



# Federal Response to 2015 HPAI Outbreak

*Fidelis (Fidel) Hegngi, D.V.M., M.S.*

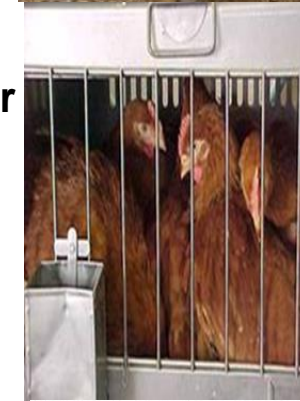
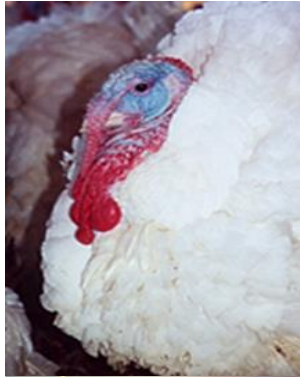
*Senior Staff Veterinarian*

*Strategy & Policy (S&P)*

**Aquaculture, Swine, Equine and Poultry (ASEP) Health Center**

**U.S. Department of Agriculture (USDA)  
Animal and Plant Health Inspection Service (APHIS)  
Veterinary Services (VS)**

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# Overview of AI Surveillance Programs in the United States



## NPIP breeding flocks

- Egg and Meat-Type chickens
- Turkeys, Exhibition Poultry, Upland Game birds and Waterfowl
- Upland Game birds and Waterfowl raised for release



## NPIP production flocks

- Meat-type chickens & turkeys
- Table-Egg Layers
- Upland Game birds and Waterfowl
- Upland Game birds and Waterfowl raised for release



## Live Bird Marketing System

- Producers, distributors, and retail markets
- Backyard flocks, auctions, swap meets, flea markets, feed stores, exhibition/fairs and shows,, exotic sales, hobby flocks etc.



## Other Diagnostics

- Passive surveillance, export testing, foreign animal disease investigations
- Wild bird surveillance

>3 million tests/year

# USDA HPAI Response Goals

- Ensure Responder safety is always the priority. This will be the first consideration for all field activities.
- Detect, control and contain HPAI in susceptible species as quickly as possible.
- Conduct operations in a manner that ensures humane animal treatment, minimizes production loss, protects public health and the environment, and stabilize animal agriculture, the food supply, and the economy.
- Use science and risk-based approaches/systems to facilitate continuity of business for non-infected premises and non-contaminated animal products.



# USDA HPAI Response Goals

- Immediately establish a control zone around each infected premises and conduct surveillance testing for avian influenza as resources allow.
- Provide educational information and outreach regarding AI and biosecurity to stakeholders in the AI affected areas
- Uphold prescribed biosecurity standards for responding personnel to avoid the spread of AI
- Achieving these three goals will allow individual poultry facilities, States, Tribes, regions, and industries to resume normal production as rapidly as possible.
- The objective is to allow the United States to regain disease-free status without the response effort causing more disruption and damage than the disease outbreak itself.

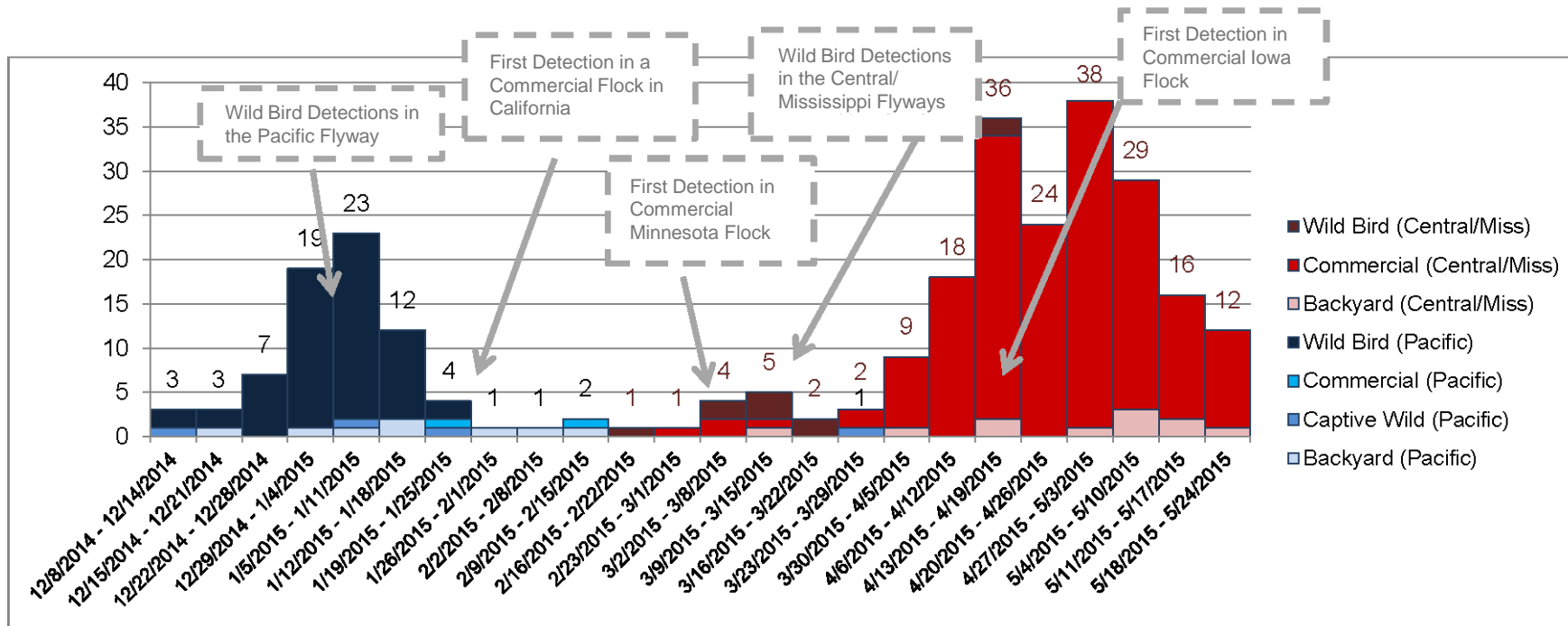


# USDA HPAI Response Strategy

- The primary control and eradication strategy for HPAI in poultry is **stamping-out**.
  - Stamping-out is the depopulation of clinically affected and in-contact susceptible poultry.
    - Infected birds will be depopulated in the quickest, safest, and most humane way possible.
    - Based on the epidemiology of the outbreak, prioritizing the poultry to depopulate first may be necessary.
  - If the spread of HPAI outpaces the resources for stamping-out, or if other factors direct the response away from a stamping-out strategy alone, emergency vaccination strategies might be considered.
- The response strategy will be supported by a coordinated public awareness campaign.



### 12/08/2014 – 6/17/2015 – H5 HPAI in Commercial Poultry, Backyard, Captive wild birds & Wild birds



- 334 H5 detections (4 captive wild bird; 21 backyard flocks; 211 commercial flocks; 98 wild birds)
- 232** HPAI H5 detections (211 commercial poultry premises, & 21 backyard flocks)
  - 211 commercial premises in 9 States = MN-109, IA-71, SD-10, WI-9, NE-5, CA-2, MO-2, ND-2, and AR-1**
  - 21 Backyard Infected HPAI Premises in 11 States (ID-1, IN-1, IA-6, KS-1, MO-1, MT-1, MN-1, NE-1, OR-2, WA-5, & WI-1)**



# 2014/2015 HPAI Detections in Poultry

USDA APHIS HPAI Response Final Report, 2014–2015 HPAI Outbreak

Table 2. Summary of All Affected Premises by State

State	Total Commercial H5 Positive HPAI Premises	Species (Commercial Premises)			Total Backyard H5 Positive HPAI Premises	Total by State
		Turkey	Chicken-Layer	Other		
Minnesota	109	104	5	0	1	110
Iowa	71	35	36	0	6	77
South Dakota	10	9	1	0	0	10
Wisconsin	9	6	3	0	1	10
Nebraska	5	0	5	0	1	6
California	2	1	0	1	0	2
Missouri	2	2	0	0	1	3
North Dakota	2	2	0	0	0	2
Arkansas	1	1	0	0	0	1
Kansas	0	0	0	0	1	1
Washington	0	0	0	0	5	5
Oregon	0	0	0	0	2	2
Montana	0	0	0	0	1	1
Idaho	0	0	0	0	1	1
Indiana	0	0	0	0	1	1
<b>Total</b>	<b>211</b>	<b>160</b>	<b>50</b>	<b>1</b>	<b>21</b>	<b>232</b>

Update on Avian Influenza Findings  
Poultry Findings Confirmed by USDA's National Veterinary Services Laboratories

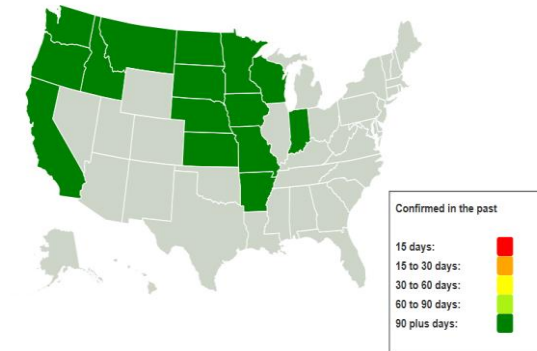


Figure 2. Number of Commercial Birds Affected by State

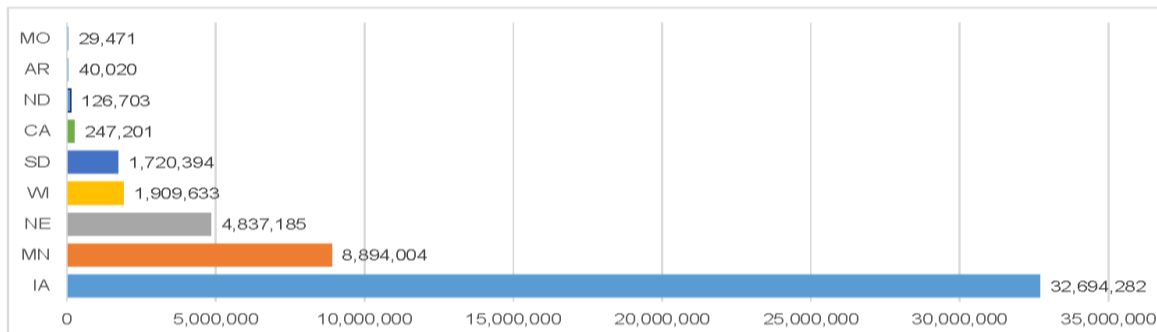
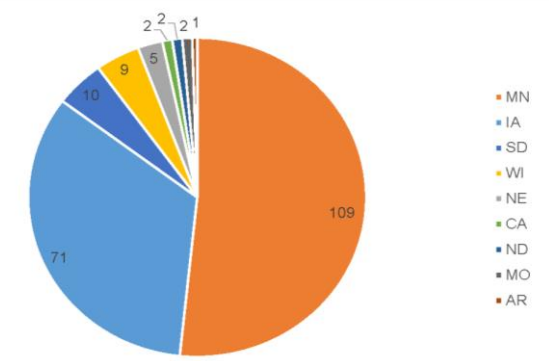


Figure 1. Number of Affected Commercial Premises by State



- 21 States with findings in commercial premises, backyard flocks, wild captive birds, and/or wild birds
- 15 States with findings in poultry
- More than 3,400 State and Federal, including contracted personnel responders



# 2014/2015 U.S.A. HPAI Outbreak

## Commercial poultry depopulated

	Commercial
Turkeys	7.4 million
Egg Layers & Pullets	43.0 million
Estimated Total	50.4 million

### These depopulation losses represent:

- 3.16% of U.S. annual turkey production (7.46% of average U.S. turkey inventory)
  - 10.01% of U.S. average layer inventory
  - 6.33% of U.S. average pullet inventory
  - Less than 0.01% of U.S. broiler inventory (broiler infection has been limited).
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- **The largest HPAI outbreak ever recorded in the United States and arguably the most significant animal health event in U.S. history.**

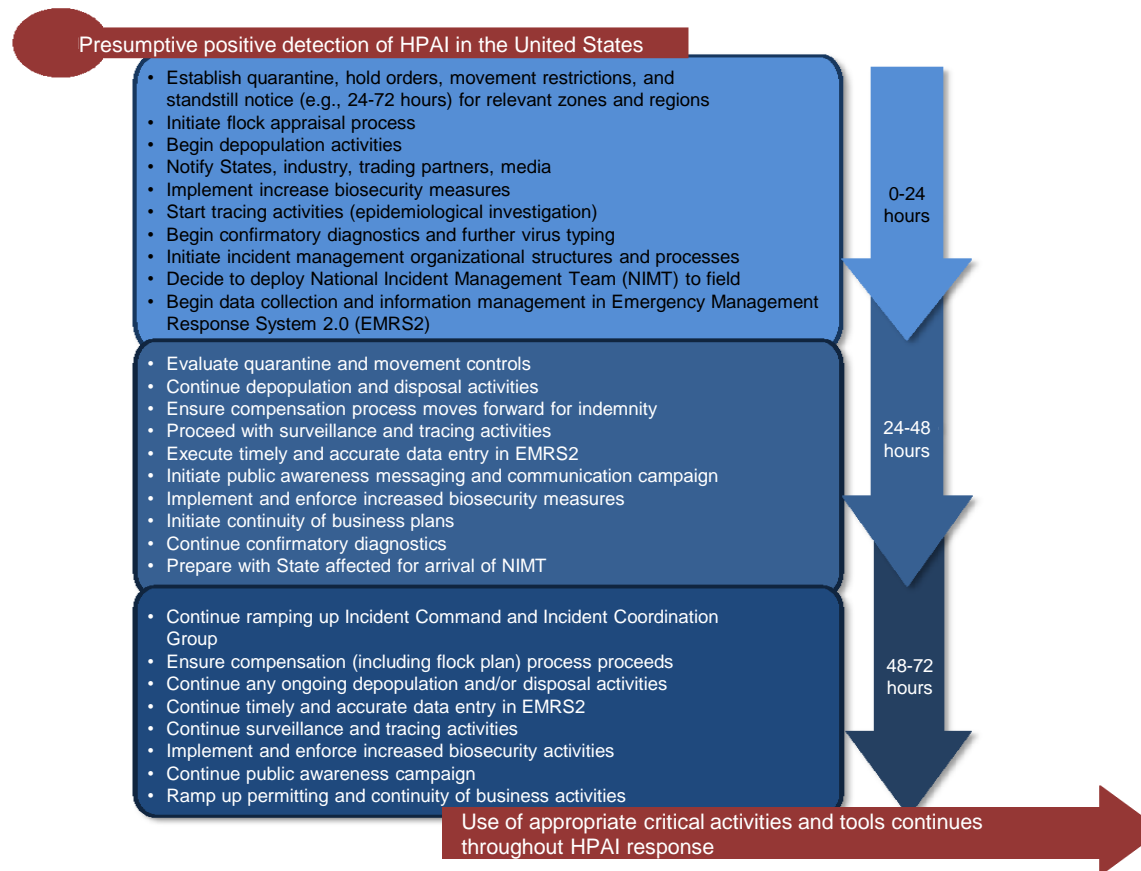


# The U.S. HPAI National Response Plan

## 4.2.4 Timeline in Any HPAI Response for First 72 Hours

In the first 72 hours after the detection of HPAI in the United States, specific actions must occur; as seen in Figure 4-1, these critical tasks are fundamental to the rapid control and containment of HPAI. Figure 4-1 covers many of the most important tasks and activities but is not all-inclusive. Each response effort is different; however, some activities – such as rapid appraisal and depopulation of affected flocks – are of ultimate importance in any HPAI outbreak.

Figure 4-1. Critical Activities in the First 72 Hours of U.S. HPAI Response



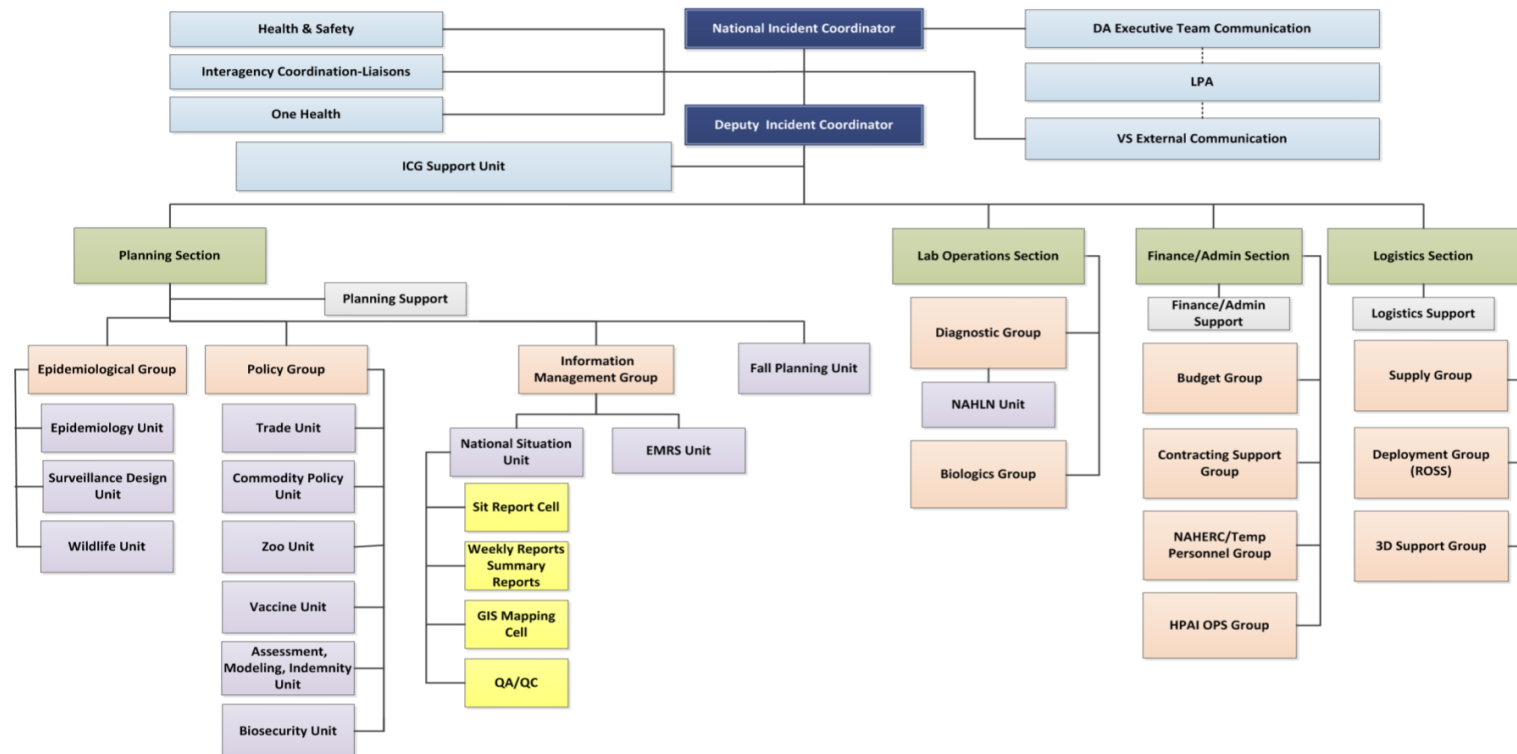


## Typical Animal Emergency Response Organizational Structure Incident Command System (ICS)

USDA APHIS HPAI Response

Final Report, 2014–2015 HPAI Outbreak

Figure 11. National Incident Coordination Group Structure from Incident



Note: DA = Deputy Administrator; QA/QC = quality assurance/quality control; OPS = operations; ROSS = Resource Ordering and Status System.

The USDA and the affected States and Tribes worked together in a Unified Command, per the National Incident Management System, to detect, control, and contain the disease as expeditiously as possible.

## The U.S. HPAI National Response Lessons Learned

- **Incident Command System (ICS)**
- Incident Management Teams (IMT - 4 to 5)
  - **Gold, Green, Blue & Red**
  - **In August 2015, VS implemented a fifth IMT – the Indigo Team – that will be available for future outbreaks.**
- Rotational Gaps (28 days/ 3day overlap)
- Protocols and SOPs (Consistency)
- ***Site Managers (Local) (Remain throughout Depopulation, Disposal, Virus Elimination/Cleaning and Disinfection (C&D), Environmental testing and Restock***





# The U.S. HPAI National Response and Biosecurity Lessons Learned

## Epidemiological Investigation

- During the 2014/2015 HPAI outbreak, APHIS collaborated with affected producers, States and academic institutions to collect scientific and technical information as part of our epidemiological investigations.
- Through this partnership, we collected observational data on poultry farms that included:
  - **Biosecurity practices;**
  - **Conducted a case-control study, which analyzed the data from HPAI-affected and unaffected farms;**
  - **Studied the genetic makeup of the virus; analyzed air samples and used modeling to assess the risk of windborne spread; and**
  - **Sampled wildlife near affected farms.**
- Through this work, APHIS concluded that wild birds were responsible for introducing the HPAI virus into the environment, and from there it spread to commercial poultry; but given the number and proximity of farms affected, the virus likely spread in other ways as well (people-personnel-visitors, equipment, vehicles, wind, rodents, etc.)



## The U.S. HPAI National Response and Biosecurity Lessons Learned

- We have developed a biosecurity self-assessment, and reference materials for producers
- Based on the flock size as stated in the 9 CFR 53.10 and NPIP Program Standards. The following **14** minimum biosecurity management practices and principles are designed to prevent the introduction and spread of infectious diseases:

- Biosecurity Responsibility
- Training
- Line of Separation (LOS)
- Perimeter Buffer Area (PBA)
- Personnel
- Wild Birds, Rodents and Insects
- Equipment and Vehicles
- Mortality Disposal
- Manure and Litter Management
- Replacement Poultry
- Water Supplies
- Feed and Replacement Litter
- Reporting of Elevated Morbidity and Mortality
- Auditing



Photo – Courtesy – Chad Gregory, President & CEO -UEP

- **Site- Specific plans for each poultry farm (or company) should be extrapolated from these minimum biosecurity principles**



# Summary

- Producers and the industry are working to enhance their biosecurity on farms to help provide even better protection against the virus should a reappearance of HPAI occur.
- We continue to improve HPAI surveillance in wild birds as a means to provide “early warning” risk information to States and industry
- We have Expanded Federal, State and industry response capabilities, including availability of personnel, equipment, and depopulation, disposal and recovery options
- We have improved our capabilities to rapidly detect HPAI in domestic poultry and to depopulate affected flocks within 24 hours to reduce the environmental load of HPAI viruses and their subsequent spread
- We have refocused from C&D to virus elimination in affected facilities
- We have developed other HPAI-related policies
- We have revised surveillance plans for control zones
- Research is ongoing to find new, more efficient ways to rapidly and humanely euthanize and dispose of the very large populations (millions) of birds housed on some modern commercial poultry farms
- We are improving public communications



# Conclusion

- HPAI preparedness and response planning is a dynamic process.
- We responded rapidly and contained and eradicated the disease.
- Much work has been done by APHIS and all our stakeholders to be as prepared as possible should HPAI outbreaks reoccur in poultry in 2015 or beyond.
- APHIS will continue to examine our preparedness posture and to make constant improvements.
- We invite all comments on our HPAI Red Book, and any of our published response policies.
- We also encourage all our stakeholders to continue to evaluate and improve their preparedness and response activities.
- While there does not seem to be a single source of transmission, there is a common solution:
  - **Better and Stringent Biosecurity**
    - Premises, Equipment, Personnel, Visitors, Vehicles
- HPAI is our common enemy
  - **We should stop the blame game, build support and work together**



## Let's Keep Our Poultry Healthy Together