

FY 2016 HPAI Response

Overview of Zones

(April 19, 2016)

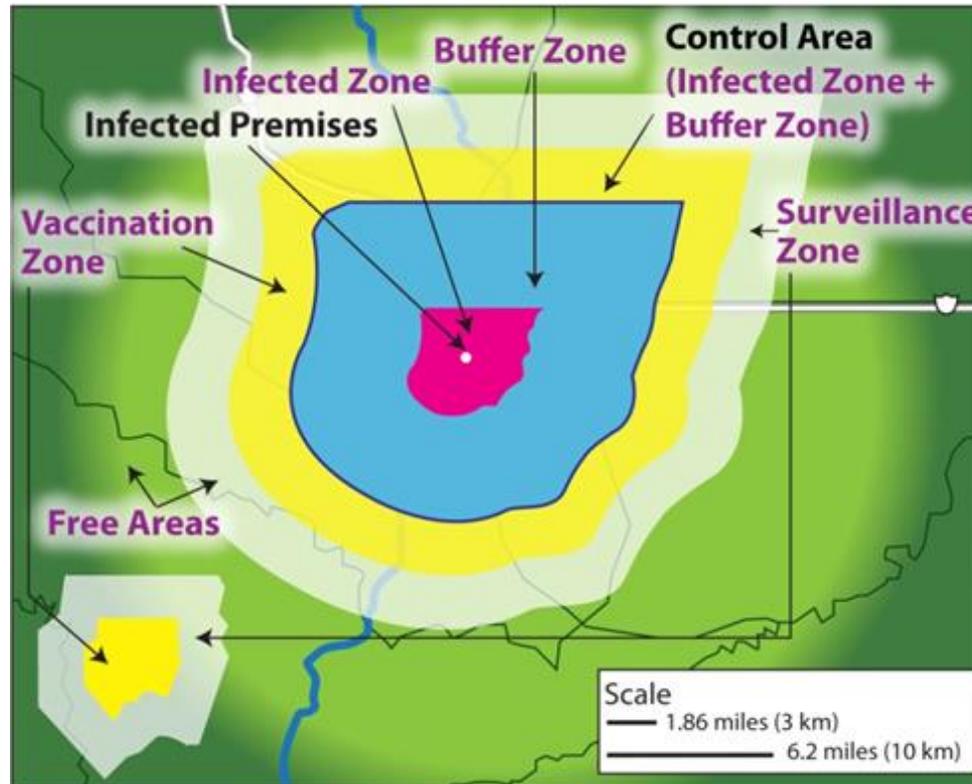
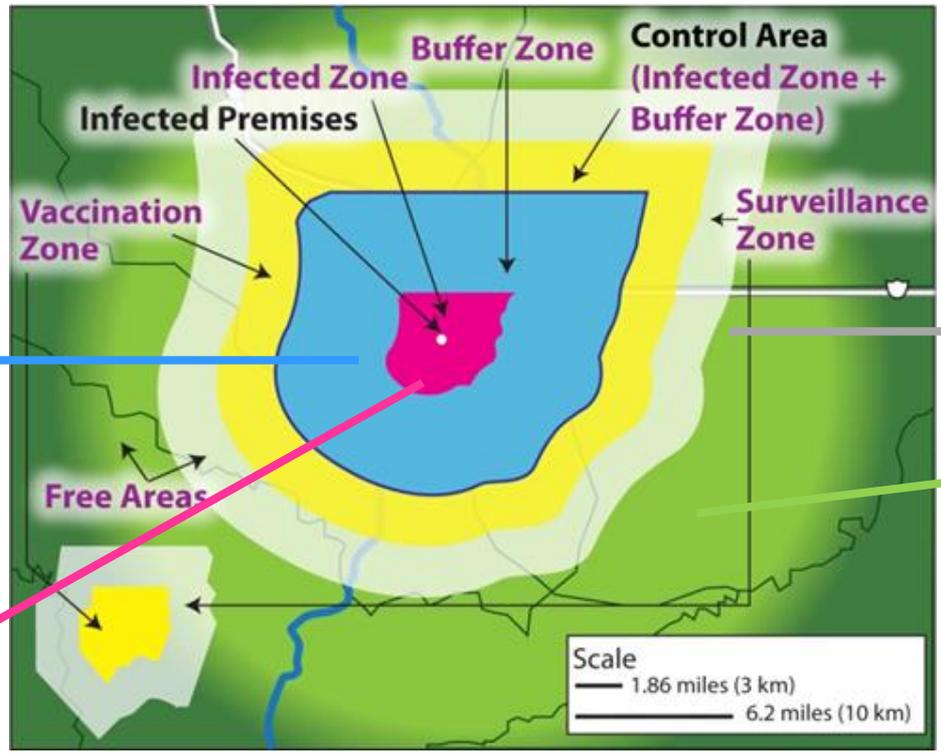


Illustration of Zone and Area Designations

In the **Buffer Zone** (which is part of the **Control Area**), there are movement controls and surveillance activities.



In the **Surveillance Zone** (which is part of the **Free Area**), targeted poultry surveillance may be conducted (i.e., commercial premises).

In the **Infected Zone** (which is part of the **Control Area**), there are movement controls and surveillance activities. Infected Premises are quarantined.

In the **Free Area** (which includes the **Surveillance Zone**), routine or program surveillance may occur (i.e., NPIP and wild birds).

Infected Zone
 Buffer Zone
 Vaccination Zone
 Surveillance Zone

Note: Since emergency vaccination was not implemented in the outbreak, Vaccination Zones and Vaccinated Premises are not further discussed.

Definitions of Zone and Area Designations

Zone/Area	Definition
Infected Zone (IZ)	Zone that immediately surrounds an Infected Premises.
Buffer Zone (BZ)	Zone the immediately surrounds an Infected Zone or a Contact Premises.
Control Area (CA)	Consists of an Infected Zone and a Buffer Zone.
Surveillance Zone (SZ)	Zone outside and along the border of a Control Area. The Surveillance Zone is part of the Free Area.
Free Area (FA)	Area not included in any Control Area. Includes the Surveillance Zone.

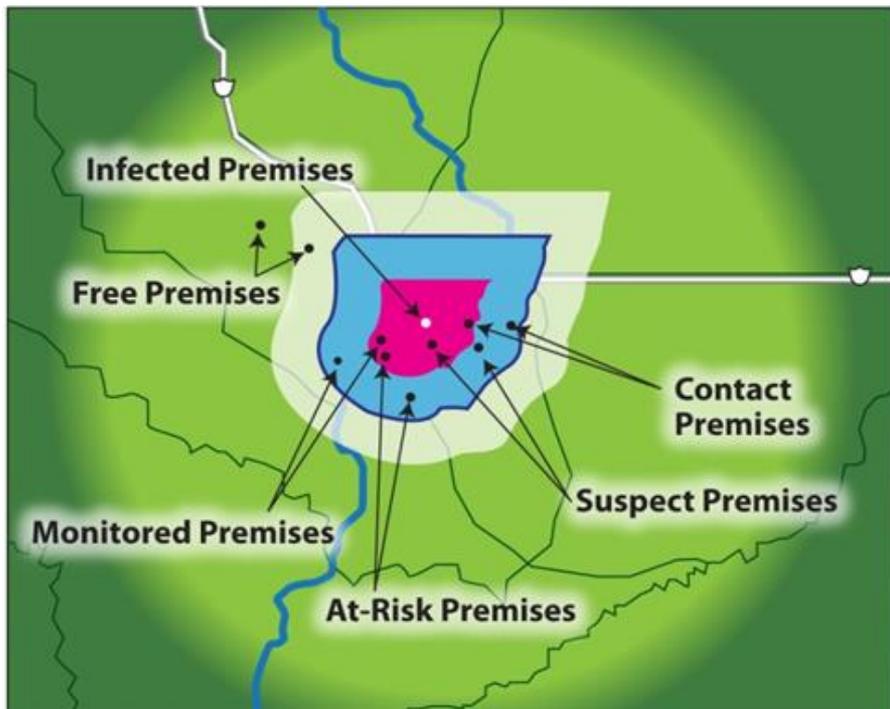


Definitions of Premises Designations

Premises	Definition	Zone
Infected Premises (IP)	Premises where a presumptive positive case or confirmed positive case exists based on laboratory results, compatible clinical signs, HPAI case definition, and international standards.	IZ
Contact Premises (CP)	Premises with susceptible animals that may have been exposed to HPAI, either directly or indirectly, including but not limited to exposure to animals, animal products, fomites, or people from Infected Premises.	IZ, BZ
Suspect Premises (SP)	Premises under investigation due to the presence of susceptible animals reported to have clinical signs compatible with HPAI. This is intended to be a short-term premises designation.	IZ, BZ, SZ
At-Risk Premises (ARP)	Premises that have susceptible animals, but none of those susceptible animals have clinical signs compatible with HPAI. Premises objectively demonstrates that it is not an Infected Premises, Contact Premises, or Suspect Premises. At-Risk Premises may seek to move susceptible animals or products within the Control Area by permit. Only At-Risk Premises are eligible to become Monitored Premises.	IZ, BZ
Monitored Premises (MP)	Premises objectively demonstrates that it is not an Infected Premises, Contact Premises, or Suspect Premises. Only At-Risk Premises are eligible to become Monitored Premises. Monitored Premises meet a set of defined criteria in seeking to move susceptible animals or products out of the Control Area by permit.	IZ, BZ
Free Premises (FP)	Premises outside of a Control Area and not a Contact or Suspect Premises.	SZ, FA

Example Zones, Areas and Premises

Premises



Zones and Areas



 Infected Zone	 Buffer Zone	 Surveillance Zone
 +  = Control Area	 +  = Free Area	

Note: Figures are not to scale.

Note: In an HPAI outbreak, the Incident Commander will work with the Operations Section and Planning Section to determine the appropriate designations.

Factors Used to Determine Control Area Size

Factors	Additional Details	
Jurisdictional areas	<ul style="list-style-type: none"> • Effectiveness and efficiency of administration • Multi-jurisdictional considerations: local, State, Tribal, and multistate 	
Physical boundaries	<ul style="list-style-type: none"> • Areas defined by geography • Areas defined by distance between premises 	
HPAI Epidemiology	<ul style="list-style-type: none"> • Reproductive rate • Incubation period • Ease of transmission • Infectious dose • Species susceptibility • Modes of transmission (such as, fecal-oral, droplet, aerosol, vectors) 	<ul style="list-style-type: none"> • Survivability in the environment • Ease of diagnosis (for example, no pathognomonic signs; requires diagnostic laboratory testing) • Age of lesions
Infected Premises characteristics	<ul style="list-style-type: none"> • Number of contacts • Transmission pathways and transmission risk <ul style="list-style-type: none"> ○ Extent of animal movement ○ Number of animals ○ Species of animals 	<ul style="list-style-type: none"> ○ Age of animals ○ Movement of traffic and personnel to and from premises (fomite spread) ○ Biosecurity measures in place at time of outbreak

Factors Used to Determine Control Area Size (cont.)

Factors	Additional Details	
Contact Premises characteristics	<ul style="list-style-type: none"> • Number and types of premises • Susceptible animal populations and population density • Animal movements 	<ul style="list-style-type: none"> • Movement of traffic (fomites) and personnel to and from premises (fomite spread) • Biosecurity measure in place prior to outbreak
Environment	<ul style="list-style-type: none"> • Types of premises in area or region • Land use in area or region • Susceptible wildlife and population density 	<ul style="list-style-type: none"> • Wildlife as biological or mechanical vectors
Climate (for aerosol spread diseases)	<ul style="list-style-type: none"> • Prevailing winds • Humidity 	
General area, region, or agricultural sector bio-security	<ul style="list-style-type: none"> • Biosecurity practices in place prior to outbreak • Biosecurity practices implemented once outbreak detected 	

Factors Used to Determine Control Area Size (cont.)

Factors	Additional Details
Number of backyard or transitional premises	<ul style="list-style-type: none"> • Types of premises, animal movements, and network of animal and fomite movements
Continuity of business	<ul style="list-style-type: none"> • Continuity of business plans and processes in place or activated at beginning of outbreak (such as surveillance, negative diagnostic tests, premises biosecurity, and risk-assessments) • Permit processes, memorandums of understanding, and information management systems in place or activated at beginning of outbreak

Minimum Sizes of Zones and Areas

Zone or Area	Minimum Size and Details
Infected Zone (IZ)	Perimeter should be at least 3 km (~1.86 miles) beyond perimeters of presumptive or confirmed Infected Premises. Will depend on disease agent and epidemiological circumstances. This zone may be redefined as the outbreak continues.
Buffer Zone (BZ)	Perimeter should be at least 7 km (~4.35 miles) beyond the perimeter of the Infected Zone. Width is generally not less than the minimum radius of the associated Infected Zone, but may be much larger. This zone may be redefined as the outbreak continues.
Control Area (CA)	Perimeter should be at least 10 km (~6.21 miles) beyond the perimeter of the closest Infected Premises. Please see the table to the left for factors that influence the size of the Control Area. This area may be redefined as the outbreak continues.
Surveillance Zone (SZ)	Width should be at least 10 km (~6.21 miles), but may be much larger.

For More Information

- [FAD PReP Website](#)
- For more details on zones and premises designations, please see [APHIS FAD Framework: Response Strategies \(Manual 2-0\)](#)
- [H5N1 Response Plan: The Red Book](#)