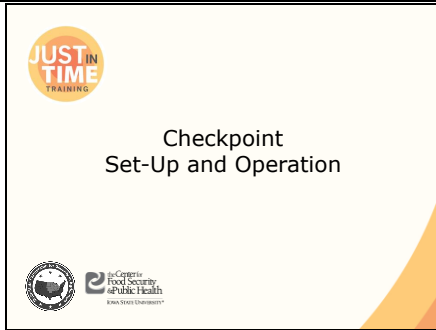


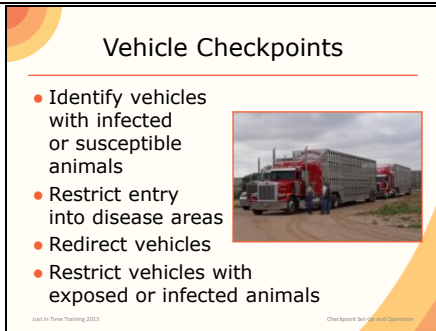
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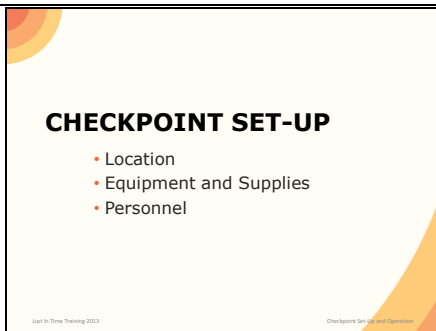
During animal disease emergencies the establishment of vehicle checkpoints may be necessary to monitor, screen, and guide animal transport vehicles. This Just-In-Time training presentation will overview the set-up and operation considerations for a vehicle checkpoint during animal disease emergency situation.

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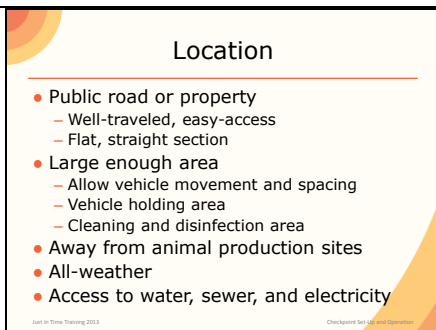
Vehicle checkpoints serve an important function during an animal disease outbreak situation. This process helps identify transport shipments that may contain infected or susceptible animals, blocks entry and redirects unaffected vehicles away from outbreak locations, and restricts the movement of vehicles with infected or potentially infected animals. Vehicle checkpoints also help to establish controlled entry and exit points at infected or suspect premises or state borders. [This photo shows several livestock truck and trailers lined up. Source: Renee Dewell, Iowa State University]

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When setting up a vehicle checkpoint, several factors must be considered and determined prior to use for procedures to proceed smoothly. These include identifying site locations, obtaining equipment and supplies that will be needed, as well as gathering a sufficient number of personnel to man the checkpoint.

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Let's first look at location. Vehicle checkpoints should be located on a public road or property. The site should be a well-traveled, easy-access location to ensure all incoming agricultural traffic driving on that road will go through the checkpoint. Secondary routes may need to be blocked to divert traffic to the checkpoint. The area should be large enough to allow for the volume of traffic and staff activities. Room for vehicle movement and spacing will be important to minimize potential transmission of disease between vehicles awaiting screening. Checkpoint locations should include holding areas for large vehicles. Cleaning and disinfection areas may also be needed.

The checkpoint should be located away from any animal production sites and should be useable for a variety of weather situations. Access to water, sanitary sewer, and electricity will be needed. Vehicle checkpoint site locations should be identified prior to an emergency situation.

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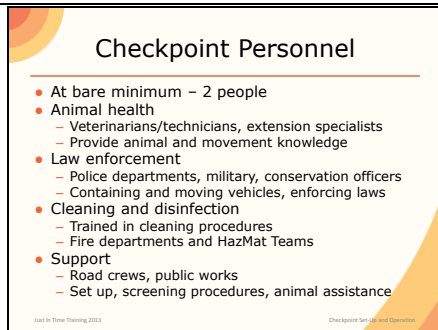
**Equipment/Supplies**

- Road supplies
  - Traffic cones and barricades
  - Signage
    - Inform drivers
  - Reflective vests
- Lighting
- Maps
- Animal supplies
  - Pens or shelter
  - Handling equipment
  - Shade or fans, or water spray
- General supplies
  - Tables, chairs
  - Shelter
  - Communication devices
  - Water

Just In Time Training 2013 Checkpoint Set-Up and Operation

A wide variety of equipment and supplies will be needed for vehicle checkpoint operation. Road signs and traffic control equipment such as traffic cones and barricades will be needed to guide vehicles through the checkpoint, holding and C&D areas. Standards for installing and maintaining traffic control devices for public roadways are outlined in the *Manual on Uniform Traffic Control Devices* (<http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/mutcd2009r1r2edition.pdf>) and should be followed. This document is published by the Federal Highway Administration (FHWA) under the Code of Federal Regulations (CFR), Section 23, Part 655, Subpart F. Personnel working near the road or barricades will need reflective safety vests. All traffic control devices and signs should be lighted or reflective for night use. If vehicle control activities will be conducted at night, lighting for the checkpoint area should be set up. Generators, drop service, or batteries will be needed to keep the lighting working at all times. Checkpoint sites should have maps of the area, as these can be useful to help drivers that are being rerouted navigate their detour route. In addition to traffic control equipment, supplies for the handling and welfare of any animals diverted will be necessary. Pens or housing for animals may be needed if animals are to be off-loaded. In these situations, equipment to herd or move the animals should be available. In hot weather situations, fans or water spray will be needed to keep the animals cool while moving through the checkpoint line. Additionally, general supplies, such as tables, chairs, water for workers, and sanitation facilities should be available. A means of communication, such as portable radios or cell phones, as well as computers to transmit document related information will also be needed.

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**Checkpoint Personnel**

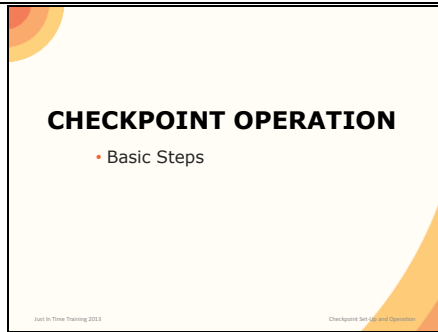
- At bare minimum - 2 people
- Animal health
  - Veterinarians/technicians, extension specialists
  - Provide animal and movement knowledge
- Law enforcement
  - Police departments, military, conservation officers
  - Containing and moving vehicles, enforcing laws
- Cleaning and disinfection
  - Trained in cleaning procedures
  - Fire departments and HazMat Teams
- Support
  - Road crews, public works
  - Set up, screening procedures, animal assistance

Just In Time Training 2013 Checkpoint Set-Up and Operation

A sufficient number of personnel should be staffed at the vehicle checkpoint to handle the anticipated volume of traffic and minimize delays at the checkpoint. All checkpoints, at a bare minimum, should have two people to allow for backup in the case of emergency or injury. Personnel staffed at the checkpoint may include individuals with training and expertise in animal health, law enforcement, cleaning and disinfection, as well as support personnel.

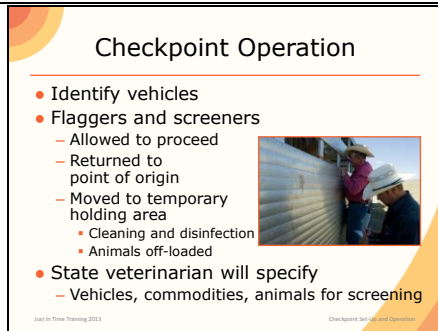
- The animal health personnel can be made up of local veterinarians and technicians, state veterinary response corps members, or extension specialists, all of whom are helpful in animal knowledge and proper animal movement paperwork.
- Law enforcement personnel present at the checkpoint can include local and state police departments, military police, National Guard, conservation officers, and park rangers. These officers will assist in containing and moving vehicles, and enforcing any laws associated with the checkpoint.
- Cleaning and disinfection personnel will be needed, and should be trained in proper cleaning and disinfection techniques for the given disease situation and when these techniques need to be used. Groups that may have this training and be of assistance include fire departments and HazMat Teams.
- Road crews or public works departments may also be helpful for setting up checkpoint locations

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While each vehicle checkpoint will have unique goals for a particular situation, a few basic steps apply to most situations.

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First, the checkpoint will serve to identify vehicles with infected or susceptible animals. Monitoring and screening of vehicles and transport documentation will help determine the level of disease risk for the animals on the transport vehicle.

The checkpoint should have individuals serving as flaggers – which identify vehicles and direct them to the checkpoint screening area – and screeners – who review checkpoint criteria or compliance with movement control orders. Additionally, staff will be needed to direct or guide the vehicle to the temporary holding area when warranted. Depending on the criteria for the checkpoint, vehicles will either be allowed to proceed to their destination, directed to return to their point of origin, or diverted to a temporary holding area for additional procedures, which may include cleaning and disinfection procedures, or off-loading of the animals. Due to the dynamic nature of an animal disease emergency, the defining criteria of a movement control order is likely to change. These changes will need to be communicated to checkpoint personnel in a timely and efficient manner.

The state veterinarian, who will issue the movement control order, will specify the types of vehicles, commodities and animals that will need to be stopped and screened based on the particular incident. This will vary based on the disease of concern and the animals susceptible to the disease. [Inspecting a livestock trailer. Photo source: <http://www.craigdailypress.com/photos/2009/aug/08/22213/>]

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Additional procedures that will be needed at the checkpoint, include documentation, communication, cleaning and disinfection measures, attention to animal welfare and waste management. All personnel should receive training prior to working at the checkpoint.

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**Documentation**

- Date/time at checkpoint
- Checkpoint location
- Vehicle and driver information
- Owners name
- Vehicle contents
- Point of origin
- Destination
- Health papers and shipping documents
- Action taken
  - Allowed to proceed
  - Returned to point of origin
  - Diverted to temporary holding area

Just In Time Training 2013 Checkpoint Set-Up and Operation

Records of vehicles entering the area will help animal health officials track and trace the movement of animals – including origin and destination – to determine areas of concern and help to determine the level of risk of exposure for the animals. It also allows contact of owners in case of outbreak changing criteria. Accurate record keeping at the checkpoint will be essential. Documentation may include:

- Date/time arrived at checkpoint
- Location (highway, mile marker) of checkpoint
- Vehicle make and model, license number, state of licensure, vehicle US DOT number
- Driver’s license number and state, contact information (address and phone) for the driver
- Point of origin (place where animals were loaded), including contact name, address and phone number, and premise ID# if possible
- Types of health papers/shipping documents examined, include issuing state and any document number on the form
- Description of the vehicle contents
  - Animal: species and number
  - Feed type (e.g., hay, grain)
  - Equipment (e.g., livestock panels)
- Final destination of the load, contact name, address and phone number
- Animal (or commodity) owner name, address and phone number

The driver should provide a signature on the information sheet. It is also important to record if the vehicle was diverted to a temporary holding area to off-load, returned to its point of origin or allowed to proceed to its intended destination.

In addition to transport vehicles and load information, documentation of resources used for traffic control, such as labor charges, equipment rental, cost of expendable equipment will be needed for reimbursement.

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**Communication**

- Checkpoint to Incident Command
  - Two-way radios
  - Cell phones
  - Computers
- Industry stakeholders
- Media
- General public

Just In Time Training 2013 Checkpoint Set-Up and Operation


Each vehicle checkpoint should have a means of communication with Incident Command. This may be via two-way radios or cell phones. Computers will also be needed to record and transmit document related information.

Communication with the industry, associated/affiliated industries, such as trucking companies, and public regarding the vehicle checkpoint will be essential. DOT message boards can be used to relay the necessary information and can improve patience with the checkpoint process. A public awareness campaign explaining the situation can increase compliance with checkpoint procedures. Information sheets for distribution can aid in ensuring uniform information dissemination. Provide an explanation for the traffic control measures, how to obtain a permit for animal movement, alternative routes, if allowed, basic biosecurity measures. Additionally, media coverage can aid in informing drivers of the checkpoint necessity and procedures.

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### Cleaning and Disinfection

- Disinfectants
  - Determined by disease
- Equipment
  - Brushes
  - Buckets
  - Berming material
- Personnel
  - Disinfect between vehicles



Just In Time Training 2013      Checkpoint Set-Up and Operation

Cleaning and disinfection may be a necessary step before transport vehicles can leave a checkpoint location. This infection control measure can reduce the risk for disease spread to additional areas. Most situations will involve spot C&D, such as undercarriage and tire washes. If more intense C&D is required, set-up should be established in a holding area at the checkpoint. Any material falling or leaking from stopped vehicles must be scooped up, absorbed and the area cleaned and disinfected.

Equipment and supplies needed for a C&D station will include an effective disinfectant product as well as cleaning equipment such as brushes and buckets. Selection of disinfectant product will be dependent on particular disease being addressed. A running water source will be needed. Equipment such as berming materials (e.g., 4x4, sand tubes) and sump pump may be needed to redirect or contain wastewater generated.

The C&D station should be manned by personnel knowledgeable in cleaning and disinfection, and biosecurity procedures. Any personnel in contact with vehicles should wash or disinfect their hands between vehicles and disinfect footwear before leaving the location. For more information on vehicle and personnel C&D see the C&D Just-In-Time training presentations (<http://www.cfsph.iastate.edu/Emergency-Response/just-in-time-training.php>).

[Photo shows a feed truck having its tires cleaned and disinfected. Photo source: Danelle Bickett-Weddle, Iowa State University]

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### Personal Protective Equipment

- Goggles or face shield
- Disposable or washable coveralls
- Gloves
- Over boots
- Extra sets available


Just In Time Training 2013      Checkpoint Set-Up and Operation

Any personnel working the C&D station will need personal protection equipment such as water proof footwear and outerwear. PPE at C&D stations not only protects personnel from possible zoonotic diseases but also from the chemical disinfectant exposure and getting wet. Masks and goggles may be needed with mixing and applying disinfectant solutions. Gloves can protect hands. For more information on Personal Protective Equipment, see the PPE Just-In-Time training presentation.

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### Animal Welfare

- Weather is critical factor
  - Truck movement cools animals
  - Stopping reduces this effect
  - Can negatively affect animal health
  - Keep traffic moving as quickly as possible
  - Portable fans and misters may aid to keep animals cool



Just In Time Training 2013      Checkpoint Set-Up and Operation

Animal welfare must be addressed at traffic checkpoint locations. One of the critical factors to consider is weather, particularly heat and humidity. Animals being transported in hot weather are dependent on the airflow created by a moving truck in order to keep cool. If trucks are stopped for an extended amount of time, the airflow is compromised and heat can begin to negatively affect the health and safety of these animals. It is important to keep checkpoint traffic moving as quickly and smoothly as possible, especially in hot weather. Swine are particularly sensitive to high temperatures and can succumb fairly quickly if mitigating actions are not taken. Portable fans and misting devices may be used to help keep the animals cool and comfortable. [This photo shows a semi truck with an animal hauling trailer. Source: Renee Dewell, Iowa State]

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### Waste Management

- All waste is considered contaminated
  - Feces, urine, bedding material
  - Personal protective equipment
- Remove waste immediately and put in solid container for disposal
- Do not dispose of any waste where it will harm environment
- Provide sharps container for contaminated needles

Any waste generated at a checkpoint should be considered contaminated and disposed of properly. This primarily includes feces, urine, bedding material and any unwashable personal protective equipment. As previously mentioned any runoff water, detergent, and disinfectant must be contained or handled in such a manner to avoid environmental harm or impact. If veterinary activities such as drawing blood or collecting tissue samples are conducted at the checkpoint site, sharps such as needles or scalpel blades should be placed in an appropriate sharps container and dispose of according to proper biological waste disposal requirements.

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### Training


- Incident Command System (ICS)
- Quarantine terminology
- State import regulations
- State response plan
- Basic biosecurity
- Safety issues
- Screening criteria

All personnel working at a vehicle checkpoint should be familiar with the Incident Command System, and Quarantine terminology. Additionally, personnel must have a basic understanding of the state import regulations, the state response plan, basic biosecurity, safety issues, and the screening criteria for the checkpoint. More information on the Incident Command System, quarantine structure and terminology, and biosecurity can be found in the corresponding Just-In-Time presentations. (<http://www.cfsph.iastate.edu/Emergency-Response/just-in-time-training.php>)

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### Lessons Learned from Previous Checkpoint Exercises

- Industries were grateful for protection
- Producers were more confident in herd's protection
- Species industries will shut down themselves
- Well informed public



In a recent exercise testing vehicle checkpoint procedures for an interstate situation, many lessons were learned. First it was determined that the various species industry groups were grateful for the protection provided by vehicle checkpoint procedures. The process helped industries feel more confident in the role these actions had in keeping disease out of their state. As a result of this confidence, industry groups indicated they would aid in controlling vehicle and animal movement within their group. [This photo shows a semi truck with an animal hauling trailer. Source: Veterinary Diagnostic and Production Animal Medicine, Iowa State University]

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**Memorandums of Understanding**

- For multi-jurisdictional collaboration
  - Authorities
    - Who will be in charge
  - Responsibilities
    - Individual state and collaborative tasks
  - Support
    - Checkpoint specifics and logistics
  - Communication
    - Disease dependent criteria
  - Financial accountability
  - Limitations and termination of agreement

Just In Time Training 2013 Checkpoint Set-Up and Operation

When checkpoint locations are set up between two jurisdictions (e.g., states or counties), the coordination of efforts between the two will be necessary. Memorandums of Understanding, or MOUs, should be established to outline terms of agreement between the two jurisdictions, such as authorities, responsibilities, support, communication, financial accountability, limitations and termination of the agreement.

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**Resources**

- Graham JL, Hutton J, Cao S, Fagel M, Wright W. 2008. National Cooperative Highway Research Program (NCHRP) Report 525, Volume 13: A guide to traffic control or rural roads in an agricultural emergency.
  - [http://www.nap.edu/catalog.php?record\\_id=14184](http://www.nap.edu/catalog.php?record_id=14184)
- Emergency Agriculture Movement Control Checkpoint Selection Guidance. Multi-State Partnership for Security in Agriculture.
  - <http://www.nasda.org/File.aspx?id=4076>
- Traffic Control – Agricultural Response Monograph No. 001. Nebraska Department of Agriculture
  - [http://www.nda.nebraska.gov/homeland\\_security/monograph\\_001.pdf](http://www.nda.nebraska.gov/homeland_security/monograph_001.pdf)

Just In Time Training 2013 Checkpoint Set-Up and Operation

The establishment of checkpoint stations during an animal health emergency may be needed to identify affected vehicles, animals and commodities in efforts to control any disease spread and protect animal health. For more information on checkpoint set up and operation during an animal health emergency response, consult these resources.

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**Acknowledgments**

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