cases reported in Virginia in 2024 as of Jun 4.

Measles

151

The number of new measles cases in the US detected since the start of 2024, as of Jun 7.

HPAI A(H5N1)

85

HPAI A(H5N1) detections in dairy cattle herds in the United States as of June 6, 2024

Infrastructure

114

The age of one of the ruptured pipes that caused a Boil Water Advisory covering much of Atlanta over the past week.

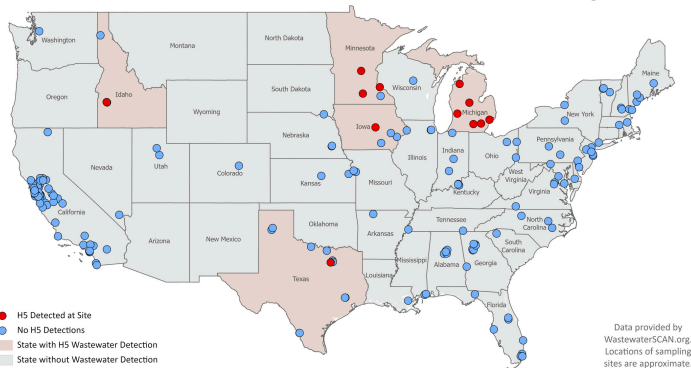
Spotlight:
Water
Infrastructure

Ongoing Monitored Situations

HPAI (A)H5N1

- **HPAI A(H5N1) was recently detected in house mice in New Mexico**, raising concern that mice could spread the virus to nearby farms or humans. So far, USDA APHIS reports detections in 85 cattle herds, one alpaca farm, 17 domestic cats, and 11 house mice.
- **HPAI (A)H5N1 detected in tissue samples from slaughtered dairy cattle.** Officials note that the meat in question was intercepted before entering the food supply, may not have had infectious virus, and that cooking meat to ‘medium to well done’ eliminates infection risk.
- **HHS orders 4.8 million doses of an H5 vaccine.** Production could be scaled up to deliver 150 million doses within six months. Health officials in Finland have ordered 20,000 doses of an unrelated H5 vaccine and plan to administer them to at-risk workers.
- **USDA announced an additional \$824 million in funding** to respond to the HPAI (A)H5N1 outbreak in dairy cattle. This supplements the \$1.3 billion previously allocated. Part of the funding will be used to launch the “Voluntary H5N1 Dairy Herd Status Pilot Program” to support livestock surveillance. The funding will also support livestock vaccine research.
- **Iowa announces disaster proclamation.** This comes in response to an outbreak of HPAI (A)H5N1 in a commercial poultry flock, and will augment the state’s surveillance and control efforts.

Detection of H5 Viral Proteins in Wastewater Sampling Sites

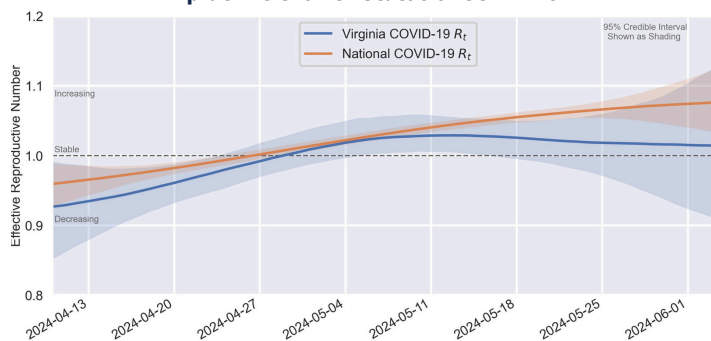


WastewaterSCAN found H5 proteins in just 14 of the 194 tested wastewater facilities. The new testing protocol can distinguish between H5 and other flu A strains but cannot identify the source of the virus. Waste from dairy or poultry facilities and stormwater may be contributing to these values. Data source: WastewaterSCAN.org

COVID-19

- **COVID-19 growth continues nationally.** Epidemic models now suggest that viral activity is increasing in 30 states and territories. Virginia reports an effective reproductive number (R_t) of 1.01 which suggests COVID-19 is stable in the Commonwealth. Data from WastewaterSCAN corroborate these findings and show a national ‘upward trend’ for COVID-19 activity. Emergency department diagnoses of COVID-19 in Virginia have remained level for the last two weeks.
- **FDA authorizes combo COVID-19 + flu test.** The new test will check for COVID-19, flu A, and flu B with a single kit. It will be provided over the counter.

Epidemic Growth Status of COVID-19



Models suggest that COVID-19 is stable in Virginia. Data Source: CDC.

Mpox

- **The low-level multi-country mpox outbreak is still ongoing.** WHO detected 528 confirmed cases globally in April. In Virginia, four cases of mpox were identified in April, and two have been reported so far in May. WHO considers the threat posed by mpox to the general population of countries without historic transmission to be ‘low’. The threat posed to men who have sex with men is considered ‘moderate’.

Measles

- **Global outbreak continues with sporadic U.S. cases.** WHO reports nearly 179,000 suspected cases of the virus in 2024, this includes 151 in the United States. Most recently, outbreaks were noted in central New Jersey, as well as major airports serving Philadelphia and Seattle.

Spotlight

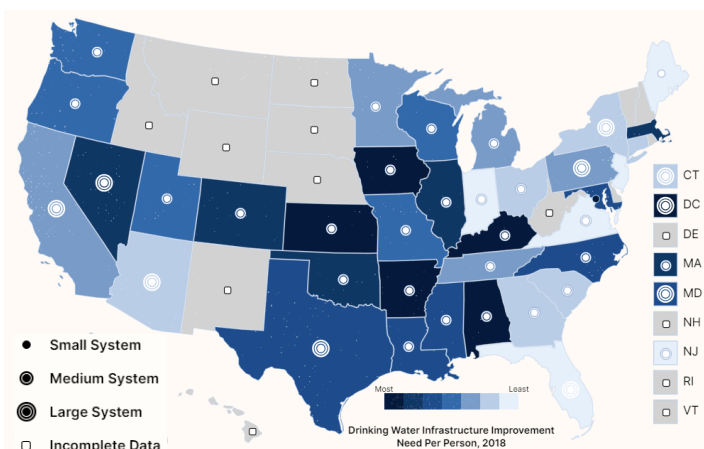
- **Atlanta's mayor declared a state of emergency due to water outages affecting a large portion of the city.** A 36 inch pipe and a 48 inch pipe, dated to 1910 and 1930 respectively, broke on May 31, presaging a series of breaks. Schools and clinics closed, and at least one hospital diverted ambulances and moved patients. The final Boil Water Advisory was lifted Thursday morning after 7 days.
- **The US and Canada experience approximately 260,000 water breaks annually** according to an estimate from Utah State University. Almost 1/3 of pipes are over 50 years old. Another study found water main break rates in the US increased 27% between 2012 and 2018.
- **The Environmental Protection Agency estimates that states need \$625 Billion over 20 years to upgrade water systems,** including \$421 Billion for distribution/transmission systems. Of that, Virginia needs \$9.4 Billion, including \$6.1 Billion for distribution/transmission.
- **The Environmental Protection Agency released an Enforcement Alert** urging community water systems to ensure the cybersecurity of their operational systems. The EPA also found that over 70% of the water systems inspected since September 2023 are not fully compliant with Section 1433 of the Safe Drinking Water Act.

Other News

- **Researchers at MIT successfully ordered enough genetic material to develop ricin toxin and the 1918 pandemic flu virus.** The researchers purchased fragments separately from multiple suppliers. While some note this as a security flaw, the MIT researchers also fit standard criteria to receive these materials.
- **Police separated protestors from attendees of a campaign event in Albemarle County.** Local officials had little warning of the event, including a late venue change from Charlottesville to Albemarle County.
- **Some homeowners in disaster prone areas are not able to get insurance.** In other cases, premiums have become cost prohibitive. Insurance access and costs may influence land-use patterns.
- **A 59-year-old, immunocompromised man died from H5N2 avian influenza in Mexico.** H5N2 has been reported in Mexican poultry, but the patient did not have exposure to infected animals. Authorities report no evidence of person-to-person transmission. Note that this case is not related to the H5N1 virus affecting dairy cattle in the U.S.
- **85 residents were evacuated after a nursing home was shut down in Pennsylvania.** The Pennsylvania Department of Health shut down the home after determining it to be 'unsafe for human occupancy'. The Pennsylvania Health Care Association, along with family and nearby long-term care facilities, facilitated the relocation of residents.
- **VDH is investigating a cluster of gastrointestinal illness cases associated with the Lake Anna area over Memorial Day weekend.** The cases primarily occurred among children and some hospitalizations have been reported. Although water exposure in Lake Anna has been confirmed among all cases, VDH has not conclusively determined the source of illness.

Water Infrastructure

Drinking Water Infrastructure Improvement Needs Per Person, 2018



According to the American Society of Civil Engineers (ASCE), Virginia is among the states with the least financial need for drinking water system upgrades. Nevertheless, ASCE gave Virginia just a 'C+' grade for its drinking water infrastructure, noting aging infrastructure balanced by recent funding allocations. By comparison, ASCE gave the nation's drinking water system a 'C-' grade. Image Source: [ASCE](#).