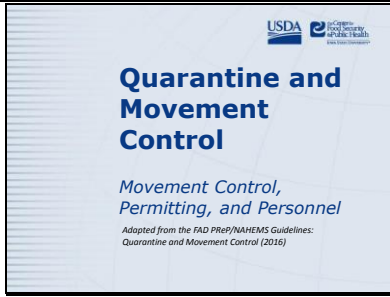
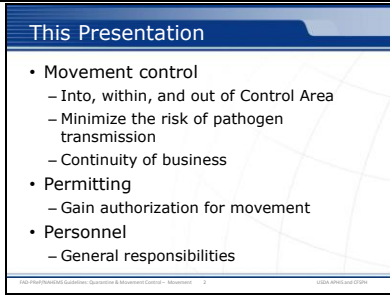


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In a foreign animal disease (FAD) incident, control and containment of the disease agent is essential to eradication and recovery. Quarantine and movement control (QMC) are critical activities to protect animal health, by helping to prevent the disease agent from being transmitted to non-infected livestock and poultry populations. QMC stops and controls movements in a regulatory Control Area. This presentation focuses on diseases spread by direct and indirect contact rather than vector-borne diseases, as QMC is not particularly effective at preventing the movement of mobile insect vectors. However, QMC activities can still prevent the movement of infected hosts, which may be important in vector-borne FAD incidents. In an incident, quarantines and movement controls are handled through Incident Command (IC), following local, State, and Federal laws/regulations. [This information was derived from the Foreign Animal Disease Preparedness and Response (FAD PReP)/National Animal Health Emergency Management System (NAHEMS) Guidelines: Quarantine and Movement Control (2016)].

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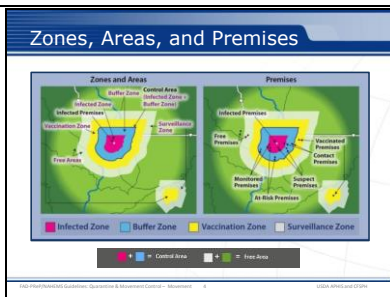
This presentation discusses movement control, permitting, as well as personnel involved in QMC activities. Movement control is the critical activity which accompanies quarantines. The term “movement control” refers to controlling the movement of animals, animal products, and fomites into, within, and out of a regulatory Control Area (CA) while minimizing the risk of pathogen transmission. For individual premises, quarantines are imposed on Infected, Contact, and Suspect Premises, while movement controls focus on At-Risk and Monitored Premises. Continuity of business, or management movement, establishes specific criteria for the movement of animals or commodities from premises. This discussion of permitting covers the process, documentation and information needed to gain authorization for movement. Finally, this presentation describes the general responsibilities of personnel involved in QMC activities.

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To repeat, the term “movement control” refers to controlling the movement of animals, animal products, and fomites into, within, and out of a regulatory Control Area. Certain criteria ensure that such movement poses a negligible risk of pathogen transmission. For individual premises, quarantines are imposed on Infected, Contact, and Suspect Premises, where movement is prohibited unless a specific permit is issued by Incident Command for essential movement. On the other hand, for At-Risk and Monitored Premises, common movements are allowed by permit based on specific criteria. These are the movements to which “movement control” refers.

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As a quick review, these figures show examples of zones and areas on the left, and examples of the locations and types of premises that have been designated with specific classifications on the right. During an FAD outbreak, geographic locations will be classified or designated according to specific criteria related to disease or disease-free status. In these figures, the Control Area, where the discussion on movement control is focused, is illustrated as the dark pink Infected Zone in the center of the figures, plus the blue encircling Buffer Zone. Movement in the Free Areas continues (this includes the Surveillance Zone), based on routine procedures such as Interstate Certificates of Veterinary Inspection. It is important to note that these figures are examples, and are not to scale. More detail on designations of zones, areas, and premises, and the factors considered in determining their size is explained in the FAD PReP/NAHEMS Guidelines: Quarantine and Movement Control document, APHIS FAD Framework: Response Strategies (Manual 2-0) and in the Zones, Areas and Premises PowerPoint presentation associated with this series. [Example Zones, Areas, and Premises. Diagrams provided by: USDA; Graphic illustration by: Dani Ausen, Iowa State University]

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Movement Into Control Area					
Item Moving into a Control Area (a/n...)	Infected Premises	Suspect Premises	Contact Premises	At-Risk Premises	Monitored Premises
Susceptible livestock or poultry	Prohibited, except under certain circumstances as determined by the Incident Command (IC) such as slaughter.	Prohibited, except under certain circumstances as determined by the IC, such as slaughter.	Prohibited, except under certain circumstances as determined by the IC, such as slaughter.	Permit for movement must be approved by the IC with appropriate biosecurity measures.	Permit for movement must be approved by the IC with appropriate biosecurity measures.
Susceptible animal products	See disease specific or COB plans for information on susceptible animal products, or guidance as determined by IC.	Prohibited unless specifically permitted by IC.	Prohibited unless specifically permitted by IC.	Allowed with appropriate biosecurity measures. IC may require a permit for movement depending upon FAD and characteristics of destination premises.	Allowed with appropriate biosecurity measures. IC may require a permit for movement depending upon FAD and characteristics of destination premises.
Other animals (non-susceptible livestock or poultry) from premises with susceptible species	Prohibited unless specifically permitted by IC and appropriate biosecurity measures.	Prohibited unless specifically permitted by IC and appropriate biosecurity measures.	Prohibited unless specifically permitted by IC and appropriate biosecurity measures.	Allowed with appropriate biosecurity measures. IC may require a permit for movement depending upon FAD and characteristics of destination premises.	Allowed with appropriate biosecurity measures. IC may require a permit for movement depending upon FAD and characteristics of destination premises.

This table and those on the next few slides are taken from *APHIS Foreign Animal Disease Framework: Response Strategies (FAD PReP Manual 2-0)*. Together, they provide broad guidance for moving into, out of, and within a regulatory Control Area. As you follow this table from left to right, guidance is provided for moving a specific item from outside the Control Area **to** a specific type of designated premises inside the Control Area. For example, livestock susceptible to the disease of concern are generally prohibited from moving onto Infected, Suspect or Contact Premises within the Control Area. Exceptions are determined by Incident Command. However, susceptible livestock and products from susceptible animals may be authorized to move from outside the Control Area onto At-Risk or Monitored Premises, if specific criteria are met and a permit to move is granted. Similar guidance is provided for non-susceptible livestock moving from a premises with susceptible species, as seen at the bottom of the table on this slide. The specific criteria are based on science, the risk of disease transmission, and the circumstances of the outbreak. Biosecurity measures are essential to all authorized movements to reduce the risk of further transmitting disease and infecting new populations of animals. The Continuity of Business (COB) plans are mentioned on the second line and will be discussed shortly. *[Movement Into a Control Area from Outside a Control Area. Content provided by: USDA]*

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Movement Into Control Area cont'd					
Item Moving into a Control Area (a/n...)	Infected Premises	Suspect Premises	Contact Premises	At-Risk Premises	Monitored Premises
Other animals or animal products (non-susceptible livestock or poultry) (products) from premises without susceptible species	IC will determine movement restrictions based on FAD and characteristics of destination premises.	IC will determine movement restrictions based on FAD and characteristics of destination premises.	IC will determine movement restrictions based on FAD and characteristics of destination premises.	Allowed with appropriate biosecurity measures. IC may require a permit for movement depending upon FAD and characteristics of destination premises.	Allowed with appropriate biosecurity measures. IC may require a permit for movement depending upon FAD and characteristics of destination premises.
Equipment, vehicles, and other fomites from premises with susceptible species	Allowed with appropriate biosecurity measures.	Allowed with appropriate biosecurity measures.	Allowed with appropriate biosecurity measures.	Allowed with appropriate biosecurity measures.	Allowed with appropriate biosecurity measures.
Semen, embryos from susceptible livestock or poultry	Prohibited.	Prohibited.	Prohibited.	Allowed with appropriate biosecurity measures.	Allowed with appropriate biosecurity measures.

This table is a continuation of the table on the previous slide and can be read the same way from left to right. Looking down the left column, the decision to issue a movement permit for non-susceptible livestock moving from a premises without susceptible species into the Control Area may be based, in part, on the FAD and characteristics of destination premises. Equipment is allowed to move with appropriate biosecurity measures. Again, biosecurity measures are essential to all authorized movements to reduce the risk of further transmitting disease and infecting new populations of animals. *[Movement Into a Control Area from Outside a Control Area. Content provided by: USDA]*

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Moving Within a Control Area					
Item Moving within a Control Area from a/n...	Infected Premises	Suspect Premises	Contact Premises	At-Risk Premises	Monitored Premises
Susceptible livestock or poultry	Prohibited, except under certain circumstances as determined by the IC, such as slaughter.	Prohibited, except under certain circumstances as determined by the IC, such as slaughter.	Prohibited, except under certain circumstances as determined by the IC, such as slaughter.	Allowed to move by permit approved by the IC with appropriate biosecurity measures, negative diagnostic tests, premises biosecurity, and risk assessment may be required for permit.	Allowed to move by permit approved by the IC with appropriate biosecurity measures, negative diagnostic tests, premises biosecurity, and risk assessment may be required for permit.
Susceptible animal products	See disease specific or COB plans for information on susceptible animal products, or guidance as determined by IC.	Prohibited unless specifically permitted by IC.	Prohibited unless specifically permitted by IC.	Allowed to move by permit approved by the IC with appropriate biosecurity measures, negative diagnostic tests, premises biosecurity, and risk assessment may be required for permit.	Allowed to move by permit approved by the IC with appropriate biosecurity measures, negative diagnostic tests, premises biosecurity, and risk assessment may be required for permit.
Other animals (non-susceptible livestock or poultry) from premises with susceptible species	Prohibited unless specifically permitted by IC and appropriate biosecurity measures.	Prohibited unless specifically permitted by IC and appropriate biosecurity measures.	Prohibited unless specifically permitted by IC and appropriate biosecurity measures.	Allowed to move by permit approved by the IC with appropriate biosecurity measures, negative diagnostic tests, premises biosecurity, and risk assessment may be required for permit.	Allowed to move by permit approved by the IC with appropriate biosecurity measures, negative diagnostic tests, premises biosecurity, and risk assessment may be required for permit.

This table, as are all in this series, is taken from *APHIS Foreign Animal Disease Framework: Response Strategies (FAD PReP Manual 2-0)*, and provides guidance for movement within a Control Area. As you follow this table from left to right, guidance is provided for moving a specific item **from** a specific type of designated premises, to another destination within the Control Area. This table again emphasizes that Infected, Suspect and Contact Premises will be under quarantine. Under quarantine, animal movements will be generally prohibited, except for certain circumstances as determined by Incident Command, such as slaughter. Some of the movements described on this table are authorized by a permit if specific criteria are met. Criteria involving surveillance, negative diagnostic tests, premises biosecurity, and risk-assessment may be required for a movement permit. Movement control and permit processes will change over time depending on situational awareness and operational capabilities. *[Moving Within a Control Area. Content provided by: USDA]*

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Moving Within a Control Area cont'd					
Item Moving within a Control Area from a/n...	Infected Premises	Suspect Premises	Contact Premises	At-Risk Premises	Monitored Premises
Other animals or animal products (non-susceptible livestock or poultry) (products) from premises without susceptible species	n/a (Infected Premises have susceptible species)	n/a (Suspect Premises have susceptible species)	n/a (Contact Premises have susceptible species)	n/a (At-Risk Premises have susceptible species)	n/a (Monitored Premises have susceptible species)
Equipment, vehicles, and other fomites from premises with susceptible species	Prohibited unless specifically permitted by IC and appropriate biosecurity measures.	Prohibited unless specifically permitted by IC and appropriate biosecurity measures.	Prohibited unless specifically permitted by IC and appropriate biosecurity measures.	Allowed by permit approved by IC and appropriate biosecurity measures.	Allowed by permit approved by IC and appropriate biosecurity measures.
Semen, embryos from susceptible livestock or poultry	Prohibited.	Prohibited.	Prohibited.	Allowed by permit approved by IC and appropriate biosecurity measures.	Allowed by permit approved by IC and appropriate biosecurity measures.

This table provides a continuation from the table on the previous slide showing the guidance for movement within a Control Area. Equipment, including vehicles, is generally prohibited to move within a Control Area unless permitted by Incident Command while following strict biosecurity measures. The movement of semen or embryos from susceptible livestock is prohibited with no exceptions from moving from Infected Premises, Suspect Premises, and Contact Premises, but are allowed to move from At-Risk and Monitored Premises by permit approved by IC and with adherence to strict biosecurity measures. Some of the movements described on this table are authorized by a permit if specific criteria are met. Again, movement control and permit processes will change over time depending on situational awareness and operational capabilities. *[Moving Within a Control Area. Content provided by: USDA]*

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Item Moving out of a Control Area (Item #)	Infected Premises	Suspect Premises	Contact Premises	At-Risk Premises	Monitored Premises
Susceptible livestock or poultry	Prohibited, except under certain circumstances as determined by the IC.	Prohibited, except under certain circumstances as determined by the IC.	Prohibited, except under certain circumstances as determined by the IC.	All At-Risk Premises must become Monitored Premises to move susceptible livestock or poultry out of a Control Area.	Allowed to move by permit approved by IC, surveillance, negative diagnostic tests, premises biosecurity, and risk assessment may be required for permit.
Susceptible animal products	See disease specific or COB plans for information on susceptible animal products, or guidance as determined by IC.				
Other animals (non-susceptible livestock or poultry) from premises with susceptible species	Prohibited unless specific permit approved by IC and appropriate biosecurity measures and risk assessment.	Prohibited unless specific permit approved by IC and appropriate biosecurity measures and risk assessment.	Prohibited unless specific permit approved by IC and appropriate biosecurity measures and risk assessment.	Allowed to move by permit approved by IC, surveillance and negative diagnostic tests for susceptible animals on premises, premises biosecurity, and risk assessment may be required for permit.	Allowed to move by permit approved by IC, surveillance and negative diagnostic tests for susceptible animals on premises, premises biosecurity, and risk assessment may be required for permit.

Movement from inside a Control Area to a location outside of the Control Area is highly controlled. Containment of the disease agent is critical, and movements leaving the Control Area may pose risks. However, movements that pose minimal risk to disease transmission are important for continuity of business. At-Risk Premises must become Monitored Premises to move susceptible livestock or poultry out of a Control Area. Monitored Premises may be allowed to move livestock by permit. Disease specific or Continuity of Business Plans may provide guidance on moving susceptible animals and/or products that present minimal risk of disease transmission. *[Movement from Inside a Control Area to Outside a Control Area. Content provided by: USDA]*

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Item Moving out of a Control Area (Item #)	Infected Premises	Suspect Premises	Contact Premises	At-Risk Premises	Monitored Premises
Other animals or animal products (non-susceptible livestock or poultry/products) from premises without susceptible species	Prohibited unless specific permit approved by IC and appropriate biosecurity measures.	Prohibited unless specific permit approved by IC and appropriate biosecurity measures.	Prohibited unless specific permit approved by IC and appropriate biosecurity measures.	Allowed by permit approved by IC and appropriate biosecurity measures.	Allowed by permit approved by IC and appropriate biosecurity measures.
Equipment, vehicles, and other facilities from premises with susceptible species	Prohibited unless specific permit approved by IC and appropriate biosecurity measures.	Prohibited unless specific permit approved by IC and appropriate biosecurity measures.	Prohibited unless specific permit approved by IC and appropriate biosecurity measures.	Allowed by permit approved by IC and appropriate biosecurity measures.	Allowed by permit approved by IC and appropriate biosecurity measures.
Semen, embryos from susceptible livestock or poultry	Prohibited.	Prohibited.	Prohibited.	All At-Risk Premises must become Monitored Premises to move semen, embryos from susceptible livestock or poultry out of a Control Area.	Monitored Premises only allowed by permit approved by IC and appropriate biosecurity measures.

As a continuation of the previous table, further guidance is provided for movements out of a Control Area. Equipment, including vehicles, is prohibited to move out of a Control Area unless permitted by Incident Command while following appropriate biosecurity measures. Similar to the guidance presented for moving within a Control Area, moving semen and embryos from Infected, Suspect, and Contact Premises (which are under quarantine) is prohibited. Movement permits are approved by Incident Command. Surveillance, negative diagnostic tests, premises biosecurity, and risk-assessment may be required for a permit authorizing movement. *[Movement from Inside a Control Area to Outside a Control Area. Content provided by: USDA]*

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Continuity of Business

- COB, managed movement
 - Specific criteria for permitted movement
- Voluntary participation
- Minimize negative impact on producers
- Criteria
 - Risk/science-based
 - Surveillance, cleaning, disinfection, biosecurity, epidemiological information

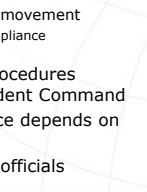


Continuity of business (COB) or managed movement is a specific type of movement control, which establishes specific criteria for the permitted movement of certain livestock and commodities from a premises. Producer participation in managed movement plans is *voluntary*. If producers choose to participate, specific criteria are required to receive a permit for permitted movement. Criteria may be specific for the commodity, the origin and destination, as well as the disease pathogen. Managed movement mitigates the impact of the Federal area quarantine on unaffected producers, and is risk- and science-based, weighing the risk of disease transmission. Developed by public-private-academic partnerships, the criteria for these permitted movements typically require surveillance, cleaning and disinfection, biosecurity measures, and epidemiological information. Plans supporting continuity of business are in development for specific species of livestock and commodities. See information on the Secure Food Supply Plans in Appendix E of the *FAD PReP/NAHEMS Guidelines: Quarantine and Movement Control*. *[The milk in this milk truck is one of the commodities that may be permitted to move. Photo source: Danelle Bickett-Weddle, Iowa State University]*

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Checkpoints

- Enforce requirements
 - May require permit for movement
 - Verifies vehicle is in compliance with regulations
- Standard operating procedures provided through Incident Command
- Outcome of conveyance depends on compliance
- Violations reported to officials



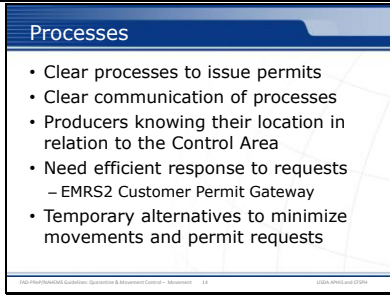
Checkpoints can help to enforce movement control requirements. Conveyances moving out of the quarantined area may require a permit for movement. This permit provides verification that a vehicle is properly cleaned and disinfected, and is transporting animals, fomites, or products in accordance with State and Federal laws and regulations. Specific standard operating procedures for checkpoints will be provided through Incident Command. Guidance for implementing checkpoints will include location of the checkpoint, inspection procedures, permit verification, necessary documentation, biosecurity requirements, and information to provide to the driver of the vehicle. Under most circumstances, animals should not be held at a checkpoint. Depending on the level of compliance, the conveyance should be returned to the premises of origin (if it cannot be permitted), or sent to its destination (if permitted), or Incident Command will provide further instructions. Violations, including failure to have the necessary permit, should be reported to the appropriate officials.

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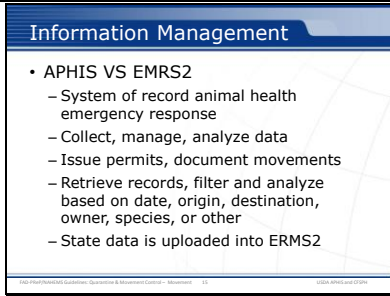
Permitting in an incident will primarily be either specific, covering critical and essential movements on and off quarantined premises, or COB permits to facilitate business and operational continuity for non-infected premises inside the regulatory Control Area. Permitting lessens the risk of transmitting the disease agent by considering risk assessments, surveillance information, biosecurity procedures, as well as national and World Organization for Animal Health standards. It is essential that personnel responsible for permitting have access to the most recent information about the outbreak, as changes in epidemiological and situational information may change permitting requirements. Permitting is likely to require significant resources and information management capabilities during an outbreak. All permitting with regard to the CA is overseen by the Unified Incident Command; States may also have permitting systems and processes.

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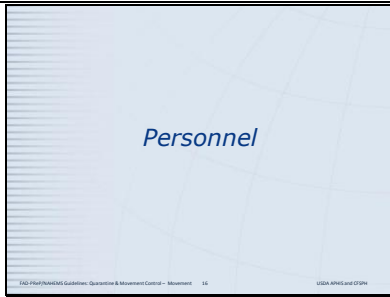
It is important to ensure the Unified Incident Command has clear processes for issuing permits for various types of movement, and that this information is clearly communicated to those affected by the disease response effort. It is equally important that producers have clear and timely information about their location in relation to the Control Area. It is essential to respond efficiently and process permit requests through the APHIS VS Emergency Management Response System 2.0 (EMRS2) Customer Permit Gateway (preferred for all COB permits), telephone, e-mail, or other methods. The Unified Incident Command can also encourage companies to work to implement temporary alternative arrangements for quarantined premises to minimize movement and permit requests. For example, a customer could perform a meter reading, or mail may be held at the post office.

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EMRS2, as the “system of record” for an animal health emergency response, is the primary information management system involved. Permitting, data collection, management, and analysis capabilities are required. EMRS2 is used for all permitting processes, including issuing permits and documenting movements. The system provides the capability to retrieve records of permits and permitted movements and filter (or further analyze) them based on date, origin, destination, owner, species, reason for movement, and other criteria. If States use their own information management systems, all permits and permitted movement information is uploaded into EMRS2. It is critically important that data is entered in a timely and accurate manner. For permitting, electronic or paper forms may be used, such as a VS 1-27 form or other designated form, to accompany movement. Please see the *FAD PReP Manual 6-0: Permitted Movement* for more information.

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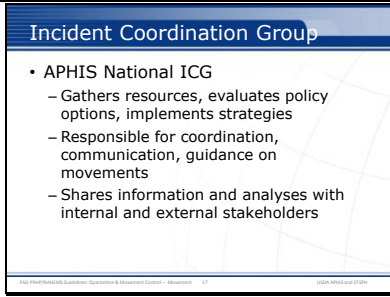


Typically, personnel in the Animal Movement and Permits Group perform QMC activities, though others are involved, such as the Permitting Unit, EMRS2 National Coordinator, and EMRS2 Specialist(s). These personnel may be assigned to different types of teams for executing their responsibilities. Carrying out QMC activities falls to both policy and operational personnel. All personnel need to be properly trained so they can work efficiently and collaboratively. In addition, personnel need to be aware of the hazards, and take the proper precautions to protect themselves.

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Incident Coordination Group

- APHIS National ICG
 - Gathers resources, evaluates policy options, implements strategies
 - Responsible for coordination, communication, guidance on movements
 - Shares information and analyses with internal and external stakeholders




The APHIS National Incident Coordination Group (ICG) is responsible for gathering resources, evaluating policy options, and implementing response strategies as related to QMC. The ICG helps to coordinate agencies, authorities, and resources, and facilitates communication and cooperation amongst affected and non-affected States. The group provides advice and recommendations on imposing quarantines, establishing Control Areas, and formulating guidance or requirements for permits and allowable movements. In addition, the ICG provides information and analyses on QMC activities, including permitting, to internal and external stakeholders.

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Incident Management Team

- Communicate with owners
- Collaborate with other authorities
- Coordinate with other response personnel
- On-site tasks – implement quarantine, ensure biosecurity and permit compliance, protect animal welfare

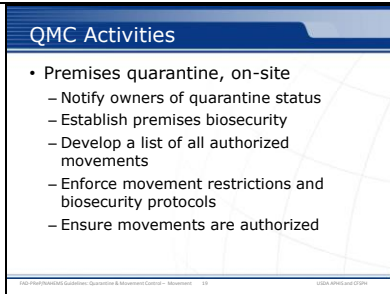


The Incident Management Team (IMT) handles the operational side of QMC activities, those activities implemented in the field. IMT personnel serve as the first line of communication with owners and agents of animals subject to QMC. Additionally, they collaborate with other authorities involved in QMC activities, coordinate with other ICS personnel responsible for biosecurity, depopulation, disposal, cleaning and disinfection, wildlife management and vector control, surveillance, and law enforcement. On-site tasks include implementing quarantine, working with the Biosecurity Group to ensure biosecurity measures are followed, confirming authorization to enter quarantined premises, ensuring compliance with the permit system, and staffing quarantine checkpoints, if established. Keep in mind, the welfare and continued care of quarantined animals may necessitate the coordination for the delivery of feed and other supplies using biosecure methods. *[This photo shows a collection of response personnel, including law enforcement and agricultural officials, coordinating QMC and other emergency response activities. Photo source: SES, Inc., Merriam, Kansas]*

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QMC Activities

- Premises quarantine, on-site
 - Notify owners of quarantine status
 - Establish premises biosecurity
 - Develop a list of all authorized movements
 - Enforce movement restrictions and biosecurity protocols
 - Ensure movements are authorized



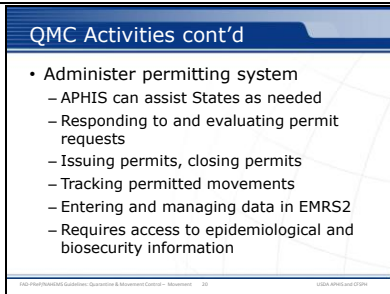
The extent to which specific QMC activities are conducted will vary, depending on the size and scope of the incident, the personnel available, and the decisions of Incident Command. Significant resource and logistical limitations may make widespread QMC activities difficult to implement and/or enforce. Assignment to a quarantined premises will involve on-site presence to:

- Notify animal owners and agents of quarantines imposed or lifted
- Work with a Biosecurity Team to establish premises biosecurity
- Develop a list of all people, animals, vehicles, and equipment authorized to enter or leave the property
- Enforce resultant movement restrictions and biosecurity/cleaning and disinfection protocols
- Ensure that movements on to or off of the premises are authorized.

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QMC Activities cont'd

- Administer permitting system
 - APHIS can assist States as needed
 - Responding to and evaluating permit requests
 - Issuing permits, closing permits
 - Tracking permitted movements
 - Entering and managing data in EMRS2
 - Requires access to epidemiological and biosecurity information



Personnel may also be assigned to administer the permitting for movement control activities. USDA APHIS can assist State(s) if EMRS2 expertise, support, or personnel are required. Permitting activities will include the following:

- Responding to permit requests
- Evaluating permit applications
- Issuing and closing permits, and tracking permitted movements in EMRS2
- Entering and managing data within EMRS2

The State(s) and Unified Incident Command require ready access to epidemiological and biosecurity information so that changes to the permitting criteria can be made as necessary. Permitting requirements may be fluid throughout an incident, particularly as the geographical area of the event expands or contracts.

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QMC Activities cont'd

- Managing permit information
 - EMRS2
 - Documentation preserved, tracked, reviewable
 - Import data from States
- Staff checkpoints
 - Ensure permit compliance
 - Shared responsibilities

[Photo: Officials at a checkpoint with agricultural conveyances.]

Efficient large-scale permitting activities requires sufficient information management systems; USDA APHIS uses EMRS2 for information management during an FAD outbreak. Documentation of permits and movements should be preserved, tracked, and reviewable. Processes have been developed to import data from State or other information management systems into EMRS2 so that permitting can be efficiently implemented in a widespread disease incident. Checkpoints may be required depending on the scope of the event. Checkpoints are intended to ensure compliance with the permit system to allow the permitted movement of animals, animal products, vehicles, equipment, and other materials. Based on authority, checkpoints may be staffed by transportation authorities and local law enforcement officials. *[This photo shows officials from agriculture, law enforcement and transportation sharing responsibilities for permit compliance at a checkpoint. Agricultural conveyances are being checked as they enter and leave a Control Area. Photo source: Mark Davis, Kansas Department of Transportation]*

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Responder Safety

- Orientation
 - Potential hazards
 - Safety precautions
 - Hygiene requirements
- Hazards
 - Physical, chemical, environmental, biological (zoonotic)
- Required PPE
- Safety Officer develops HASP

[Photo: An ambulance at a site.]

Of primary importance is the personal safety of each responder, particularly if a zoonotic disease is involved. All personnel responsible for QMC activities should receive a complete orientation covering potential hazards, necessary safety precautions, and hygiene requirements. Responders may face a variety of hazards, such as sharp edges, farm chemicals, uneven ground, slippery flooring, extreme temperatures, and injuries from animals. Responders must be aware of the biological hazards that may cause illness in animal populations, and if zoonotic, may cause illness to responders themselves. Required personal protective equipment (PPE) may include outerwear, safety goggles, high visibility vests, and respirators. Team members may be assigned to a variety of tasks that could present hazardous situations. The Safety Officer ensures safe working conditions for responders and develops the Incident Specific Health and Safety Plan (HASP) based on an analysis of these hazards. *[The ambulance in this photo is available in case of a medical emergency. Photo source: SES, Inc., Merriam, Kansas]*

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Biological Hazard

- Biosecurity to prevent disease spread
 - Understand pathogen transmission
 - Implement C&D with movements
 - Establish work zones to control access
 - Personal disinfection at departure

The hazard of spreading disease to susceptible animal populations must be addressed through biosecurity. QMC personnel, particularly those assigned on-site to quarantined premises, may work in known contaminated areas. Personnel responsible for evaluating the biosecurity of movements or assigned to checkpoints may unknowingly become contaminated. It is imperative to fully understand pathogen transmission routes, particularly in order to properly evaluate movement permit applications. When movement of people, equipment, vehicles, and other articles is essential, proper cleaning and disinfection is necessary. The establishment of work zones control access to enter and leave quarantined premises and help prevent contamination of clean areas. Personnel working on quarantined premises to depopulate, clean, or disinfect must complete a personal disinfection regimen prior to departure from the premises. For more detailed information on biosecurity, the transmission of disease, and work zones, see *FAD PReP/NAHEMS Guidelines: Biosecurity* and *FAD PReP SOP: Biosecurity*.

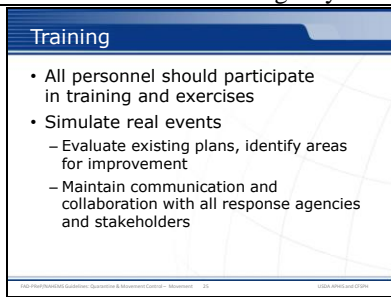
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Waiting Period/Safety Officer

- Avoid contact with susceptible animals not known to be infected
- Time defined by Incident Command
 - Based on disease, task assignment, level of biosecurity
- Avoid transmission of disease to naive premises

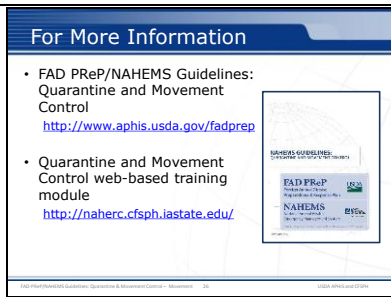
In addition to the personal disinfection regimen prior to departure from the quarantined premises, personnel who leave must comply with an appropriate waiting period, defined by Incident Command. During this time, personnel should not come into contact with any susceptible animal species that are not known to be infected. The waiting period will be based on the disease, task assignment, and level of biosecurity required. It is important that personnel understand this condition in order to avoid the actual or perceived transmission of the disease to naive premises.

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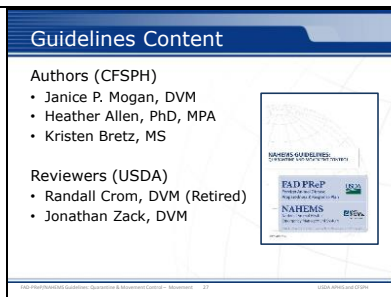
While this presentation focuses on QMC from the perspective of APHIS, other agencies may also participate in QMC activities. It is important that personnel from a wide variety of agencies are trained and exercised for these activities, in order to account for personnel turnover, and to develop a robust cadre of trained responders. Exercises simulate real events in order to evaluate existing plans and identify needed areas of improvement. Potential responders should be encouraged to participate in exercises in order to understand the complex response efforts that will be required. Exercises also help to underscore the need to develop and maintain communication and strong collaborative relationships within the emergency management community, vertically (Federal-State-local), horizontally (interagency), and with industry stakeholders.

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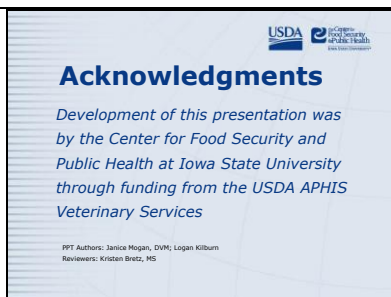
More details can be obtained from the sources listed on the slide, available on the USDA website (<http://www.aphis.usda.gov/fadprep>) and the National Animal Health Emergency Response Corps (NAHERC) Training Site (<http://naherc.cfsph.iastate.edu/>).

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The print version of the Guidelines document is an excellent source for more detailed information. This slide acknowledges the Guidelines' authors and reviewers. It can be accessed at <http://www.aphis.usda.gov/fadprep>.

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