

# Avian Influenza in Arizona

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# Influenza Overview

- Two main types of influenza viruses that circulate: **A & B**
- Influenza B is human specific while Influenza A is not.
- Subtypes (H & N)
  - 18 different H vs. 11 different N subtypes
- Influenza A virus → Pandemic Potential
  - New + different influenza A virus emerges
    - Infects people
    - Has the ability to spread efficiently among people
    - People have little to no immunity against it.



# Let's talk bird flu..



Photo by Sahand Babali on Unsplash



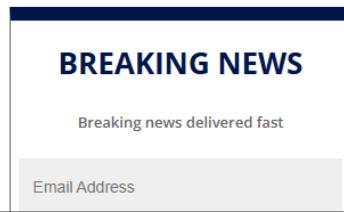
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# Bird Flu: Virus detected in Maricopa County wastewater samples

By Kenneth Wong | Updated December 30, 2024 12:17pm MST | Health | FOX 10 Phoenix | 

## The Brief

- Maricopa County Department of Public health say they have detected "an influenza subtype associated with avian flu" in wastewater within the county.
- The A(H5) influenza subtype was found in wastewater samples collected in Phoenix, Surprise, and Tempe.
- "No human cases of avian flu have been detected in Maricopa County," read a portion of the statement.



# Bird Flu: Virus detected in Maricopa County wastewater samples

By Kenneth Wong | Updated December 30, 2024 12:17pm MST | Health | FOX 10 Phoenix | [↗](#)

The

5 animals die after bird flu exposure at Arizona zoo; 25 employees exposed to virus



Natalie Neysa Alund  
USA TODAY

Published 3:57 p.m. ET Dec. 13, 2024



## BREAKING NEWS

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# Bird Flu: Virus found in Maricopa County samples

By Kenneth Wong | Updated December 30, 2024 12:17

The Maricopa County Department of Public Health reported that five animals have died after exposure to the virus, including four dogs and one cat. The agency is investigating the cases and has issued a warning to pet owners to avoid raw food and raw milk.

**5 animals die after exposure to virus at Arizona zoo; 25 exposed to virus**



Natalie Neysa Alund  
USA TODAY

Published 3:57 p.m. ET Dec. 13, 2024



## H5N1 confirmed in more cats as probe into raw pet food widens

*Lisa Schnirring*, January 14, 2025

Topics: [Avian Influenza](#) ([Bird Flu](#))

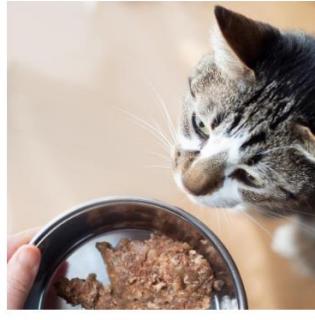


The Los Angeles County Department of Public Health (LACDPH) yesterday [reported](#) three more H5 avian flu infections in pet cats after exposure to raw food or raw milk.

In other avian flu developments, federal officials confirmed those and several more H5N1 detections in domestic cats from California and other states.

### Tests under way for multiple raw pet food brands

With the latest cases noted in an alert to veterinarians yesterday, the LACDPH has now reported seven H5N1 infections in pet cats. Officials had earlier reported four other illnesses, including two that died after drinking recalled raw milk. They also said they were investigating other possible cases in cats that weren't exposed to raw milk, with raw food as a potential culprit.



## NOT EGG-CELLENT NEWS

ALREADY 40% MORE EXPENSIVE THAN A YEAR AGO, BIRD FLU COULD PUSH EGG PRICES UP ANOTHER 20% IN 2025



TOP STORY

## TWO PEOPLE IN AZ TEST POSITIVE FOR BIRD FLU

CASES COME FROM PINAL CO. FARM | HEALTH OFFICIALS SAY THE RISK REMAINS LOW

LATEST NEWS

■ 'DAY OF THE FARMER' CELEBRATES YUMA'S AGRICULTURE INDUSTRY AND ITS WORKERS

1,920 x 1,080

9:02

70°



# Influenza A in people and Animals by hemagglutinin subtype

Influenza A in people and animals by hemagglutinin subtype

Subtype	People	Poultry	Swine	Bats	Cats	Dogs	Horses	Cows	Other*
H1	human	chicken	pig						x
H2	human	chicken	pig						
H3	human	chicken	pig			dog	horse		x
H4		chicken	pig						x
H5	human	chicken	pig***		cat	dog		cow	x
H6	human	chicken	pig		cat	dog			
H7	human	chicken	pig		cat		horse		x
H8		chicken	pig						
H9	human	chicken	pig						
H10	human	chicken	pig						x
H11		chicken							
H12		chicken							
H13		chicken							
H14		chicken							
H15		chicken							
H16		chicken							
H17				bat					
H18				bat					

Table. Different hemagglutinin subtypes and the species in which they have been detected.





High Pathogenicity Avian Influenza (HPAI) is defined by the ability of the virus to **cause morbidity and mortality in poultry**.

# Wild waterfowl are hosts for influenza A viruses



Photo by Steve Smith on Unsplash

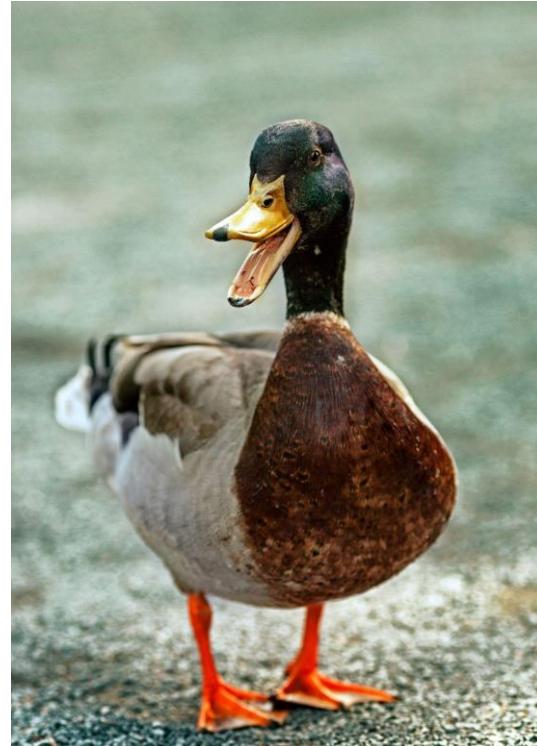
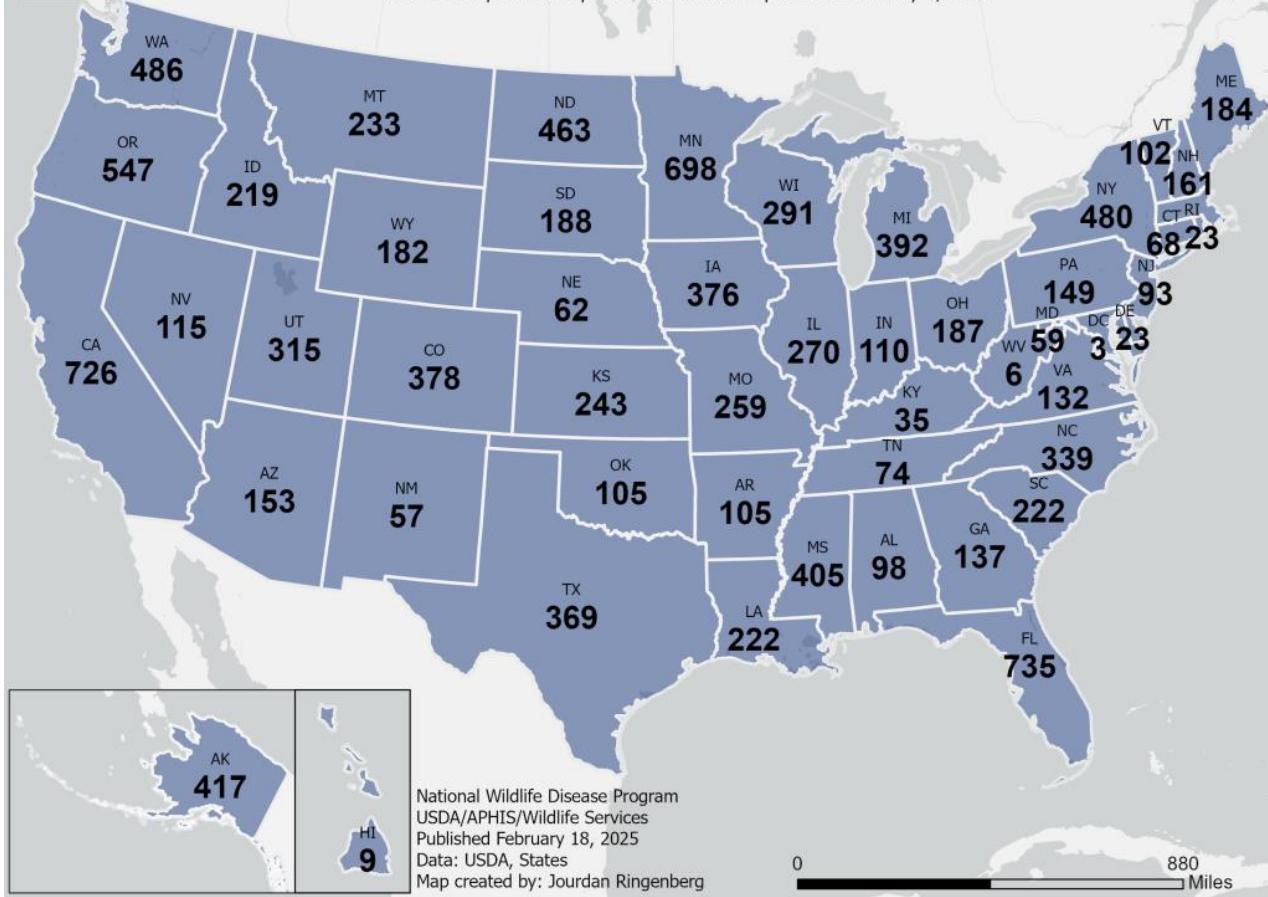


Photo by Ross Sokolovski on Unsplash

States with HPAI detections in wild birds (Total Count: 12,064)  
Numbers represent all positive wild bird samples since January 1, 2022



Currently,  
there is  
widespread  
circulation  
of Influenza  
A(H5N1) in  
wild bird  
populations.

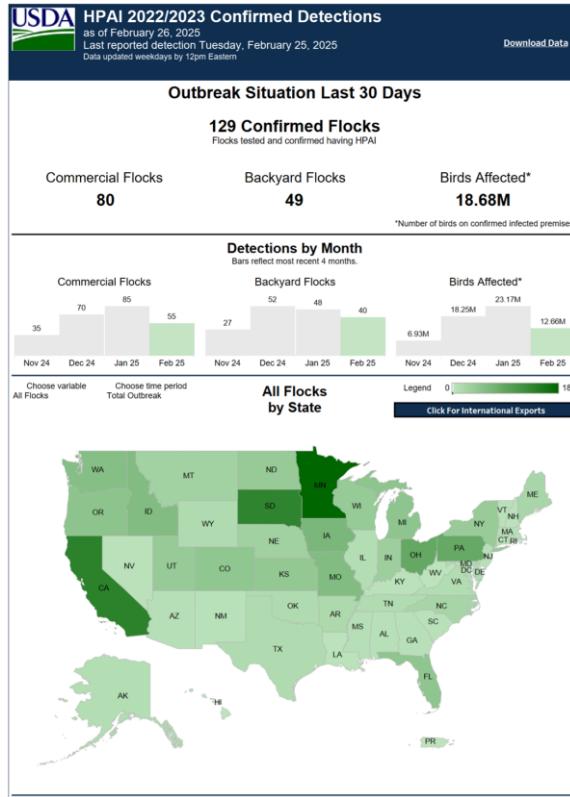


## North American Bird Migration Flyways

- Atlantic Flyway
- Mississippi Flyway
- Central Flyway
- Pacific Flyway



# Confirmed Detectors in Poultry



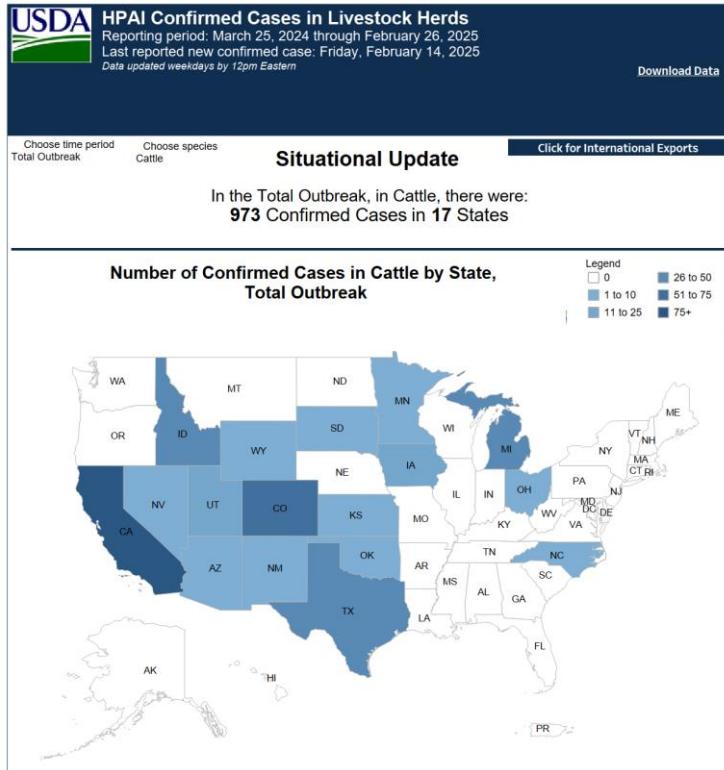
- As of February 26th, **166,065,938 poultry** have been affected across 51 jurisdictions
- In Arizona, H5 has been detected in poultry in Pinal, Maricopa, and Graham Counties.
- Culling of all birds on the premises and facility disinfection is the current method of managing H5 infection in poultry

A virus mutation after a single introduction of H5N1 from wild birds to dairy cattle allowed for cow-to-cow ongoing transmission.



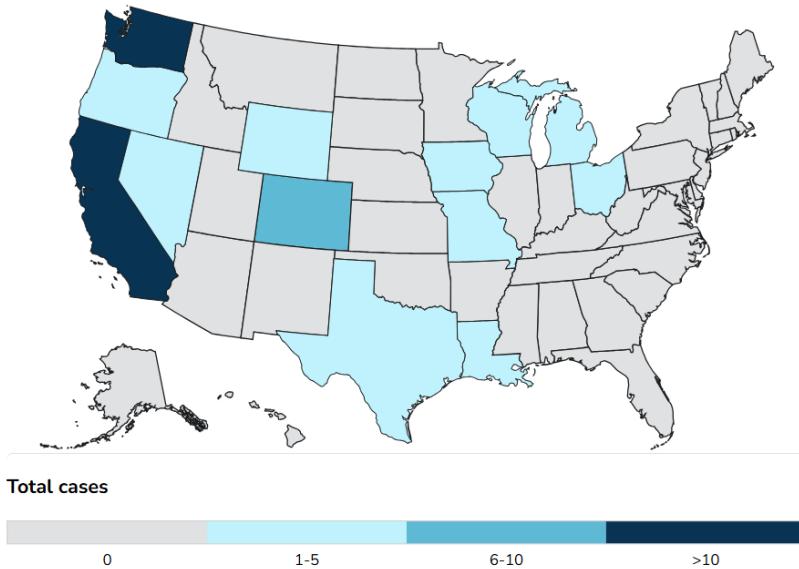
Photo by Lomig on Unsplash

# Confirmed Detections in Cattle



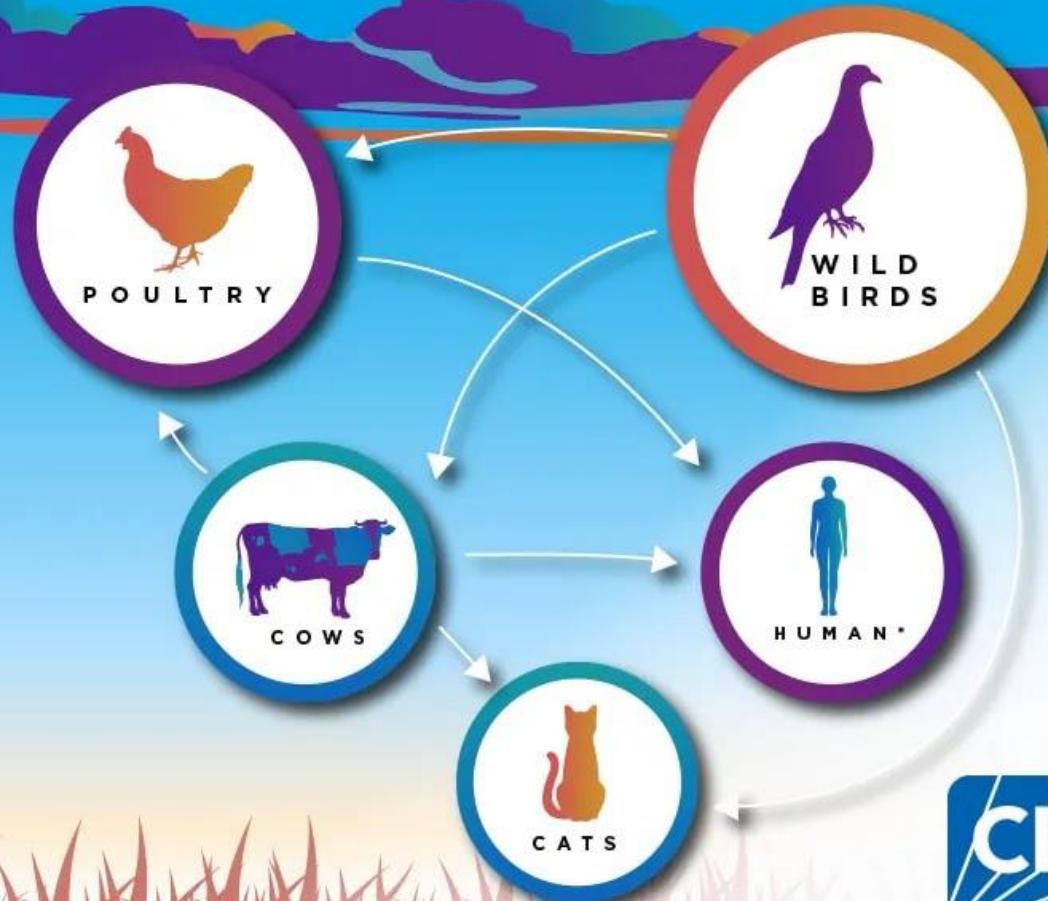
- March 2024, first confirmed cases of H5N1 infection in dairy cattle in Kansas & Texas
- Presently **973 cattle herds** impacted across 17 states.
- On February 11, avian influenza was detected in milk produced by a dairy herd in Maricopa County

# Avian Influenza in Humans



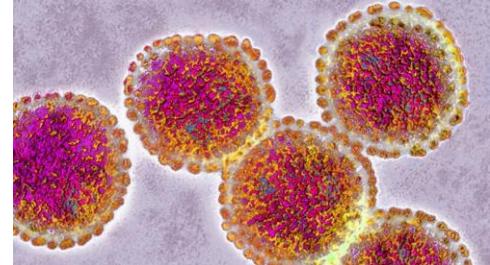
- First human case in the current outbreak was identified in Texas in April 2024
- 70 confirmed cases in 13 states have now been reported
- 1 death reported
- 2 probable cases of H5 were detected in humans in Arizona

# H5N1 Bird Flu How is it Spreading?

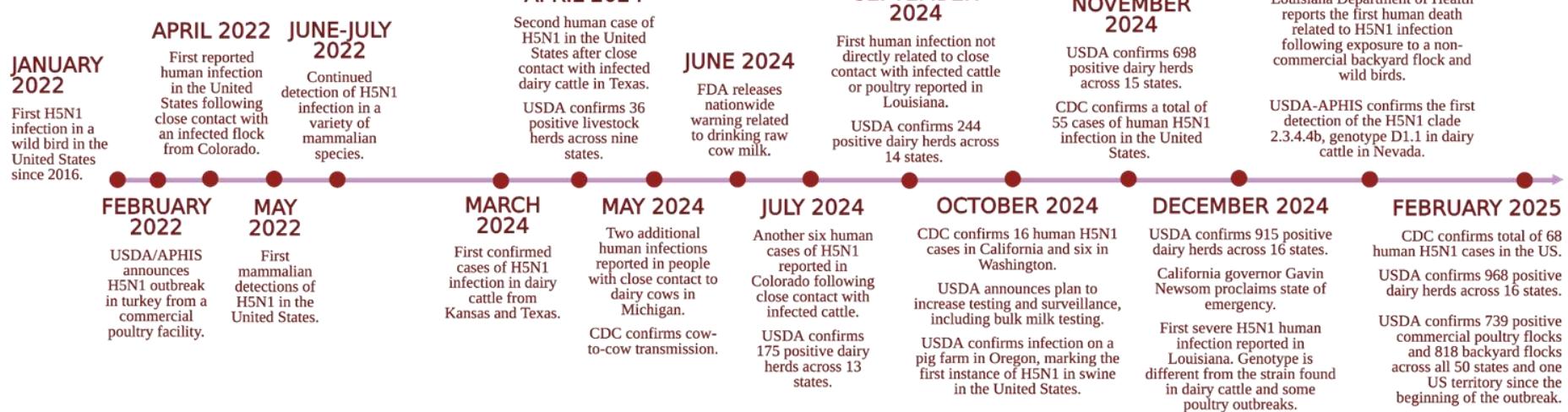


*\*No human-to-human spread of H5N1 has been detected during the current outbreak in dairy cows.*

# National H5N1 Avian Influenza Timeline



## NATIONAL TIMELINE OF H5N1 DETECTION AND RESPONSE



# Controlling the Spread

- Appropriate PPE should be used when handling infected animals or animal products
- Individuals who are exposed to infected animals are monitored for symptoms for 10 days from last exposure
- Contacts are evaluated to determine if post-exposure prophylaxis is recommended
- If contacts become symptomatic, specimens are sent to the Arizona State Public Health Lab for testing and antivirals are offered
- In healthcare settings, standard, contact, and droplets precautions should be in place when encountering a patient with suspected avian influenza



# Laboratory Subtyping

- The CDC recommends expedited subtyping of all influenza A positive specimens of hospitalized and critically ill patients to monitor for potential novel or avian influenza types
- Nontypable results should be sent to the state public health lab for further testing
  - Nontypable results may indicate that the virus detected might be a novel influenza A virus
  - A result may also be “nontypeable” because there is too little virus to perform subtyping on that specimen





# ARIZONA

Thank you