

USDA APHIS FAD Preparedness and Response (FAD PReP)

AAVLD - U.S. Animal Health Association
NAHLN Emergency Response Symposium
October 2008

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Evolving Emergency Landscape

TRADITIONAL INCIDENT LANDSCAPE	EVOLVING INCIDENT LANDSCAPE
Versed in specific disasters in singular Agency/Department focal area such as program diseases	Versed in all-hazards including CBRNE
Efforts focused on accidental/naturally occurring incidents	Expanded efforts to include intentional and catastrophic incidents
Skilled in localized incidents (contained outbreaks)	Skilled in wide-spread incident (lacking discrete incident site and multiple incident sites)
Able to respond with single agency capabilities	Events of magnitude that overwhelm individual agency and demand large scale interagency coordination
Limited media coverage of events	Aggressive incident media coverage requiring a joint information approach
Reactive surging of capabilities	Proactive inter-agency coordination of capabilities
RESPONSE ORIENTED	PREVENTION & PREPAREDNESS - MITIGATION & RECOVERY ORIENTED



APHIS Animal Disease and Pest Response

THE Key Concept

State – Federal – Industry – Tribal Partnership

Disease and Pest Response Partnership Requires:

- ✓ Coordination and Cooperation
- ✓ Communicate, Prepare, Plan, Exercise
- ✓ Response Capabilities (F/A-L-O-P)
- ✓ Coordinate = Integrate, Synchronize and Deconflict



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Priorities for APHIS

- EMLC leading change for “One APHIS” ER
- Develop preparedness plans with States that provide standard goals, objectives, timelines
- Provide science based risk assessments and emergency response planning
- Integrate the NVS into animal disease and emergency response
- Develop continuity of business plans with industry for specific sectors
- Exercises – APHIS led exercise program
- Training – the current and next generation



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FAD Preparedness and Response

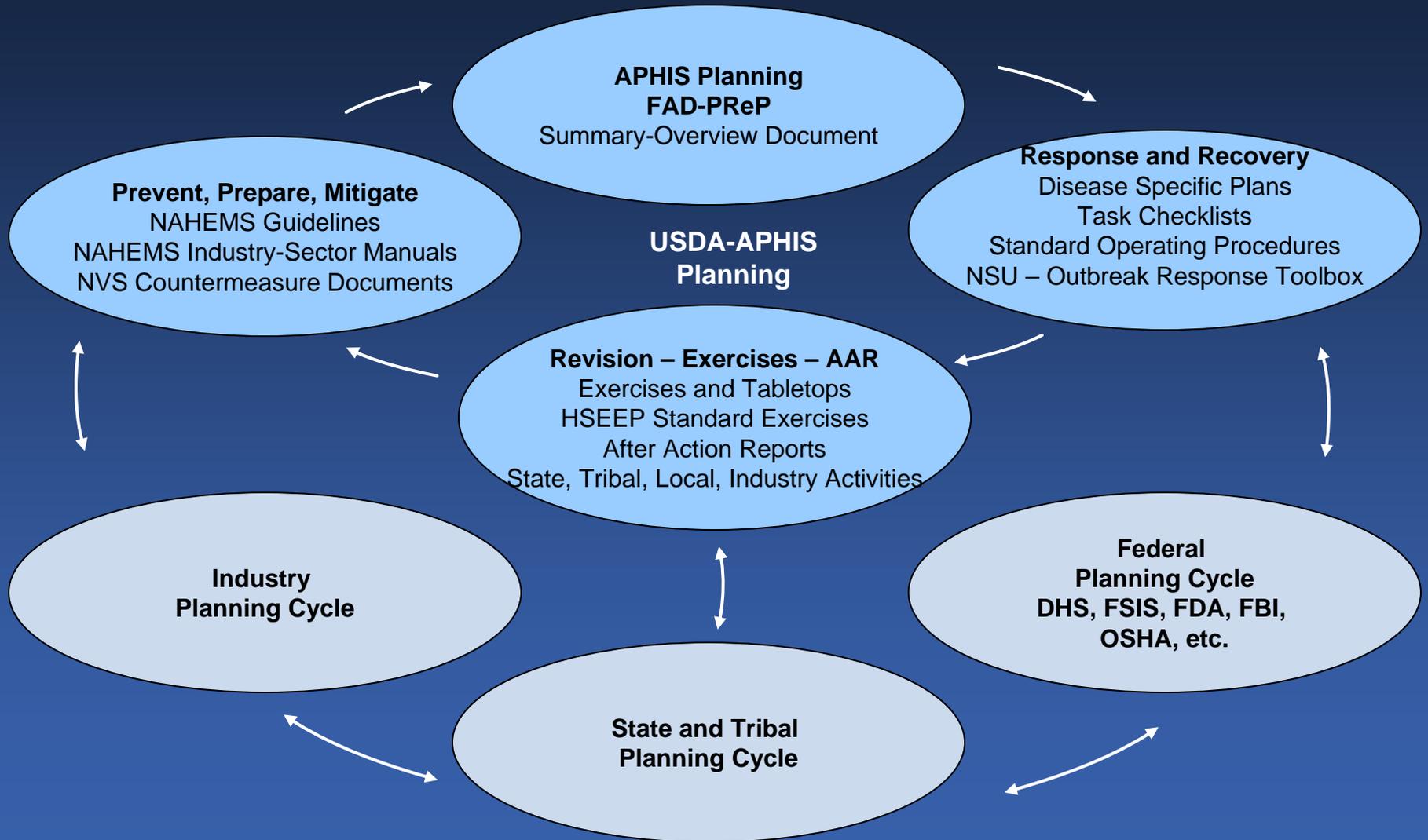
A main goal is to identify the veterinary functions and countermeasures that are necessary to contain and control the outbreak of a foreign animal disease, and integrate these veterinary functions and countermeasures with the emergency management systems and operations that will be conducted in joint and unified operations by local, State and Federal officials.



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Figure 2. Integration and Coordination with State–Industry–Tribal–Federal Partners



Challenge of FAD Preparedness and Response

A specific challenge of foreign animal disease preparedness and response is the ability to rapidly incorporate veterinary functions and countermeasures into emergency management operations, and the ability to scale-up veterinary functions and countermeasures in a moderate to large scale outbreak.



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Challenge of FAD Preparedness and Response

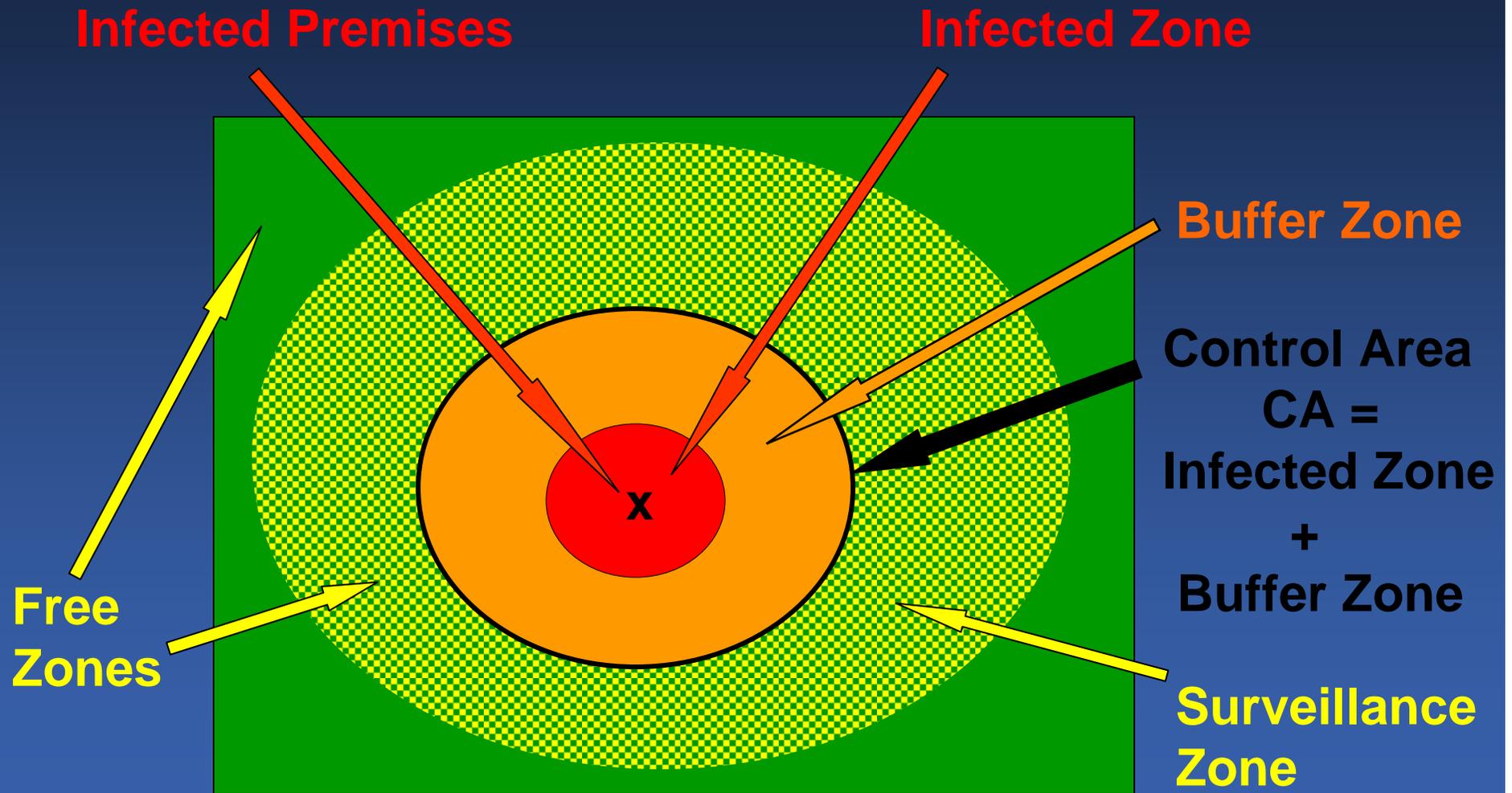
Another challenge of foreign animal disease and preparedness and response is establishing priorities for goals and objectives, and identifying those goals and objectives that become (or remain) competing interests during an actual incident or outbreak.



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Zones of an Outbreak Response



Challenge of FAD Preparedness and Response

For instance, the goal of containing and eradicating a foreign animal disease within a control zone may be in potential competition with the continuity of business planning for food and agriculture sector premises or facilities located within a control zone, that seek to maintain continuity of business, or that seek to re-establish continuity of business as rapidly as possible, by demonstrating non-infection and effective biosecurity practices.



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Challenge of FAD Preparedness and Response

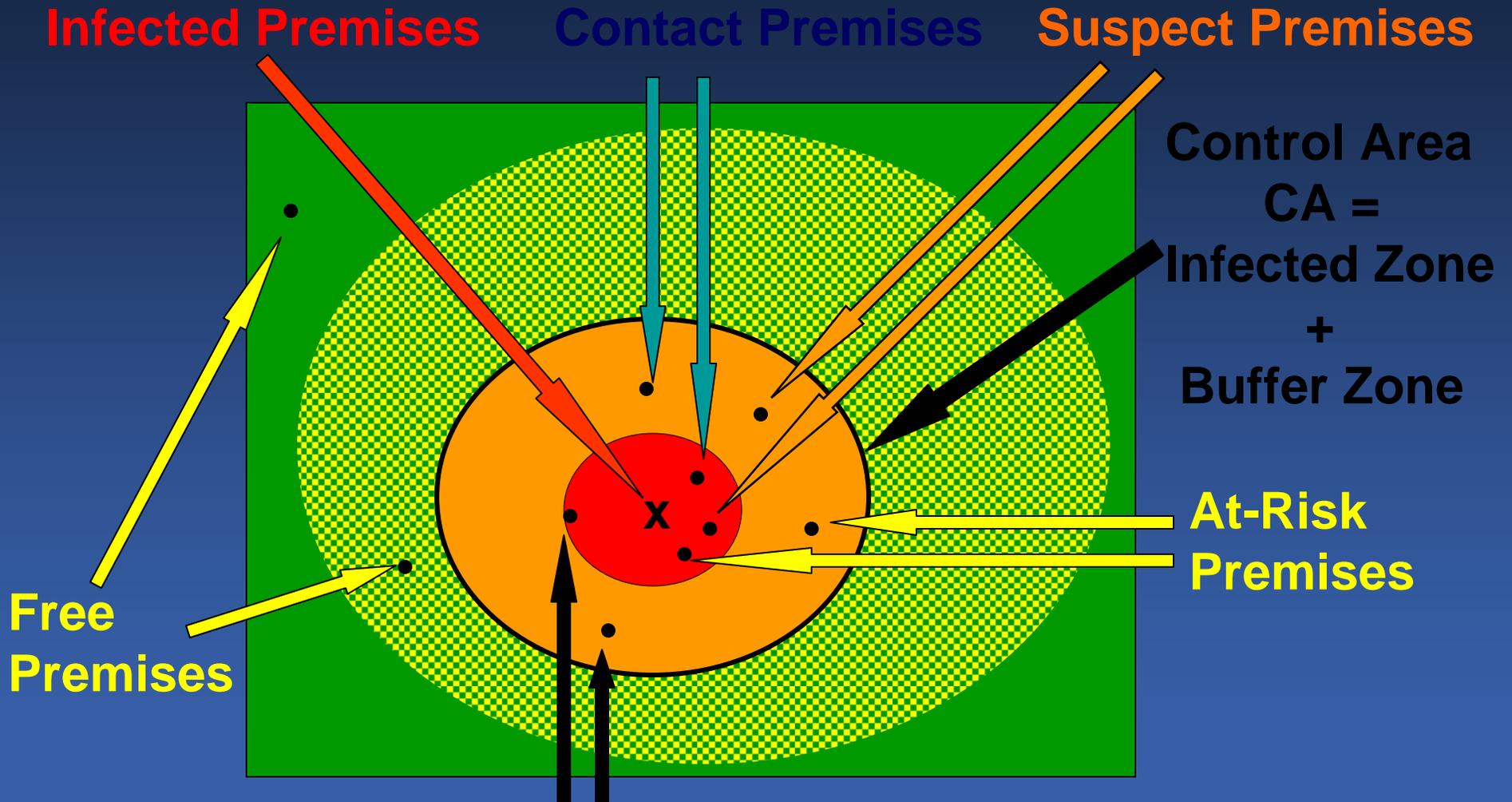
As each State and industry sector develops their HPAI and FMD response plans, it is critical that incident goals, objectives, strategies, procedures and timelines are coordinated with Federal planning. This will enhance coordination and communication between all partners, produce less chance for unmet expectations or overlooked actions, and speed up a successful response. In short, the coordination objective is to integrate, synchronize, and de-conflict all levels of preparedness and planning, as much as possible, prior to an incident.



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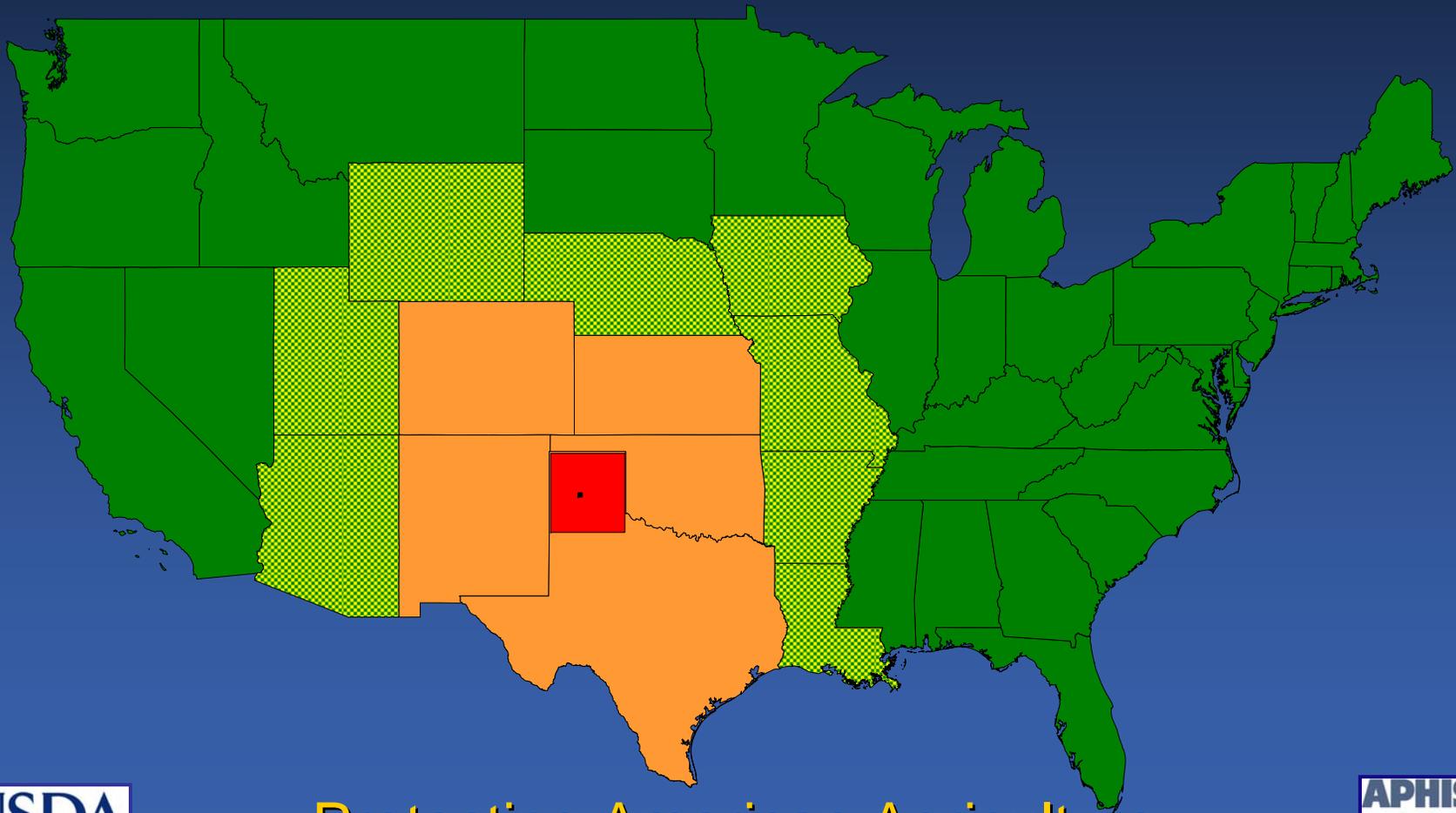


Premises in an Outbreak Response



“Monitored Premises” = Premises With Permit Pending or Permit Approved to Move Commodity from the CA

Zones of an Outbreak Response???

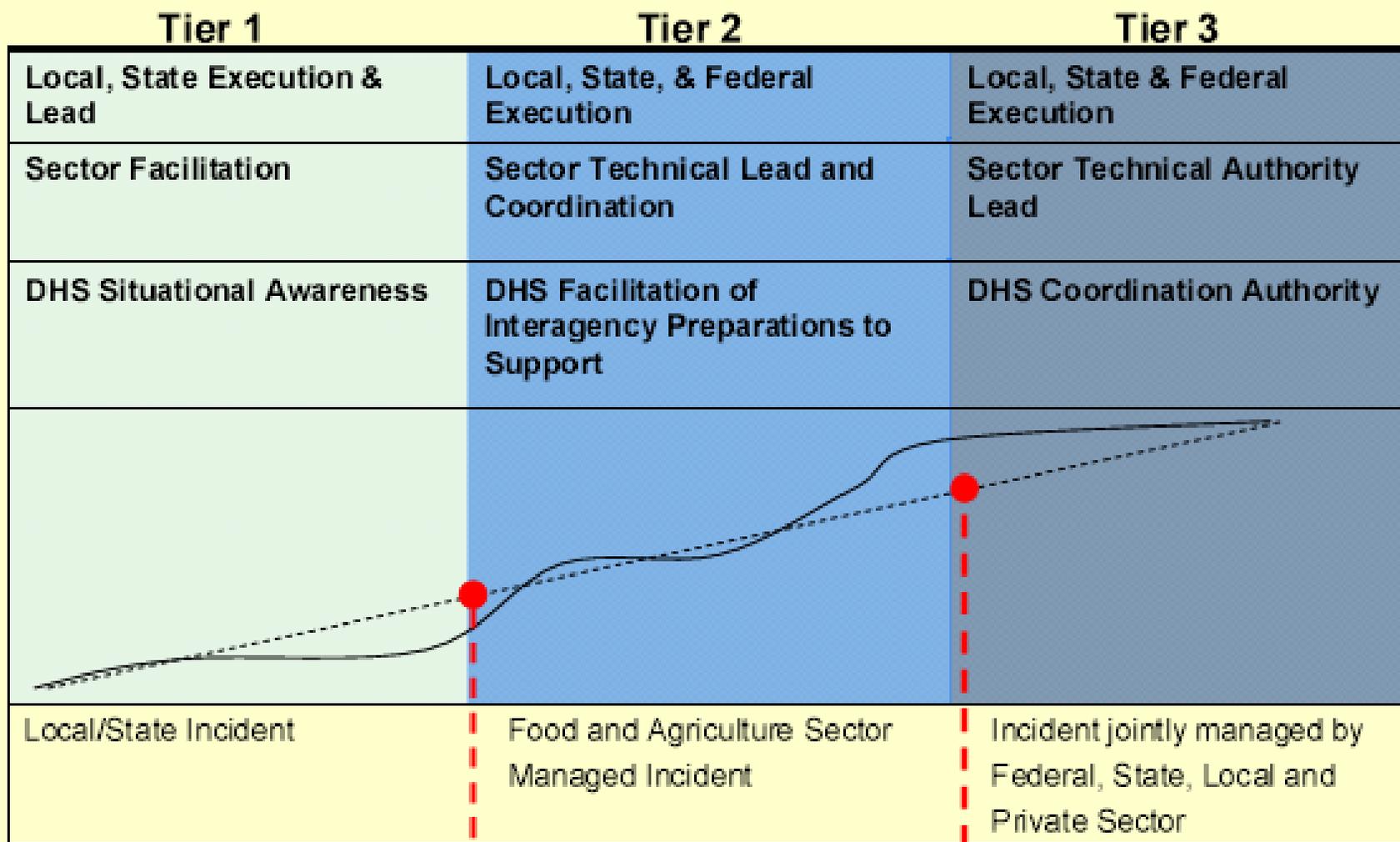


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- Etiology and Ecology
- Case Definitions and Laboratory Definitions
- Surveillance Objectives
- Diagnostic Sample Testing, Surge Capacity, and Reporting
- Communication: Internal and External
- Epidemiology
- Health and Safety
- Biosecurity
- Quarantine and Movement Control: P
- Quarantine and Movement Control: Continuity of Business in a Control Zone
- Mass Depopulation and Euthanasia
- Disposal
- Cleaning and Disinfection
- Vaccination
- Wildlife
- Appraisal and Compensation
- Emergency Management National Response Framework (NRF) National Incident Management System (NIMS) Structure and Requirements
- Recovery and Continuity of Business Planning
- EMRS and Information Management
- National Veterinary Stockpile

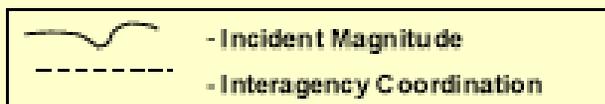
Incident Management Levels



Incident Management

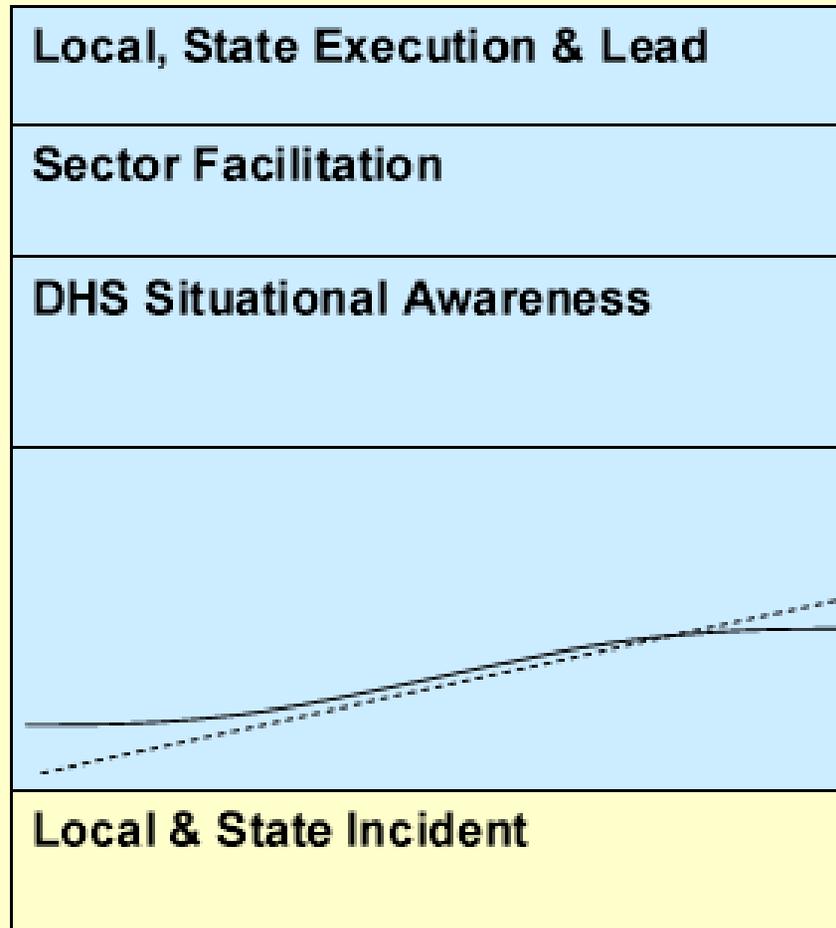
- Sector emergency declaration

- Sector Secretary requests DHS support
- Presidential declaration



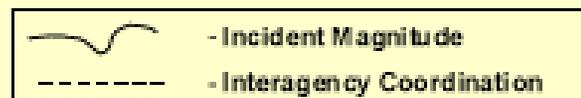
United States Department of Agriculture
Animal and Plant Health Inspection Service

Incident Management Level: Tier 1

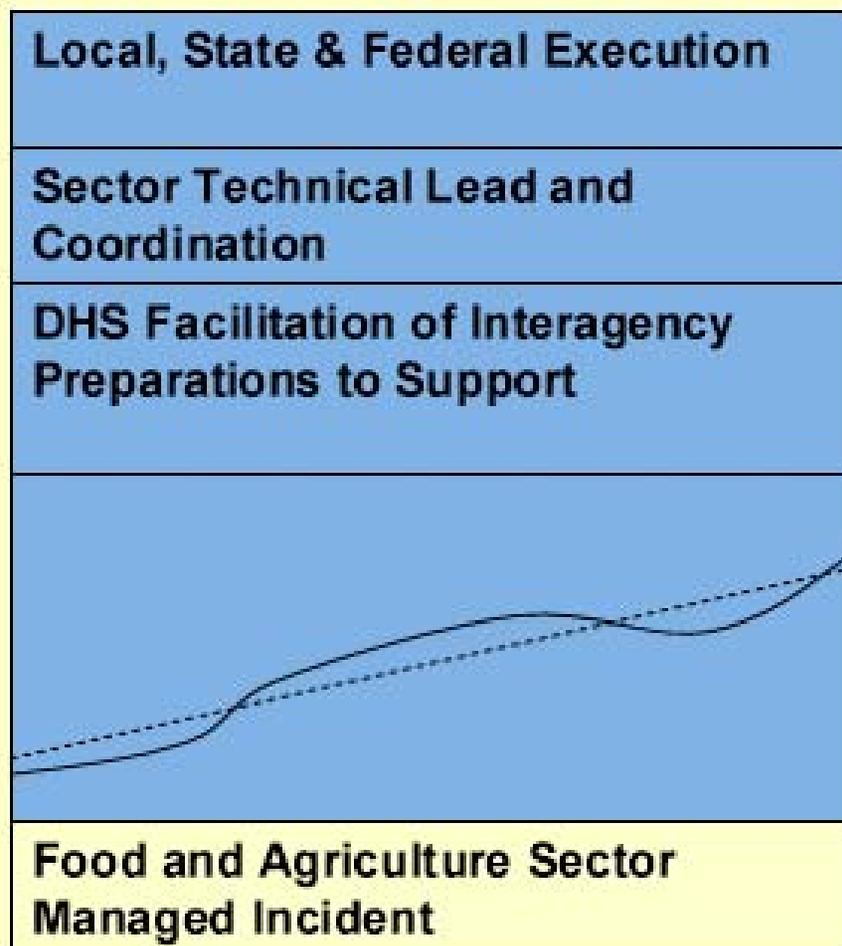


Tier 1 Incident Examples

- ❖ Overturned livestock truck
- ❖ Tornado
- ❖ Screwworm Detection in Imported Pet Dog

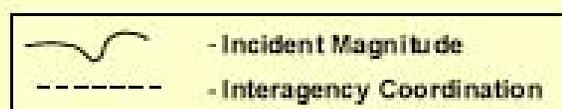


Incident Management Level: Tier 2



Tier 2 Incident Examples

- ❖ Flooding in Midwest
- ❖ TB Detections, Traces and Testing in Multiple States
- ❖ HPAI Outbreak in Domestic Poultry
- ❖ FMD Outbreak on Single Contiguous Premises

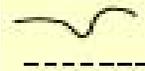


Incident Management Level: Tier 3



Tier 3 Incident Examples

- ❖ Major Hurricane
- ❖ Multi-Focal, Multi-State FMD Outbreak
- ❖ Biological Attack – Aerosol Anthrax



- Incident Magnitude

- Interagency Coordination



United States Department of Agriculture
Animal and Plant Health Inspection Service

National Response Framework (NRF)

A guide to how the Nation conducts all hazards responses.



National Incident Management System (NIMS)

A comprehensive, nationwide, systematic approach to incident management.



Strategic Guidelines, Plans and Concept of Operations—USDA

USDA Departmental level preparedness and planning guides.

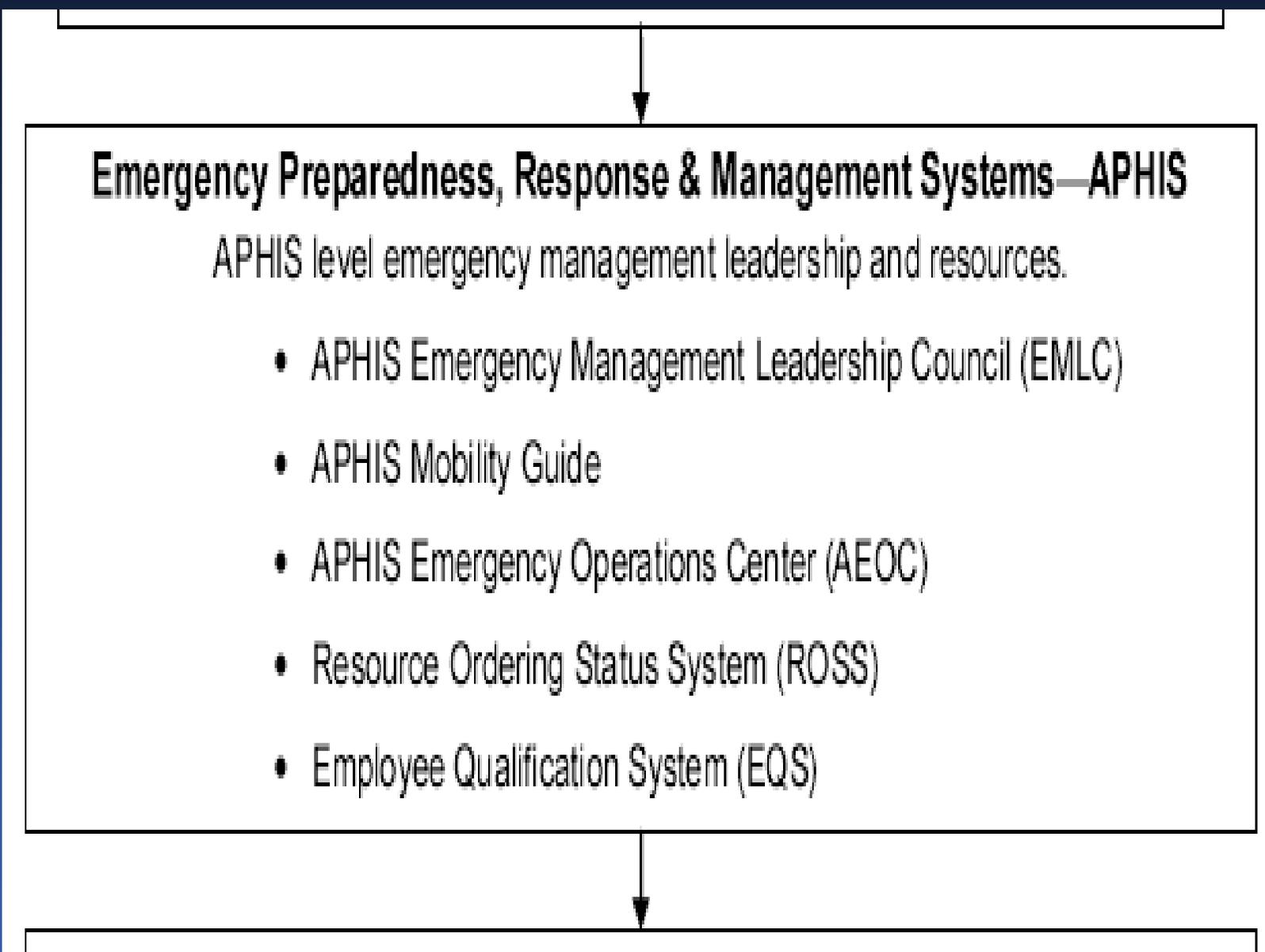


Emergency Preparedness, Response & Management Systems—APHIS

APHIS level emergency management leadership and resources.

- APHIS Emergency Management Leadership Council (EMLC)
- APHIS Mobility Guide
- APHIS Emergency Operations Center (AEOC)
- Resource Ordering Status System (ROSS)
- Employee Qualification System (EQS)





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National Animal Health Emergency Management System—APHIS-VS

Clear, comprehensive, functional plans and tools that define for Federal, State and local officials the goals, objectives, strategies, procedures and timelines for effective FAD preparedness and response.

- FAD Preparedness and Response Plan (FAD-PReP)
 - FAD-PReP Summary Response Plans (Disease Specific)
 - FAD-PReP Checklists
 - FAD-PReP Standard Operating Procedures
 - NVS Planning Guide for Federal, State and Local Authorities
 - NVS Countermeasure Working Group Documents
 - NAHEMS Industry Sector—Facility Manuals
 - NAHEMS Guidelines
 - Emergency Management Response System (EMRS)
 - National Surveillance Unit – Outbreak Response Toolbox
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Figure 4-4. Current Incident Management Team—Short Team Configuration

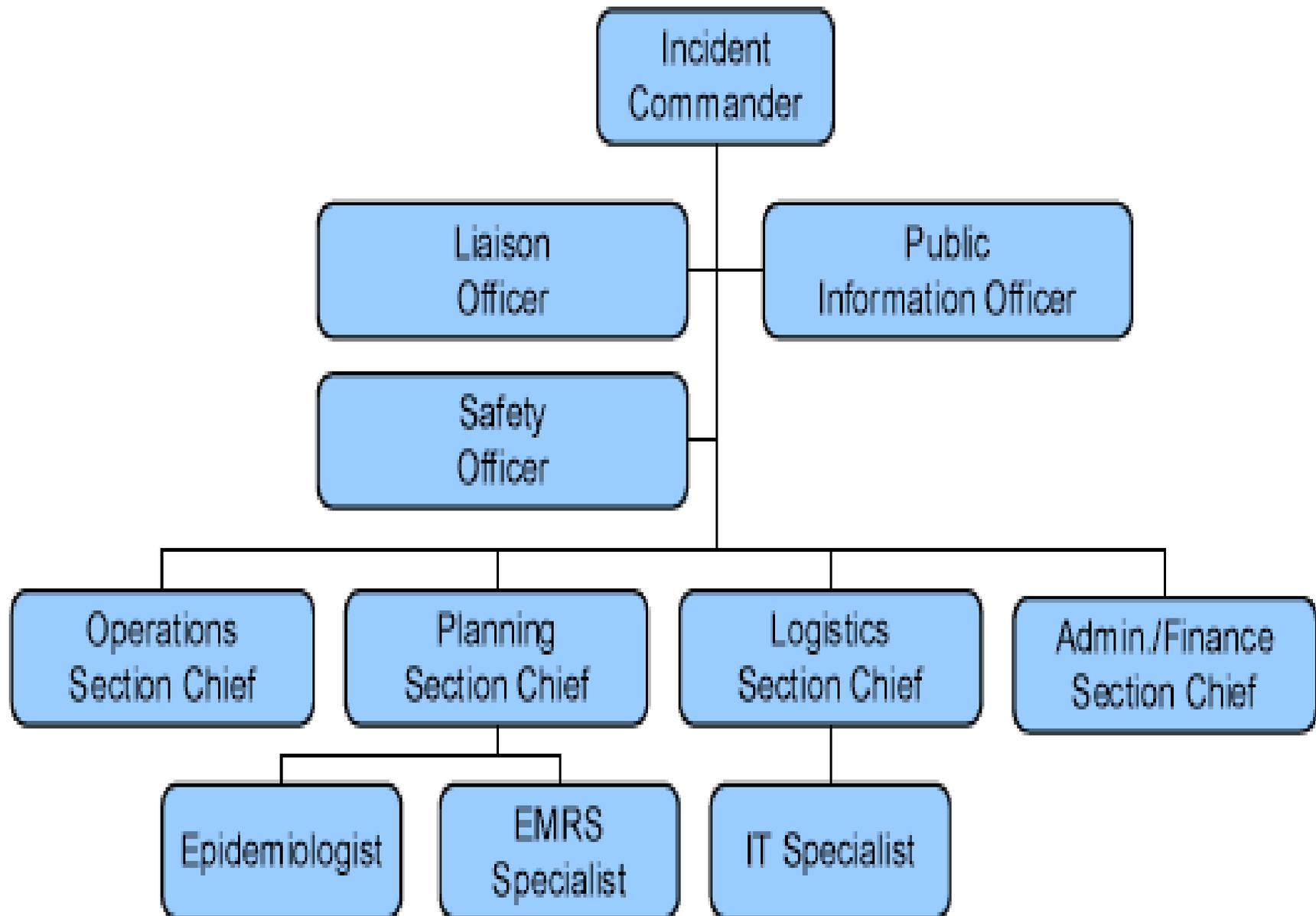


Figure 4-1. APHIS HQ, MAC, AEOC, and Incident Management Team Organizational Structure (Assuming a Single Incident)

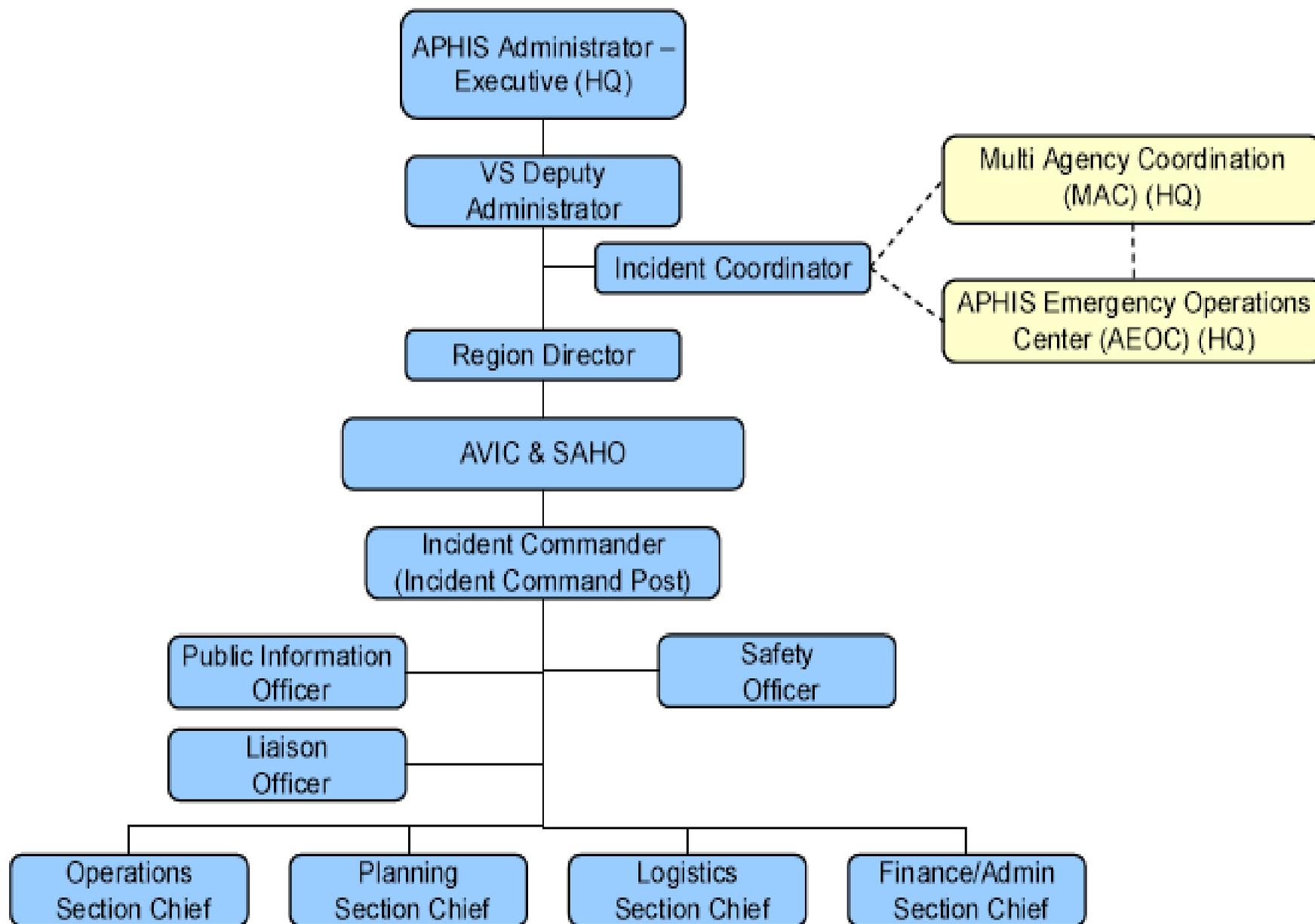


Figure 4-2. APHIS AEOC Organizational Structure
(Assuming a Single Incident)

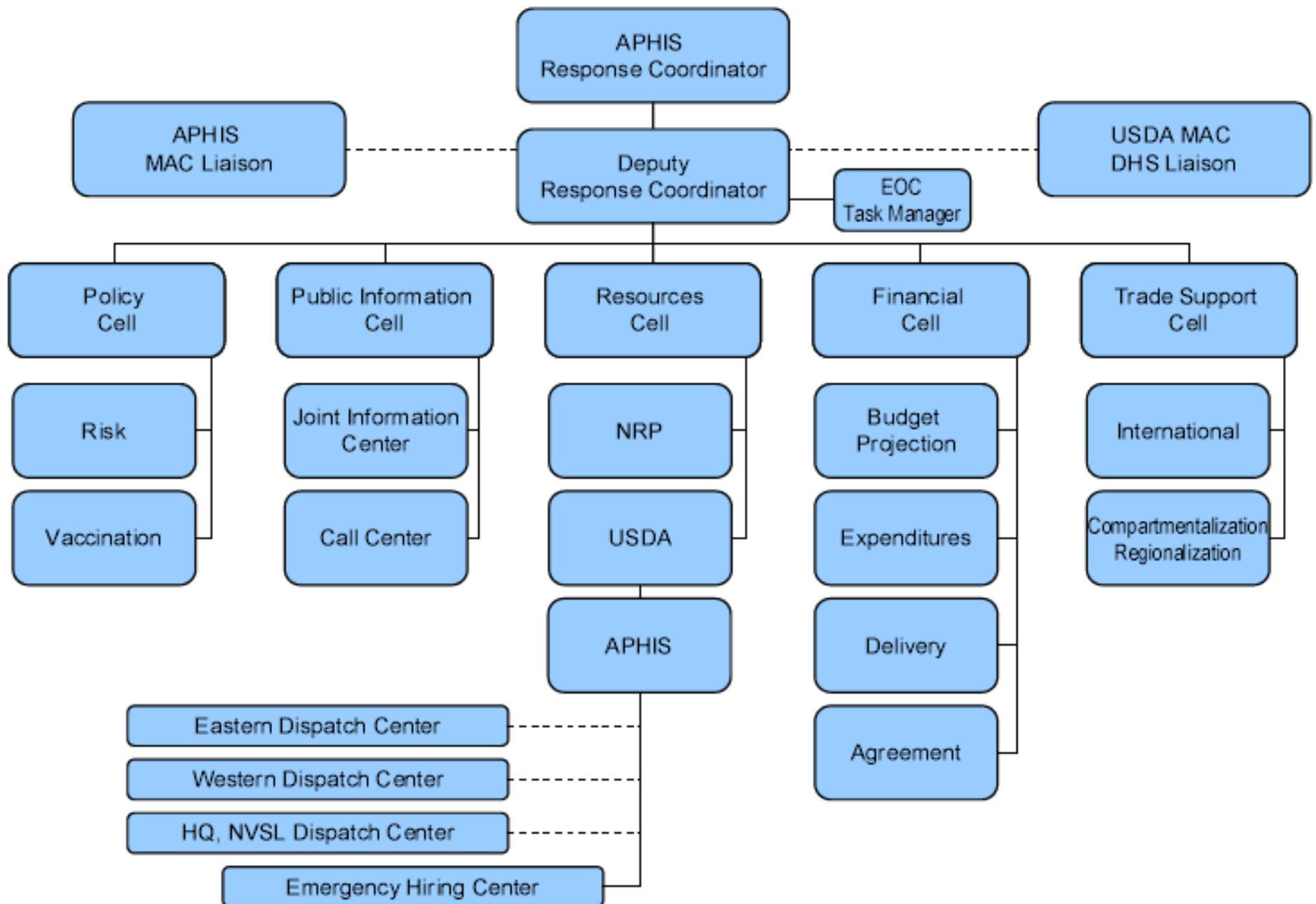
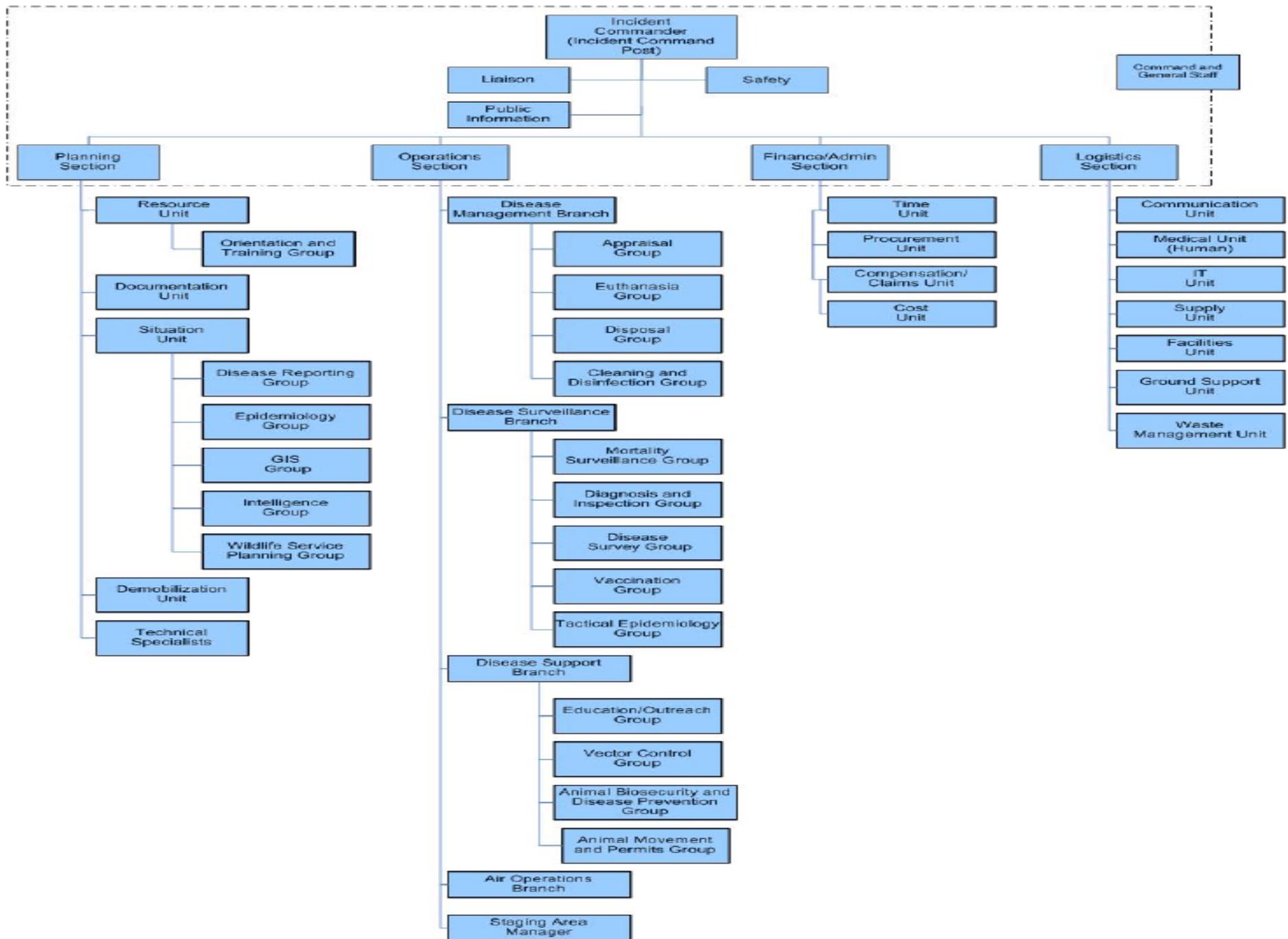


Figure 4-5. Incident Management Team Organizational Structure



Some FAD Preparedness and Response Strategic Tools

- FAD PReP Preparedness and Response
- National Veterinary Stockpile (NVS)
- National Animal Health Laboratory Network (NAHLN)
- Continuity of Business Planning Strategies
- National Animal Health Emergency Response Corps (NAHERC)



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APHIS
National Animal Health Emergency Management
Foreign Animal Disease
Preparedness and Response Plan
(FAD PReP)

DRAFT—October 2008



Improved Emergency Response Guidance

- Reworked national response plans and objectives for HPAI and FMD (in draft)
 - National Incident Management System (NIMS) compliant
 - Specific and comprehensive
 - Actions & responsible officials clearly defined
- Revised VS Memo 580.4
 - Emphasizes actions & responsible officials
 - Clarifies priority designations & process



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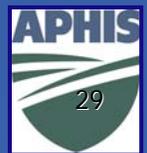


National Veterinary Stockpile

- National repository of critical veterinary supplies, vaccines, equipment, and commercial 3D (depopulation, disposal, and decontamination) support
- Operational in 2006, established by Homeland Security Presidential Directive#9
- Deliver critical veterinary resources to animal disease outbreaks within 24 hours



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NVS: Helping States Plan and Exercise

- Vigorous outreach effort to educate States
- Published NVS guide to educate States and help them plan to activate NVS
- Brief officials on information in the guide
- Operate NVS website:
 - www.nvs.aphis.usda.gov
- Support state exercises to test readiness



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Current NVS Projects

- Improved rapid transport of samples to FADDL (5 hours versus 15 hours)
- Rapid movement of vaccine antigen concentrate to overseas processors and return of vaccine to domestic vaccination teams
- Logistics analysis of requirements for supporting lab network surge during outbreak



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NAHLN: Laboratory Surge Capacity

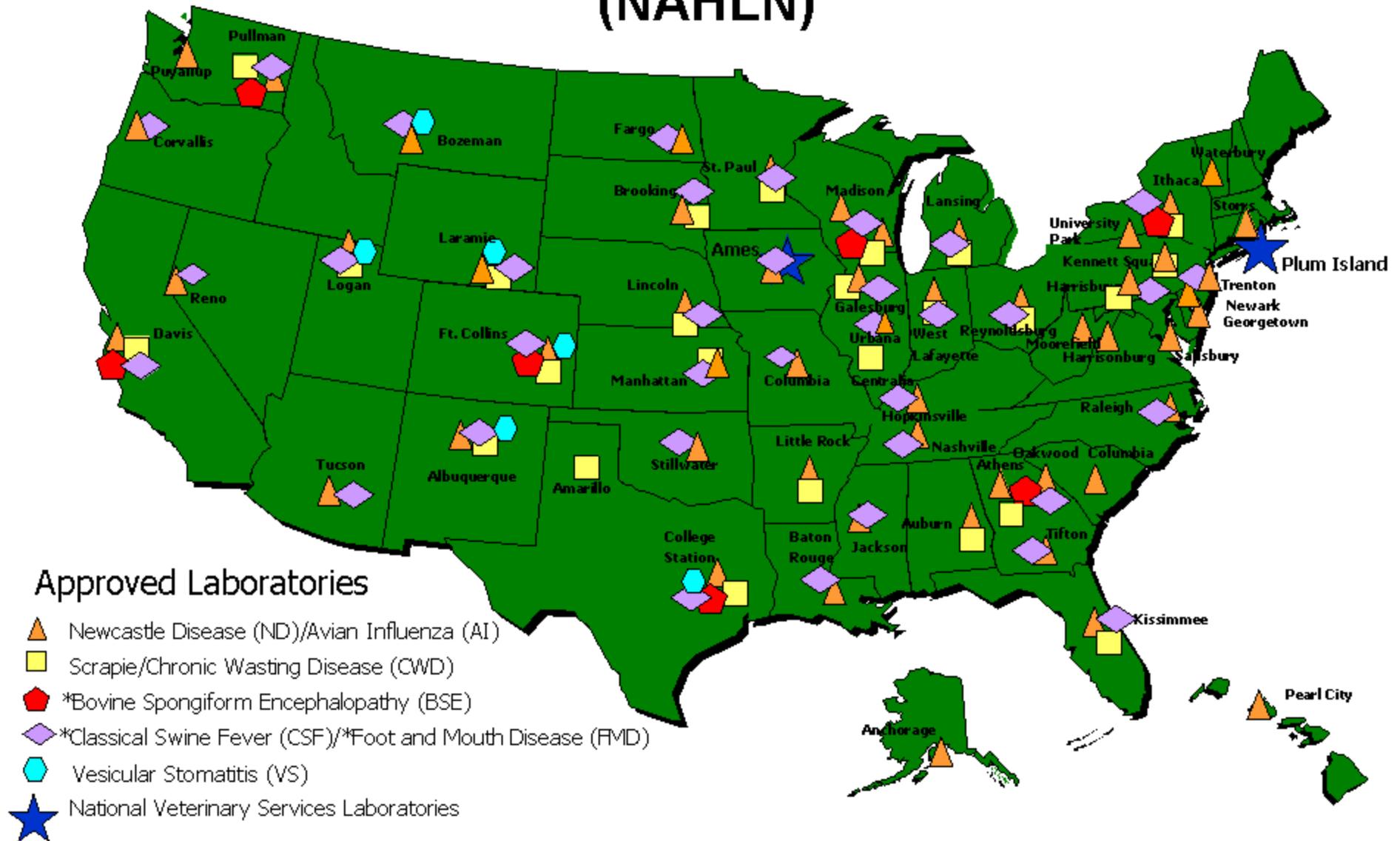
- NAHLN is a network of university and State laboratories approved to perform testing
- NAHLN provides increased and more flexible capacity for laboratory support of routine and emergency animal disease diagnosis
- NAHLN provides standardized rapid diagnostic techniques used at State, regional, and national levels



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National Animal Health Laboratory Network (NAHLN)



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

September 18, 2008

NAHERC: Personnel Surge Capacity and Sustainment

- NAHERC was formed in 2001 to provide an emergency resource of veterinary professionals to respond to animal health emergencies
- Accomplishments include a simplified application process (www.usajobs.gov), a web site (naherc.aphis.usda.gov), and a NAHERC coordinator
- NAHERC has more than 600 members



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Continuity of Business Planning

- Greater emphasis in response pre-planning to minimize disruptions to business operations in future outbreaks
- Sector and commodity based risk assessments and industry biosecurity programs integrated into Area Command or Unified Command decision making.



Continuity of Business Planning (cont.)

- Movement and permits for animals and animal products, by commodity and biosecurity program
 - Within Control Area
 - Into Control Area
 - Out of Control Area
- Bottom line:
Contingency plans for hour-zero forward!



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FMD-Specific Disease Response Planning

- FMD Preparedness and Response Plan
- Improved Emergency Response Guidance
- FMD Exercises
- FMD Modeling Activities
- North American FMD Vaccine Bank
- FMD Vaccination Strategies



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FMD Exercises (Completed)

Major response exercises since 1998 include:

- NIMBY - 1998
(multiple states, Canada, USDA)
- Tripartite 2000
(Canada, Mexico, USDA)
- Crimson Guard - 2002
(multiple states, USDA and other executive branch agencies)
- Amistad - 2003
(Texas, Mexico, Canada, USDA)
- MayDay - 2004
(Texas, Canada, Mexico, DHS, USDA)
- Operation Aphtosa - 2004
(California, Nevada, DHS, HHS, USDA)
- Equinox - 2005
(multiple states, Canada, DHS, HHS, EPA, USDA)
- Palo Duro - 2007
(Texas, DHS, USDA)



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FMD Exercises (Upcoming)

- New England FMD exercise in mid-November 2008. Regional exercise with ME, NH, and VT participating
 - Objective is to conduct a regional NVS FMD exercise that is Homeland Security Exercise and Evaluation Program (HSEEP) compliant
- Exercise recommendations, lessons learned, and after actions reports will help us improve response planning capabilities



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FMD Exercises (Upcoming) cont.

- National Veterinary Stockpile Multi-State FMD Exercise
 - Exercise will be a cooperative effort
 - National Guard will conduct a regional deployment exercise that responds to the intentional introduction of a disease agent such as FMD virus.
 - States interested in participating include IL, IA, KS, KY, MI, MN, MO, NE, ND, OH, OK, SD, and WI.
 - The three day exercise will include Canadian assistance to ensure participants deal with the actions that an intentional introduction of FMD would require



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FMD Modeling Activities

- Models are useful for understanding effects of mitigation strategies (vaccination, movement controls, etc.), planning for resource needs (stockpiling), and developing response exercises
- Models are loaded in a high speed computing environment (one can run on a regular PC)
- Models can account for cost parameters to support benefit/cost comparisons for various disease control strategies



Additional FMD Modeling Activities

- Joint Modeling Operations Center
 - APHIS and DHS
 - Using animal disease spread models to develop and test strategies for containing outbreaks and devising countermeasures
- Foreign Animal Disease Threat Subcommittee
 - 13 Federal agencies collaborating together
 - Reviewing proposals to fund disease spread and economic models



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North American FMD Vaccine Bank (NAFMDVB)

- Consortium with Canada and Mexico, established in 1982
- Acquires, stores, and quality controls concentrates and master seeds
- Contracts for finishing concentrate, procures conventional vaccines
- Monitors activity of virus strains globally
- Activated upon finding FMD in North America
 - Decision by Chief Veterinary Officers of all three countries



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Ongoing FMD Vaccine Planning

- International transport of antigen NAFMDVB in U.S. to manufacturers overseas for processing and return of vaccine to end users
- International transport of commercial vaccine from manufacturers overseas and return to end users
- Transport of samples and reagents to labs
- 3D contractor large animal handling and depop training



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FMD Second Generation Molecular Adenovirus Vaccine

- Prevents FMDV (serotype/subtype-specific) clinical disease, viral shed, and transmission
- Provides onset of immunity at 1 week post-vaccination following single vaccination
- Provides duration of immunity of ≥ 4 months
- 2-ml dose, administered IM
- DIVA compatible
- Manufactured in U.S.
- Storage in NVS warehouses around U.S.
- Ready to use
- > 3 years shelf-life (frozen)
- Available **early 2010**



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Questions?



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