



Avian Influenza – Emergency Management in an HPAI Outbreak Situation



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Avian Influenza Overview

- Avian influenza (AI) - identified in the early 1900s
- Highly pathogenic avian influenza (HPAI) – causes contagious illness, death in birds; low pathogenic (LPAI) causes mild to no illness
- Vast majority of AI viruses found in birds do not represent a public health concern





2006 World Organization for Animal Health (OIE) Avian Influenza Chapter

- New definition of poultry
- Notifiable AI (NAI)
 - HPAI, and all H5 and H7 regardless of pathogenicity detected in *poultry*
 - Non-HPAI of all other subtypes are ***not*** reportable
- Report all HPAI immediately
- Report H5/ H7 LPAI
 - Immediately if found in commercial operations
 - Six month report if found in LBM or other backyard environments (these are expected findings)



Background

- USDA's HPAI prevention and response efforts are part of the National Strategy for Pandemic Influenza outlined by President Bush in November 2005
- To support these efforts, at the end of 2005 USDA received \$91.4 million in supplemental funding (of which \$80.2 million went to APHIS)



U.S. Positioned to Contain AI Virus

- United States is very active in international efforts to detect and control AI
- U.S. industry is likely to report suspicious birds to help protect the overall health of the poultry industry
- Compensation is an additional incentive
- USDA National HPAI Response Plan in place
- USDA has some of the world's top AI researchers



USDA/APHIS Safeguarding Strategic Plans Have Four Parts

1. Exclusion
2. Surveillance
3. Preparedness
4. Response



Part 1: Exclusion of Potential Diseased Animals and Products

- Import regulations
- Science-based restricted trade with affected countries
- Point of entry surveillance
- Promote international capacity building

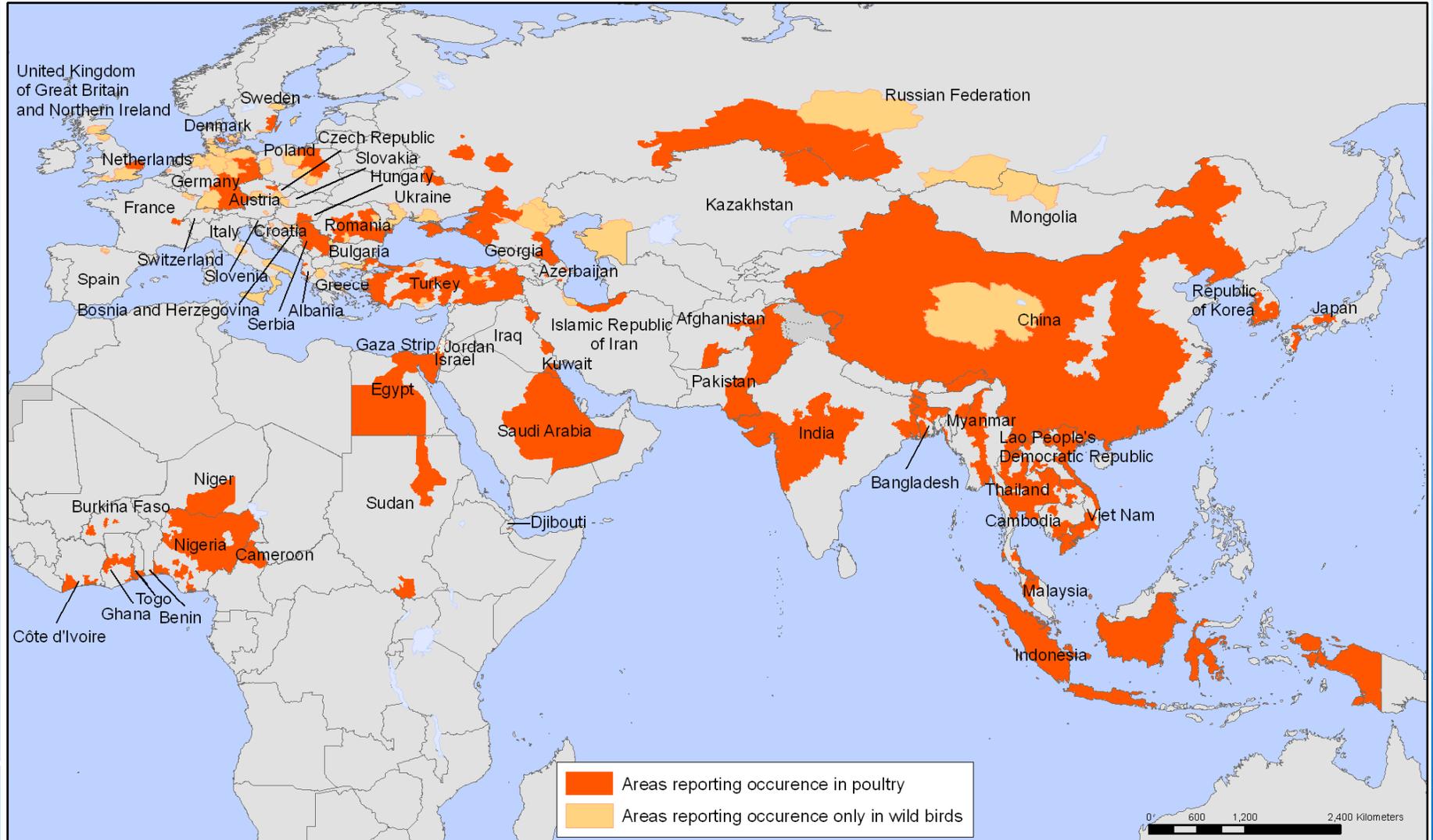


Avian Influenza Protecting the United States



Areas reporting confirmed occurrence of H5N1 avian influenza in poultry and wild birds since 2003

Status as of 17 March 2008
Latest available update



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The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source: World Organisation for Animal Health (OIE) and national governments
Map Production: Public Health Mapping and GIS
World Health Organization



Border Protection and Trade Restrictions

- USDA maintains trade restrictions on the importation of poultry and poultry products from countries and/or regions where the HPAI H5N1 strain has been detected in commercial or traditionally raised poultry
- USDA regulations require that import permits accompany properly sanitized poultry products



USDA International Efforts

- Eliminating the virulent strain of HPAI H5N1 at its source—in poultry abroad—is an effective way to reduce the chances of a domestic outbreak
- USDA supporting the United Nation's FAO and the OIE in their launch of a Crisis Management Center to coordinate global HPAI response and deploy rapid response teams to HPAI hotspots



Part 2: Continual Surveillance

- For rapid detection upon introduction
- To prove freedom from disease to our trading partners

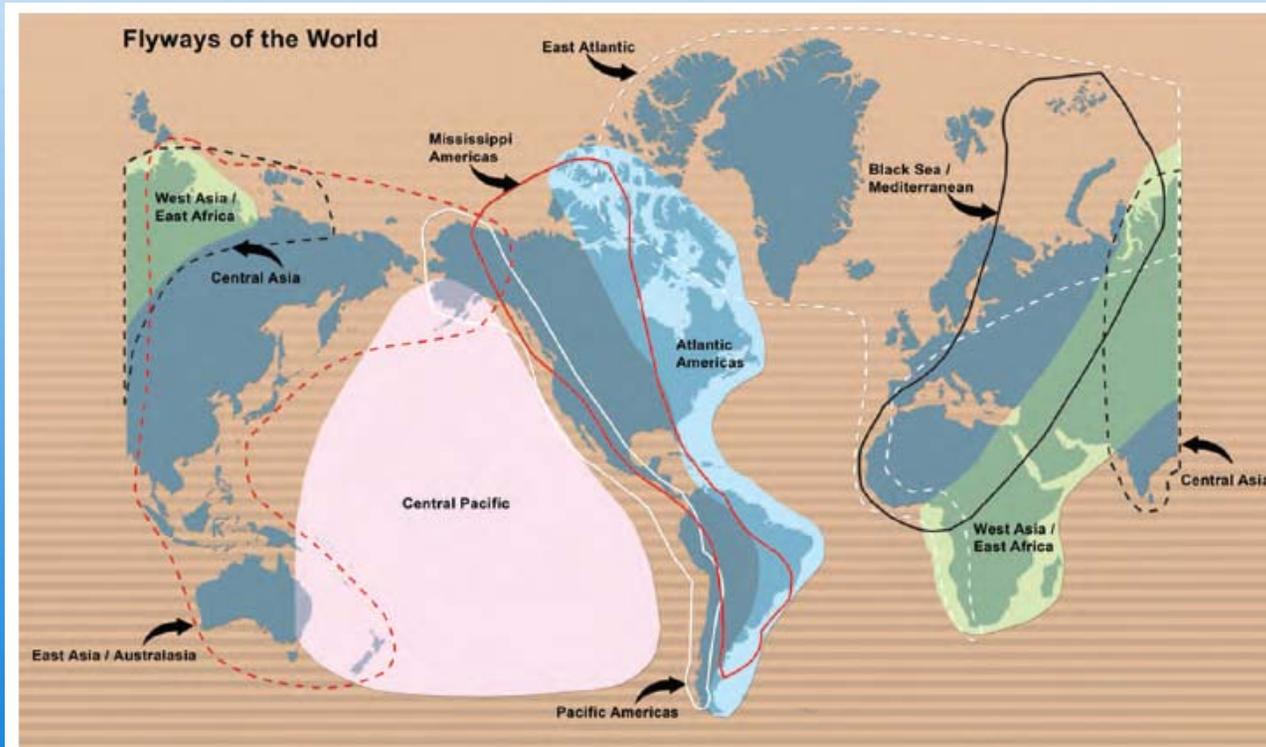


Summary of National AI Surveillance

- Multiple data streams for AI surveillance
- National AI Surveillance Plan
- Capitalizing on existing surveillance systems
 - NPIP poultry breeding flocks
 - NPIP commercial poultry production flocks
 - Live Bird Marketing System
 - Waterfowl and game birds raised for release
 - Wild birds
 - Diagnostic laboratories
 - (passive surveillance, including FAD investigations)



Migratory Bird Flyways



Migration flyways of the world. Note that Alaska is a major crossroads for several flyways.

Migratory
Birds –

Overlap of
summer
breeding
grounds in
Alaska,
Northeast
Canada



Improved Wildlife Surveillance/Sampling

- AI surveillance in wild, migratory birds for the early detection of HPAI H5N1 virus is in place to detect a possible disease incursion
- Currently, the surveillance effort is being fully supported by all 50 State Wildlife Agencies in a cooperative effort to produce robust sample sizes from across the United States



Part 3: Response Preparedness

- Foreign Animal Disease Diagnosticians and APHIS responders
- National Veterinary Stockpile
- National Animal Health Laboratory Network
- National Animal Health Emergency Response Corps
- Authorities and Partnerships
- NIMS and ICS

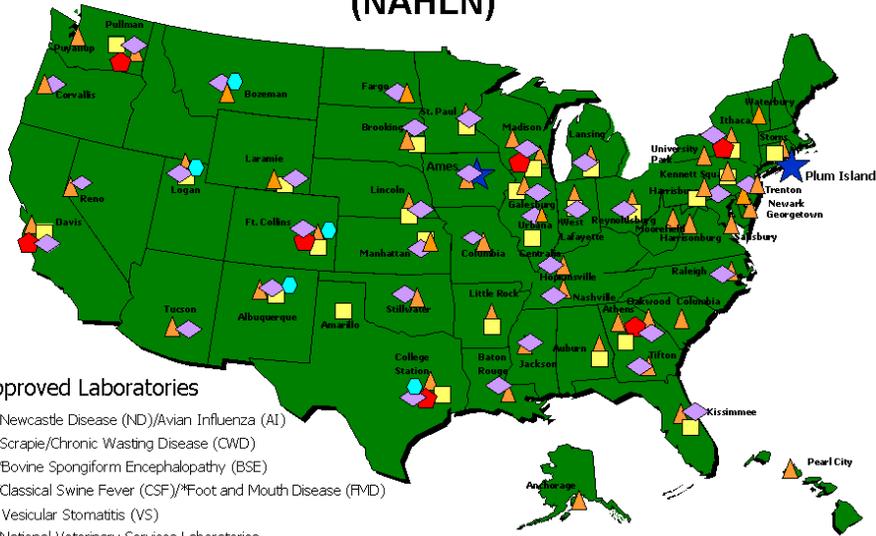


National Veterinary Stockpile (NVS)



- National repository of critical veterinary supplies
- Homeland Security Presidential Directive 9
 - Directed the Secretary in 2004 to establish the NVS
 - Required the NVS to
 - ❖ **Augment** local/state resources by deploying **within 24 hours** “sufficient amounts of animal vaccine, antiviral, or therapeutic products to appropriately respond to the most damaging animal diseases affecting human health and the economy”

National Animal Health Laboratory Network (NAHLN)

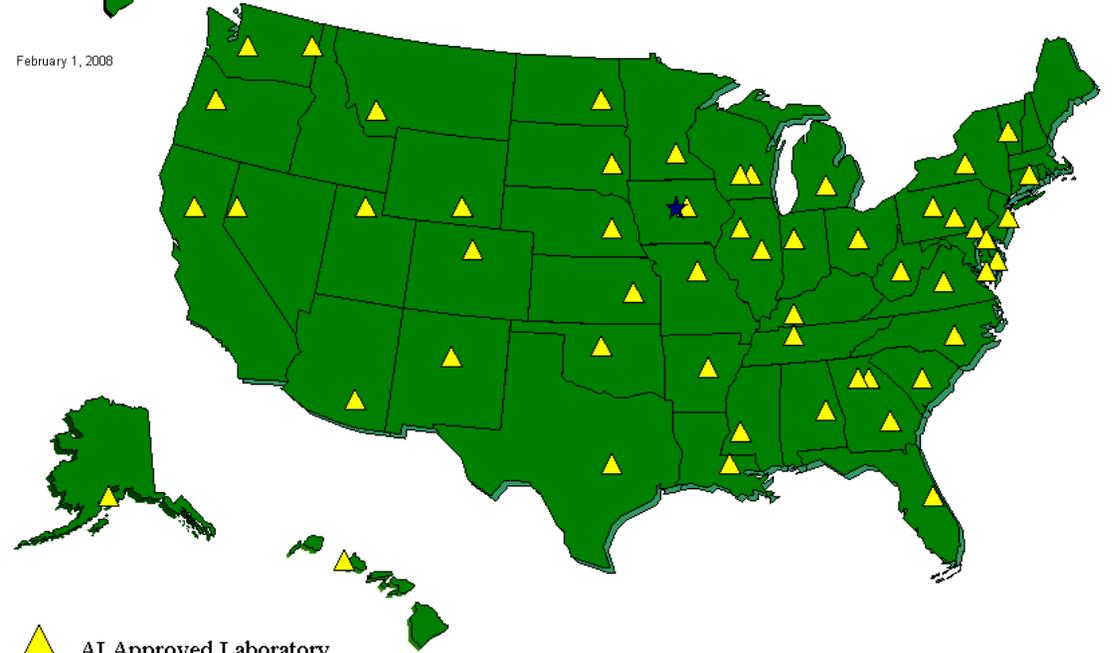


*For specified agents, not all laboratories are currently participating in surveillance testing.

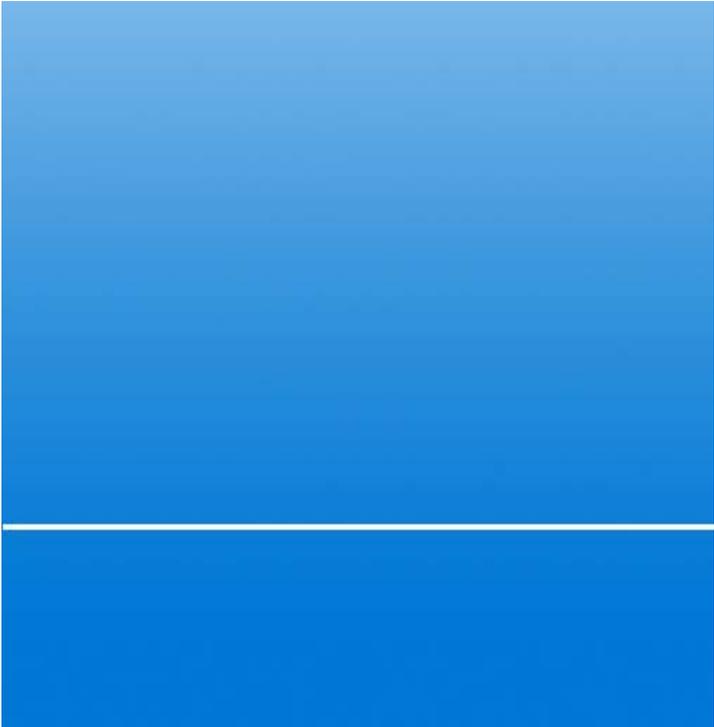
February 1, 2008



Laboratories Approved to Conduct AI Testing



January 4, 2008





National Animal Health Emergency Response Corps (NAHERC)

- With the cooperation and assistance of the American Veterinary Medical Association and the North American Veterinary Technician Association, VS maintains a roster of private and State animal health technicians and veterinarians for VS' National Animal Health Emergency Response Corps.
- These technicians and veterinarians can be activated quickly to serve as temporary Federal personnel to help meet emergency staffing needs.



APHIS Role in an Animal Emergency

- Secretary of Agriculture has statutory authority and leadership role to protect American agriculture and animal health.
- Animal Health Protection Act (AHPA) (7 U.S.C. 8301 et seq.) gives the Secretary of Agriculture a broad range of authorities to use in the event of an outbreak of HPAI in the United States, as well as to prevent its introduction into the United States.



APHIS

- APHIS Mission: To protect the health and value of American agriculture and natural resources.
- In the event that a pest or disease of concern is detected, APHIS implements emergency protocols and partners with affected States to quickly manage or eradicate the outbreak. This aggressive approach has enabled APHIS to successfully prevent and respond to potential pest and disease threats to U.S. agriculture.



APHIS Has a History of Managing Animal Health Emergencies

- ◆ 1970s Classical Swine Fever
- ◆ 1984 Highly Pathogenic Avian Influenza
- ◆ 2002 Low Pathogenic Avian Influenza
- ◆ 2002-2003 Exotic Newcastle disease
- ◆ 2004 Highly Pathogenic Avian Influenza



USDA National HPAI Response Plan

- Intended to complement State and Industry plans that are more specific to local issues and needs
- Plan is a “living document” that will continue to evolve with new or additional information and with further stakeholder and partner communication



APHIS Response Strategy

- National Animal Health Emergency Management System (NAHEMS) Guidelines
- Stamping out
- Cleaning and disinfection
- Availability of first responders
- Vaccines (to be used only upon approval by the USDA and the applicable State Veterinarian)



APHIS Role in an Animal Emergency



- APHIS also has the responsibility under the NRF in a Stafford Act Declaration to assist in any animal emergency or natural disaster through leadership of USDA for ESF 11
- APHIS works and integrates with other State - Federal - Industry partners for non FAD diseases programs and responses
- APHIS and USDA lead a science based approach for State – Federal – Industry partners in animal emergency response



National Coordination

Homeland Security Act of 2002 and HSPD-5 required a comprehensive national approach to domestic incident management through the development of the National Incident Management System (NIMS) and National Response **Framework** (NRF)

- NIMS: Standardizes incident management processes, protocols, and procedures for use by all responders
- NRF: Establishes . . .
 - Federal coordination structures/mechanisms
 - Direction for incorporation of existing plans
 - Consistent approach to managing incidents



The NRF applies to all Federal departments and agencies that may be requested to provide federal to federal support



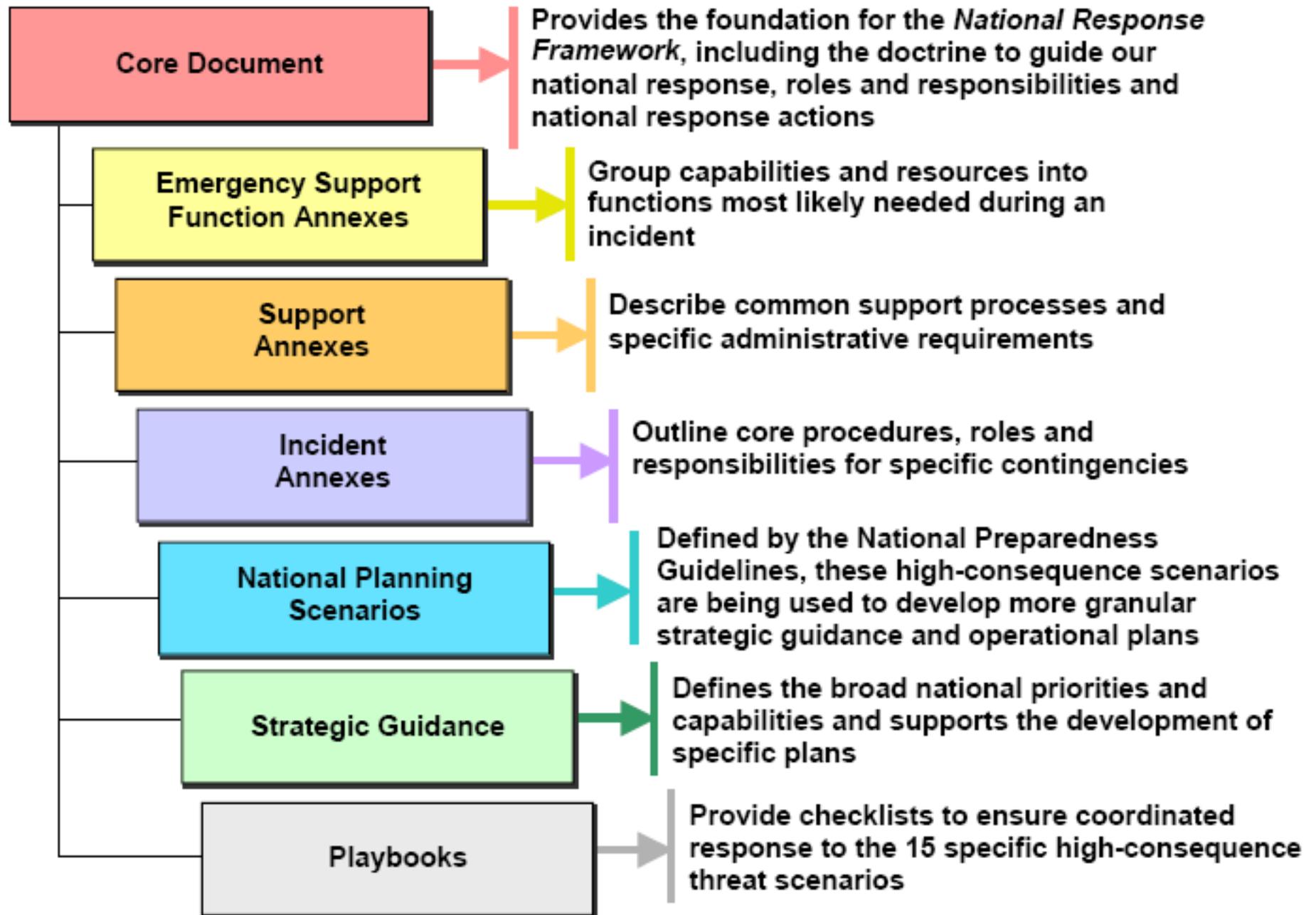
Major disasters, emergencies, and terrorist incidents including threats

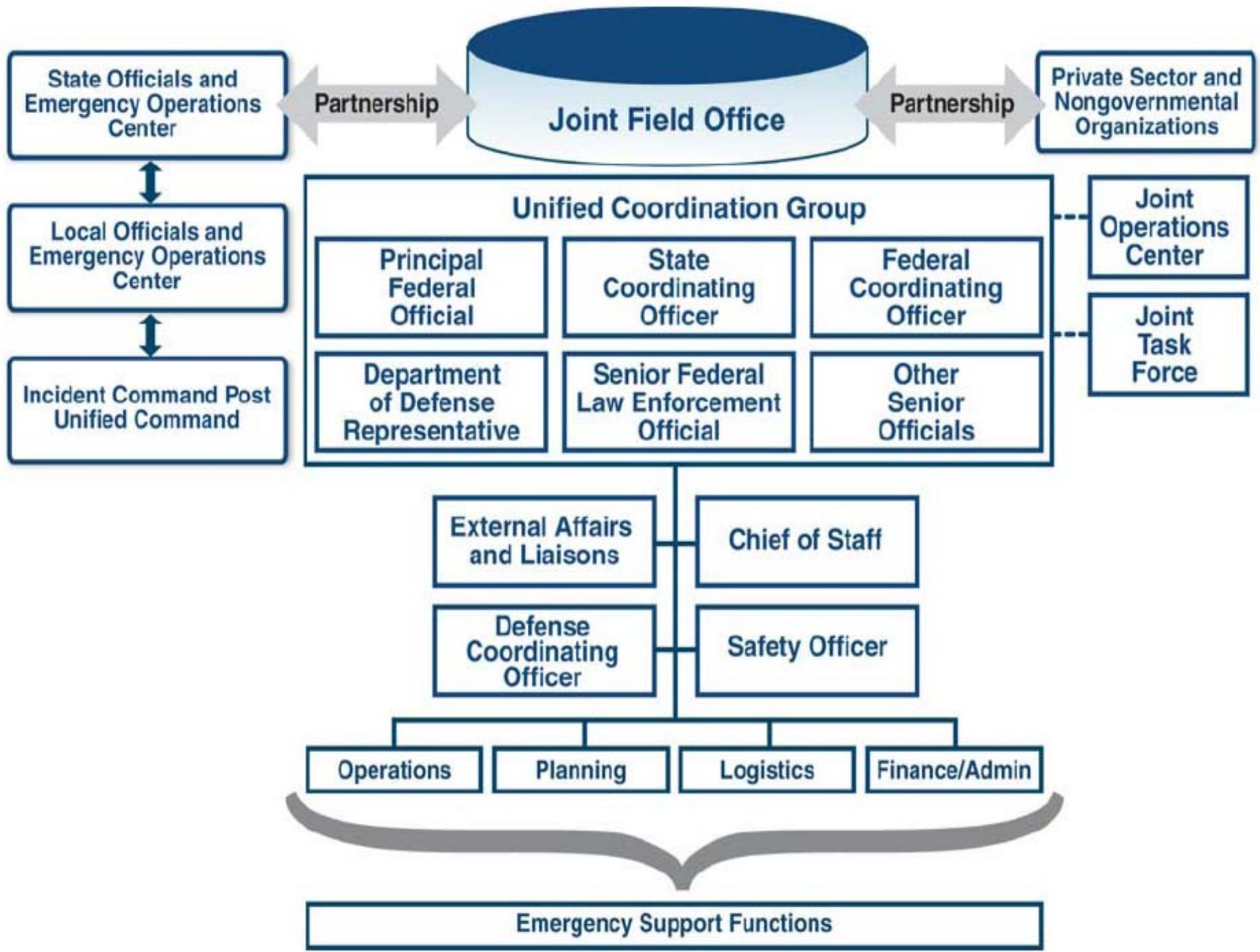


Other events requiring Department of Homeland Security (DHS) assistance

The NRF provides one way of doing business for both Stafford Act and non-Stafford Act incidents

Figure 1. Organization of the *Framework*







NRF Emergency Support Functions



ESF #1: Transportation

ESF #2: Communications

ESF #3: Public Works/Engineering

ESF #4: Firefighting

ESF #5: Emergency Management

**ESF #6: Mass Care/Housing/
Human Services**

ESF #7: Resource Support

**ESF #8: Public Health/
Medical Services**

ESF #9: Urban Search/Rescue

**ESF #10: Oil/Hazardous Materials
Response**

**ESF #11: Agriculture/Natural Resources
(USDA/DOI)**

ESF #12 Energy

ESF #13: Public Safety/Security

**ESF #14: Long-Term Community Recovery/
Mitigation**

ESF #15: External Affairs



National Response Framework Emergency Support Function #11



1. Provision of nutrition assistance
- 2. Animal and plant disease and pest response**
3. Assurance of the safety and security of the commercial food supply
4. Protection of natural, cultural, and historic properties



ESF #11 – Agriculture and Natural Resources

- Revamps the previous Food ESF to address agriculture and natural resources issues related to Incidents of National Significance
- Supports State, local, and Tribal authorities and other Federal agency efforts to:
 - Provide nutrition assistance
 - Control and eradicate animal and plant disease outbreaks
 - Assure food safety and food security
 - Protect natural and cultural resources and historic properties



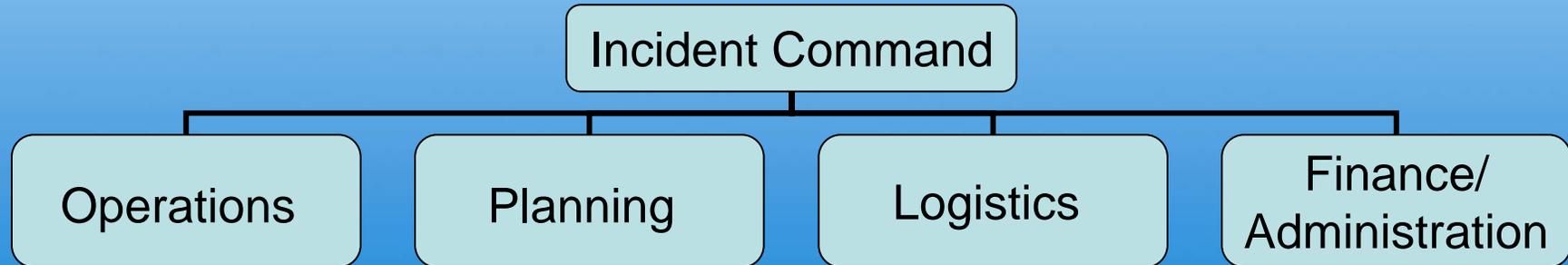


USDA Responds to Emergencies Using Incident Command System (ICS)

- ICS a time-tested, emergency management structure.
- APHIS has used ICS since 2002.
- ICS is used to respond to:
 - A foreign animal disease
 - An emerging disease
 - A natural disaster
 - An act of bioterrorism
 - Additional response parties: USDA's Office of the Inspector General and the Federal Bureau of Investigations

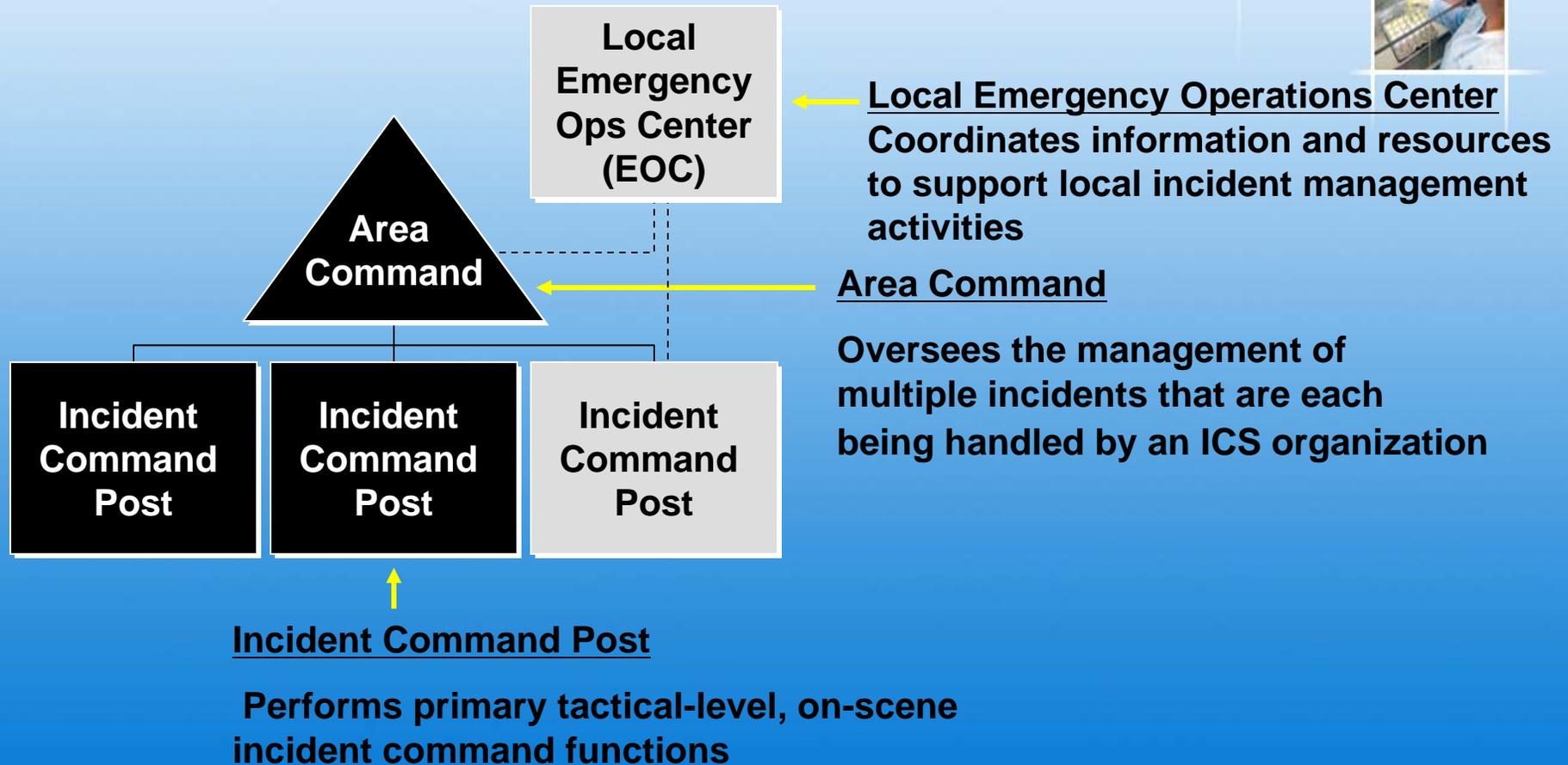


ICS Organizes Animal Health Emergency Responses Through 5 Key Functions





Incident Command System





If Multiple Infected Premises, And Wide Spread Geographically...

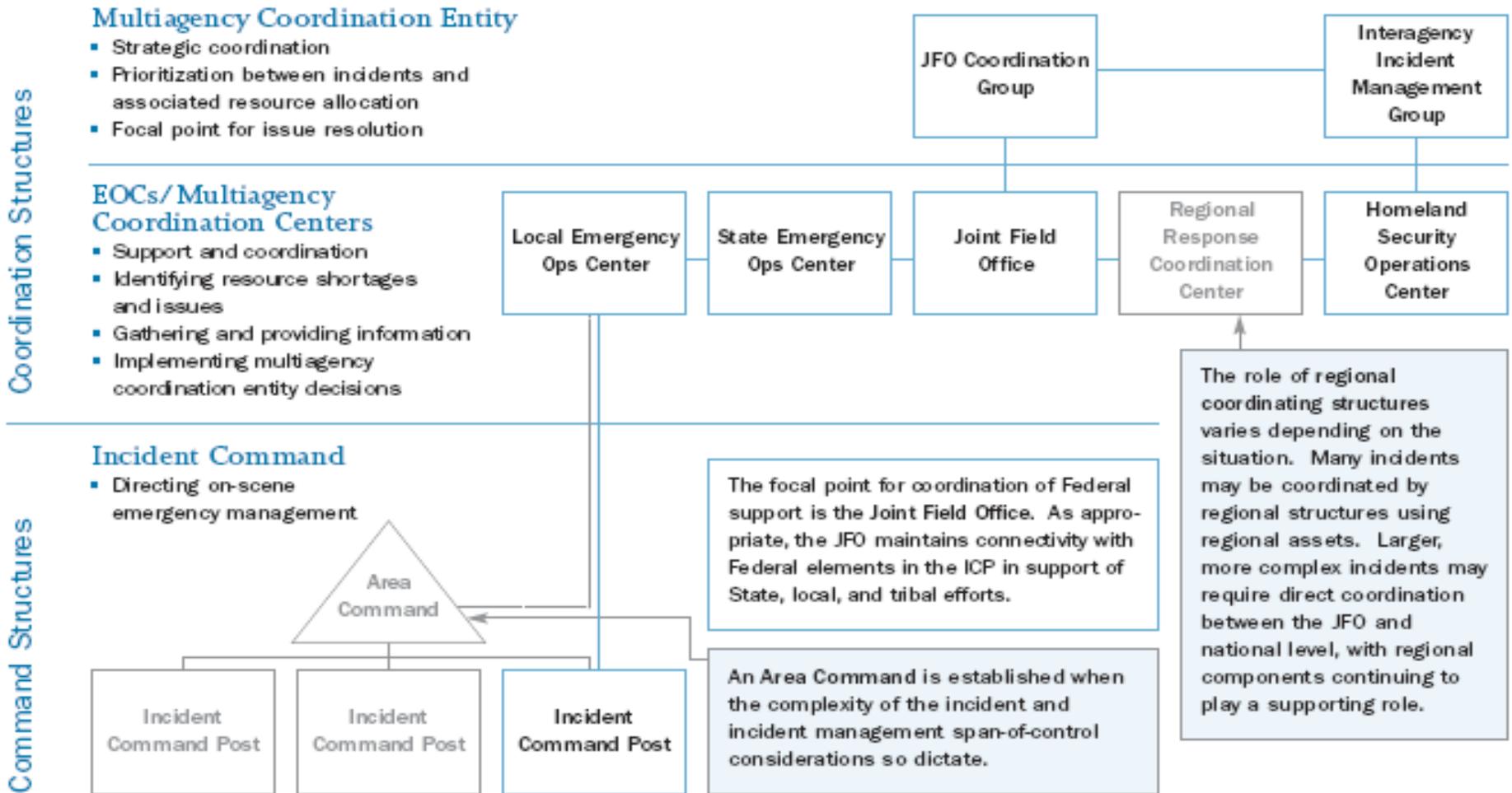


FIGURE 3. Structure for NRP coordination

NIMS Framework

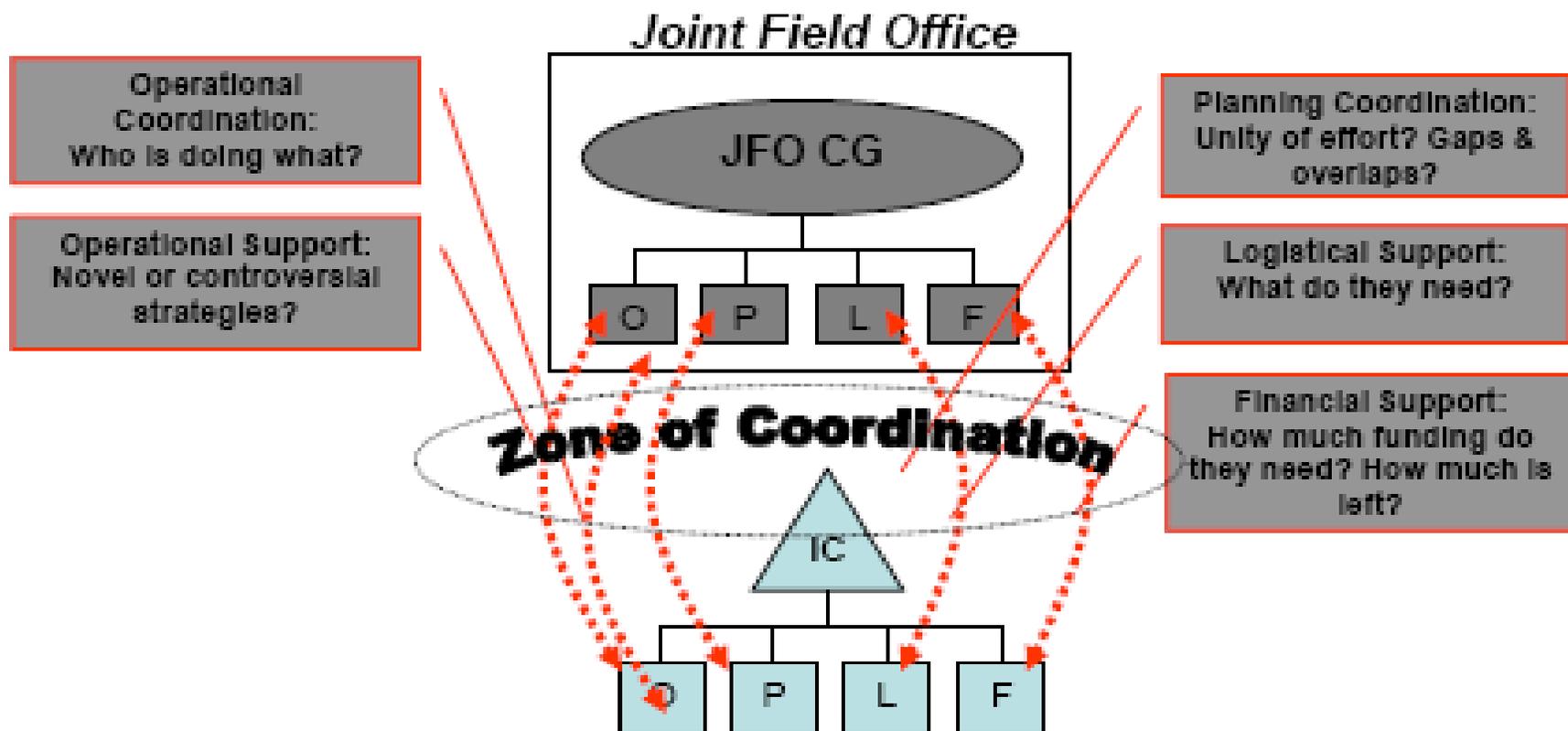
Field Level Regional Level National Level

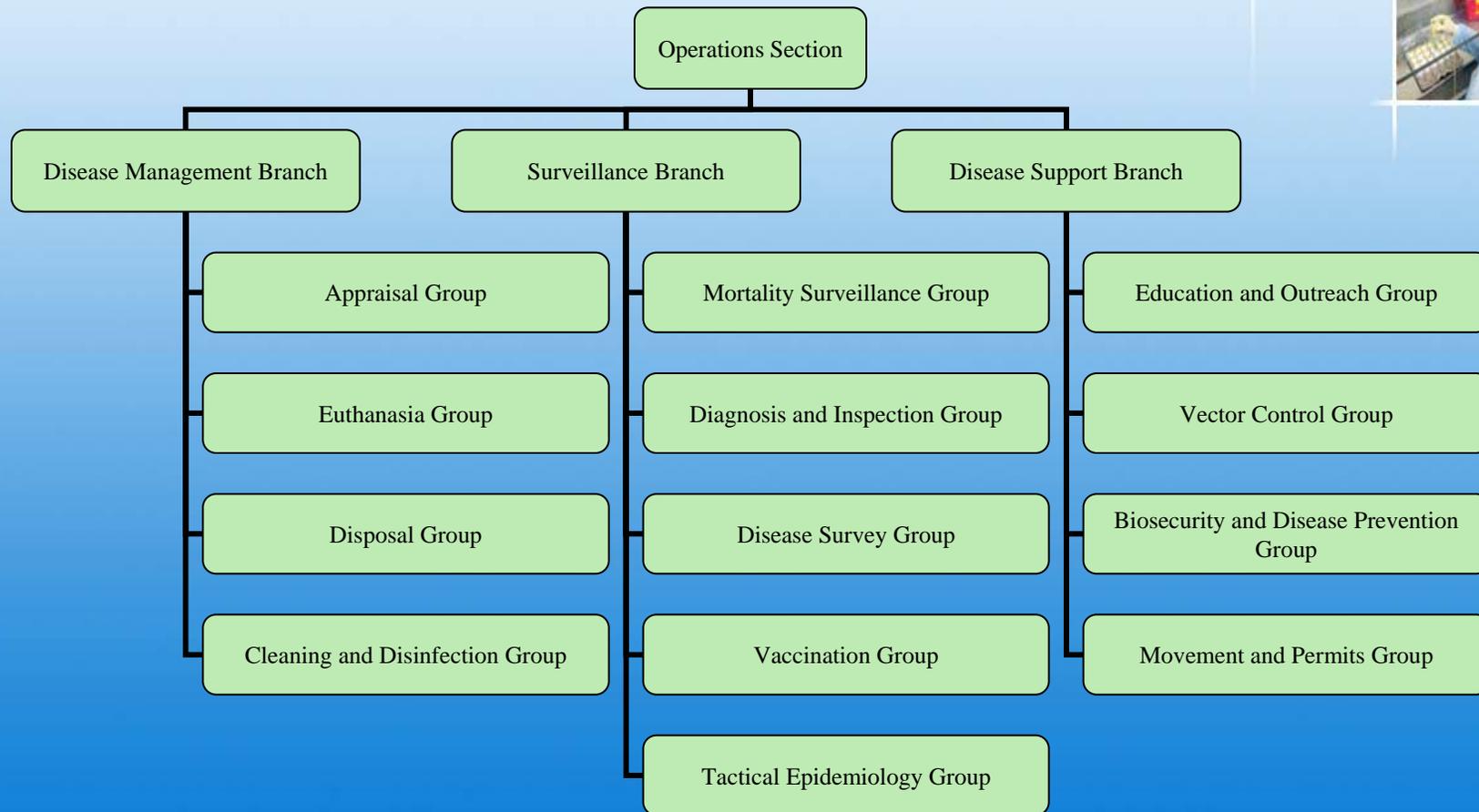
The structure for NRP coordination is based on the NIMS construct: ICS/Unified Command on-scene supported by an Area Command (if needed), multiagency coordination centers, and multiagency coordination entities.



Joint Field Office

A temporary Federal facility established locally to provide a central point for Federal, State, local, and tribal executives with responsibility for incident oversight, direction, and/or assistance to effectively coordinate protection, prevention, preparedness, response, and recovery actions.







Avian Influenza Protecting the United States



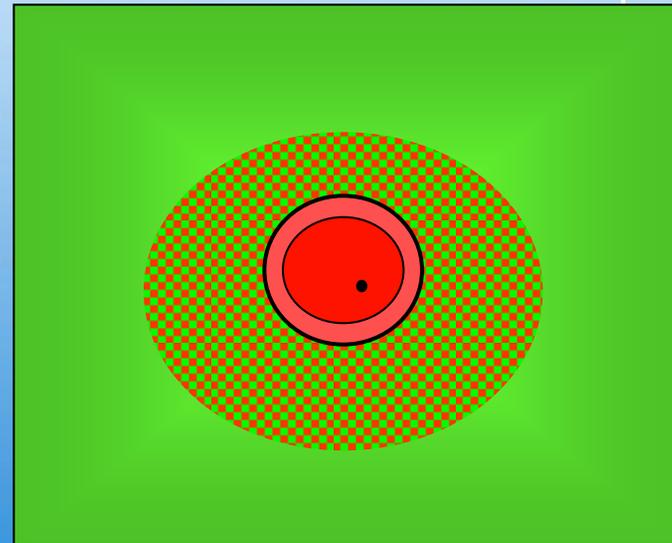
Catalog Category: AgHealth Positions

Catalog Item Name	Alias	Code	Created By
ADMIN SERVICES ADVISOR (AGHEALTH)		A105	APHIS National Dispatch Center (MD-APCC)
ADMINISTRATIVE ASSISTANT (AGHEALTH)		A094	APHIS National Dispatch Center (MD-APCC)
AGENCY LIAISON (AGHEALTH)		A001	APHIS National Dispatch Center (MD-APCC)
AGREEMENTS UNIT LEADER (AGHEALTH)		A002	APHIS National Dispatch Center (MD-APCC)
ANIMAL APPRAISAL GROUP SUPERVISOR		A007	APHIS National Dispatch Center (MD-APCC)
ANIMAL APPRAISAL SPECIALIST		A006	APHIS National Dispatch Center (MD-APCC)
ANIMAL APPRAISAL STRIKE TEAM LEADER		A112	APHIS National Dispatch Center (MD-APCC)
ANIMAL APPRAISAL TASKFORCE LEADER		A117	APHIS National Dispatch Center (MD-APCC)
ANIMAL BIOSECURITY & DISEASE PREV GRP SUPV		A075	APHIS National Dispatch Center (MD-APCC)
ANIMAL BIOSECURITY & DISEASE PREV S/T LDR		A118	APHIS National Dispatch Center (MD-APCC)
ANIMAL BIOSECURITY & DISEASE PREV TASKFORCE LDR		A009	APHIS National Dispatch Center (MD-APCC)
ANIMAL BIOSECURITY & DISEASE PREV TECH		A073	APHIS National Dispatch Center (MD-APCC)
ANIMAL DIAGNOSIS & INSPECTION GRP SUPV		A022	APHIS National Dispatch Center (MD-APCC)
ANIMAL DIAGNOSIS & INSPECTION S/T LEADER		A119	APHIS National Dispatch Center (MD-APCC)
ANIMAL DIAGNOSIS & INSPECTION TASKFORCE LDR		A023	APHIS National Dispatch Center (MD-APCC)
ANIMAL DIAGNOSIS & INSPECTION TECH		A097	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISEASE MANAGEMENT BRANCH DIR		A024	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISEASE REPORTING GROUP SUPV		A026	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISEASE REPORTING OFFICER		A025	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISEASE SUPPORT BRANCH DIRECTOR		A120	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISEASE SURVEILLANCE BRANCH DIR		A027	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISEASE SURVEY GROUP SUPV		A028	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISEASE SURVEY STRIKE TEAM LDR		A121	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISEASE SURVEY TASKFORCE LDR		A104	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISEASE SURVEY TECHNICIAN		A029	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISPOSAL GROUP SUPERVISOR		A122	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISPOSAL STRIKE TEAM LEADER		A123	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISPOSAL TASKFORCE LEADER		A124	APHIS National Dispatch Center (MD-APCC)
ANIMAL DISPOSAL TECHNICIAN		A125	APHIS National Dispatch Center (MD-APCC)



Part 4: Response Guidelines

- Rapid response
- Containment
- Eradication
- Carcass disposal
- Biosecurity



Strategies outlined in the National Animal Health Emergency Management System (NAHEMS)



Prevention

Preparedness

Response

Recovery

Mitigation



Avian Influenza **Protecting the United States**



Questions?

