

**Threat and Hazards Assessment Table: Bird Flu in New Jersey Farming Communities**

| Natural  | Technological  | Human-Caused   |
|--|--|--|
| Resulting from acts of nature  | Involves accidents or the failures of systems and structures   | Caused by the intentional actions of an adversary  |
| <p><b>Epidemic/Pandemic</b></p> <ul style="list-style-type: none"> <li>A strain of HPAI (Highly Pathogenic Avian Influenza), H5N1 (Bird Flu), was identified in New Jersey in February 2025 at a live bird market in Union County, NJ.</li> <li>HPAI is highly contagious among birds and is often fatal to domestic poultry. HPAI spreads through bodily secretions from infected birds, which can infect and kill an entire flock within days. H5N1 has been found in wild birds, poultry, cats, and captive bears in New Jersey.</li> <li>While there have been no reported human infections of H5N1 to date, the highly contagious nature of this influenza have led to over 18,000 people being monitored for symptoms after H5N1 exposure throughout the US.</li> </ul> <p><b>Extreme Weather</b></p> <ul style="list-style-type: none"> <li>Extreme temperatures can cause stress to poultry herds, which lowers their immune system and makes them even more susceptible to H5N1.</li> <li>New Jersey is highly susceptible to flooding from heavy rainfall, hurricanes/ tropical storms, and river overflow. Flooding can contaminate water sources with sewage that includes animal feces, and it can contaminate water sources over a wider range.</li> </ul> | <p><b>Power Outages</b></p> <ul style="list-style-type: none"> <li>To combat the extreme weather in New Jersey, poultry farmers utilize ventilation and heating equipment to keep the temperature at a safe and stable level. A power outage would put the poultry at risk of extreme temperatures, which leads to disease and death.</li> <li>Biosecurity equipment is also utilized in poultry farms to help the farmers reduce the risk of HPAI transmission. This technology includes UVC germicidal cabinets, automated temperature control systems, cameras, and AI systems that analyze bird behaviors to detect early signs of illness.</li> </ul> <p><b>Transportation Issues</b></p> <ul style="list-style-type: none"> <li>Transmission can increase if proper transportation protocols are not adhered to. This can lead to infected poultry and contaminated equipment and vehicles traveling to farms or markets and spreading H5N1 at these new sites.</li> </ul> | <p><b>Biosecurity Breaches</b></p> <ul style="list-style-type: none"> <li>Lax PPE usage can increase the risk of infection from poultry to humans, which would put farm workers and visitors at risk. These farm workers/visitors may also go on to infect other poultry farms.</li> <li>Negligent disinfection practices can also continue the cycle of infection. Before a new flock can be introduced to the farm, rigorous disinfection protocols must be followed to ensure that microorganisms from the previous herd do not have the opportunity to infect the new herd. If poor disinfection practices are in place, each new herd is at risk of contracting HPAI as soon as they are established in the farm.</li> <li>Live bird markets have accounted for several of the outbreaks in New Jersey, which could point to poor biosecurity practices that increase the opportunities for transmission and put healthy herds at risk of infection.</li> </ul> <p><b>Illegal Poultry Practices</b></p> <ul style="list-style-type: none"> <li>Unauthorized sales of poultry bypass essential health and safety inspections that can spread disease that is harder to track and mitigate.</li> <li>Illegal hunting can lead to human contact with infected wild birds.</li> </ul> |

## References

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