

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.

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Bird Flu: Virus detected in Maricopa County wastewater samples

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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



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NOT EGG-CELLENT NEWS

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



Bird Flu: Vir Maricopa C samples

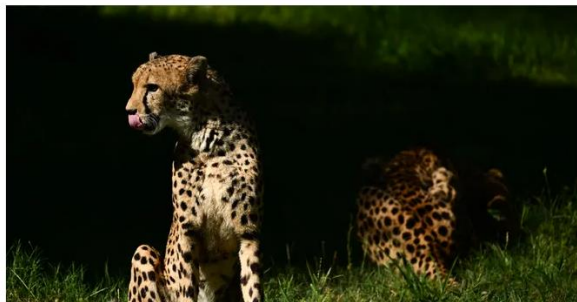
By Kenneth Wong | Updated December 30, 2024 12:17

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

Lisa Schnirring, January 14, 2025

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



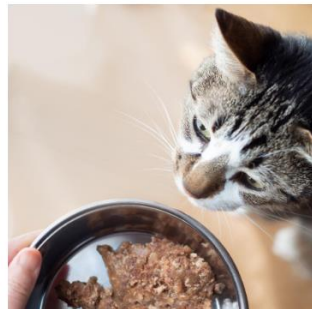
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The Los Angeles County Department of Public Health (LACDPH) yesterday **reported** three more H5 avian flu infections in pet cats after exposure to raw food or raw milk.

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

DEVILS VS ASU
12 57 48
HRS MIN SEC

9:02 70°

1,920 x 1,080

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 |  |  |  | | | | | | X |
| H2 |  |  |  | | | | | | |
| H3 |  |  |  | | |  |  | | X |
| H4 | |  |  | | | | | | X |
| H5 |  |  |  *** | |  |  | |  | X |
| H6 |  |  |  | | |  | | | |
| H7 |  |  |  | |  | |  | | X |
| H8 | |  | | | | | | | |
| H9 |  |  |  | | | | | | |
| H10 |  |  |  | | | | | | X |
| H11 | |  | | | | | | | |
| H12 | |  | | | | | | | |
| H13 | |  | | | | | | | |
| H14 | |  | | | | | | | |
| H15 | |  | | | | | | | |
| H16 | |  | | | | | | | |
| H17 | | | |  | | | | | |
| H18 | | | |  | | | | | |

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

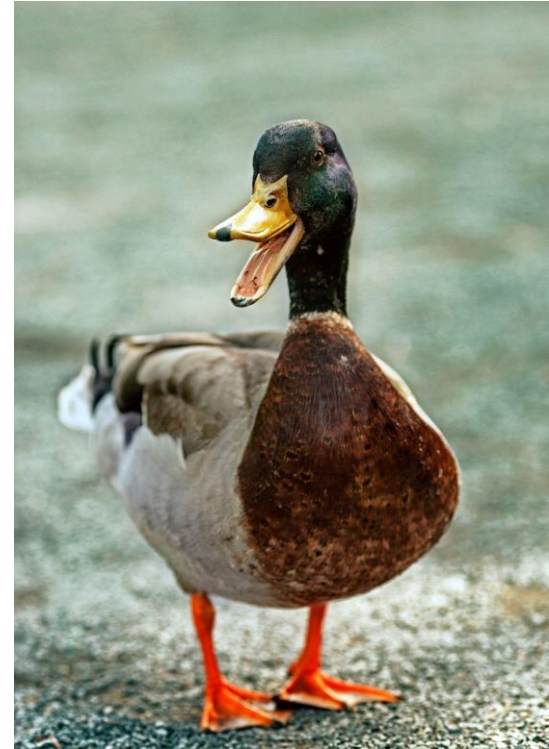
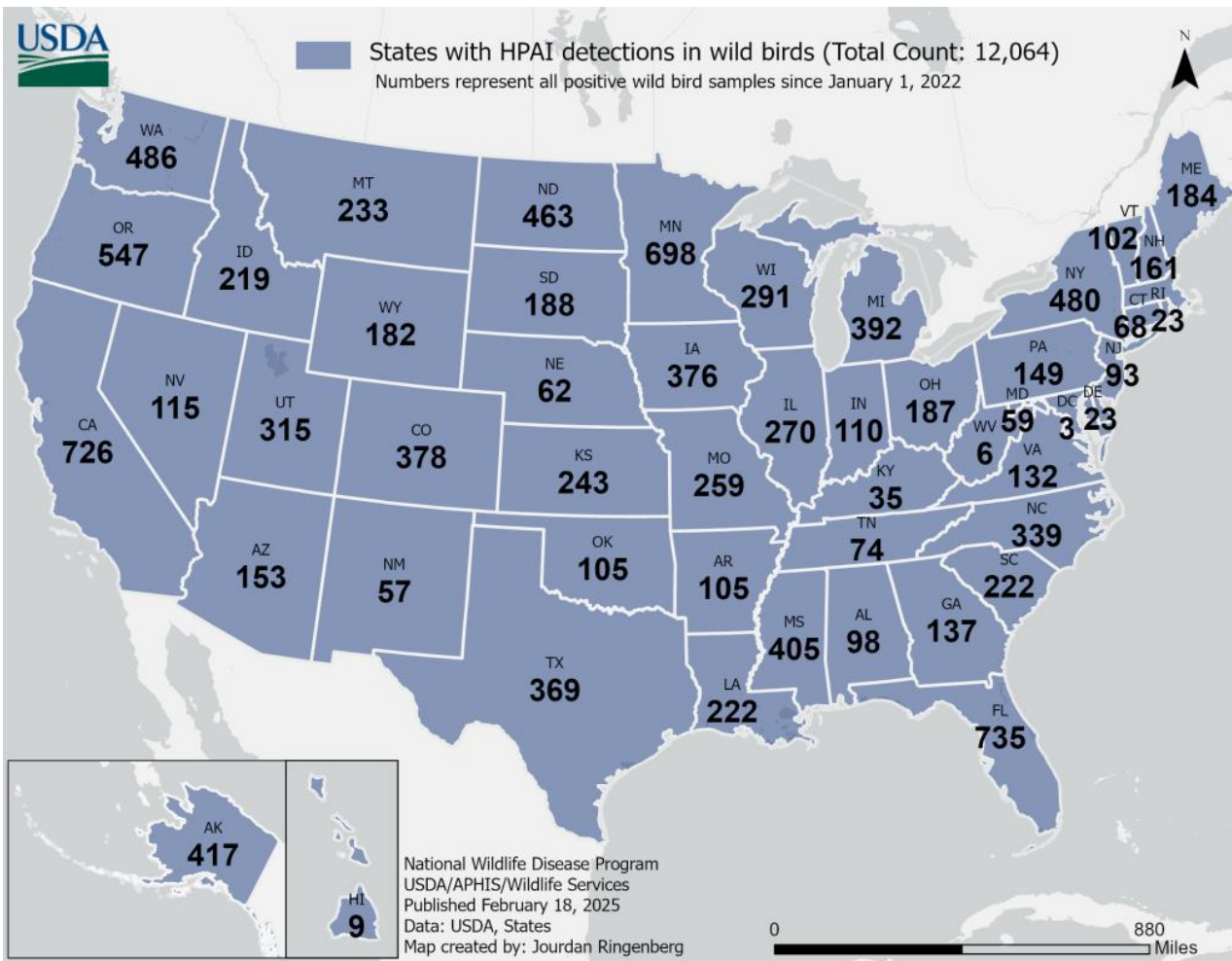


Photo by Ross Sokolovski on Unsplash



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

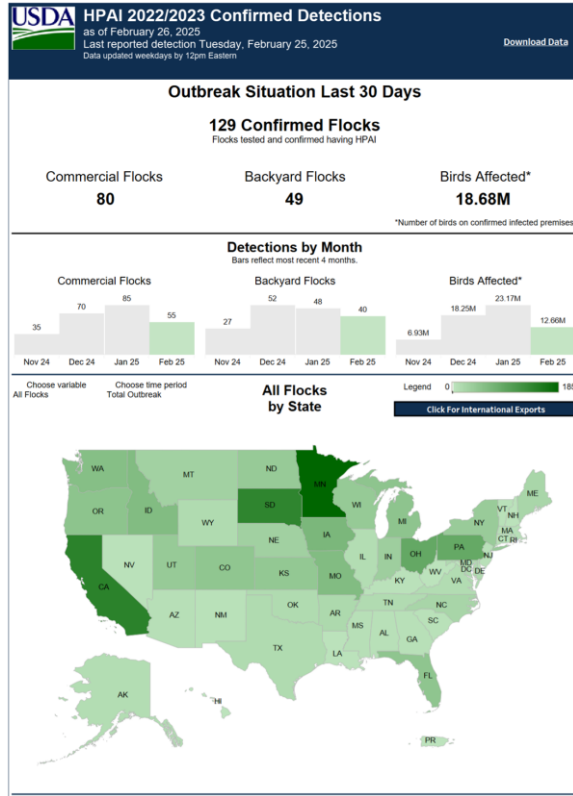


North American Bird Migration Flyways

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



Confirmed Detections in Poultry



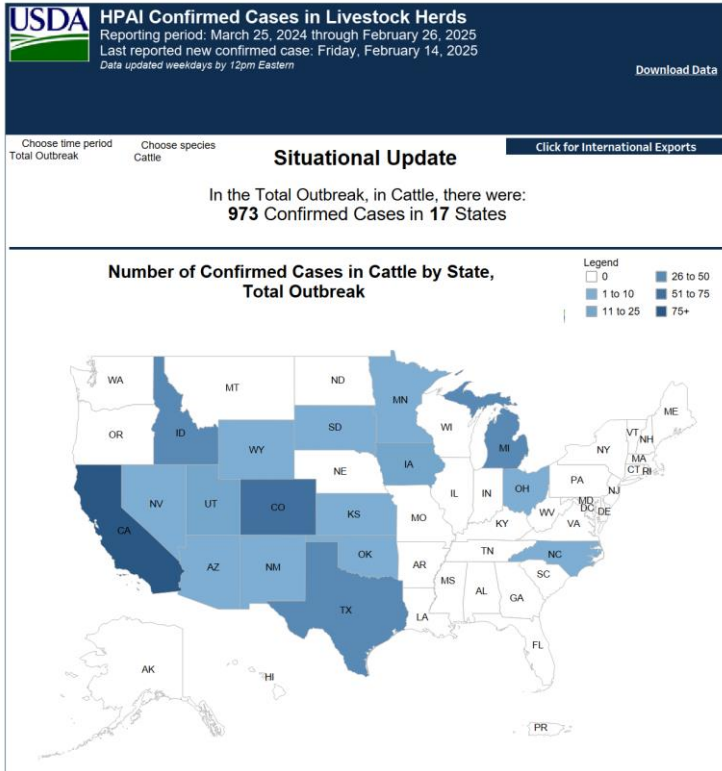
- As of February 26th, **166,065,938** poultry have been affected across 51 jurisdictions
- In Arizona, H5 has been detected in poultry in Pinal, Maricopa, and Graham Counties.
- Culling of all birds on the premises and facility disinfection is the current method of managing H5 infection in poultry

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

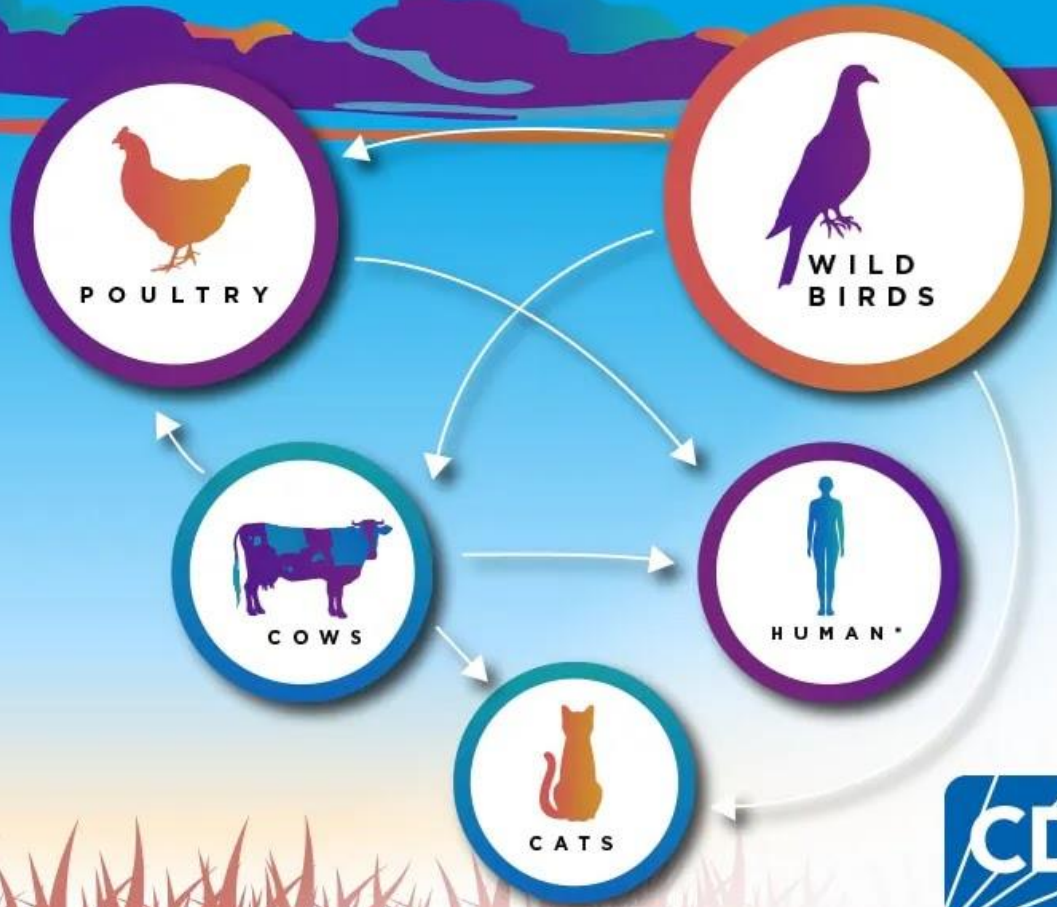
Confirmed Detections in Cattle



- 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

H5N1 Bird Flu

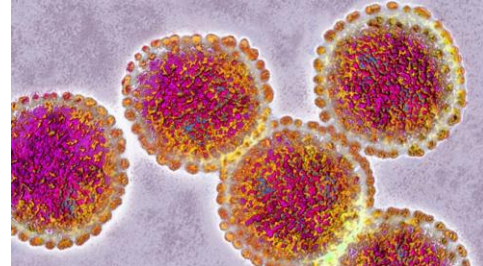
How is it Spreading?



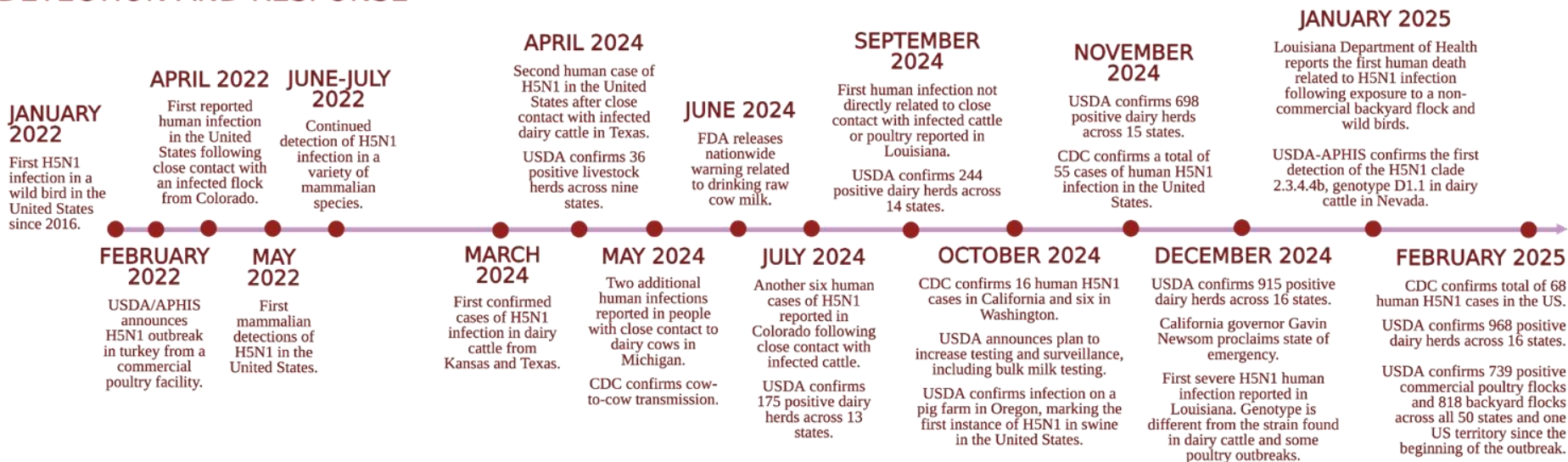
**No human-to-human spread of H5N1 has been detected during the current outbreak in dairy cows.*



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 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