



Colorado Department of Agriculture

Secure Milk Supply (SMS) Plan

**A Foot and Mouth Disease Preparedness and
Continuity of Business Plan**

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1.0 INTRODUCTION

The Colorado Department of Agriculture (CDA), Animal Health Division, also referred to as the State Veterinarian's Office ("State Veterinarian"), is a statutorily created agency with authority and responsibilities vested in the Colorado Agricultural Commission and the Colorado Commissioner of Agriculture pursuant to articles 1 through 80 or title 35, C. R. S. The State Veterinarian serves under the authority and delegation of the Colorado Department of Agriculture Commissioner of Agriculture.

Foot and mouth disease (FMD) is a highly contagious foreign animal disease (FAD) that infects cattle and other cloven-hooved livestock, such as swine, sheep, goats, and deer, and other wildlife. If one or more cases of FMD are identified in the state of Colorado, the State Veterinarian has the authority and responsibility to enforce quarantines and establish Control Areas around FMD infected premises and to manage animal and animal product (e.g., milk) movement within, into, and out of the Control Area and other areas of the state.

1.1 PURPOSE

The Colorado Secure Milk Supply Plan (CO SMS Plan) provides additional guidance, beyond that described in the National Secure Milk Supply Plan (SMS Plan), for the **Colorado dairy industry** to move milk to processing from unaffected dairy farms in a Control Area. Due to the extensive movement of raw milk to processing within and into the state of Colorado, regional cooperation enhances the effectiveness of these efforts to support the continuity of business of the dairy industry. Allowing milk movement under the guidance described here will help preserve the economic viability of dairy farms and dairy businesses and ensure a continuous supply of dairy products to consumers.

The CO SMS Plan can be broken down into two components:

Pre-Event Preparedness

Pre-outbreak planning, including assessment of biosecurity protocols, to be implemented by producers, haulers, and processors.

Post-Event Response

Measures producers, haulers, and processors must take to receive a milk movement permit once a FMD outbreak occurs.

Goals of the CO SMS Plan:

- Maintain business continuity for dairy producers, haulers, and processors during an FMD outbreak
- Provide for efficient and effective emergency disease response to minimize disease spread
- Assure a continuous supply of milk and milk products to consumers

Although the CO SMS Plan does not address live animal movement, the CDA recognizes that the movement of livestock is essential to the continuity of business. Biosecurity and surveillance requirements are equally important to the movement of livestock, compost, feed, and equipment to prevent the transmission of FMD. For guidance on the movement of these products during a FMD outbreak, please refer to the *Colorado Dairy Emergency Disease Response Plan*.

The science- and risk-based planning for the milk movement under the SMS Plan is primarily for **dairy cattle**, however the basics of biosecurity and milk transport remains the same for other species of animals.

In Colorado, there is a presence of other species that produce milk, including: camels, water buffalo, goats, and sheep. The movement of these milk products will be considered under the umbrella of this CO SMS Plan, as these species are susceptible to FMD. However, the requirements to obtain milk movement permits for these species may be different than dairy cattle.

1.2 GUIDANCE DOCUMENTS

The CO SMS Plan aligns with the goals, concepts, and terminology found in the following guidance documents:

- Foreign Animal Disease Preparedness and Response Plan (FAD PReP):
 - [*Foot and Mouth Disease Response Plan: The Red Book*](#)
 - [*Classification of Phases and Types of a Foot-and-Mouth Disease Outbreak and Response*](#)
 - [*Manual 6-0: Permitted Movement*](#)
 - [*Dairy Industry Manual*](#)
 - [*NAHEMS Guidelines: Quarantine and Movement Control*](#)
- [Secure Milk Supply Plan](#) components:
 - [Biosecurity Performance Standards \(BPS\)](#) for Raw Milk Collection and Transport
 - Pro-active Risk Assessments for Raw Milk Movement Results Summary
 - [Baseline](#) and [BPS](#)
 - [Self-Assessment Checklist](#) for Enhanced Dairy Biosecurity
 - [Information Manual](#) for Enhanced Biosecurity: Dairy
 - [Milk Movement](#) from Control Areas in an FMD Outbreak

Links to the Colorado Emergency Response plans and SOPs:

- Colorado's Dairy Emergency Disease Response Plan
- Colorado Secure Milk Supply Industry

1.3 DAIRY INDUSTRY PLANNING AND PREPAREDNESS

The CDA has worked with many agencies, entities, and planning partners to develop and implement the CO SMS Plan; they include: Dairy Farmers of America (DFA), Western Dairy Association (WDA), Colorado Livestock Association (CLA), CSU Veterinary Clinical Sciences, CSU Animal Sciences, CSU Extension, CSU Veterinary Diagnostic Laboratory (CSUVDL), USDA APHIS Veterinary Services, Colorado Division of Homeland Security and Emergency Management (DHSEM), local emergency management personnel, Colorado State Patrol and local law enforcement, Colorado Department of Transportation (CDOT), Colorado Department of Public Health and Environment (CDPHE), milk haulers, milk processors, and practicing veterinarians.

1.4 PLAN UPDATES

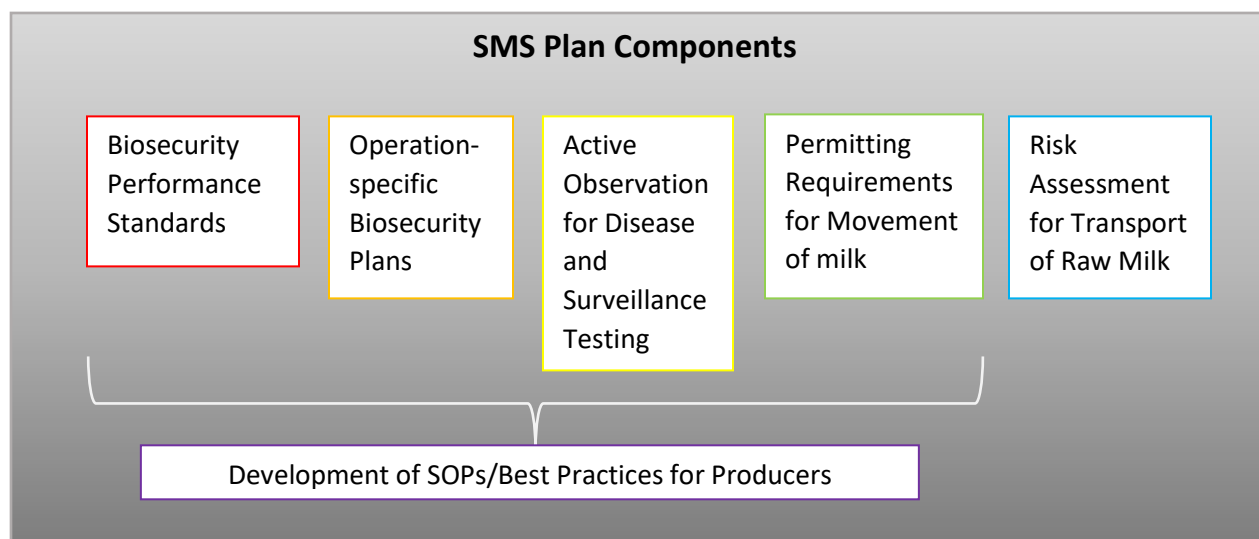
The CO SMS Plan will be reviewed by the CDA on a routine basis or when there are significant changes to the National Secure Milk Supply Plan.

1.5 OVERVIEW OF THE SMS PLAN

In the event that FMD is diagnosed in the United States, an animal health emergency will be declared and livestock and allied industries will feel the immediate impacts of animal and animal product quarantine

and movement restrictions. The just-in-time supply practices of milk movement in the U.S. could result in significant interruptions of milk and milk products to consumers, as well as create significant milk disposal and animal welfare issues on dairies. Movement of cattle to other operations is another important component of the dairy industry that would be impacted during an FMD outbreak. A well-developed, science- and risk-based plan requires the input of industry, state, and federal animal health officials.

Figure 1.1 SMS Plan Components



2.0 MOVEMENT RESTRICTIONS

By restricting the movement of infected animals, animal products, and contaminated fomites, quarantine and movement control can be a powerful tool in controlling and containing an FMD outbreak. Movement control is accomplished through a permit system that allows entities to make necessary movements without creating an unacceptable risk of disease spread. All components of the dairy industry and producers need to strictly adhere to movement control procedures, which are based on the best scientific information available at the time.

2.1 IMPORTANCE OF BIOSECURITY

State Veterinarian: It is the Colorado Department of Agriculture (CDA) and the State Veterinarian's responsibility during an outbreak to detect, control, and contain FMD in animals as quickly as possible with the ultimate goal of eradication. The state veterinarian will be making permitting decisions regarding the movements of animals and animal products (milk, semen, embryos) within, out of, and through Control Areas based on the unique characteristics of the outbreak, the status of the premises, and the risks involved with the types of movement. The Biosecurity Validation Group (See [Appendix G](#)) under the ICS structure will be responsible for validating biosecurity on premises within the Control Area.

Producers: It is the producer's responsibility during a FMD outbreak to keep their animals from becoming infected, focusing on what they can control on their operation. *Biosecurity* will be paramount to limiting disease spread. To facilitate business continuity (movement), producers will need to provide assurances

to the State Veterinarian they are not contributing to the spread of disease nor putting their own animals at risk of exposure. This document focuses on the biosecurity measures needed to limit disease spread through the **movement of raw milk to processing**.

**** It is critical that biosecurity and movement of milk is a coordinated effort between producers, haulers, and processors. ****

Contingency Plans: Producers located in a Control Area should also be prepared to manage their dairy premises without being allowed to move animals (calves, heifers, bulls, steers, dry cows, etc.) and milk until movement permits are issued. Site-specific contingency plans should be developed to address movement restrictions in the initial stages of the disease outbreak; including animals, equipment, and other on-farm and off-farm traffic.

Pasteurization: Dairy cattle may be infected and shedding the FMD virus for days before clinical signs of the disease appear, thus raw milk transported from dairy farms must be treated as *potentially infected*. FMD is not a food safety or public health concern; it is an animal health disease. However, all milk transported from dairies within a control area must either be (a) going to a processing plant for pasteurization or (b) already be pasteurized when it leaves the dairy farm, regardless if it is intended for human or animal consumption, to limit the potential for disease spread. See sections 5.10.5.5 and 5.10.5.6 for procedures for the inactivation of FMD virus in milk and cream in *The Foot-and-Mouth Disease Response Plan: The Red Book*.

Vehicles and Visitors: Vehicles and people visiting farms and having contact with raw milk, including milk trucks and hauler/drivers and other on-farm and off-farm movements, must be treated as potential methods of disease transmission.

Haulers and Processors: Hauler/drivers represent a *moderate to high risk* of spreading the disease unless strict biosecurity procedures are followed. On multiple farm pick-up routes, the milk truck and hauler/driver may spread the disease from an infected but undetected farm to an uninfected farm. Cross-contamination may occur at processing plants among milk truck hauler/drivers, among milk trucks, and with other people and vehicles through contact with raw milk. Control measures focused on preventing the spread of FMD virus via the milk truck/tanker and milk truck driver/hauler is the focus of the CO SMS Plan. See [Appendix D: Milk Hauler/Driver Biosecurity Expectations](#).

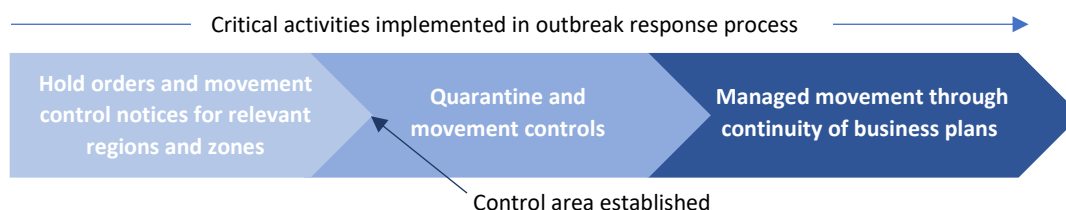
Biosecurity Performance Standards: The [SMS Biosecurity Performance Standards for Raw Milk Collection and Transport](#) is a document for *dairy producers, milk haulers, and processing plants* that describes the recommended biosecurity performance standards (BPS) to implement in support of rapid permitting for raw milk movement in the event of a FMD outbreak. Compliance with these performance standards is intended to reduce the chance of spreading FMD and increase the chance of timely permitting of raw milk movement from uninfected dairy premises to processing.

Pasteurized Milk Ordinance (PMO): The Grade “A” Pasteurized Milk Ordinance (PMO), published by the U.S. Department of Health and Human Services, Public Health, Food and Drug Administration, outlines minimum standards and requirements for Grade “A” milk production and processing. The Colorado Department of Public Health and Environment (CDPHE) is the agency which oversees the PMO in the State of Colorado [see the [CDPHE Milk and Dairy Regulations](#)]. In the face of an outbreak, the CDA will

collaborate with CDPHE to ensure that milk from dairies within a Control Area which meets the requirements of Grade “A” PMO may be transported in a biosecure manner to commercial processing for pasteurization according to PMO standards and enter normal commerce for human consumption. The CDA and CDPHE will coordinate with DFA to develop plans for on-farm bulk milk tank sample collection and certification of farm workers to perform this task in accordance with farm-specific biosecurity protocols.

Coordinated Effort: Pre-event planning must be a coordinated effort between industry and government. See Appendix 5 in the Biosecurity Performance Standards (BPS) for Raw Milk Collection and Transport.

2.2 ESTABLISHMENT OF RESTRICTED MOVEMENT AREAS AND MILK MOVEMENTS



2.2.1 State Veterinarian Response to an Outbreak

The State Veterinarian and Incident Commander will coordinate activities to establish an Infected Zone and a Buffer Zone (see Figure 2) within 12 hours of the identification of an index case. Livestock movement controls and permitting process will be implemented upon detection of FMD in the United States in relevant regions or zones. Once the Control Area is established (Infected Zone plus Buffer Zone), quarantine, movement controls, and permitting will be implemented.

At the onset of a FMD outbreak in Colorado, authorities will place movement controls on livestock and livestock products while initial investigations take place to identify the scope of the outbreak. The investigation involves identifying any infected farms, suspect farms, and contact farms with disease trace-back or trace-forward (epidemiological) links to infected farms. During this initial response, movement restrictions are likely to cover large areas, possibly statewide, and may restrict both interstate and intrastate movements.

The CO SMS Plan includes the concept of regionalization of milk movement (which separates animal subpopulations to maintain disease-free status in one or more zones on a geographic basis) to allow continued milk movement where possible while reducing the potential risk of spreading FMD. This initial phase of the disease investigation is expected to take two to seven days. Once the initial investigation phase is completed, authorities may create more precise movement control areas around infected premises or in certain parts of the State. Control areas around infected premises would remain in place for a minimum of two weeks as intensive surveillance of susceptible species is conducted on the farm premises within the control area. The control area may be enlarged during this time if additional infected farms are found or if disease conditions warrant.

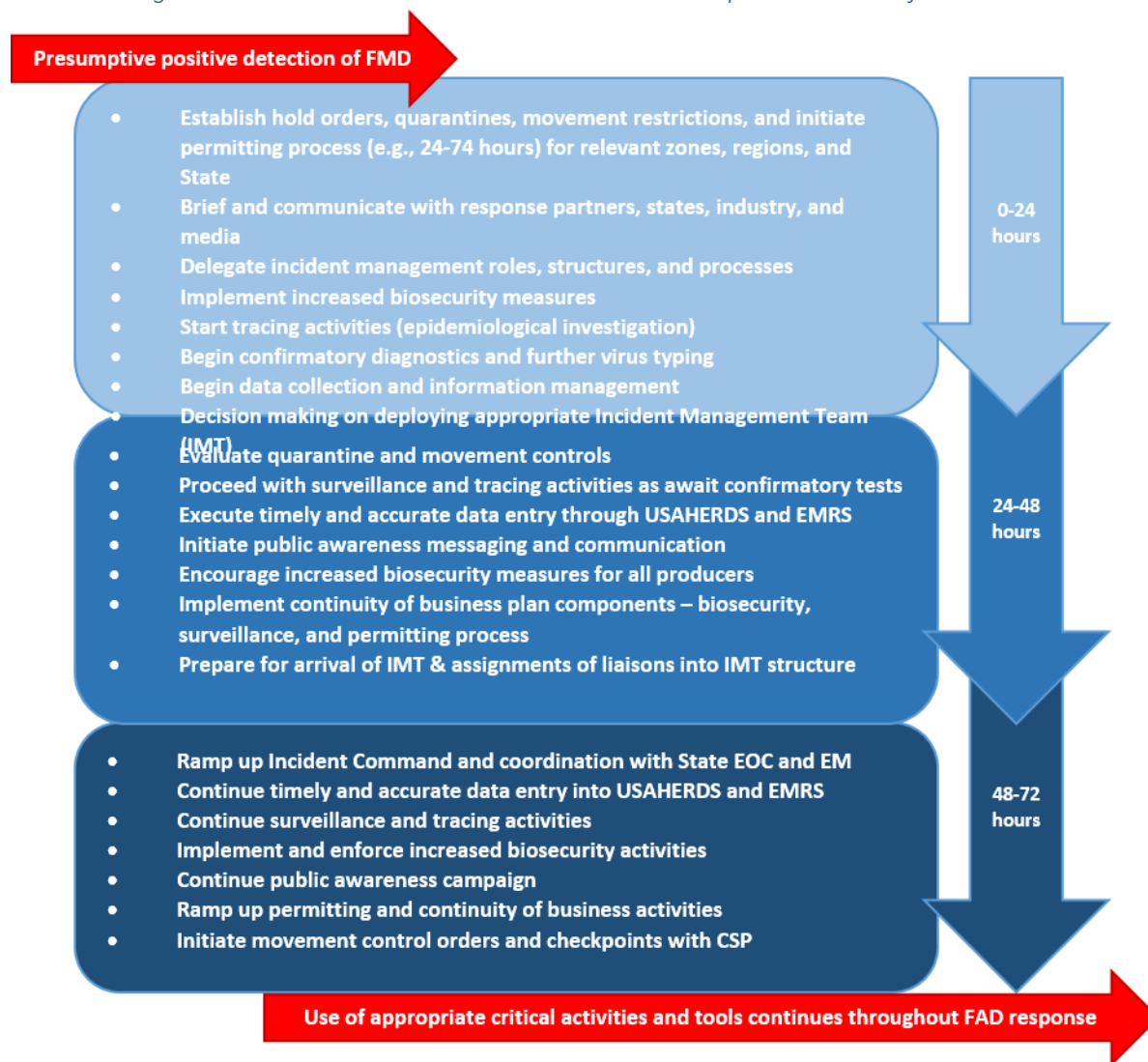
Colorado State Patrol – Movement Control

The Colorado State Patrol, through a multi-jurisdictional planning and response initiative in partnership with members of the agriculture community, will quickly respond to, diligently investigate, coordinate

with and take direction from the CDA to prevent the introduction of or the spread of a foreign animal disease (FAD), such as FMD.

The State Patrol will be the primary agency for controlling vehicles carrying agricultural products. The State Patrol will work closely with the CDA and the incident command team, the Colorado Division of Homeland Security and Emergency Management (DHSEM), Colorado Department of Transportation (CDOT), local law enforcement, other support agencies, and cross-border animal health MOUs in the operation of the road closures and the diversion of vehicles carrying agricultural products. At checkpoints, the State Patrol will be verifying that vehicles carrying agricultural products have a valid movement permit from the CDA and are following emergency disease livestock movement protocols.

Figure 2.1 STATE: Critical Movement and Control Response Activities from 0-72 hours



Source: Adapted from NAHEMS Guidelines: Quarantine and Movement Control

2.2.2 Definitions and Classifications of Phases and Types of an FMD Outbreak

Each phase and type is associated with actions related to biosecurity, surveillance, and milk movement restrictions. These actions are defined in *The Foot-and-Mouth Disease Response Plan: The Red Book*. These phases and types are defined as follows:

- **Phase 1:** The time from the confirmation of the first phase until the extent of the outbreak can be reasonably estimated.
- **Phase 2:** Scope and severity of the outbreak.
 - *Type 1:* Focal outbreak
 - *Type 2:* Moderate regional
 - *Type 3:* Large regional
 - *Type 4:* Widespread or national
 - *Type 5:* Catastrophic
 - *Type 6:* North America
- **Phase 3:** Recovery Phase

2.2.3 Definitions and Classification of Farm Premises

From pages 5-16 in *The Foot-and-Mouth Disease Response Plan: The Red Book*.

- **Infected Premises:** Confirmed or presumptive case exists.
- **Contact Premises:** Having susceptible animals that may have been exposed to FMD directly or indirectly through contact with infected premises.
- **Suspect Premises:** Having susceptible animals with clinical signs compatible with FMD.
- **At-Risk Premises:** Having susceptible animals but can demonstrate they are not infected, contact, or susceptible premises and seek to move animals or animal products within a Control Area by permit.
- **Monitored Premises:** Meet the criteria for At-Risk premises and seek to move animals and animal products out of a Control Area.
- **Free Premises:** Are not Contact or Suspect premises and lie outside Control Areas.
- **Vaccinated Premises:** Premises where emergency vaccination has been performed and may be a secondary designation.

2.3 DEFINITIONS OF AND ESTABLISHING MOVEMENT RESTRICTED AREAS

2.3.1 Movement Restrictions upon Diagnosis of FMD outside of Colorado

The State Veterinarian in Colorado and CDA may impose movement restrictions immediately after the confirmation of the first case of FMD in the United States (not in Colorado) as a precautionary action to reduce the risk of disease spread. These movement restrictions may be imposed statewide or over one or more parts of the state. The areas and nature of the restrictions are expected to change as more information on the outbreak becomes available. At this stage, the State Veterinarian may also require the dairy industry (dairy farms, drivers/haulers, and processing plants) to increase their biosecurity.

The Colorado SMS Plan and the following guidelines will be used by the State Veterinarians in consideration of issuing movement restrictions, in priority order:

- That FMD has been identified in a border state or a state that ships milk into Colorado for processing.
- That FMD has been identified in a state contiguous with Colorado or in a state with strong epidemiological links in the form of susceptible animal or animal product movements to a cooperating state.
- The geographic extent and severity of the outbreak within the contiguous 48 states.
- That FMD has been identified in one or more non-contiguous states with weak epidemiological links to Colorado.
- That FMD has been identified in other states geographically remote with no significant epidemiological links to Colorado. For example, a case of FMD in New England would be unlikely to trigger movement restrictions and the implementation of the CO SMS Plan in Colorado.
- Suspected bioterrorist activity generally would raise the priority for imposing movement restrictions under each of the situations described above.

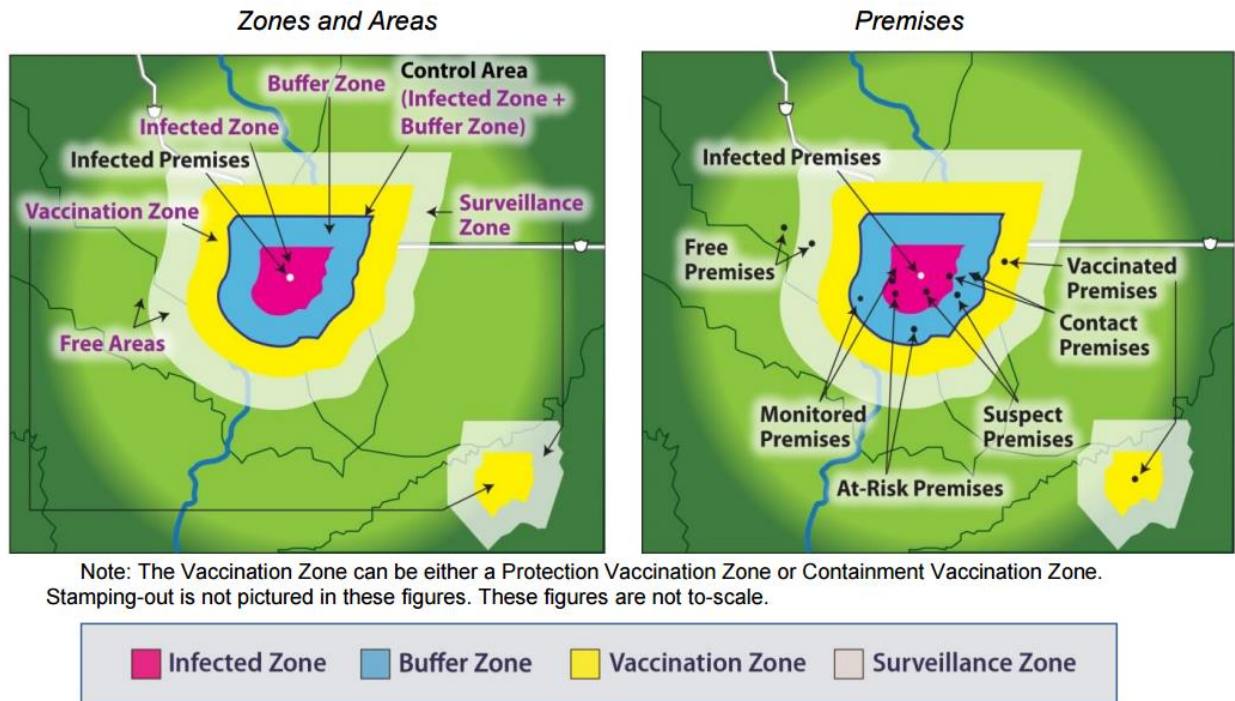
In the event of an FMD event occurring in the United State, the State Veterinarian of Colorado would discuss movement restrictions before implementing them, using these guidelines as the basis for decision making.

2.3.2 Movement Restrictions upon Diagnosis of FMD within Colorado

Movement restrictions would be imposed in Colorado once a presumptive or confirmed case of FMD has been identified in the state of Colorado and one or more premises have been designated as an Infected Premises. The goal of movement restrictions would be to control the disease and prevent spread, protect unaffected producers, and assure other states that the State is actively responding to the disease to minimize added state restrictions on movement of livestock and livestock products. (Control Areas may be established in Colorado because there is one or more Infected Premises in an adjacent state). The following definitions are adopted from federal agency definitions contained on page 5-16 of *The Foot-and-Mouth Disease Response Plan: The Red Book*.

- **Infected Zone:** Zone immediately surrounding an Infected Premises
- **Buffer Zone:** Zone immediately surrounding an Infected Zone or Contact Premises
- **Control Area:** An area that includes an Infected Zone and its Buffer Zone
- **Surveillance Zone:** Zone on the outside border of a Control Area
- **Free Area:** Any area not included in a movement restricted area including Stage 1 movement restriction areas and Control Areas
- **Vaccinated Zone:** Emergency vaccination zone either (a) a Containment Vaccination Zone that usually lies inside a Control Area or (b) a Protection Vaccination Zone that usually lies outside a Control Area

Figure 2.2 Example of Zones, Areas, and Premises in FMD Outbreak Response



Source: Foot-And-Mouth Disease Response Plan: The Red Book

2.3.3 Establishing Control Areas

The CO SMS Plan adopts from the farm premises classifications in *The Foot-and-Mouth Disease Response Plan: The Red Book* and established Control Areas around infected premises based on the *Red Book* guidelines. An Infected Zone of a minimum of 3 km will be created around an Infected Premises with a Buffer Zone of a minimum of 7 km around the infected zone. Therefore a Control Area will be a minimum of 10 km beyond the perimeter of any Infected Premises.

The *Red Book* on pages 5-19 and 5-20 lists 10 factors to consider in determining the actual size of a control area. These factors are specified in Table 3 below.

Table 3.1 Factors Used to Determine Control Area Size

Factors	Additional Details
Jurisdictional Areas	<ul style="list-style-type: none"> - Effectiveness and efficiency of administration - Multi-jurisdictional considerations: Local, State, Tribal and multi-State
Physical Boundaries	<ul style="list-style-type: none"> - Areas defined by geography - Areas defined by distance between premises
Disease Epidemiology	<ul style="list-style-type: none"> - Reproductive rate - Incubation period - Ease of transmission - Infectious dose - Species susceptibility - Modes of transmission (fecal-oral, droplet, aerosol, vectors) - Survivability in the environment - Ease of diagnosis (pathognomonic or diagnostic laboratory testing) - Age of lesions
Infected Premises Characteristics	<ul style="list-style-type: none"> - Number of Contacts - Transmission pathways and transmission risk <ul style="list-style-type: none"> --Amount of animal movement --Number of animals --Species of animals --Age of animals --Movement of traffic and personnel to and from premises (fomite spread) - Biosecurity measures in place at time of outbreak
Contact or Contiguous Premises Characteristics	<ul style="list-style-type: none"> - Number and types of premises - Susceptible animal populations and population density - Animal Movements - Movement of traffic and personnel to and from premises (fomite spread). - Biosecurity measures in place at time of outbreak
Environment	<ul style="list-style-type: none"> - Types of premises in area or region - Land use in area or region - Susceptible wildlife and population density - Wildlife as vectors - Wildlife as fomites
Climate (for Aerosol Spread Diseases)	<ul style="list-style-type: none"> - Prevailing winds - Humidity
General Area, Region, or Agricultural Sector Biosecurity Number of Backyard or Transitional Premises	<ul style="list-style-type: none"> - Biosecurity practices in place at time of outbreak - Biosecurity practices implemented at time of outbreak - Types of premises, animal movements and network or animal and fomite movements
Business Continuity Requirements	<ul style="list-style-type: none"> - Business continuity, movement and marketability, or compartmentalization plans and practices in place at time of outbreak
Source: USDA APHIS FAD PReP Dairy Industry Manual, Foreign Animal Disease Preparedness & Response Plan. Draft July 2010.	

2.3.4 Eligibility of Farms to Move Milk

The CO SMS Plan specifies the eligibility of various classifications of dairy farm premises to move milk as follows:

➤ **Infected, Suspect, and Contact Premises**

Infected, Suspect, and Contact Premises are not eligible to receive Continuity of Business Permits under the CO SMS Plan.

➤ **At-Risk Premises and Monitored Premises**

These premises are eligible for milk movement permits. Both types of premises are treated the same and a movement permit allows milk to move within and out of a Control Area. The CO SMS Plan specifies the biosecurity and related conditions for obtaining a movement permit. Participation in the pre-event preparedness is voluntary, but to move raw milk a producer must have a permit. Colorado will issue permits for eligible At-Risk and Monitored Premises as quickly as possible but initially it will require that authorized personnel approve the farm biosecurity, surveillance, and record keeping requirements.

➤ **Vaccinated Premises**

This designation is secondary and does not affect the eligibility for a milk movement permit. The decision to use FMD vaccination will be made by federal and state animal health officials based on the characteristics of the outbreak and other unique factors related to a particular outbreak. However, producers should be aware that vaccines for FMD are likely to have a withdrawal time before animals can go to slaughter. Some vaccines may also have a withdrawal time for milk consumption. Withdrawal time will be indicated on the label.

➤ **Milk routes**

Milk haulers will receive specific route information from milk dispatch (i.e., DFA and others) on a daily basis to provide for biosecure corridors as outlined in the Dairy Emergency Disease Response Plans. This may include a list of permitted farms in movement restricted areas, a list of public roads closed to milk haulers, and suggested routes for milk pickup.

- Milk trucks picking up milk on farms in Free Areas are allowed to travel through designated Control Areas to processing plants in Free Areas but the State Veterinarian recommends avoiding travel in Control Areas
- Milk trucks picking up milk on farms in Free Areas are allowed to deliver milk to processing plants in Free Areas
- Milk trucks picking up milk on *permitted farms* in Control Areas are allowed to deliver milk to processing plants in Free Areas
- Milk trucks are allowed to pick up milk on routes that include permitted farms in Control Areas and farms in Free Areas but the State Veterinarian recommends separate routes for Control Area farms or, in cases of mixed routes, that milk from all of the Free Area farms be picked up before entering and picking up milk from permitted farms in Control Areas

3.0 PRE-EVENT PREPAREDNESS

Pre-planning for safe, timely, risk-based, permitted movement of animals and animal products will be critical to maintaining business continuity of the dairy industry while controlling and containing the outbreak.

3.1 PRODUCER PARTICIPATION

There are steps that dairy producers can voluntarily take **prior to** an outbreak to streamline the issuance of permits for the movement of raw milk to processing. Producers who have completed and met all pre-event requirements will be on the fast-track for issuance of movement permits compared to those who have not done any pre-event planning.



The CDA will be working closely with the Western Dairy Association (WDA), Dairy Farmers of America (DFA), and accredited veterinarians to assist producers in completion of the following requirements:

1. Implement Enhanced Biosecurity:

Stringent biosecurity measures will be essential to prevent entry of virus into each herd. Premises should review and implement the items in the [Self-Assessment Checklist for Enhanced Biosecurity for FMD Prevention: Dairy](#). The checklist emphasizes three concepts that all dairy operations should be ready to implement: (1) a biosecurity manager, (2) a written operation-specific enhanced biosecurity plan, and (3) a line of separation (LOS).

Dairy premises should use the [Information Manual for Enhanced Biosecurity for FMD Prevention](#) to develop a written *site-specific biosecurity plan*.

The Biosecurity Checklist, Information Manual, and materials for training employees are available on the SMS website www.securemilksupply.org.

A majority of the biosecurity measures in the Biosecurity Checklist should be implemented even in the absence of a FMD or foreign animal disease (FAD) outbreak to prevent entry and spread of many livestock diseases.

Meeting the requirements in the checklist will provide assurances to the State Veterinarian that biosecurity measures are in place or can be ramped-up quickly during an outbreak to make the milk movement an *acceptable risk*.

2. Location Verification:

Farms must have a *validated* premises ID or a location ID from the CDA. Having a Location ID (LID) facilitates requesting movement permits during an outbreak. The LID includes having a valid 911 address and a set of matching coordinates (latitude and longitude) reflecting the actual location of the premises. See the [Colorado Location Identification \(LID\) Registration](#) website.

Farms may also have a National Premises Identification Number (PIN) from the USDA.

3. Surveillance:

Surveillance requirements for permitting in the face of a FMD outbreak will be communicated to the dairy industry from the State Veterinarian or Incident Command within 48 hours. Initial surveillance will be visual inspection on-farm of susceptible species. As soon as practical, surveillance will include laboratory testing of susceptible animals and/or testing of milk (if validated tests are available).

Guidance on surveillance sampling for the SMS plan is available on the SMS website: [FMD Virus Surveillance Guidance for Dairy Operations in a Control Area](#).

Dairy Farms should prepare for different surveillance methods:

Dairy farm personnel should be trained to look for the signs associated with FMD. Training materials are available on the SMS website. It is important for animal caretakers to be able to document that there is no evidence of an FAD virus infection in their herd through Active Observational Surveillance. See [Active Observational Surveillance \(AOS\) to Support Permitting Milk Movement](#). Dairy farm personnel should also know who to contact if disease is suspected.

Designated individuals should be trained to collect samples. A herd veterinarian should lead this training. These designated individuals should periodically practice sample collection, and sample collection supplies should be maintained on the premises. The premises manager/owner should know how to submit samples to the CSU Veterinary Diagnostic Laboratory which is an approved diagnostic laboratory within the National Animal Health Laboratory Network. Having these individuals trained and ready to collect and submit samples will enable the premises to start surveillance sampling as soon as they find themselves in a Control Area or are required to submit samples to obtain movement permits.

4. Data Management:

Data collection and sharing is part of an FMD response to issue movement permits. This data shall be available for review by the State Veterinarian or their designee. See [Customizable Logs](#).

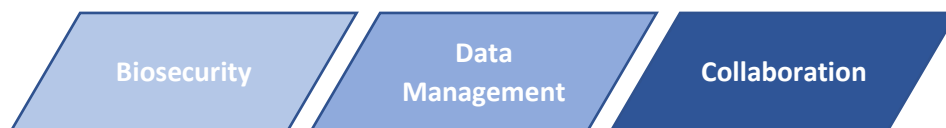
Premises should maintain production records needed for trace-back and trace-forward purposes; records of movement of animals, feed, supplies, equipment, personnel, and visitors facilitates accurate completion of the *Epidemiology Questionnaire*. In addition, records of the names, addresses, and telephone numbers of haulers, employed personnel, feed supplies, etc. should be maintained. See Appendix H in the [FMD Response Plan: The Red Book](#) for an example Epidemiology Questionnaire.

5. Collaboration:

Producers should ensure that truckers/haulers and receiving processing facilities transporting and receiving their raw milk are prepared to implement ramped-up biosecurity protocols in the face of a FMD outbreak in order to decrease the risk of disease introduction and transmission and to maintain continuity of business.

3.2 HAULER AND PROCESSOR PARTICIPATION

Haulers and processors play a critical part in safe transport and processing of raw milk in the face of a FMD outbreak. Movement permits will only be issued when the State Veterinarian and the Incident Command is provided assurances (e.g., proper biosecurity) that haulers and processors are not contributing to disease spread. Haulers and processors are also responsible for maintaining movement information for trace-back and trace-forward purposes.



The [Biosecurity Performance Standards for Raw Milk Collection and Transport](#) outlines the overarching goals and expectations to prevent FMD spread. Haulers and processors should use these guidelines to develop site-specific biosecurity standard operating procedures in collaboration with producers. These include guidelines that cover the following: (1) over-the-road transport in a control area, (2) core BPS for milk collection on a dairy premises, (3) controlling dairy premises access: line of separation (LOS) and controlled access points, (4) off-loading raw milk at a dairy processing plant, (5) cleaning and disinfecting vehicles, (6) approved disinfectants for FMD virus, and (7) personal protective equipment (PPE).

3.2.1 Hauler Guidance

The following information can be found in the [Milk Hauler: SMS Plan Permitting Guidance](#) document on the SMS website.

Hauler Components:

- Provide contact information, including personal and company information, and document tanker ID and route details (direct, commingled; premises included)
- Follows premises procedures and biosecurity processes related to milk loading as well as related general farm biosecurity including:
 - Site specific LOS
 - PPE requirements if leaving truck
 - Site specific loading procedures
 - Avoiding contact with farm personnel, animals, or milk products
 - Minimize raw milk spillage/leakage
- Route complies with State Veterinarian approved traffic routes, if in place
- Communicates with dairy premises, processing plant, and regulatory officials to ensure all procedures and biosecurity processes in place are followed

Hauler or Hauling Company to create:

- Mechanism for training on biosecurity for drivers
- Mechanism for working with dairy premises to utilize site specific LOS and milk loading SOPs
- Mechanism for working with processors to utilize milk unloading SOPs
- Plan to access necessary supplies
- Communication plan with dairy premises, processing plants and regulatory officials

Control measures focused on preventing the spread of FMD virus via the milk truck/tanker and the milk truck driver/healer is critical. See [Appendix D: Milk Hauler/Driver Biosecurity Expectations](#).

3.2.2 Processor Guidance

The following information can be found in the [Milk Processor: SMS Plan Permitting Guidance](#) document on the SMS website.

Milk Processing Plant components:

- Location Identification Number (LID) from CDA and/or Federal Premises ID (PIN) from USDA
- Facility
 - Traffic patterns on plant premises are followed, including records of all vehicle and personnel movements into and out of facility
 - Controlled access to facility unloading bay
 - C&D station(s) in place with waste water management (if necessary)
- Personnel follow procedures to prevent spread of possibly contaminated materials (e.g., mud, manure, or raw milk) from susceptible species
- Vehicles (raw milk tankers)
 - Personnel inspect tanker for leakage upon entry and approve off-loading prior to hauler/driver exiting cab
 - All milk leakage is addressed immediately and the source is resolved prior to additional milk pick-ups
 - Prevent raw milk spillage on outside of the tanker when sampling (collection bucket should be available)
 - Avoid residual milk leaks from tanker after off-loading upon exiting processing plant
 - All milk spills during off-loading of milk are addressed immediately
 - C&D process in place to ensure that tankers leave processing plant with clean exterior
- Processor follows Grade A standards for processing milk or any additional guidelines put in place by the State Veterinarian

Processing Plant must create the following Standard Operating Procedures (SOPs):

- For personnel that contact susceptible species to avoid transporting any contaminated material (mud, manure, etc.) to/from plant grounds on their vehicles or clothing
- To prevent raw milk on clothing and footwear of plant personnel from leaving the designated raw milk handling areas of the plant
- For controlled access for the unloading bay
- For milk tanker C&D with wastewater plan (if necessary)
- For milk tanker inspection upon arrival to processing plant for leakage
- For handling any milk leakage or spillage during milk unloading and avoid cross-contamination of other vehicles, people, or equipment
- To ensure no residual milk in tanker and hose leaks upon tanker exit after off-loading milk

Processors must have the ability to communicate with milk haulers, dairy premises, and regulatory officials. They must provide agreement/documentation to dairy producers that plant procedures and biosecurity in place and acceptable to State Veterinarian.

The above may need SOPs, additional training, or education plans to fully implement. The processing facility should also consider to how monitor that procedures are correctly followed.

Milk processors should also initiate a process to collect milk movement permits from the hauler who is delivering milk from a FMD Control Area. CDA or the incident management team should be notified if permits are not received from producers located within a Control Area.

3.3 DATA MANAGEMENT

The CDA shall collect, store, and maintain information on pre-event biosecurity assessments and the results of those assessments. The data is protected under State statute and regulations that govern the confidentiality of producers' data. Other producer information is highly protected under the State's Livestock Information Security Act (C.R.S. 35.57.9) and thereby not affected by the Colorado Open Records Act (CORA).

Data Sharing, Notification of Relevant Parties, Communication Channels, and Data Security:

- The name, location, contact information, and permit numbers for milk movement will be provided only to individuals that require this information to implement procedures of the CO SMS Plan during an emergency disease outbreak and shall be included on the permit.
- Permitting information will be made available only to emergency management personnel involved in the disease response activities, animal health officials in other cooperating states and with federal animal health officials upon request; provided the Colorado State laws and rules governing the confidentiality of the livestock information is not violated.

4.0 POST-EVENT RESPONSE

Post-event procedures and requirements include the outcome of the most recent pre-event biosecurity inspections for dairy farm premises; provisions for re-inspections; and provisions for livestock inspections of dairy farm premises. See [Appendix F](#) for Critical Activities for Producers, Haulers, and Processors in the first 72 hours of response.

4.1 POST-EVENT REQUIREMENTS FOR MILK MOVEMENT

The following permitting guidance applies to dairy farms in Control Areas during a FMD outbreak:

1. All dairies will implement their FMD site-specific biosecurity plans (and continue until freedom from FMD is re-established); biosecurity protocols will be enforced within the Control Area.
2. The State Veterinarian will allow permitted movement of milk from premises with no evidence of infection with FMD to processing according to State, regional, and national SMS Plans.
3. All dairy premises within a Control Area will complete a FMD Epidemiology Questionnaire with a FAD Investigator. See Appendix H in the *FMD Response Plan: The Red Book* for an example Epidemiology Questionnaire.
4. Post-event biosecurity assessments may be performed at the discretion of the State Veterinarian, or assigned incident management personnel, prior to issuing a milk movement permit. See [Appendix G](#) for biosecurity validation in the ICS structure.

5. Dairy premises will be required to monitor all cattle daily for signs of FMD infection, record their findings, and promptly report abnormal findings to State Veterinarian. Records shall be available for review by the State Veterinarian or their designee.
6. Depending on the outbreak, the State Veterinarian may require additional surveillance, beyond monitoring cattle for clinical signs of FMD. See [FMD Virus Surveillance Guidance for Dairy Operations in a Control Area](#).
7. Dairy processing plants receiving milk from a Control Area will enhance their biosecurity to prevent spreading disease via trucks/tankers and drivers/haulers, as well as plant personnel handling raw milk potentially containing FMD virus.

5.0 REQUESTING A PERMIT FOR MOVEMENT DURING AN OUTBREAK

The CO SMS Plan covers Continuity of Business Permits (secure food supply permits) for **At-Risk and Monitored Premises** in moving raw milk movement only. Other on-farm and off-farm movements may also need special permits. See [FAD PReP Manual 6-0: Permitted Movement](#) for additional information on permit types.

5.1 PRODUCERS: HOW TO REQUEST A PERMIT

The CDA will set up an online information sharing center and provide public information news releases for producers, stakeholders, and the public at the start of and during an outbreak which will allow the CDA to better control the disease. There will be multiple ways for dairy producers to request a movement permit for milk; via telephone, through an internet link to access an online form, or by contacting the animal health field personnel providing service to that premises.

Producers should provide the following information when requesting a permit:

Permit Class	Where you are moving in relation to the Control Area (e.g., out of control area)
Permit Reason	Why you are moving (e.g., to processing)
Origin Premises	Premises information, including Location ID (LID and/or PIN)
Destination Premises	Premises information, including Location ID (LID and/or PIN)
Item permitted	Category of what you are moving (e.g., feed, animals, milk)
Item class	Specifically what is moving (e.g., raw milk to processing)
Duration/span of permit	First movement date and how long the movements are expected to occur
Origin Premises Classification	Must be classified as Monitored Premises for a COB permit
Biosecurity	Biosecurity processes must be in place and acceptable to the State Veterinarian for the following: origin premises, milk loading, milk hauler, and processing plant
Truck route	Truck route to processing is acceptable to the State Veterinarian; interstate movements meet normal movement requirements in addition to any outbreak specific conditions

Producers should be prepared to have the following information available upon request prior to issuance of movement permit:

- A completed copy of the epidemiology questionnaire.
- A completed copy of the Biosecurity Checklist and the site-specific biosecurity plan.

- Written assurance of compliance with the Biosecurity Checklist.
- Information demonstrating normal health status for the animals on the production site involved (e.g., herd health monitoring documents and/or certificate of veterinary inspection signed by an Accredited Veterinarian)
- Laboratory results from samples tested, if required for movement.
- For animal movements to another production site, the site of destination must include that they understand the risks associated with accepting the animals.

5.2 DECISION MAKING PROCESS FOR ISSUING PERMITS

Decisions on raw milk movement will depend on factors unique to each outbreak and Control Area. Permitting decisions are made based on the best science- and risk-based information available during an FMD outbreak.

Dairy Premises in a FMD Control Area that are designated as Infected, Suspect, or Contact Premises **will not be allowed to move milk** unless a permit is issued by the State Veterinarian. Guidance on these movements is not covered in this document.

The State Veterinarian requires that dairy premises meet certain restrictions for permitted movements:

- Be pre-certified by the CDA, completing the [Pre-Event Requirements](#)
 - Producers who have completed and met all pre-event requirements will be given *first priority* when requesting raw milk movement permit.
- Be designated as a Monitored Premises before being permitted to move raw milk
- Allow milk to move with requirements for increased biosecurity and truck and driver biosecurity as described in [Appendix D: Milk Hauler/Driver Biosecurity Expectations](#) and in the [Biosecurity Performance Standards](#).

Dairy premises in a FMD Control Area must be designated as **Monitored (or At-Risk) Premises** to be eligible to request a permit for movement of animals and animal products. Monitored Premises must meet a set of defined criteria, such as having a valid Location ID (LID), having implemented biosecurity measures, surveillance, and the appropriate record-keeping or data management to move milk. Obtaining a movement permit for animals may also require meeting additional biosecurity measures and surveillance (inspection, diagnostics).

- The surveillance guidance for premises in a Control Area to become designated as a Monitored Premises include (see [FMD Virus Surveillance Guidance for Dairy Operations in a Control Area](#)):
 - Demonstration that they are not an Infected, Contact, or Suspect Premises
 - Completion and updating of epidemiologic questionnaire
 - Record of normal production parameters
 - No unexplained clinical signs indicating FMD in any susceptible species
 - No known contact with Infected or Suspect premises
 - Periodic inspection of animals and daily AOS records by Accredited Veterinarians under the authority of the Responsible Regulatory Officials
 - Follow-up laboratory testing for animals with any suspicious clinical signs

Additional restrictions may be required if milk is to be moved outside of the Control area or into another state for processing.

- **Processing of milk from a control area must always include pasteurization (for either human or animal consumption).**

See Sections 5.10.5.5 and 5.10.5.6 for *procedures for the inactivation of FMD virus in milk and cream* in *The Foot-and-Mouth Disease Response Plan: The Red Book*.

5.3 COLORADO PERMITTING PROCESS

In the event of an FMD outbreak in Colorado a permitting team will be deployed under the Operations Section of the Incident Command Structure (ICS). The Permitting Team will be responsible for collecting relevant and required information for each permitted movement request using available resources and the USAHERDS animal health information management database.

When a request for a permit is received by the permitting team, they will evaluate the following:

CO SMS Plan: Permitting Guidance for Movement of Raw Milk		Y/N	Decision guidance
Is the producer a participant of the CO SMS Plan?			First priority for permits given to participants
Biosecurity:			
Was the date of the last biosecurity checklist within the past six (6) months?			If no, must be completed prior to issuing permit
Is the site-specific biosecurity plan available for review?			If no, must be available prior to issuing permit
Are FMD biosecurity plan measures being actively implemented?			If no, must be prior to issuing permit
Location Verification			
Does the premises have a validated Location ID (LID) from CDA?			If no, must be completed prior to issuing permit
Does the premises have a validated National Premises ID (PIN) from USDA?			Not required by CDA, but is for EMRS
Production Data			
Does the producer have the preceding seven (7) days of production data available for review?			If no, must be available prior to issuing permit
Are there any unexplained abnormalities in production parameters?			If yes, must be investigated prior to issuing permit
Surveillance			
Are required test results available for requesting premises (as per surveillance guidelines)?			If no, must be completed prior to issuing permit
Have there been any abnormal clinical signs noted in live animals on premises?			If yes, must be investigated prior to issuing permit
Collaboration			
Has producer collaborated with haulers and processing plants for biosecurity?			If no, must do so prior to issuing permit
Has the hauler and processor implemented biosecurity for the movement?			If no, must be prior to issuing permit
Epidemiology Questionnaire			
Has the producer completed an Epidemiology Questionnaire with state/federal official?			If no, must be completed prior to issuing permit
Is the premises a Monitored (MP) or At-Risk (ARP) Premises?			If no, must be MP or ARP prior to issuing permit
Permit Information			
Has the producer provided all required information? (i.e., Permit Class, Reason, Origin and Destination, Item permitted, Item class, and duration)			If no, must be provided prior to issuing permit
Is the permit request filled out completely?			If no, must be completed prior to issuing permit
Receiving Premises or State			
Is the receiving premises (or State if moving out of state) willing to accept movement?			If no, may not issue permit

Once a permit is issued by the CDA and documented in USAHERDS, a copy of the permit will be forwarded to the national permitting unit or incident command personnel will enter the information into EMRS (the federal emergency management response system tracking database).

If the permit is for a movement out of state, the Permitting Team will email (or fax) the permit and required/requested additional information to the **state of destination** for approval. If the permitting information is immediately entered into EMRS, the destination state may approve the movement from that location.

Use the following tables to help guide decision making for issuing movement permits:

[Figure 5.1. Premises Designations in Relation to Permitting and Movement Control](#)

[Table 5.1. Movement into Control Area from Outside Control Area to Specific Premises](#)

[Table 5.2. Movement within a Control Area](#)

[Table 5.3. Movement from Inside a Control Area to Outside a Control Area from Specific Premises](#)

Use the following tables to determine what type of permit should be issued:

[Table 5.4. Summary of Permit Types](#)

[Table 5.5. Summary of Definitions for Movement](#)

Refer to the following links for additional information regarding permitting:

[Milk Movement at the Beginning of an FMD Outbreak](#)

[FAD PReP Manual 6-0: Permitted Movement](#)

Figure 5.1. Premises Designations in Relation to Permitting and Movement Control

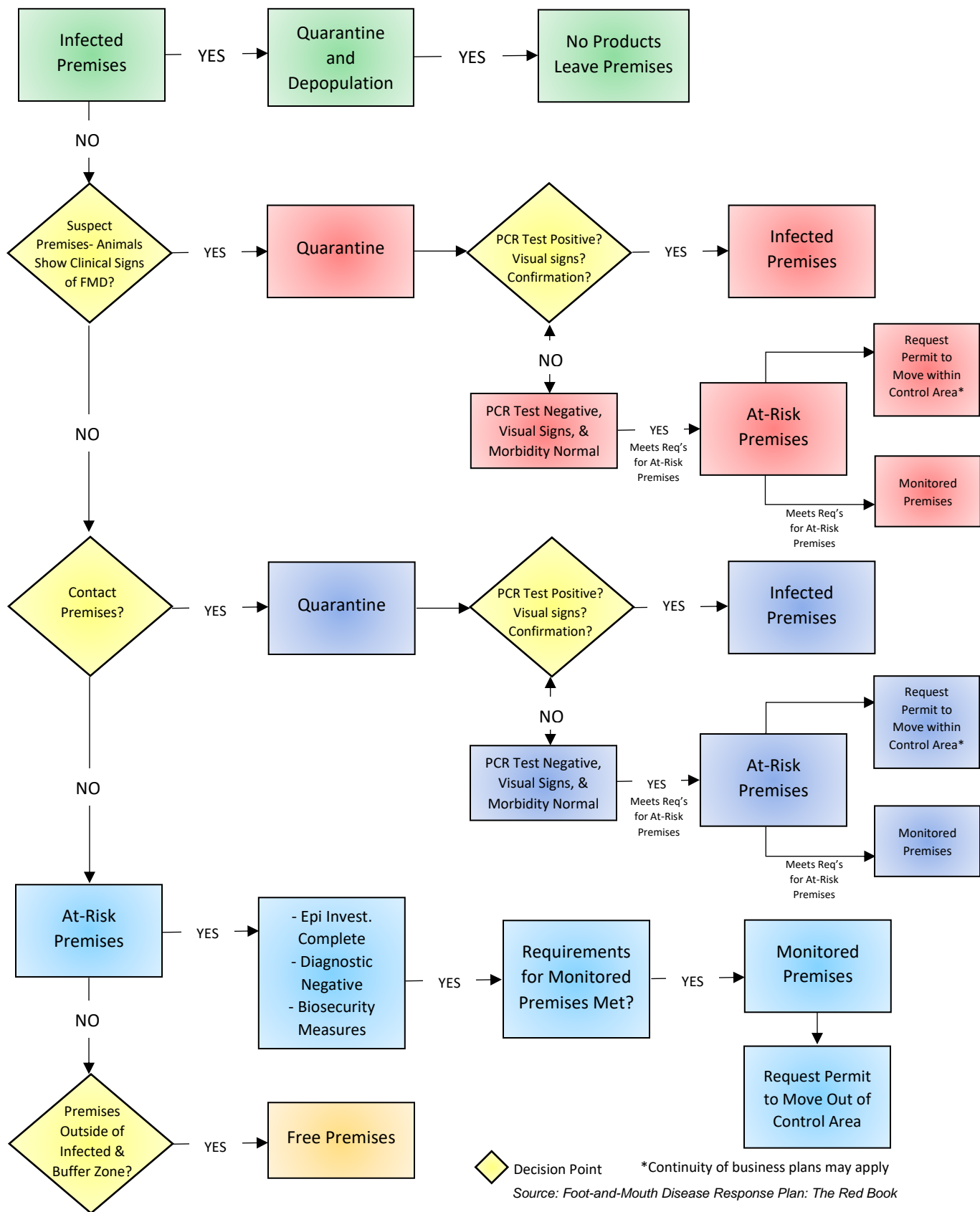


Table 5.1. Movement into Control Area from Outside Control Area to Specific Premises ^a

Item moving into a Control Area to a/an...	Infected Premises	Suspect Premises [^]	Contact Premises [^]	At-Risk Premises	Monitored Premises
Susceptible animals	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.	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 continuity of business plans for information on susceptible animal products, or guidance and processes as determined by the IC. Please see Section 5.10.5 which contains OIE FMD-specific guidance for inactivating FMD.				
Other animals (non-susceptible) from premises with susceptible species	Prohibited unless permit approved by IC and appropriate biosecurity measures.	Prohibited unless permit approved by IC and appropriate biosecurity measures.	Prohibited unless permit approved by IC and appropriate biosecurity measures.	Allowed with appropriate biosecurity measures. IC may require a permit for movement depending upon FMD epidemiology and characteristics of destination premises.	Allowed with appropriate biosecurity measures. IC may require a permit for movement depending upon FMD epidemiology and characteristics of destination premises.
Other animals (non-susceptible) from premises without susceptible species	IC will determine movement restrictions based on FMD epidemiology and characteristics of destination premises.	IC will determine movement restrictions based on FMD epidemiology and characteristics of destination premises.	IC will determine movement restrictions based on FMD epidemiology and characteristics of destination premises.	Allowed with appropriate biosecurity measures. IC may require a permit for movement depending upon FMD epidemiology and characteristics of destination premises.	Allowed with appropriate biosecurity measures. IC may require a permit for movement depending upon FMD epidemiology 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 animals	Prohibited.	Prohibited.	Prohibited.	Allowed with appropriate biosecurity measures.	Allowed with appropriate biosecurity measures.

^a Movement control and permit processes will change over time depending on situational awareness and operational capabilities.

[^] Contact Premises and Suspect Premises are intended to be short-term premises designations. Ideally these Premises should be re-designated before movements occur.

Source: Foot-and-Mouth Disease Response Plan: The Red Book

Table 5.2. Movement within a Control Area ^a

Item moving within a Control Area to a/an...	Infected Premises	Suspect Premises [^]	Contact Premises [^]	At-Risk Premises	Monitored Premises
Susceptible animals	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; surveillance, negative diagnostic tests, premises biosecurity, and risk-assessment may be required for permit.	Allowed to move by permit approved by the IC; surveillance, negative diagnostic tests, premises biosecurity, and risk-assessment may be required for permit.
Susceptible animal products	See continuity of business plans for information on susceptible animal products, or guidance and processes as determined by the IC. Please see Section 5.10.5 which contains OIE FMD-specific guidance for inactivating FMD.				
Other animals (non-susceptible) from premises with susceptible species	Prohibited unless specific permit granted by IC and appropriate biosecurity measures.	Prohibited unless specific permit granted by IC and appropriate biosecurity measures.	Prohibited unless specific permit granted by IC and appropriate biosecurity measures.	Allowed to move by permit approved by the IC; surveillance, negative diagnostic tests, premises biosecurity, and risk-assessment may be required for permit.	Allowed to move by permit approved by the IC; surveillance, negative diagnostic tests, premises biosecurity, and risk-assessment may be required for permit.
Other animals (non-susceptible) 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 specific permit granted by IC and appropriate biosecurity measures.	Prohibited unless specific permit granted by IC and appropriate biosecurity measures.	Prohibited unless specific permit granted 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 animals	Prohibited.	Prohibited.	Prohibited.	Allowed by permit approved by IC and appropriate biosecurity measures.	Allowed by permit approved by IC and appropriate biosecurity measures.

^a Movement control and permit processes will change over time depending on situational awareness and operational capabilities.

[^] Contact Premises and Suspect Premises are intended to be short-term premises designations. Ideally these Premises should be re-designated before movements occur.

Source: Foot-and-Mouth Disease Response Plan: The Red Book

Table 5.3. Movement from Inside a Control Area to Outside a Control Area from Specific Premises ^a

Item moving out of a Control Area from a/an...	Infected Premises	Suspect Premises [^]	Contact Premises [^]	At-Risk Premises	Monitored Premises*
Susceptible animals	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.	At-Risk Premises must become Monitored Premises to move susceptible livestock 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 continuity of business plans for information on susceptible animal products, or guidance and processes as determined by the IC. Please see Section 5.10.5 which contains OIE FMD-specific guidance for inactivating FMD.				
Other animals (non-susceptible) 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, negative diagnostic tests, premises biosecurity, and risk-assessment may be required for permit.	Allowed to move by permit approved by IC; surveillance, negative diagnostic tests, premises biosecurity, and risk-assessment may be required for permit.
Other animals (non-susceptible) 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 permit approved by IC and appropriate biosecurity measures.	Prohibited unless permit approved by IC and appropriate biosecurity measures.	Prohibited unless 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 animals	Prohibited.	Prohibited.	Prohibited.	At-Risk Premises must become Monitored Premises to move semen, embryos from susceptible livestock out of a Control Area.	Monitored Premises only allowed by permit approved by IC and appropriate biosecurity measures.

^a Movement control and permit processes will change over time depending on situational awareness and operational capabilities.

[^] Contact Premises and Suspect Premises are intended to be short-term premises designations. Ideally these Premises should be re-designated before movements occur.

* Continuity of business plans may apply.

Source: Foot-and-Mouth Disease Response Plan: The Red Book

Table 5.4. Summary of Permit Types

Type of Permit		Type of Premises	Details	Into/Within/Out of Control Area	Intrastate or Interstate	Example
Specific Permit		Infected, Contact, Suspect	Includes critical movements (e.g. animal welfare) and essential movements (e.g., response activities). Specific permit may/may not be required based on risk and unified Incident Command recommendation.	Can be into, within, or out of Control area; into or within Control Area more common	Usually intrastate, rarely interstate.	Movement of animals on a suspect premises to a slaughter establishment in the Control Area.
Continuity of Business Permit	Operational Permit	At Risk, Monitored	Includes normal movements necessary to keep non-infected premises within the Control Area in business during an outbreak. Permit requirements/criteria based on unified Incident Command, APHIS National ICG, and State officials recommendations.	Usually within or out of Control Area.	Can be Intrastate or interstate.	Movement of mortality off an At-Risk Premises to outside of the Control Area.
	SFS Permit	At Risk, Monitored	Includes animal and animal product movements into the supply chain for feeding, growing, processing, or to market. Helps to secure the U.S. food supply during an outbreak. Permit requirements/criteria based on Secure Food Supply Plans and/or the unified Incident Command, APHIS National ICG, and State official recommendation.	At-Risk Premises can only move within a Control Area; Monitored Premises can move within or out of a Control Area. Movements into the Control Area are less common.	Can be Intrastate or interstate.	Movement of washed and sanitized shell eggs from a Monitored Premises to market outside of the Control Area.

Source: FAD PReP Manual 6-0 Permitted Movement

Table 5.5. Summary of Definitions for Movement

Term	Explanation	Example	Requirements	Approval
Permitted Movement	A permitted movement is the type of movement associated with a permit (specific or COB). One or more permitted movements can be associated with a single permit, but each movement is recorded separately. If a permit is issued for multiple movements, these movements must be for the same item and between the same two premises, in the same direction.	Three separate truckloads of washed and sanitized eggs moving between the same two premises in the Control Area are associated as permitted movements to a single permit.	Tracked in EMRS2. The specific requirements associated with the permit must be met for the permitted movements that are associated with that permit.	State of origin and State of destination must approve permit which allows the associated permitted movements.
Tracked Conveyances	A type of movement that does not require a permit. Tracked conveyances originate from FSIS-inspected establishments and are negligible-risk products.	Pasteurized liquid egg loads moving out of a Control Area from a FSIS- inspected processing facility in a Control Area.	Typically tracked in EMRS2. FSIS inspection.	Notification to State of destination but no approval required.
Routine Movement	Routine movements are a type of movement that does not require a permit. All movements must be negligible risk and not require a COB permit (either SFS or operational, so no animals or animal products). Often intrastate, but can be interstate movements with agreement of State origin and State of destination.	Movement of washed and sanitized egg crates from At-Risk and Monitored Premises; personal or business movements off of and on to a premises (e.g., to the post office).	Not tracked in EMRS2. Elevated biosecurity, enhanced record keeping and other requirements as dictated by the State of origin/unified Incident Command.	State of origin (and State of destination for interstate movement) and unified Incident provide general proclamation of what categories or items are routine and what can move without a permit; this can change during the outbreak.

Source: FAD PReP Manual 6-0 Permitted Movement

5.4 RESCINDING MILK MOVEMENT PERMITS

1. Permits may be rescinded for violating biosecurity procedures. Re-inspections for biosecurity reasons will include a full biosecurity assessment and must be passed before a permit can be re-issued; or
2. Permits will be rescinded if livestock inspections by qualified animal health professionals under the direction of the State Veterinarian identify clinical signs consistent with FMD; as a result, the farm is identified as a Suspect Premises. The permit may be reinstated when sufficient information is provided to the State Veterinarian to determine the farm is no longer a Suspect Premises; or
3. Permits will be rescinded if laboratory tests indicate FMD virus infection in one or more animals on the premises; as a result, the farm is identified as an Infected Premises.
4. Rescinding of permit for failure to complete, or produce completed, daily herd health inspection records will be at the discretion of the State Veterinarian.

6.0 STATE AND AGENCY COLLABORATION

The Colorado Department of Agriculture has Memorandums of Understanding (MOUs) with other states and agencies to manage the movement of animals and animal products and aid in disease response activities within the State and across state borders.

6.1 MEMORANDUMS OF UNDERSTANDING (MOUs)

The CDA has the following MOUs with other states to manage the movement of animals and animal products during a foreign animal disease (FAD) outbreak such as FMD or any other significant livestock disease incident:

- Colorado Department of Agriculture – Nebraska Department of Agriculture
- Colorado Department of Agriculture – Kansas Department of Agriculture
- Colorado Department of Agriculture – Oklahoma Department of Agriculture, Food & Forestry
- Colorado Department of Agriculture – Utah Department of Agriculture and Food

The CDA has the following MOUs with the CDPHE and ECIMT to aid in the disease response activities:

- Colorado Department of Agriculture – Colorado Department of Public Health and Environment MOU for any disease outbreak that affects animal and human health
- Colorado Department of Agriculture – Eastern Colorado Incident Management Team for deployment of an Incident Management Team to manage a significant livestock disease incident

The CDA has the following documents that help manage movements throughout Colorado and bordering states to protect Colorado livestock producers and aid in disease control:

- Colorado State Patrol Livestock Control Movement Policy
- Control Movement Annex of the Colorado Department of Transportation (CDOT) Emergency Operations Plan

7.0 JUST IN TIME PREPARATION

If FMD is diagnosed within Colorado, premises that are within a Control Area or even in other parts of the State will be required to obtain a permit for the movement of milk. Producers who have completed and met all pre-event preparedness will be able to obtain permits more quickly than those who have not.

Those that have not participated in the pre-event preparedness will need to implement appropriate biosecurity on their premises in order to obtain milk movement permits, in addition adequate surveillance will need to be performed by trained staff, and production records will need to be maintained and shared with the State Veterinarian. Producers must still meet all of the requirements listed in [3.0 Pre-Event Preparedness](#) and [4.0 Post-Event Response](#).

APPENDIX A: LINE OF SEPARATION

The **Line of Separation (LOS)** is a clearly identified boundary around, or within, the entire dairy operation to separate off-farm and on-farm movement of vehicles, items, people, and animals. The purpose of the LOS is to limit movement of FMD virus into areas where susceptible animals can be exposed directly (animal contact) and indirectly (contaminated vehicles, footwear, equipment, run off). Access should only be allowed through a minimum number of clearly marked and controlled **LOS Access Point(s)** following appropriate biosecurity measures.

Figure E-1: Dairy LOS schematic

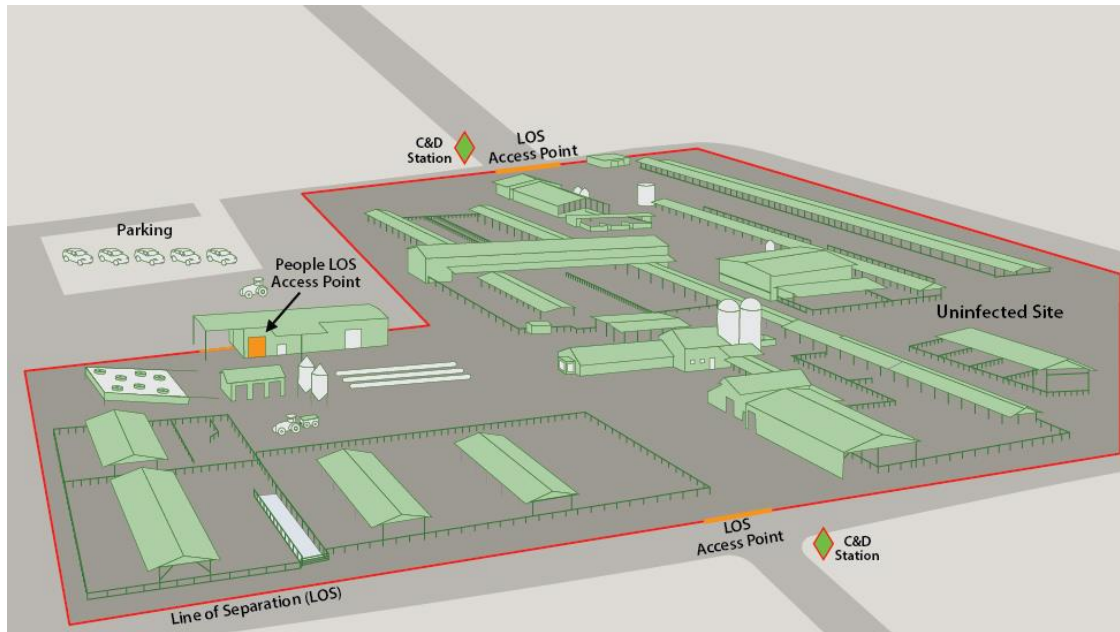


Figure E-2: Aerial view of dairy farm with LOS indicated



APPENDIX B: SELF-ASSESSMENT BIOSECURITY CHECKLIST

Online link to the [Self-Assessment Checklist](#) for Enhanced Biosecurity for FMD Prevention: Dairy, from the National Secure Milk Supply Plan.

Target Audience

This checklist and corresponding [Information Manual](#) for Enhanced Biosecurity applies to:

- Dairy operations with lactating cattle either raising, or shipping, heifers and bull calves off-site for rearing.
- Dairy operations with other susceptible species (beef cattle, pigs, sheep, goats) kept on the premises.
- All individuals delivering, servicing, or working on the operation, including family members and/or non-family employees responsible for animal care and husbandry.
- Dairy operations that have never been infected with foot and mouth disease (FMD) and have not been vaccinated for FMD.

Introduction

In the event of a foot and mouth disease (FMD) outbreak in the United States (U.S.), maintaining business continuity for the dairy industry is critical to the agricultural economy, food security, as well as animal health and well-being. The goal of the Secure Milk Supply (SMS) Plan is to provide a workable business continuity plan for the dairy producers that have cattle with no evidence of FMD infection and associated industries that is credible to State and Federal animal health officials. In an actual FMD outbreak, decisions will be made by the Responsible Regulatory Officials (local, state, tribal, and federal officials, as appropriate) based on the unique characteristics of each outbreak.

During an FMD outbreak, it is the producer's responsibility to keep their animals from becoming infected, focusing on what they can control on their premises. Biosecurity approaches are both structural and operational. *Structural biosecurity* is built into the physical construction and maintenance of a facility. *Operational biosecurity* involves management practices designed to prevent the introduction and spread of disease agents onto or off of an animal production premises. FMD will test the effectiveness of operational biosecurity because these practices depend on the awareness and behavior of the individuals on the operation.

FMD is highly contagious and has a major impact on animal health and international trade; however, it does not pose a food safety or public health concern. Existing biosecurity plans for dairies may offer protection against endemic diseases but heightened precautions are needed for FMD. The enhanced biosecurity recommendations outlined in this document are based on the known exposure routes for FMD. Operations with susceptible species raised outdoors (on pasture, dry lots) may have more difficulty preventing FMD exposure depending on their proximity to infected premises and the presence of wildlife in the area.

This document emphasizes *three concepts* that all dairy operations should be ready to implement in the event of an FMD outbreak in the U.S.:

1. A Biosecurity Manager

2. A written operation-specific enhanced biosecurity plan, and
3. A Line of Separation

This enhanced dairy biosecurity checklist and the corresponding Information Manual can be used to develop an operation-specific, written, enhanced biosecurity plan prior to an FMD outbreak. All dairy premises should designate a Biosecurity Manager; this is item number 1 in the checklist below. The Biosecurity Manager develops the biosecurity plan PRIOR TO an outbreak; the plan should address items 2-11 on this checklist. The biosecurity plan should describe the scope of the operation, contain forms for documentation of training and signatures, explanations of procedures and signage used on the premises, and protocols written and communicated effectively in languages that are fully understood by the individuals responsible for implementation.

Implementing the biosecurity plan, including training individuals, before an FMD outbreak occurs provides the best chance to prevent animals on the operation from being exposed. However, implementing effective biosecurity to protect outdoor raised animals from FMD can be expensive and inconvenient. Once the biosecurity plan is written, dairy farm owners/managers may use the checklist in one of the following ways:

- **In the absence of FMD in the United States**, dairy farm owners/managers should decide which items (#2-11) they will implement.
- **If FMD is diagnosed anywhere in the U.S.**, dairy farm owners/managers should implement all of the items in the checklist to minimize the risk of exposing their animals.
- **If the dairy operation is located in an FMD Control Area**, Responsible Regulatory Officials *may require* that all of the items on the checklist, and possibly others, be implemented before animal movement is permitted, and perhaps before raw milk movement to processing is permitted.

Scope of the Biosecurity Plan

Each location (premises) should have its own biosecurity plan. Begin by defining your premises, clearly describing the animals (all species) and animal housing (buildings, pastures, and dry lots) associated with the dairy operation. Additionally, other businesses operated from the same premises will need to be accounted for in the biosecurity plan (e.g., distribution or sales of milk or milk products, eggs, fruits, vegetables, feed, mineral, fertilizer, compost, seed, or equipment; petting zoo; hosting farm tours; repair shop; etc.). Animals owned by the operation but reared off-site and accessed via a public road may be considered a separate premises, have a separate Premises Identification Number (PIN), and therefore, a separate biosecurity plan. Biosecurity plans for premises owned/managed similarly may have significant overlap. Having a PIN may be required to request movement permits during an outbreak. A PIN includes a valid 911 address and a set of matching coordinates (latitude and longitude) reflecting the actual location of the animals on the premises. Request a PIN from the office of your State Animal Health Official.

Recommendations for Biosecurity

The self-assessment checklist has three possible responses, described below. A critical and thorough evaluation of each component is essential to prevent virus entry and protect the health and well-being of the animals on the operation.

- **In place:** All items are addressed in the biosecurity plan and implemented on the dairy operation as evidenced by visual inspection or by signed and/or dated documentation, as applicable.
- **In progress:** Some, but not all, of the items are addressed in the biosecurity plan and implemented on the dairy operation as evidenced by visual inspection or by signed and/or dated documentation, as applicable.
- **Not in place:** The items have not been addressed in the biosecurity plan or are not implemented on the dairy operation.

1. Biosecurity Manager and Written Plan

The Biosecurity Manager is identified for the operation. This individual is responsible for developing the biosecurity plan with the assistance of a veterinarian (if they are not a veterinarian) and ensuring biosecurity training of, or communicating biosecurity measures with, all individuals who enter the operation. The Biosecurity Manager has the written authority to ensure compliance with biosecurity protocols and take corrective action as needed.

☐ In place

☐ In progress

☐ Not in place

An operation-specific, written, enhanced biosecurity plan has been developed by the Biosecurity Manager. The plan is reviewed at least annually and whenever the operation goes through a change that affects biosecurity (expands, adds a new aspect of the business, etc.). The biosecurity plan clearly defines the scope of the operation, includes a premises map labeled with the Line of Separation (LOS), LOS Access Point(s), cleaning and disinfection (C&D) station(s), designated parking area, and carcass disposal/pickup location. The map indicates vehicle movements (animal transport vehicles, deliveries, etc.) and carcass removal pathways. The Biosecurity Manager ensures that all individuals entering the operation frequently (weekly or more often) have access to a copy of biosecurity plan. The Biosecurity Manager is capable of implementing the written plan if FMD is diagnosed in the U.S.

☐ In place

☐ In progress

☐ Not in place

2. Training

The Biosecurity Manager ensures that all individuals entering the operation are informed of biosecurity measures they are to follow. Animal caretakers undergo more extensive training. The training is in a language understood by the individuals receiving training. Effective training ensures that individuals are aware of the concepts and procedures that apply to their specific areas of responsibility; training occurs at least annually and is documented. The Biosecurity Manager also ensures that all contractors, truck drivers, and service personnel are aware of and adhere to the biosecurity measures in the biosecurity plan.

☐ In place

☐ In progress

☐ Not in place

3. Protecting the Dairy Operation

Line of Separation (LOS)

The biosecurity plan includes a LOS, which are established as an outer control boundary around, or within, the premises to limit movement of virus into areas where susceptible animals can be exposed. The LOS is clearly defined in the biosecurity plan and is clearly marked on the premises. Animals, vehicles, people, or items only cross the LOS through clearly marked and controlled LOS Access Point(s), following appropriate biosecurity measures. Cattle are prevented from nose-to-nose contact from livestock on adjacent premises. Cattle do not have access to streams, waterways, or run-off water that may have come from other premises.

☐ In place

☐ In progress

☐ Not in place

LOS Access Point(s)

Entry to the dairy operation is restricted to a limited number of controlled LOS Access Points. These LOS Access Points are protected with a suitable barrier (e.g., gate, cable, rope) to prevent unauthorized vehicles from entering. Each LOS Access Point is clearly marked with a sign in a language understood by all entering. Vehicles moving through a LOS Access Point are cleaned to remove visible contamination and then disinfected. People and items moving through LOS Access Points follow specific biosecurity steps. The animal loading/unloading area does not serve as a people entry point. All movements (animals, vehicles, equipment, people) across the LOS are recorded and available for review upon request.

☐ In place

☐ In progress

☐ Not in place

Cleaning and Disinfection (C&D) Station

There is an operational, clearly marked, and equipped C&D station with the means to remove visible contamination and then disinfect vehicles, equipment, and items needing to cross the LOS at each LOS Access Point. The C&D station is operated by individuals who have received documented training in proper selection and use of personal protective equipment and the principles of C&D. Effluent from the C&D station is managed following state and local regulations, ensuring it does not enter waterways, animal housing, or on-farm traffic areas.

☐ In place

☐ In progress

☐ Not in place

Designated Parking Area

There is a clearly marked designated parking area outside of the LOS, away from animal areas, for vehicles that will not enter the operation and have NOT been cleaned and disinfected.

☐ In place

☐ In progress

☐ Not in place

4. Personnel

Prior to Arriving at the Dairy

Access is limited to individuals who are essential to the operation of the dairy. Everyone crossing the LOS on foot or exiting their vehicle inside the LOS arrives at the operation having showered and wearing clean

clothing and footwear since last contacting susceptible animals. All individuals crossing the LOS have a signed agreement on file agreeing to follow these instructions.

☐ In place ☐ In progress ☐ Not in place

Entry Logbook

Everyone crossing the LOS Access Point(s) completes the entry logbook, unless they are a scheduled worker. The entry logbook is monitored by an individual working on the dairy to ensure accurate completion. The contact information and work schedule records for all workers are maintained.

☐ In place ☐ In progress ☐ Not in place

Biosecure Entry Procedure

All individuals who cross a LOS Access Point on foot or exit their vehicle inside the LOS follow a biosecure entry procedure as specified in the biosecurity plan.

☐ In place ☐ In progress ☐ Not in place

5. Animal Movement

Incoming Animals

Animals only come from sources with documented biosecurity practices and no current or previous evidence of FMD infection.

☐ In place ☐ In progress ☐ Not in place

Pre-movement Isolation Period

No animals from an FMD Control Area are introduced onto the operation for at least 7 days prior to moving animals to another production site with susceptible animals.

☐ In place ☐ In progress ☐ Not in place

Contingency Plan for Interrupted Animal Movement

A plan exists to manage animals (heifer and bull calves, cull cattle) in a biosecure manner on-site in the event animal movement is stopped for several weeks.

☐ In place ☐ In progress ☐ Not in place

Loading/Unloading Animals

Animals leaving the operation only move in one direction across the LOS at an Access Point. The animal loading/unloading area is NOT a people entry point. Areas contaminated by personnel or animals after loading/unloading are cleaned and effectively disinfected according to the biosecurity plan.

☐ In place ☐ In progress ☐ Not in place

6. Animal Product Movement

Milk to Processing

The Biosecurity Manager ensures the milk tanker hauling milk from other operations does not leak milk in an area that cannot be effectively disinfected.

- ☐ In place ☐ In progress ☐ Not in place
☐ Does not apply (explanation included in biosecurity plan)

Milk for Calf Feeding

Calves on the operation receive either colostrum/milk originating from the operation where they are housed or colostrum/milk replacer manufactured according to World Organization for Animal Health (OIE) recommendations for inactivation of FMD virus for animal consumption.

- ☐ In place ☐ In progress ☐ Not in place

Milk Disposal

A milk disposal plan exists in the event raw milk cannot be moved to processing off-farm.

- ☐ In place ☐ In progress ☐ Not in place

Semen, Embryos

Semen and embryos collected after FMD has been diagnosed in the U.S. come from sources with documented, enhanced biosecurity practices and no current or previous evidence of FMD infection. Semen and embryos are transported in containers whose exteriors can be cleaned and effectively disinfected to minimize the risk of virus transmission.

- ☐ In place ☐ In progress ☐ Not in place
☐ Does not apply (explanation included in biosecurity plan)

7. Vehicles and Equipment

Vehicles and Equipment (non-animal transport)

All vehicles and equipment (not containing live animals) are cleaned and effectively disinfected prior to crossing the LOS. The biosecurity plan contains contingency plans for vehicle and equipment C&D in inclement weather. Sharing of equipment with other operations is eliminated.

- ☐ In place ☐ In progress ☐ Not in place

Livestock Truck/Trailer (animal transport vehicles)

All empty animal transport vehicles are cleaned and disinfected prior to arrival at the operation (outgoing loads) or before animals are loaded for delivery to the operation (incoming loads).

- ☐ In place ☐ In progress ☐ Not in place

8. Carcass Disposal

Dead animals are disposed of in a manner that prevents the attraction of wildlife, rodents, and other scavengers. Rendering trucks and other vehicles hauling dead animals to a common disposal site do not cross the LOS.

☐ In place ☐ In progress ☐ Not in place

9. Manure Management

Manure is stored and removed in a manner that prevents exposure of susceptible animals (either on or off the premises or origin) to disease agents and meets state, local, and Responsible Regulatory Officials' regulations.

☐ In place ☐ In progress ☐ Not in place

10. Rodent, Wildlife, and Other Animal Control

Control measures are in place to minimize interaction between cattle and other animals (deer, feral pigs, rodents, dogs, cats, horses, etc.).

☐ In place ☐ In progress ☐ Not in place

11. Feed

Feedstuffs are delivered, stored, mixed, and fed in a manner that minimizes contamination, and feed spills are cleaned up promptly to avoid attracting wildlife.

☐ In place ☐ In progress ☐ Not in place

APPENDIX C: BIOSECURITY PERFORMANCE STANDARDS

Online link to the [Biosecurity Performance Standards \(BPS\) for Raw Milk Collection and Transport](#) from the National Secure Milk Supply (SMS) Plan. References to appendices below can be found in the original document.

3. OVER-THE-ROAD TRANSPORT IN A CONTROL AREA

The following BPS and best practices apply to milk trucks/tankers moving milk to, from, and within a Control Area. Movements outside of a Control Area are not under the same requirements unless designated by the state or federal animal health authorities. Transport of milk at milk transfer stations may be prohibited during an FMD outbreak unless specific biosecurity steps are in place. Milk transfer stations are not covered in this document.

3.1 Milk Truck/Tanker Movement and Storage

3.1.1 Milk haulers/drivers should strive to keep the cab interior and the external surfaces of the truck as clean as possible in an FMD Control Area; the performance standard is no visible contamination within the cab or externally on the tanker when participating in milk transportation in a Control Area.

3.1.1.1 Evidence for a clean cab interior should include the absence of visible organic material on all surfaces.

- There should be no trash, dirty clothing or footwear, or unnecessary supplies in the cab.

3.1.1.2 Evidence for external cleaning includes the absence of visible organic material on all surfaces.

- The driver should keep a record of exterior truck washes (commercial or C&D stations on dairy premises).
- BEST PRACTICE: Milk trucks/tankers not in use after being cleaned and sanitized should be stored in a secure manner to limit access by unauthorized people. Storage at facilities other than a secure truck yard, including the milk hauler/driver's home, should be approved by Incident Management Team. No trucks/tankers will be allowed onto farms housing cattle, pigs, sheep, or goats in a Control Area without a permit for picking up milk.

3.1.2 The Incident Management Team may designate traffic corridors in the Control Area; the performance standard is for milk haulers/drivers to adhere to designated traffic corridors and avoid tire contact with manure or other organic material where possible.

3.1.2.1 The milk hauler/driver should have the ability to communicate with his/her dispatcher and/or the Incident Management Team before and throughout their route.

- Milk routes may change frequently pending environmental conditions.
- Notification of the farm personnel is important should there be delays in milk pick-up to ensure the cleaning and disinfection station is set up and ready to go upon arrival if the truck must cross the LOS.

3.1.2.2 The Incident Management Team may communicate restricted areas to the industry which identifies safe corridors and communicates those options to milk haulers/drivers.

3.1.2.3 Milk haulers/drivers should keep a daily written log of additional stops (food, fuel, maintenance) en route to dairy premises and the processing plant.

- This information should be provided to their dispatcher or Incident Command upon request for trace back or trace-forward purposes.
- Minimizing cross-contamination with other vehicles or people having contact with cattle, sheep, goats, or pigs should also occur once the hauler and tanker have left the farm.
- The hauler/driver should keep all clothing/footwear clean when exiting the tanker during stops to prevent contaminating themselves and the truck cab. Protective booties/disposable boots should be worn if walk paths are visibly contaminated and properly removed and disposed of before re-entering the cab.

4. CORE BPS FOR MILK COLLECTION ON A DAIRY PREMISES

The following BPS are considered 'core' in that they aim to minimize the risk of FMD introduction onto a dairy premises. Whenever milk haulers/drivers are involved in milk collection activities, there are certain precautions that need to be taken. The milk truck/tanker may visit more than one dairy premises in a day. Therefore, minimizing exposure to mud, manure, milk, and organic matter will help decrease the overall infectious burden of FMD virus that could be picked-up and transported by the tanker/hauler between premises. Milk samples collected on farm should be handled as if they contain FMD virus to avoid contamination of the milk hauler/driver or the cooler and its contents during transport.

In all situations, there are biosecurity performance standards that should be followed to minimize the risk of FMD virus entering a dairy premises.

- Dairy premises owners will want to ensure proper cleaning and disinfection steps are being implemented during milk pickup to ensure their animals are not exposed by the actions of off-farm personnel or vehicles.
- Milk haulers/drivers need to take necessary precautions to ensure FMD virus is not spread by their truck mounted transfer hose, clothing, or footwear during milk collection.
- Regulatory officials want to ensure that proper cleaning and disinfection steps are being taken during milk pick up so FMD virus is not transported between dairy premises. Each dairy premises should develop a farm-specific standard operating procedure (SOP) that meets or exceeds the biosecurity performance standards that is acceptable to the decision makers in their state.

4.1 Milk Haulers/Drivers on a Dairy Premises

4.1.1 While the hauler/driver is involved in milk collection activities, the performance standard is no direct contact with farm personnel, animals, or milk products to be fed to susceptible animals.

- Milk hauler/driver should communicate, but have no direct contact, with farm personnel.
- Milk hauler/driver should have no contact with any animals.
- Milk hauler/driver should have no contact with animal housing or animal traffic areas.
- Milk hauler/driver should have no contact with products to be fed to susceptible animals (e.g., raw or pasteurized colostrum, raw or pasteurized milk in open containers) or with equipment used in feeding animals.

4.1.2 Milk Haulers/Drivers involved in milk collection activities; the performance standard is to prevent raw milk from contacting their street clothing and footwear.

4.1.2.1 The tanker cab should be considered and maintained as a clean, non-contaminated zone.

- The cab door should be considered a “Vehicle Door Boundary” between the cab and potentially contaminated outside areas.
- Adequate supplies of clean gloves and protective footwear for a full shift of milk collection and delivery should be kept in the cab (see section 9.2).
 - BEST PRACTICE: Keep protective outerwear and an extra set of clean street clothes in the cab in the event of milk spray or milk spillage occurs. The goal is to not wear raw milk contaminated clothing from farm to farm.
- During an FMD outbreak, there should be no other passengers or animals in the cab of the vehicle.

4.1.2.2 Milk haulers/drivers must put on, at a minimum, gloves and protective footwear.

- For full details on donning and doffing PPE, see section 9.2.
- Single use (disposable) gloves and footwear covers must be worn while collecting milk.
- BEST PRACTICE: Since milk spray during transfer hose connection can occur, protective outerwear should be worn over street clothes.
 - As an alternative to routine use of full protective outerwear, if raw milk dampens street clothes, the hauler should change into clean street clothes before entering the cab. The soiled clothes should be enclosed in a garbage bag until they can be laundered.

4.1.2.3 Before re-entering the cab, the milk hauler/driver must remove gloves and disposable outerwear/footwear or disinfect protective outer clothing and footwear.

- Disposable items should be placed in a receptacle that can be disposed of in a manner that does not contaminate personnel, equipment, or animal areas.
- Waterproof outerwear with visible raw milk on it should be sprayed with disinfectant.

4.2 Milk Trucks/Tankers on a Dairy Premises

4.2.1. The performance standard is for dairy premises personnel to record all vehicle and people movements that enter the dairy premises.

- All records of movements by date and time onto the premises should be maintained on the dairy premises and made available to animal health authorities in the event it is needed for a trace-back or trace-forward investigation.
- The milk hauler/driver must be prepared to provide the origin of tanker, driver name, contact number, vehicle identification, and previous and next stop (name and location).

4.2.2 In order to pick-up milk on a dairy premises, the performance standard is to provide a clean drive path for the milk tanker to approach the milk house (free of animal excrement).

4.2.2.1 The SMS Dairy Premises Working Group recommends that milk should not be picked up on dairy premises where milk trucks/tankers must drive across a visibly manure-contaminated cow path. If the cow path area cannot be effectively cleaned and disinfected prior to tanker transit of that area, an alternative route to pick up milk on farm should be pre-planned.

4.2.2.2 BEST PRACTICE: The milk tanker drive path is a hard/solid or well-drained gravel surface to minimize contamination of the transfer hose's exterior and the milk hauler/driver's footwear or clothing when they exit the cab.

4.2.3 Milk trucks/tankers carrying raw milk from other premises (multiple farm pickups or no CIP between loads); the performance standard is to minimize raw milk contamination of subsequent dairy premises.

4.2.3.1 Milk spills or leaks from dairies with infected but undetected cattle pose a risk of introducing FMD virus on subsequent premises. Follow the steps below to mitigate potential spills or leaks.

- The inlet valve on the tanker shall remain closed at all times except during pumping of milk.
- Pay close attention while loading milk and turn off the pump before reaching full tanker capacity to avoid overflow and milk escaping from the vent or manhole.
- Milk leaked/spilled onto porous surfaces (soil, mud, gravel or pitted concrete driveways) are difficult to clean and disinfect to inactivate the FMD virus making prevention steps critical.
- Milk leaked/spilled onto non-porous surfaces (stainless steel, sealed concrete – not pitted) must be cleaned and disinfected (see sections 7 and 8) to inactivate the FMD virus.
- Should large quantities of milk not originating from the current dairy premises leak or spill outside of the milk house, the hauler should alert the dairy premises personnel to clean and disinfect the area.

4.2.4 To mitigate the risk of bioaerosols escaping the air vent during milk pumping and transporting, the performance standard is to close and lock the dome lid (secured by the dog legs).

4.2.4.1 Follow state regulations that apply to venting of the tanker during pumping, including complete closure of the dome lid.

- Additional vents in the manhole cover and dome lid may be needed for adequate airflow.

4.3 Milk Samples

4.3.1 Milk sample vial(s) collected/picked up on farm; the performance standard is to ensure no visible contamination on the exterior of the disinfectable outer container (plastic sealable bag).

4.3.1.1. The labeled sample vials should be stored in a sealed plastic bag that has had the exterior sprayed with an approved disinfectant.

- Disinfectant must not come into contact with the milk or the interior or exterior of the vial.

4.3.1.2 The milk hauler/driver places the bagged sample collection vial(s) within the sample cooler (in a rack if possible) on the milk tanker for delivery to the dairy processing plant.

- Sample coolers must be made of a material that can be cleaned and disinfected.

- a. Coolers visibly contaminated with milk, mud, or manure should be cleaned and disinfected at the processing plant.

5. CONTROLLING DAIRY PREMISES ACCESS: LINE OF SEPARATION (LOS) AND CONTROLLED ACCESS POINT(S)

5.1 Establishing a Line of Separation (LOS) and Controlled Access Point(s) on a Dairy Premises

The dairy premises should identify a line of separation (LOS) to separate off-farm traffic from on-farm movements of vehicles, people and animals and only allow access through controlled access point(s). One goal of the LOS is to limit direct (animal contact) and indirect (contaminated vehicles, footwear, equipment, run off) exposure of FMD virus to susceptible animals on the dairy premises. A second goal is to prevent movement of FMD virus off of a dairy premises that is infected but undetected. Crossing the LOS through a controlled access point requires that specific biosecurity practices are followed for all vehicles, personnel, and equipment. Once the LOS is established, it should not move unless areas which were outside of the LOS are decontaminated before being moved inside the LOS.

The LOS may be located along the property line or another boundary within the premises (for example, near or within the milk house). When determining the best location for the LOS, the following should be considered:

- Animal housing and holding areas
- Traffic on roadways outside the LOS could be carrying FMD virus in organic matter (mud, manure, run-off); ensure the LOS is located some distance from animal housing and holding areas so off-farm organic matter does not cross the LOS onto the farm.
- Animal movement patterns
- Drive path slope and ground topography (paved, gravel, dirt)
- Weather conditions (rain, snow, mud) effect on drive paths near controlled access point(s)
- Traffic patterns on and off of the dairy premises to select the fewest number of controlled access point(s)

Each controlled access point should be clearly marked with signs for all traffic entering the premises (e.g., vehicles, people, etc.). There should be a cleaning and disinfection (C&D) station for vehicles to cross at the controlled access point. Biosecurity protocols should be established for people crossing at the controlled access point. Ensure the controlled access point is not adjacent to animal holding or housing areas. The goal of the C&D station is to remove any material that may contain FMD virus from conveyances. This C&D station should be set up and operated by farm personnel. Training will be needed to ensure personnel are safely and effectively implementing the recommended protocols. The C&D station may be periodically monitored as determined by the Incident Management Team.

People crossing the controlled access point need to ensure they are not introducing FMD virus on their footwear, clothing, or hands. Each dairy premises should develop a farm-specific standard operating procedure that addresses the biosecurity performance standards that is acceptable to the decision makers in their state.

5.1.1 When determining the location(s) for the line of separation (LOS) and controlled access point(s), the performance standard is to establish a boundary that adequately separates off-farm movements from on-farm movements to prevent exposure of susceptible animals.

5.1.1.1 Set up temporary barriers (fence, gates, posts, ropes, etc.) designating the LOS that separates the milk tanker path from the rest of the farm.

5.1.1.2 Controlled access points should not be located in close proximity to animal housing areas due to the risk of run-off and splashing from the C&D station.

5.1.2 Dairy premises personnel crossing the LOS at the controlled access point(s); the performance standard is not to introduce to, or remove from, the dairy premises any item contaminated with animal manure/excrement.

5.1.2.1 Entering the dairy premises requires showing up to work having showered and wearing clothing and footwear that are clean (free of all animal manure/excrement) and have not been worn around livestock at other operations.

- Footwear worn outside the LOS must be cleaned and disinfected prior to entry. As an alternative, dedicated or disposable footwear worn only on the dairy premises can be put on when crossing the controlled access point.
- Clothing worn outside the LOS must be clean prior to entry. As an alternative, dedicated clothing worn only on the dairy premises can be put on when crossing the controlled access point.

5.1.2.2 Exiting the dairy premises requires leaving clothing and footwear worn around cattle on the operation unless it can be cleaned (free of all animal manure/excrement) and disinfected at the controlled access point.

- Footwear worn on the operation must be cleaned and disinfected prior to exit. As an alternative, dedicated or disposable footwear worn only on the dairy premises can be left on the operation prior to exit.
- Clothing worn on the operation must be clean prior to exit. As an alternative, dedicated clothing worn only on the dairy premises can be left on the operation prior to exit.

Multiple options exist for dairy premises to configure the LOS and milk house access for the milk truck/tanker and hauler/driver and are described next. The options are highly dependent on the dairy premises layout and have slightly different requirements and BPS associated with each approach. Appendices 2, 3 and 4 include illustrations (enlargements of image on right) and repeat the corresponding BPS for LOS for different dairy premises layouts described in this document.

5.2 NOT Crossing the LOS: Truck/Tanker/Hauler Collecting Milk (Option 1)

Some farms may have a layout and a direct route to the milk house that would allow the milk tanker and hauler/driver to pick up milk without crossing the LOS. In this situation, the farm would establish its milk house as outside the LOS during milk collection and the hauler performs all milk collection activities. Dairy premises that utilize direct load tankers may also have a farm layout conducive to this approach. A critical control point for preventing FMD virus introduction to the herd is the door from the milk house

into the milking parlor during milk collection. Dairy premises personnel are responsible for cleaning and disinfecting the milk house and equipment once the hauler leaves.

A brief checklist is provided in Appendix 2 to determine if a dairy premises can utilize this option. This option closely aligns with normal milk collection activities in a non-FMD outbreak situation. It also offers a solution to the weather challenges (severe wind, heavy rains causing mud, heavy snow, freezing temperatures, etc.) as well as locations faced with water shortages as the tanker would not be cleaned and disinfected at the dairy premises.

Appendix 2: BPS and Best Practices for Milk Collection when the Milk Truck/Tanker/Hauler do NOT Cross the LOS

- This appendix contains examples of farms where the inside of the milk house could be considered OUTSIDE the LOS. The door to the milk house is one critical control point for preventing FMD virus introduction to the herd.
- Haulers and farm personnel should follow the BPS described in sections 3, 4, and 5.1 as well as the additional BPS steps described in this appendix to ensure FMD virus is not introduced or spread between dairy premises.
- Haulers should follow the PPE requirements described in section 9.2.

5.3 Crossing the LOS: Only the Transfer Hose (Option 2)

Some farms may have a layout and a direct route to the milk house that would allow the milk tanker and hauler/driver to pick up milk without crossing the LOS. In this situation, the farm would establish the area just in front of the milk house as outside the LOS. C&D of the tanker would not be required. One critical control point for preventing FMD virus introduction to the herd is ensuring the transfer hose exterior has no visible contamination as it crosses the LOS at a controlled access point. Another critical control point is to ensure residual raw milk in a truck-mounted transfer hose is not deposited on subsequent dairy premises. The hauler/driver works with farm personnel to accomplish milk collection activities, each staying on their respective sides of the LOS.

A brief checklist is provided in Appendix 3 to determine if a dairy premises can utilize this option. This option requires meeting the State's requirements for a licensed weigher/sampler to perform milk collection duties and having a transfer hose long enough to reach from the bulk tank to the milk tanker through a controlled access point that does not exceed pump manufacturers recommendations. BPS are provided for using either a truck-mounted or a farm-dedicated transfer hose.

Appendix 3: BPS and Best Practices for Milk Collection when Only the Transfer Hose Crosses the LOS

- This appendix contains examples of farms where the area just outside the milk house is considered OUTSIDE the LOS and the milk house is INSIDE the LOS. A clean and disinfected transfer hose crossing the controlled access point is one critical control point for preventing FMD virus introduction to the herd. There are also specific BPS for farm personnel to follow to ensure FMD virus is not introduced or spread between dairy premises.
- Haulers and dairy premises personnel need to follow the BPS described in sections 3, 4, and 5.1 as well as the additional BPS steps described in this appendix.
- Haulers should follow the PPE requirements described in section 9.2.

5.4 Crossing the LOS: Milk Truck/Tanker (Option 3a)

5.5 Crossing the LOS: Milk Hauler/Driver Exits the Cab (Option 3b)

Dairy premises that house or hold animals near the milk truck/tanker drive path to the milk house should establish their LOS at some distance from these animals. There are three critical control points for preventing FMD virus introduction to the herd in this situation:

- Milk truck/tanker is cleaned and disinfected (C&D) prior to crossing the controlled access point at the LOS
- Milk hauler/driver exiting the cab to collect milk does not contact people, animals, milk fed to susceptible animals, and wears proper PPE a. Another option: Haulers/drivers do not exit the cab
- Truck-mounted transfer hose is handled to prevent depositing raw milk and environmental contamination from previous farm pickups onto the dairy premises a. Another option: Use a farm-dedicated transfer hose.

Dairy premises need to follow their State's requirements to have a licensed weigher/sampler on farm to complete all the steps necessary to collect milk for situations where the hauler does not exit the cab. The BPS for haulers that exit the cab is presented in section 5.5. Dairy premises with direct-load tankers should ensure their personnel are trained in tractor-trailer connections and covered under insurance to perform these duties.

Appendix 4: BPS and Best Practices for Milk Collection when Milk Truck/Tanker and Hauler/Driver Crosses the LOS

- This appendix contains examples of farms where the drive path to the milk house requires the milk truck/tanker to pass by susceptible animals and the LOS is at some distance from the animals. There are also specific BPS for farm personnel to follow to ensure FMD virus is not introduced or spread between dairy premises.
- Haulers and dairy premises personnel need to follow the BPS described in sections 3, 4, and 5.1 as well as the additional BPS steps described in this appendix.
- Haulers should follow the PPE requirements described in section 9.2.

6. OFF-LOADING RAW MILK AT A DAIRY PROCESSING PLANT

Milk processing plants are a commingling location for raw milk trucks/tankers, employee vehicles, and vehicles bringing supplies and taking away finished products. These vehicles and their drivers may be carrying FMD virus on their equipment, clothing, and footwear. There are no susceptible animals on the same premises as the processing plant, so the risk of FMD introduction and spread to livestock at these locations is low. However, the plant is an area where cross-contamination of vehicles and drivers can occur from milk trucks/tankers that have picked-up milk on infected, but not yet detected farms or have become externally contaminated during transit. These vehicles and drivers do present a moderate to high risk for transferring contaminated environmental media or milk to other vehicles.

Plant employees that care for or have susceptible animals at home need to take precautions to prevent transporting FMD virus on vehicles, clothing, and footwear. BPS are described to minimize the risk of plant employees transporting FMD virus to susceptible animals.

The ability to C&D trucks/tankers at the processing plant will be affected by location, water availability, regulations for waste water, and climate differences. In an FMD outbreak, steps taken by all industry partners to reduce the infectious burden of FMD virus in the environment, on trucks/tankers, roadways, and commingling locations will contribute to the overall success of controlling this highly contagious disease. Therefore, best practices are described aimed at decreasing the infectious burden. Processing plants and animal health officials are encouraged to work together to determine the best options that reduce FMD virus spread and aligns with local capabilities and regulations.

6.1 Establishing Traffic Patterns on the Processing Plant Premises

Traffic patterns for raw milk trucks/tankers and all other vehicles should be established to minimize cross contamination while on the plant premises. All traffic involved in raw milk movement (e.g., vehicles, people, etc.) should be limited to a designated entry at the processing plant. If possible, separate entrances should be established for all other vehicles (finished product, employees, supplies, etc.) to minimize cross-contamination of raw milk trucks/tankers that may travel to or near dairy premises with susceptible animals.

Only the licensed milk hauler/driver is allowed to be in the cab as it enters the processing plant premises. Raw milk trucks/tankers entering a processing plant premises should follow specific biosecurity practices.

6.1.1 Before entry, the performance standard is for dairy plant personnel to record all vehicle and people movements involving raw dairy products.

- The milk hauler/driver must be prepared to provide date, time of arrival and departure, origin of tanker, driver name, contact number, vehicle identification, and dairies from which milk was collected from prior to arrival at the plant (names and locations).
- All records of vehicle and people movements onto the processing plant premises should be maintained and made available to animal health authorities in the event it is needed for a trace back or trace forward investigation.

6.1.2 Whenever possible, the performance standard is for the milk hauler/driver to remain in the cab until the processing plant personnel have cleared the tanker for off-loading.

- If the milk hauler/driver must exit the cab for any reason, follow protocols under section 4.1.2.

6.1.3 Trucks/tankers should be inspected for evidence of milk leakage upon entry; the performance standard is for dairy plant personnel to look for visible milk on the tanker exterior and in the storage compartment and notify the driver.

- If noted, the cause should be resolved prior to future transport by that driver or tanker to minimize raw milk leakage at subsequent pickups on dairy premises.
- Residual milk on the exterior and within the storage compartment should be removed through the cleaning process, prior to picking up milk on a dairy premises.

6.2 Raw Milk Tanker Exterior Cleaning and Disinfection

Conducting C&D of raw milk trucks/tankers at the processing plant is one additional step toward reducing the infectious burden of FMD virus in the environment, especially when tanker C&D cannot be accomplished on the dairy premises during raw milk collection.

6.2.1 The performance standard is for processing plant officials and animal health officials to work together to determine the best options for tanker C&D to reduce FMD virus spread that aligns with response goals, local capabilities and regulations.

6.2.1.1 BEST PRACTICE: Raw milk trucks/tankers should have their exterior surfaces, tires, undercarriage, and storage compartment cleaned and disinfected with the goal of removing any material that may contain FMD virus from conveyances before picking up milk at subsequent dairy premises with susceptible animals.

- Adhering to plant established traffic patterns is also essential to ensure organic material is not picked up on the plant premises before the raw milk tanker leaves.
- The location of the C&D station(s) could be at one or more of the following areas and meet the above goal:
 - a. Before or upon entry to the processing plant premises
 - b. Within the milk receiving bay
 - c. Before leaving the plant premises
 - d. At an approved off-site location

6.2.4.1 Plant mitigation plans should describe the location, personnel and equipment needed to operate a C&D station for conveyances entering their premises.

- The area where the tanker is cleaned and disinfected should be free of dirt/mud (ideally on a hard/solid or well-drained gravel surface).
- The milk hauler/driver should remain in the cab of the milk tanker.
 - a. If the milk hauler/driver must exit the cab for any reason, follow protocols under section 4.1.2
- Training will be needed to ensure personnel are safely and effectively implementing the recommended protocols.
- The C&D station will be periodically monitored as determined by the Incident Management Team.

6.2.4.2 The milk tanker should be cleaned as described in section 7 (focusing on the tires, wheel wells, undercarriage, mud flaps, splash guards, steps, storage compartment) to remove visible contamination.

- Use the least amount of water necessary.
- Run-off/effluent from the C&D station must be managed such that it does not come in contact with susceptible animals and waterways (including ditches, streams, wetlands) and meets all applicable state, local and municipality regulations.

6.2.4.3 The milk tanker should be properly disinfected with an approved disinfectant that is applied for the recommended wet contact time per label directions.

- EPA-approved disinfectants against FMD virus can be found in section 8.

6.3 Milk Haulers/Drivers at the Processing Plant

6.3.1 Exiting the cab of the tanker, the performance standard is to prevent raw milk from contacting exposed skin, street clothing, and footwear.

6.3.1.1 The tanker cab should be considered and maintained as a clean, non-contaminated zone.

- The cab door should be considered a “Vehicle Door Boundary” between the cab and potentially contaminated outside areas.
- Adequate supplies of clean gloves, protective outerwear and footwear for a full shift of milk collection and delivery should be kept in the cab.
- Processing plants should keep a supply of protective wear (boots, gloves) in the event the hauler’s supply becomes depleted, damaged, or excessively contaminated.

6.3.1.2 If milk haulers/drivers are not involved in milk unloading procedures. They should put on protective footwear, at a minimum, prior to exiting the cab.

6.3.1.3 If on farm bulk tank samples were collected, the hauler should wear gloves and provide the previously disinfected, sealed bag(s) to designated plant personnel or drop-off locations.

6.3.2 Exiting the cab of the tanker, the performance standard is no direct contact with other personnel.

6.3.2.1 Haulers NOT responsible for tasks involving raw milk contact (off-loading or cleaning pumps/hoses/collection equipment), should go directly to and remain in, the designated area (break room).

- Haulers should have no direct contact with processing plant personnel, other haulers/drivers, raw milk handling equipment, or other milk transport vehicles.
- Haulers should not enter the milk processing area.
- Haulers should adhere to all plant protocols designating foot traffic and use of facilities.

6.3.3 Returning to the cab of the tanker, the performance standard is removal of all protective gloves and footwear.

6.3.3.1 The tanker cab should be maintained as a clean, non-contaminated zone which requires removing disposable protective outer clothing, footwear and gloves or clean and disinfect waterproof gear and footwear prior to entry.

6.4 Personnel Involved in Raw Milk Receiving

6.4.1 Plant personnel or haulers responsible for tasks involving raw milk contact (collecting tanker sample for antibiotic screening, off-loading/assisting with offloading/cleaning pumps, hoses, and collection equipment, working in the lab), the performance standard is to prevent raw milk on their clothing and footwear from leaving the designated raw milk handling areas of the plant.

6.4.1.1 Cross-contamination of raw milk with finished product should be avoided by designating areas specific to personnel handling raw milk.

- Gloves, clothing or protective outerwear/footwear worn while handling raw milk should not be worn in areas of the plant where pasteurized milk or milk products are processed, handled, or stored.
 - This includes lab personnel testing raw milk samples.
- If not already part of the plant's operating protocol, a boot bath, with product effective at killing FMD, should be placed between the receiving room and the milk processing section of the plant.
 - All personnel crossing between the areas must use the boot bath.
 - The boot bath must be kept free of organic debris and the disinfectant solution changed frequently to remain effective.
- Raw milk samples/paperwork, etc. should be moved from the receiving area in a manner that prevents the raw milk receiver from entering the processing plant.

6.4.1.2 Clothing or protective outerwear/footwear worn while handling raw milk should not leave the plant premises without cleaning and disinfection to minimize the potential for transporting FMD virus from the plant to premises with cloven-hooved livestock.

- This could be accomplished through dedicated work clothes and footwear that remains, and is laundered, at the plant.

6.4.1.3 All employees who have contact with cloven-hooved livestock (cattle, sheep, goats, or pigs), should arrive at work showered, in clean street clothes and footwear, prior to changing into their plant issued clothing and footwear.

6.4.1.4 PPE protocols for raw milk handling is presented in section 9.3.

6.4.2 When collecting tanker samples, the performance standard is to not spill milk on the outside of the tanker.

6.4.2.1 A collection bucket should be used for the disposal of the first two milk samples collected. The bucket and contents can be disinfected and neutralized prior to disposal into the sanitary sewer.

- Sample collection areas and equipment should be cleaned and disinfected in between each tanker with a food grade disinfectant that is effective against FMD (see section 8).

6.4.3 During off-loading milk, the performance standard is to address raw milk spills immediately.

6.4.3.1 Raw milk spilled on the floor or ground during the connection/disconnection of the plant transfer hose(s) should be rinsed into the drain as soon as all connections are made and before personnel walk through the area.

6.4.4 After off-loading milk, the performance standard is to ensure no residual raw milk in the tanker and hose leaks upon leaving the processing plant.

6.4.4.1 After off-loading of milk is complete, the storage compartment and/or valve area should be rinsed off prior to sealing all access points on the tanker.

- All equipment on the tanker, including valves and fittings, must be maintained in good repair to prevent leakage of milk from these points on the tanker.
- After milk off-loading is complete and the inlet valve is closed, any milk spilled around the valve or within the storage compartment should be cleaned and the surfaces disinfected immediately prior to replacing dust cap or closing the storage compartment doors.

6.4.4.2 The Pasteurized Milk Ordinance (PMO) requires CIP of milk trucks/tankers once every 24 hour period when in use.

- Evidence for internal tanker cleaning is monitored by seals on all access points and a wash tag identifying time/place of last interior tanker cleaning.
- Complete CIP of the tanker after each off-load may not be possible in many situations (lack of CIP equipment, lack of waste water permits, lack of off-loading capacity for incoming loads, etc.).
- A sanitary rinse may not be possible due to the lack of a permit for waste water disposal.

6.4.4.3. It is critical that all access points to raw milk on the tanker be completely sealed to prevent leaking whether CIP is conducted or not.

6.4.4.4 The truck-mounted transfer hose should be cleaned internally and externally using the CIP or COP equipment at the plant prior to placing it in the cleaned storage compartment.

- If the plant does not have CIP or COP capabilities, the interior and exterior surfaces of the hose should be rinsed with potable water until the discharge running into the drain is clean and clear

6.4.4.5 Once the tanker is unloaded and has no visible contamination on its exterior or in the storage compartment, it should be eligible for movement to the next location.

- The next location could be an off-site CIP facility or another dairy premises for raw milk pick-up.

7. CLEANING AND DISINFECTING VEHICLES

The virus that causes FMD has been shown to be stable in the environment and in organic material (mud, manure, feed, and bedding). Virus stability increases at lower temperatures and with protection from sunlight. FMD virus is inactivated at pH below 6.5 or above 11. Effective disinfectants for hard, nonporous surfaces only are listed in section 8. Proper cleaning procedures are essential in order for the disinfectant to adequately contact the virus and have time to inactivate it.

7.1 Proper Cleaning Procedures for Vehicles

7.1.1 Wear personal protective equipment

7.1.1.1 Gloves, coveralls, rubber or disposable boots, and goggles and a mask if you are generating splashes (eye protection) or dust (respiratory protection). See section 9.4 for more details.

7.1.2 Soak the most visibly contaminated areas to aid in washing

7.1.2.1 Soak the area with water and a detergent or cleaning agent (soap) starting with the dirtiest area and working toward the cleaner areas.

- This will aid in the removal of organic material on the tires, wheel wells, undercarriage, mud flaps, splash guards, and steps.
- May need to drive the vehicle forward slightly to ensure the tire contact surface is soaked.

7.1.3 Wash

7.1.3.1 Wipe, spray or scrub the area, starting with the dirtiest and working towards the cleaner areas.

- The use of pressure washers can enhance organic matter removal on the tires, wheel wells, undercarriage, mud flaps, splash guards, and steps.
- Ensure that the spray and wash water run-off from the vehicle wash does NOT reach animal holding/housing areas as FMD virus in organic matter could result in animal exposure.
- Washing the dirtier areas may cause splatter onto the cleaner areas; hence starting with the dirtiest areas will allow removal there first and subsequent removal of splatter from the cleaner areas last.
- Field demonstrations on full-sized milk tankers used 50-60 gallons of water, 15-20 gallons of citric acid and took approximately 30 minutes to fully clean and disinfect.

7.1.4 Rinse

7.1.4.1 Remove all detergent/soap residues by applying a low pressure water rinse on all surfaces, starting with the top of the tanker and working down.

7.2 Proper Disinfection Procedures for Vehicles

7.2.1 Read the product label

7.2.1.1 Handle the solution correctly to ensure safety of the handler and effectiveness of the disinfectant.

- Personal protective equipment may be needed to mix up solutions.
- Note the recommended dilutions, water temperature, environmental temperature, and the need for ventilation when using the product.

7.2.2 Disinfect

7.2.2.1 Apply the product to the cleaned areas of the vehicle, starting with the tires to maximize contact time before moving.

- Vehicle can be slowly rolled forward to allow the disinfectant to contact all parts of the tires

7.2.2.2 Allow the product adequate wet contact time (per label directions) with all surfaces to inactivate the virus. Solution must remain 'wet' to actively work; reapplication may be necessary.

8. APPROVED DISINFECTANTS FOR FMD VIRUS

In the U.S., the Environmental Protection Agency (EPA) regulates disinfectants (referred to as antimicrobial pesticides) under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). This law requires that all label use directions and safety precautions be followed. The labeling for each EPA-registered disinfectant lists the disease agents it effectively inactivates. In the case of the foot and mouth disease (FMD) virus, there are only a few labeled products and only one is registered as a sanitizer on food contact surfaces. In emergencies, when EPA registered products may not be available, EPA may grant exemptions for unregistered uses of registered pesticides, or uses of unregistered pesticides, to USDA-APHIS personnel, State Departments of Agriculture personnel, or possibly farmers or individuals to use a specific pesticide for a limited time by designated personnel. USDA-APHIS has exemptions in place for the use of citric acid and sodium hypochlorite (bleach), against the FMD virus in the event that registered pesticides are not available during an outbreak.

****See online version for Section 8****

9. PERSONAL PROTECTIVE EQUIPMENT (PPE)

PPE is one of many tools that can be implemented to decrease the risk of spreading FMD virus between animals and locations by human activities. Wherever possible, best practices should be implemented to further limit virus spread. PPE is designed to prevent spillage onto, and contamination of skin, street clothing and boots by materials (raw milk, manure, and mud) that could contain FMD virus. The type of PPE that will be worn is determined by the activities performed by personnel at C&D stations and involved in raw milk transfer.

9.1 Importance of PPE during an FMD Outbreak

Personnel that need to wear PPE during an FMD outbreak will benefit from pre-event education, training, and practice to increase their competencies and most effectively limit virus spread. Topics to cover include:

- Proper donning
- Performing tasks while wearing PPE
- Precautions while wearing PPE for long periods of time
- Doffing to limit contamination of street clothes
- Proper disposal of PPE
- Personnel involved in cleaning and disinfecting (C&D) vehicles need to protect their street clothing and footwear from virus contamination during the cleaning process and their exposed skin, eyes, nose, and mouth from the disinfectant.
- Dairy premises personnel need to ensure the clothing/footwear or PPE worn on farm around animals remains on the farm.
- This can be accomplished by using farm-dedicated clothing and footwear or wearing PPE when on the dairy premises and leaving it on the farm.
- Milk haulers involved in raw milk transfer should carry at least one change of street clothes with them in the event raw milk contacts their clothing.
- Milk haulers should not wear their street clothes or footwear around susceptible livestock after their raw milk pickup routes.

- Dairy processing plant personnel involved in raw milk transfer should change their clothing and footwear before leaving the plant.
- Protective clothing, uniforms, etc. worn while transferring raw milk should be laundered at the processing plant.
- If on-site laundering is not possible, clothing that leaves the plant should not be around susceptible animals.

9.2 PPE for Haulers/Drivers that Exit the Cab

Haulers/Drivers that exit the cab should focus on keeping their street clothing, hands, and footwear free of visible contamination. When exiting the cab, boots or disinfectable shoe covers should be worn. If handling the raw milk transfer hose, gloves should also be worn. As a best practice, protective outerwear should be worn over street clothes since milk spray during transfer hose connection can occur. As an alternative to routine use of full protective outerwear, a change of street clothes should be carried in the event a hauler/driver's street clothes become dampened with raw milk. The goal is to not transfer raw milk on clothing from farm to farm. The soiled clothes should be enclosed in a garbage bag until they can be laundered.

Milk haulers/drivers should carry adequate supplies of PPE in the tanker cab for a full shift of milk collection and delivery within an FMD Control Area. Dairy premises and milk processing plants should keep a supply of PPE (gloves, disposable boots) in the event the hauler's supply becomes depleted, damaged, or excessively contaminated.

9.2.1 PPE Supplies for Haulers/Drivers that Exit the Cab

- Gloves
 - Disposable
 - At least 2 pair for every dairy premises visit
- Protective footwear
 - Disposable or waterproof to withstand washing and disinfection while being worn
 - Footwear should cover shoes and socks
- Change of street clothes
 - In the event raw milk sprays onto street clothing, at least one change of clothes should be carried in the cab
- Garbage bag that can be closed
 - Contaminated street clothes should be kept in a closable garbage bag and not opened until deposited into a washing machine
- Protective outerwear
 - Disposable or waterproof* to withstand washing and disinfection while being worn
 - Covers street clothing
 - Apron or rain coat that remains on farm and dedicated to the hauler is an option
 - Must be stored in such a way it does not become contaminated with raw milk, animal manure, or mud
- *Protective eyewear (goggles, face shield)
 - a. If wearing waterproof outerwear that will be disinfected while still worn to prevent splashes of disinfectant into the eyes

9.2.2 Donning PPE for Haulers/Drivers that Exit the Cab

9.2.2.1 The cab door should be considered a “Vehicle Door Boundary” between the cab and potentially contaminated outside areas.

- Put on single use disposable gloves
- BEST PRACTICE: Put on protective outerwear, at least to the waist if wearing full coveralls (unless farm supplies apron, rain coat)
- Put on protective footwear
 - If disposable outerwear is worn, the pant legs of the protective outerwear should be tucked into the protective footwear.
 - If waterproof outerwear is worn, the pant legs should go over the boots, but not touch the ground. This will allow water and disinfectant to remain on the outside of the protective footwear.
- BEST PRACTICE: Step out of the cab and pull the outerwear on the rest of the way then zip closed

9.2.3 Doffing PPE for Haulers/Drivers that Exit the Cab

9.2.3.1 The cab door should be considered a “Vehicle Door Boundary” between the cab and potentially contaminated outside areas.

- If worn, remove farm-dedicated apron or rain coat after disconnecting and storing transfer hose
 - Return to storage area in milk house
- Remove outerwear unless waterproof*
- Remove gloves
- Remove protective footwear unless waterproof**
- Disposable outerwear, gloves, and footwear should be disposed of in a manner that does not contaminate personnel, equipment, or expose susceptible animals
- Get immediately into the cab trying not to introduce any visible contamination on your street shoes or clothing
- *Waterproof protective outerwear that travels with hauler:
 - Put on protective eyewear to prevent splashing disinfectant into eyes upon decontamination
 - Spray approved disinfectant from top to bottom so that it contacts all potentially contaminated surfaces of the outerwear, gloves, and footwear
 - Ensure the disinfectant meets the recommended wet contact time
 - Reapply if the disinfectant dries before the contact time is achieved o Remove protective eyewear and disinfect any surfaces that contacted raw milk
 - Store in tanker cab
 - Remove gloves and dispose of on the dairy premises in an appropriate manner.
 - Outerwear and footwear may remain on the milk hauler or be removed and stored in the cab

- **Waterproof protective footwear should be cleaned and disinfected before removal and stored so that it does not contaminate the cab of the truck

9.3 PPE for Dairy Premises Personnel C&D the Milk House after Hauler Collects Milk

Personnel need to wear protective gear that protects their street clothes/footwear, eyes, and face from environmental contamination, washing procedures, and disinfectant sprays. The PPE worn while cleaning and disinfecting the milk house after the hauler has collected milk should not be worn or stored around animals or animal areas. Carefully read the disinfectant label and follow their recommendations for PPE. When not in use, PPE needs to be stored in an area that prevents it from getting wet or sprayed with disinfectant and prevents contamination with organic material.

9.3.1 PPE Supplies for C&D the Milk House

- Gloves
 - Disposable or waterproof to withstand washing and disinfection while being worn
 - At least 2 pair for every C&D session
- Clean street clothing
 - There should be no animal manure/excrement on street clothing as PPE will be contaminated
- Protective outerwear
 - Disposable or waterproof to withstand washing and disinfection while being worn
 - Fully cover clean street clothing
 - Dedicated to this task; should not be worn around animals or animal areas
- Protective footwear
 - Disposable or waterproof to withstand washing and disinfection while being worn
 - They should cover the shoes and socks
 - Dedicated to this task; should not be worn around animals or animal areas
- Designated disposal bin or storage area for used PPE

9.3.2 Donning PPE for C&D the Milk House

- Put on gloves
- Put on protective outerwear over clean street clothing
- Put on protective footwear
 - If disposable outerwear is worn, the pant legs of the protective outerwear should be tucked into the protective footwear.
 - If waterproof outerwear is worn, the pant legs should go over the boots, but not touch the ground. This will allow water and disinfectant to remain on the outside of the protective footwear.

9.2.3 Doffing PPE for C&D the Milk House

- Remove outerwear unless waterproof*
 - *Put on protective eyewear to prevent splashing disinfectant into eyes upon decontamination
 - *Spray approved disinfectant from top to bottom so that it contacts all potentially contaminated surfaces of the outerwear, gloves, and footwear

- Ensure the disinfectant meets the recommended wet contact time
 - Reapply if the disinfectant dries before the contact time is achieved
- *Remove protective eyewear
- Remove gloves
- Remove protective footwear unless waterproof**
 - **Clean and disinfect before removal and stored so that it does not become contaminated
- Disposable outerwear, gloves, and footwear should be disposed of in a manner that does not contaminate personnel, equipment, or expose susceptible animals

9.4 PPE for Personnel Involved in Raw Milk Handling at the Dairy Processing Plant

Dairy processing plant personnel need to ensure the clothing/footwear worn while handling raw milk does not leave the plant. This can be accomplished by plant-dedicated clothing and footwear or wearing PPE while at the dairy processing plant and leaving it there.

If the milk hauler is responsible for off-loading milk, protective gear should be worn. Follow donning and doffing protocols provided in sections 9.2.2 and 9.2.3.

9.4.1 PPE Supplies for Raw Milk Handling at the Dairy Processing Plant

- Gloves
 - Disposable or waterproof to withstand washing and disinfection while being worn
 - At least 2 pair for every tanker off-load at the processing plant
- Plant dedicated clothing – OR –
- Protective outerwear
 - Disposable or waterproof to withstand washing and disinfection while being worn
 - Cover exposed street clothing
- Plant dedicated footwear – OR –
- Protective footwear
 - Disposable or waterproof to withstand washing and disinfection while being worn
 - They should cover the shoes and socks
- Designated disposal bin for used PPE

9.5 PPE for C&D Stations

Personnel need to wear protective gear that protects their street clothes/footwear, eyes, and face from environmental contamination, washing procedures, and disinfectant sprays. Carefully read the disinfectant label and follow their recommendations for PPE. When not in use, PPE needs to be stored in an area that prevents it from getting wet or sprayed with disinfectant and prevents contamination with organic material.

9.5.1 Supplies for C&D Station

- Read the disinfectant label for specific PPE recommendations.
- Gloves
 - Disposable or waterproof to withstand washing and disinfection while being worn

- A 4-day supply for the C&D station; at least 2 pair for every person involved and for each vehicle cleaned and disinfected
- Protective outerwear
 - Water resistant (disposable) or waterproof to withstand washing and disinfection while being worn
 - The protective outerwear should cover street clothing, exposed skin, including neck and head
 - A 4-day supply; at least one pair dedicated to C&D for every person involved
- Protective eyewear (goggles, face shield)
 - At least one pair dedicated to the C&D station for every person involved
- Nose/mouth protection (face shield or facemask)
 - At least one dedicated to the C&D station for every person involved
- Protective footwear
 - Disposable or waterproof to withstand washing and disinfection while being worn
 - It should cover the shoes and socks
- Wide waterproof tape
- Biohazard bags or other receptacle for properly disposing of PPE

9.5.2 Personnel involved in Vehicle C&D: Donning PPE

- Inspect all protective gear for damage or contamination; do not use unless intact, clean
- Protective outerwear should completely cover all street clothes and exposed skin, including neck and head
- Gloves should not be open around the wrists
 - Cover with protective outerwear or
 - Seal with tape to prevent disinfectant running inside
- Protective footwear should not be open at the top
 - Cover with protective outerwear or
 - Seal with tape to prevent water, disinfectant running down the pant leg inside the footwear
- Protective eyewear straps should go over the hooded outerwear
 - Mouth and nose protection straps should go over the hooded outerwear

9.5.3 Personnel involved in Vehicle C&D: Doffing PPE

9.5.3.1 Disposable:

- Remove tape from top of boots and dispose of in PPE trash receptacle
- Unzip the protective outerwear
- Pull the protective outerwear off the shoulders touching the outside with gloves on
 - A buddy system works best – have a second person wearing gloves pull the outerwear down off the shoulders while standing behind you
 - If alone, grab the outerwear on each side above the waist and wiggle the shoulders free
- Remove the gloves and dispose of in provided receptacle
- Touching only the inside of the protective outerwear so as not to contaminate hands, peel the outerwear down to boot level

- Sitting on a stool or other support, peel the outerwear and boots off the rest of the way
- Outerwear and footwear should be disposed of in a manner that does not contaminate personnel, equipment, or expose susceptible animals
- On a dairy premises: Additional biosecurity steps should be followed for personnel to cross the LOS at a controlled access point that eliminates any visible contamination on street shoes

9.5.3.2 Waterproof:

- Water rinse off protective gear from top to bottom to remove any potential contamination from outerwear, gloves, and footwear
- Remove protective eyewear and store in a protected location
- Remove gloves
 - If reusable, store in a protected location or
 - Dispose of in an approved receptacle
- Remove protective outerwear, protective footwear
 - Store in a protected location near the C&D station to be worn upon next vehicle C&D
- On a dairy premises: Additional biosecurity steps should be followed for personnel to cross the LOS at a controlled access point that eliminates any visible contamination on street shoes

9.5.4 Precautions While Wearing PPE at the C&D Station

9.5.4.1 The buddy system (two people) works best when donning and doffing PPE, as well as monitoring each other for signs of heat-related illness, fatigue, or injury.

- The second person also aids in ensuring street clothes are not contaminated should the PPE fail or become damaged.
- At a minimum, another person should be aware of the presence of personnel in PPE on the dairy premises or processing plant to provide assistance if needed.

9.5.4.2 Wearing PPE can affect a person's mobility and response time/movements due to its coverage.

- Personnel wearing PPE should be aware of certain situations and take precautions to limit environmental or situational impacts. Additional details are available in the
 - USDA FAD-PReP/NAHEMS Guidelines: Personal Protective Equipment (2011), available at: <http://www.cfsph.iastate.edu/pdf/fad-prep-nahems-guidelines-ppe-personal-protectiveequipment>
 - USDA FAD-PReP/NAHEMS Guidelines: Health and Safety (2011), available at: <http://www.cfsph.iastate.edu/pdf/fad-prep-nahems-guidelines-health-and-safety>

9.5.4.3 Heat related illnesses

- High temperatures, high humidity, direct sun, direct heat, limited air movement, physical exertion, poor physical condition, certain medications, a low tolerance for heat and certain

types of PPE can all contribute to heat-related illnesses (excerpt from USDA FAD-PreP/NAHEMS Guidelines: Health and Safety, 2011).

- It is important that personnel are familiar with the signs of heat-related illnesses and cease work when initial signs are detected.
- To prevent heat-related illness, limit work shifts so that personnel have time out of PPE to rehydrate, rest, and cool off.
- A cooling vest could be worn under the protective outerwear if the environment cannot be modified.

9.5.4.4 Cold stress

- Additional insulated underclothing may be needed to ensure personnel are able to maintain their core body temperature.
- Keeping appendages warm can be challenging in cold weather and dexterity decreases.
- To prevent cold stress, limit shifts so that personnel have time out of PPE to warm up, rest, and remain hydrated.

9.5.4.5 Slips, trips and falls

- It is important the protective footwear fit well and provide comfort or the wearer will be less agile, more apt to trip, or not comply with wearing them.
- When selecting between disposable or waterproof footwear, know the area where it will be worn.
 - If steps will be involved (such as on the side of a milk tanker or at the processing plant), good footing is a must.
 - Ensuring a safe walking and climbing environment is as important as disease control. Personnel must feel comfortable to walk around in order to follow biosecurity protocols.

9.6 Proper Disposal of PPE

9.6.1 PPE generated during an FMD outbreak: the performance standard is to dispose or launder PPE in a manner that does not expose susceptible species to FMD virus or contaminate people, vehicles, equipment, and supplies.

- Pre-event, estimate the amount of PPE that will be generated in a given time frame (daily, weekly) so that a disposal or laundering plan can be implemented to accommodate the volume of PPE used.
- A clearly marked receptacle should be provided on farm or at the processing plant so all personnel know where to dispose of their used PPE.
 - Ensure the receptacle is protected from wind and scavengers to prevent the contaminated PPE from leaving the premises. A sealable or latchable lid is advised.
 - A removable liner is advised for ease of removal and containment when transporting to its final destination.
- Burial, burning or landfilling are likely methods for disposal. Ensure the method selected is in accordance with state, local and municipal regulations.

APPENDIX D: MILK HAULER/DRIVER BIOSECURITY EXPECTATIONS

This information can be found in the [Information Manual for Enhanced Biosecurity for FMD Prevention: Dairy](#) (Appendix J).

One of the most frequent arrivals onto a dairy premises is the milk hauler/driver. Establish the expectations for their actions on farm and communicate it to the hauling company and all milk haulers/drivers that arrive at your operation. Below are examples for the various milk collection options involving the hauler/driver. Include the biosecurity measures that best fit your facility and personnel capabilities and prevent the introduction or spread of FMD virus. More details can be found in the [SMS Biosecurity Performance Standards](#) for Raw Milk Collection and Transport.

General – Applies to ALL Haulers/Drivers

- Follow the state regulatory requirements
 - Licensed weigher/sampler records milk weight, collects bulk tank sample, and ensures the state regulatory requirements are followed
- Ensure no residual raw milk remains in the truck/tanker or hose before the truck/tanker leaves the processing plant, whenever Clean-in-Place is not done
- Avoid tire contact with manure or other organic material whenever possible
- Keep the interior of the cab and exterior of the truck/tanker as clean as possible with no visible contamination
- Carry and wear appropriate protective gear when exiting the cab to prevent milk spray on exposed skin, street clothing, and footwear
 - Single use (disposable) gloves – all haulers exiting cab
 - Protective footwear – all haulers exiting cab
 - Protective outerwear – all haulers transporting commingled loads or more than one farm in a single day
- Carry an approved disinfectant and spray equipment (e.g., garden sprayer) for cleaning and disinfection (C&D) of small milk spills during collection
- Avoid contact with people, animals, or milk fed to susceptible animals
- Close and secure the dome lid during milk pumping and transporting

Farm-Specific Options – Choose 1 or the 3 options to include in your biosecurity plan

1. Milk Truck/Tanker Does NOT Cross the LOS

- *Milk house is outside the LOS and milk hauler/driver performs all milk collection tasks*



Source: Information Manual for Enhanced Biosecurity for FMD Prevention: Dairy (Appendix D)

- Before re-entering the cab
 - Remove gloves and disposable footwear OR disinfect non-disposable footwear
- Milk house equipment C&D
 - Dairy premises personnel perform milk equipment C&D after the hauler leaves

2. Only the Transfer Hose Crosses the LOS

- *Area just in front of the milk house is outside the LOS or hose porthole is LOS Access Point*
- *Milk hauler/driver remains outside the LOS and dairy premises personnel remain inside the LOS*
- *Requires a licensed weigher/sampler on farm to complete all necessary steps to collect milk*



Source: *Information Manual for Enhanced Biosecurity for FMD Prevention: Dairy (Appendix D)*

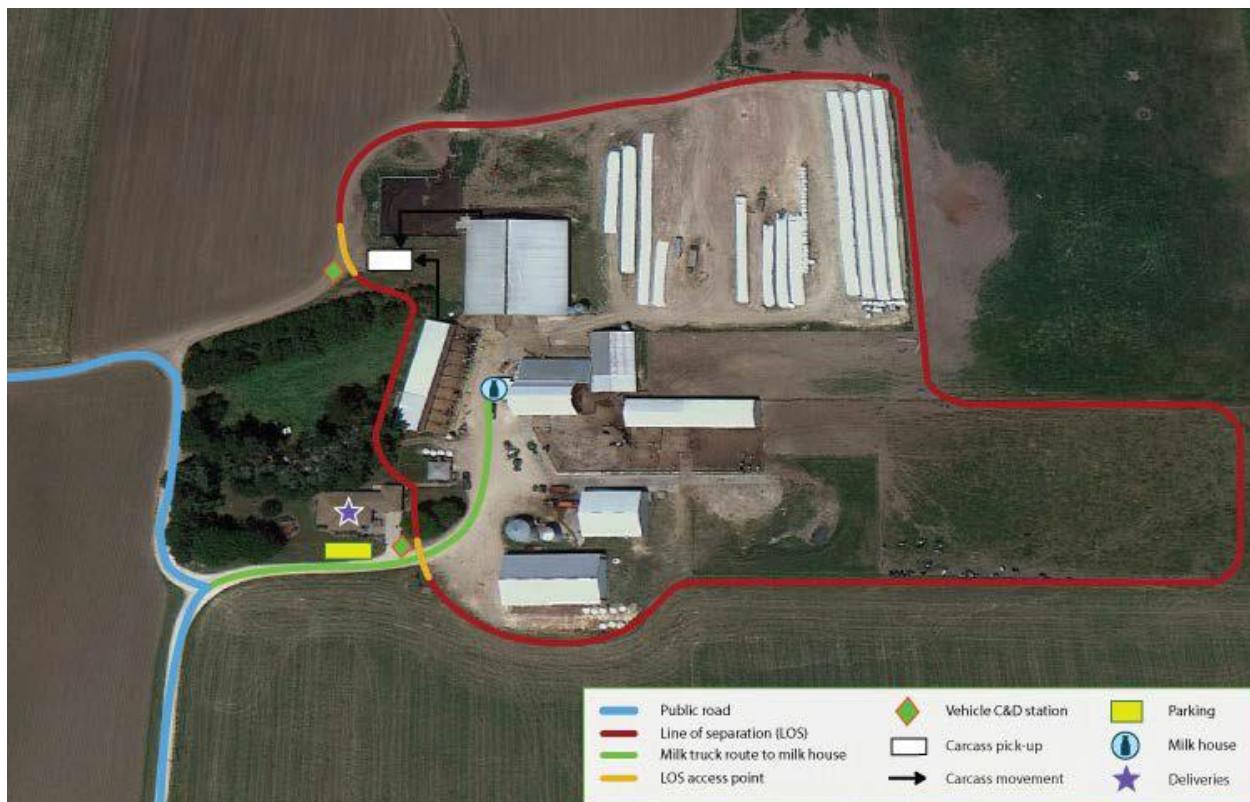
Milk hauler/driver responsibilities

- Pass capped TRUCK-MOUNTED transfer hose to dairy personnel
 - Dairy premises personnel will spray hose exterior surface with FMD-approved disinfectant as it crosses the LOS
 - Dairy premises personnel connect transfer hose to bulk tank after performing weigher/sampler duties
 - After loading is complete and when the transfer hose is used on other farms before being cleaned/sanitized
 - Hauler will cap tanker end of hose and pass entire hose to dairy premises personnel to spray exterior with disinfectant as it crosses the LOS
 - Dairy premises personnel will rinse interior with potable water from milk house until discharge is clean and clear, cap both ends and pass back to hauler/driver
- Receive capped TRUCK-MOUNTED transfer hose from dairy personnel
 - Connect to tanker for milk collection (if not already connected). Pump milk.
 - Hauler/driver will spray hose exterior surface with FMD-approved disinfectant as it crosses the LOS, before storing on tanker
- OR Connect FARM-DEDICATED transfer hose to truck/tanker; Disconnect when done and pass to dairy premises personnel
 - Dairy premises personnel will spray hose exterior surface with FMD-approved disinfectant as it crosses the LOS and clean interior with rest of milking equipment

- Re-enter the cab
 - Remove gloves and disposable outerwear/footwear OR disinfect non-disposable outerwear and footwear
- Transport milk samples to processing plant

3. Milk Truck/Tanker Crosses the LOS and Hauler/Driver

- *Milk truck/tanker must cross the LOS to pick up milk*
- *Determine if hauler/driver exits cab or not; if not, follow guidance above for milk collection by dairy personnel*



Source: Information Manual for Enhanced Biosecurity for FMD Prevention: Dairy (Appendix D)

- Milk truck/tanker C&D required before crossing LOS
 - Dairy premises personnel perform milk truck/tanker C&D upon entry and exit of the farm
- Re-enter the cab
 - Remove gloves and disposable outerwear/footwear OR disinfect non-disposable outerwear and footwear

APPENDIX E: FACTORS TO CONSIDER PRE-EVENT FOR INDUSTRY, STATE, and FEDERAL PLANNING

The following is from the National Secure Milk Supply Plan's Biosecurity Performance Standards for Raw Milk Collection and Transport: Appendix 5.

The following summary highlights Performance Standards that the Working Group Members felt would benefit from pre-event communication and planning on a more local level to accomplish. The standards, factors to consider, and tasks for government and industry to address pre-event are listed. Please refer to the full BPS document for additional details.

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
<p>3.1 Milk Truck/Tanker Movement and Storage</p> <p><i>3.1.2 The Incident Management Team may designate traffic corridors in the Control Area; the performance standard is for milk haulers/drivers to adhere to designated traffic corridors and avoid tire contact with manure or other organic material where possible.</i></p> <ul style="list-style-type: none"> • This PS is designed to decrease the potential infectious burden to remove upon farm entry 	<ul style="list-style-type: none"> • Routes will be designated on an operational period basis (24 hour) by the Operations section of Incident Command • Back roads need to be clearly marked with name or route number. During communication between haulers/tanker drivers, dispatchers, and incident command, the name/number that appears on the road sign should be used • There are potential ways that milk tankers could be contaminated, such as unpaved roads necessary to get to a farm and cross traffic. A standard of "minimizing" contamination (rather than "avoiding") should be established so that all parties are satisfied with the condition of the tanker. • A communication possibility is instant transmission of routing information from a dispatch center to the hauler through GPS technology. This could be added to trucks without GPS in a short time period (6 hours). 	<ul style="list-style-type: none"> • Define the 24-hour operational period that will be used for route designation • Determine if and how routing will be linked to premises classification and permitting; communicate this with industry • Identify personnel responsible for monitoring routes and communicating information to industry • Identify areas of local (police) and national (DOT, National Guard) governmental support related to control of traffic including roadblocks, patrols, and fines, and communicate information with industry • Identify industry key points of contact pre-event and communicate protocols with industry on transportation routes during event 	<ul style="list-style-type: none"> • <i>Haulers:</i> Emphasize the importance of strict adherence to designated routes • <i>Haulers:</i> Communicate with dispatch any contaminated roadway within the FMD Control Area • <i>Haulers:</i> Provide contact information to government • <i>Haulers:</i> Identify and communicate protocols and schedule with haulers/tanker drivers on transportation routes • <i>Haulers:</i> Maintain contact information for all premises on route in case of a delay of preventing milk pickup • <i>Haulers:</i> Identify best technology for sharing route information with their drivers en route, and work toward implementation pre-event 	<ul style="list-style-type: none"> • CDA has MOU with CSP

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
<p>4.1 Milk Haulers/Drivers on a Dairy Premises</p> <p><i>4.1.2 Milk Haulers/Drivers involved in milk collection activities; the performance standard is to prevent raw milk from contacting their street clothing and footwear</i></p> <ul style="list-style-type: none"> • This PS is designed to prevent potential FMD virus entry to the dairy premises via the milk hauler who may travel to multiple dairy premises on one route 	<ul style="list-style-type: none"> • Early in the outbreak, PPE supplies may be hard to rapidly obtain from a supplier; determine acceptable protective wear alternatives to protect the hauler from contaminating their clothing and footwear with raw milk • Determine whether the premises or hauler will be responsible for supplying the protective wear, and any additional backup protective wear. • Distribute a suggested/required supply list to haulers/processors to have on hand in case of an outbreak; Examples: lab coat, butcher's or milkers apron, garbage bag with head/arm holes, palpation sleeves, gloves, plastic boots, rubber overshoes, etc. • The cab of the truck should be considered a 'clean' zone, not bringing in organic material (milk, manure, mud) from the dairy premises • PPE should be specific to the tasks at hand – crossing the LOS or not • Determine if disposable or waterproof outerwear is more appropriate based to climate, industry capabilities, ability to adequately disinfect, and resources available • All entities (dairy premises, hauler, processors) should determine the responsible party for obtaining necessary protective outerwear, footwear, and disinfectants and communicate these expectations prior to a response • Proper disposal of outerwear on farm must be determined – disinfecting, burning, burying, etc. – as this will affect more than just the milk haulers outerwear (any service provider on the farm with animal or milk contact will need to wear 	<ul style="list-style-type: none"> • Determine protective wear expectations for those entering the premises and communicate this to producers • Communicate PPE disposal options that are in accordance with state regulations 	<ul style="list-style-type: none"> • <i>Premises:</i> Have a dedicated storage available for waterproof outerwear should this be the option selected • <i>Premises:</i> Describe how PPE will be disposed of, ensuring to meet local and state ordinances, in your farm-specific SOP • <i>Premises:</i> Have a supply of gloves and protective outerwear and footwear for the hauler in the event theirs becomes depleted, damaged, or contaminated • Communicate expectations between the <i>premises and hauler</i>, including supply of protective wear • <i>Haulers:</i> Determine options and have a plan to obtain resources needed to accomplish task • <i>Haulers:</i> Ensure you are comfortable donning and doffing the protective gear necessary to perform the various tasks • Ensure <i>haulers</i> obtain the necessary training to effectively implement protocols 	

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
	<p>protective outerwear that should not leave the farm)</p> <ul style="list-style-type: none"> ● Importance of compliance and training materials could be provided through a variety of entities; Examples: milk hauler associations, state and national cattle associations, SMS website, state officials, incorporated into licensed milk sampler/hauler training at the state level, etc. ● A farm-specific SOP should be developed and communicated to all haulers picking up milk on that dairy in the FMD control area 			
<p>4.2 Milk Trucks/Tankers on a Dairy Premises</p> <p><i>4.2.1 The performance standard is for dairy premises personnel to record all vehicle and people movements that enter the dairy premises.</i></p> <ul style="list-style-type: none"> ● This PS is designed to enhance trace-back and trace-forward information 	<ul style="list-style-type: none"> ● To trace movements, multiple options could be utilized depending on requirements by officials, resources, available and capabilities of industry; Examples: GPS on trucks, electronic weigh bills, preprinted labels carried by the haulers and left on farm, information on permit carried by hauler, etc. 	<ul style="list-style-type: none"> ● Determine what information must be collected at the farm level and in what format ● Communicate expectations to industry (premises, haulers and processors) 	<ul style="list-style-type: none"> ● <i>Premises:</i> Obtain forms, if required, from the Incident Management Team (IMT), and be prepared to collect the info and provide forms when required ● <i>Haulers:</i> Be prepared to provide details as required by the IMT 	
<p><i>4.2.2 In order to pick-up milk on a dairy premises, the performance standard is to provide a clean drive path for the milk tanker to approach the milk house (free of animal excrement).</i></p> <ul style="list-style-type: none"> ● This PS is designed to decrease the infectious burden in the environment where vehicles will travel 	<ul style="list-style-type: none"> ● FMD virus is shed in manure of infected animals so a drive path that is also used for animal movement will be difficult to clean and disinfect on a regular basis in all weather conditions. 	<ul style="list-style-type: none"> ● Individual states may decide that driving across a contaminated path is acceptable with appropriate milk tanker exit cleaning and disinfection procedures ● Communicate expectations with industry 	<ul style="list-style-type: none"> ● <i>Premises:</i> Obtain forms, if required, from the Incident Management Team (IMT), and be prepared to collect the info and provide the forms when required ● <i>Haulers:</i> Be prepared to provide details as required by the IMT 	

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
<p><i>4.2.4 To mitigate the risk of bioaerosols escaping the air vent during milk pumping and transporting, the performance standard is to close and lock the dome lid (secured by the dog legs).</i></p> <ul style="list-style-type: none"> • This PS is designed to further prevent the unlikely escape of FMD virus through the vent 	<ul style="list-style-type: none"> • This is standard practice for many haulers, but not all. 	<ul style="list-style-type: none"> • Communicate state regulations to industry related to venting during pumping 	<ul style="list-style-type: none"> • <i>Haulers:</i> Know the state regulations related to venting during pumping 	
<p>4.3 Milk Samples</p> <p><i>4.3.1 Milk sample vial(s) collected/picked up on farm; the performance standard is to ensure no visible contamination on the exterior of the disinfectable outer container (plastic sealable bag).</i></p> <ul style="list-style-type: none"> • This PS is designed to prevent cross contamination 	<ul style="list-style-type: none"> • Normally, samples are collected from all bulk tanks and tested at the processing plant; determine if this will still be the case in an FMD outbreak situation • Determine via pre-event testing whether carrying samples in a plastic sealable bag or other disinfectable outer container will affect the requirement to maintain the sample temperature between 32 and 40 degrees 	<ul style="list-style-type: none"> • Determine if bulk tank samples will be collected in an FMD outbreak and how samples will be handled, couriers, plants, etc. 	<ul style="list-style-type: none"> • <i>Premises and Haulers:</i> Discuss bulk tank sample expectations with government officials and processors • <i>Haulers:</i> Ensure the container used to transport milk samples can safely transport them in they are individual plastic bags 	
<p>5.1 Establishing a Line of Separation (LOS) on a Dairy Premises</p> <p><i>5.1.1 When determining the location(s) for the line of separation (LOS) and controlled access point(s), the performance standard is to establish a boundary that adequately separates</i></p>	<ul style="list-style-type: none"> • When determining the LOS, be sure susceptible species do NOT have fence line contact with roadways • Evaluate a typical week's worth of movements on-farm and off-farm to determine the best location for the LOS • Consider the availability of water, power, mud-free surface for the location of controlled access point(s) as a C&D station will be needed to cross the LOS to the farm side 	<ul style="list-style-type: none"> • Review dairy premises biosecurity SOPs that include their proposed LOS and controlled access point(s) 	<ul style="list-style-type: none"> • <i>Premises:</i> Include an aerial photo of your farm (available online) and clearly mark the LOS and controlled access points • <i>Premises:</i> Identify signage and blockade devices to clearly mark the LOS and controlled access points. 	

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
<p><i>off-farm movements from on-farm movements to prevent exposure of susceptible animals.</i></p> <ul style="list-style-type: none"> • This PS is designed to prevent the introduction of FMD virus onto a dairy operation 				
<p>5.2 NOT Crossing the LOS: Truck/Tanker/Hauler Collecting Milk</p> <p><i>5.2.1 The area where the milk tanker parks near the milk house is outside the LOS; the performance standard is to ensure other vehicles, personnel entering the dairy do not drive/walk through this area, unless they are involved in milk pumping activities and specific biosecurity steps are followed.</i></p> <ul style="list-style-type: none"> • This PS is designed to focus disease prevention resources on the LOS and ensuring personnel, vehicles do not cross 	<ul style="list-style-type: none"> • Some milk houses on dairy premises are located nearly on the road. The level of contamination on the road may not be different from the area in front of the milk house. If this drive path can be dedicated to the milk tanker (no animal travel the area, no other vehicles enter/leave), with proper biosecurity protocols, the tanker and hauler/driver could remain outside the LOS during pumping • The tanker would NOT undergo C&D as it does not 'cross' the LOS at a controlled access point • Direct load tankers may fall under this situation as well 			
<p>5.3 Crossing the LOS: Only the Transfer Hose</p> <p><i>5.3.1 The hauler/driver will not cross the controlled access point, but assists with handling</i></p>	<ul style="list-style-type: none"> • For farms with a dedicated drive path for the milk tanker, and the tanker can get close enough to the milk house while still remaining on the outside of the LOS, the transfer hose is the only object that needs to cross the controlled access point 	<ul style="list-style-type: none"> • Determine if your state milk licensing agency will allow on-farm weighers/samplers to undergo training pre-event • Discuss with industry the basis of payment and if 	<ul style="list-style-type: none"> • <i>Premises:</i> Work with your state licensing agency to have one or more weigher/samplers trained pre-event • <i>Premises:</i> Ensure the weigher/sampler maintains 	

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
<p><i>the transfer hose outside the LOS; the performance standard is to meet State requirements for licensed weigher/samplers to perform milk collection duties on the farm side of the LOS.</i></p> <ul style="list-style-type: none"> • This PS is designed to focus disease prevention resources on the transfer hose and ensuring the hauler adheres to all protocols to not introduce FMD virus 	<ul style="list-style-type: none"> • The transfer hose would need to cross the LOS and undergo appropriate C&D to prevent introducing organisms onto the farm side of the LOS <p>Requires a licensed weigher/sampler available on the dairy premises to provide the farm-side steps of milk pickup.</p> <ul style="list-style-type: none"> • It could be a farm-dedicated hose (less risk of introducing virus) or a truck-mounted hose (more biosecurity protocols needed to prevent virus introduction) 	<p>that needs to change in an emergency in the event a licensed weigher/sampler is not available for the dairy premises</p>	<p>their license (most last 2 years)</p> <ul style="list-style-type: none"> • <i>Premises & Haulers:</i> Work together pre-event to determine if the hose will reach from the bulk tank to the tanker • <i>Premises:</i> Obtain the supplies required to ensure the transfer hose does not introduce contamination as it crosses to the farm-side from outside the LOS 	
<p><i>5.3.2 Farm-dedicated transfer hose crosses the LOS at a controlled access point to connect to the tanker; the performance standard is to ensure there is no visible contamination on the hose exterior after pumping when crossing back to the farm side.</i></p> <ul style="list-style-type: none"> • This PS is designed to limit potential FMD virus entry to the dairy premises via the transfer hose that may be used to multiple dairy premises on one route. 	<ul style="list-style-type: none"> • The transfer hose must undergo C&D protocols when crossing onto the farm side from outside the LOS to minimize virus entry 	<ul style="list-style-type: none"> • Determine if dairy premises can have their own transfer hose or if they need to use a truck-mounted hose and communicate that to industry 	<ul style="list-style-type: none"> • <i>Premises:</i> Pending state regulations and hose connection size on the tanker, be prepared to purchase a farm-dedicated transfer hose and clean it after use • <i>Premises:</i> Work with haulers to learn how to connect/disconnect transfer hoses to the bulk tank 	
<p><i>5.3.3 Truck-mounted transfer hose crosses the LOS at a controlled access point to connect to the</i></p>	<ul style="list-style-type: none"> • The transfer hose must undergo C&D protocols when crossing onto the farm side from outside the LOS to minimize virus entry 	<ul style="list-style-type: none"> • Determine if dairy premises need to have their own transfer hose or can use a truck-mounted 	<ul style="list-style-type: none"> • <i>Premises:</i> Ensure personnel know how to connect/disconnect transfer hoses to bulk tank 	

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
<p><i>bulk tank; the performance standard is to ensure there is no visible contamination on the hose exterior when crossing to the farm side.</i></p> <ul style="list-style-type: none"> • This PS is designed to limit potential FMD virus entry to the dairy premises via the transfer hose that may be used to multiple dairy premises on one dairy route. 	<ul style="list-style-type: none"> • Residual milk in the transfer hose may contain FMD virus in milk from previous farm pickups (not know to be infected dairy premises). Therefore, the dairy premises should be aware of the risks of subsequent milk pickups and ensure any raw milk spilled on farm is cleaned and disinfected immediately, before personnel walk through the area • If the area below the milk hose connection on the tanker is not a solid surface, an impermeable tarp could be used to capture milk spills • Training on proper procedures to prevent milk spills or leaks could be provided through videos available from milk hauler associations, state officials, SMS website, other • Standard Operating Procedures should be established for trucks that use a truck-mounted transfer hose and pick up more than one farm per load, or pick up multiple farms per day without clean-in-place of hose, pump at every off-load 	<p>hose and communicate that to industry</p> <ul style="list-style-type: none"> • For tankers performing multiple farm pickups between off-loads, determine protocol for dealing with spills occurring on the premises during pumping of milk; communicate this with premises, haulers 	<ul style="list-style-type: none"> • <i>Haulers:</i> Determine options to ensure the exterior of the transfer hose is clean and disinfected and milk from the tanker is not spilled on subsequent farms • <i>Haulers:</i> Have a plan to obtain resources needed to accomplish tasks 	
<p>5.4 Crossing the LOS: Milk Truck/Tanker</p> <p><i>5.4.1 When crossing the LOS at a controlled access point, the performance standard is removal of all visible contamination on the milk tanker (or other conveyances) followed by disinfection.</i></p> <ul style="list-style-type: none"> • This PS is designed to prevent potential FMD virus entry to the dairy premises. 	<ul style="list-style-type: none"> • Availability and selection of an appropriate “disinfection station” could vary at the local and regional level • A possibility is a high pressure spray rig to follow tankers. This may be useful for removing gross contamination, but disinfection on the premises will still be necessary. • A possibility is establishing a regional C&D station focused on cleaning (removal of visible contamination) and a station at the farm gate focused on disinfection. • A possibility is one verified disinfection station for multiple farms, provided producers are willing to take this risk 	<ul style="list-style-type: none"> • Communicate expectations and any available resources with industry • Determine availability of C&D supplies and facilities likely to be offered, including sources of mobile options • Communicate expectations for clean/no visible contamination with industry • Identify exterior truck washing facilities in state, region 	<ul style="list-style-type: none"> • <i>Premises:</i> Explore options for reducing contamination on the tanker from dirt or gravel driveways • <i>Premises:</i> Identify possible locations for a single cleaning and disinfection station to be used upon entry and exit of vehicles • <i>Premises:</i> Ensure farm personnel obtain the necessary training to safely and effectively implement protocols 	

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
	<p>(suggest signing an agreement accepting risk for “group biosecurity”)</p> <ul style="list-style-type: none"> • The Dairy Premises Biosecurity Working Group believes that grouping premises by location and status is less than ideal. • States may want to establish expectations for the disinfection station and audit the capabilities on farm pre-event • Depending on the farm, only minimal exterior tanker cleaning may be required to remove visible contamination, thus speeding up the exit process • Options for reducing contamination from dirt driveways at the premises should be explored and discussed • The C&D station should be set up outside of, but adjacent to the controlled access point(s) • The hauler should remain in the truck during the C&D process as long as the truck idle laws allow it • If the hauler needs to exit the vehicle, follow protocols under section 4.1.2 • Alternating C&D personnel between farms could also help with availability of farm personnel as long as proper biosecurity measures are taken by labor force • A plan needs to be established that meets local regulations for C&D waste water handling; is recapturing it, deactivating it and spreading it an option? • Field demonstrations on full-sized milk tankers used 50-60 gallons of water, 15-20 gallons of citric acid and took approximately 30 minutes to fully clean and disinfect • Importance of C&D compliance and training materials could be provided through a variety of entities; Examples: 	<ul style="list-style-type: none"> • Communicate with truck washing facilities pre-event regarding their capabilities and options for restriction of their use to only vehicles moving to and from an FMD control area • Determine expectations for exterior truck cleaning and disinfection protocols • Work with industry to determine an appropriate layout for C&D station • Communicate with processors the idle regulations of the state • Identify training resources for farm personnel to safely and effectively implement protocols • Work with environmental protection to determine acceptable and feasible run-off collection procedures • Determine the frequency and personnel who will monitor dairy premises biosecurity procedures during an outbreak; this should be accounted for in the ICS structure • Determine acceptable accommodations for inclement weather with industry • Determine frequency and personnel resources necessary to monitor 	<ul style="list-style-type: none"> • <i>Premises:</i> Determine resources needed to accomplish task • <i>Premises:</i> Work with appropriate state and federal agencies to determine acceptable and feasible run-off collection procedures • <i>Premises:</i> Work with environmental and health authorities, ideally pre-event, to discuss disinfection protocols, including appropriate contact times in various weather conditions • <i>Premises:</i> Plan for inclement weather (extreme heat, extreme cold, excessive rain) • <i>Premises and Haulers:</i> Prepare to have PPE available for the C&D station and haulers exiting the cab after crossing the LOS • <i>Haulers:</i> Obtain accurate contact information to ensure farm personnel are available when tanker arrives • <i>Haulers:</i> Be prepared for delays due to length of time for C&D of tanker exterior on farm • <i>Haulers:</i> Communicate with government regarding idle regulations 	

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
	<p>milk hauler associations, state and national cattle associations, SMS website, state officials</p> <ul style="list-style-type: none"> • Identification and mapping existing truck wash facilities with capabilities should be one step in response planning • Some external contamination may be unavoidable but this can be mitigated by the C&D at the farm before crossing the LOS • Provisions for how to meet this standard when snow and ice impact the environment and temperatures will need to be decided upon 	<p>tanker cleanliness; communicate this with industry</p>	<ul style="list-style-type: none"> • <i>Haulers</i>: Determine feasible accommodations for inclement weather and discuss with government 	
<p><i>5.4.2 Milk haulers/drivers in trucks/tankers that cross the LOS (multi-farm pickups or empty for direct loading): the performance standard is to minimize the need for the milk hauler to exit the cab</i></p> <ul style="list-style-type: none"> • This PS is designed to decrease driver/hauler exposure to the farm and vice versa 	<ul style="list-style-type: none"> • Requires a licensed weigher/sampler available on the dairy premises to provide the farm-side steps of milk pickup • Insurance/risk managers of hauling companies may be willing to balance the liability of having dairy farm personnel disconnect/connect trailers and tractors with the risk of hauler/driver exiting the cab and becoming contaminated during an FMD outbreak • Standard Operating Procedures should be established for farm personnel that describe the steps to disconnect/connect tankers to tractors 	<ul style="list-style-type: none"> • Determine if your state milk licensing agency will allow on-farm weighers/samplers to undergo training pre-event • Discuss with industry the basis of payment and if that needs to change in an emergency in the event a licensed sampler/weigher is not available for the dairy premises 	<ul style="list-style-type: none"> • <i>Premises</i>: Work with your state licensing agency to have one or more weigher/samplers trained pre-event • <i>Premises</i>: Ensure farm personnel obtain the necessary training to safely disconnect/connect tankers • <i>Haulers</i>: Work with insurance companies and risk managers pre-event to determine if dairy farm personnel can disconnect/connect trailers • <i>Haulers</i>: Obtain accurate farm contact information to ensure farm personnel are available when tanker arrives 	
<p>6.1 Establishing Traffic Patterns on the Processing Plant Premises</p>	<ul style="list-style-type: none"> • To trace movements, multiple options could be utilized depending on requirements by officials, resources available and capabilities of industry; Examples: GPS on trucks, electronic weigh 	<ul style="list-style-type: none"> • Determine what information must be collected at the processing plant and in what format 	<ul style="list-style-type: none"> • <i>Haulers</i>: Be prepared to provide details as required by the IMT • <i>Processors</i>: Review plant layout and determine how 	

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
<p><i>6.1.1 Before entry, the performance standard is for dairy plant personnel to record all vehicle and people movements involving raw dairy products</i></p> <ul style="list-style-type: none"> • This PS is designed to enhance trace-back and trace-forward information 	<p>bills, preprinted labels carried by the haulers and left on farm, information on permit carried by hauler, etc.</p> <ul style="list-style-type: none"> • Traffic control will vary between plants. How this is best accomplished will depend on the location, layout and normal traffic flow of a plant. 	<ul style="list-style-type: none"> • Communicate expectations to industry (premises, haulers and processors) 	<p>access to the plant is best accomplished. Incorporate that information into the plant FMD response plan.</p>	
<p>6.2 Raw Milk Tanker Exterior Cleaning and Disinfection</p> <p><i>6.2.1 The performance standard is for processing plant officials and animal health officials to work together to determine the best options for tanker C&D to reduce the FMD virus spread that aligns with response goals, local capabilities and regulations.</i></p> <ul style="list-style-type: none"> • This PS is designed to prevent potential cross contamination 	<ul style="list-style-type: none"> • The BEST PRACTICE is for raw milk trucks/tankers to have their exterior surfaces, tires, undercarriage, and storage compartment cleaned and disinfected with the goal of removing any material that may contain FMD virus from conveyances before picking up milk at subsequent dairy premises with susceptible animals • Establishing C&D station locations will vary between plants • State Animal Health Officials and processors should discuss feasible options for achieving this PS in the local setting; including at an off-site location that is in close proximity to the plant entrance. • Waste water will need to be managed per local/state regulations • Local climatic conditions need to be considered when determining the SOP to accomplish this PS • Processing plant written plans or proposed options should be reviewed by and discussed pre-event with government officials from all states that ship milk to that plant 	<ul style="list-style-type: none"> • Communicate expectations and any available resources with industry, accounting for local and inclement weather conditions • Review and pre-approve processing plant specific biosecurity plans to speed implementation during an actual outbreak • Partner with industry to develop and provide training to ensure processing plant personnel are safely and effectively implementing the recommended protocols Determine the frequency and personnel who will monitor processing plant biosecurity procedures during an outbreak; this should be accounted for in the ICS structure 	<ul style="list-style-type: none"> • <i>Processors:</i> Develop a site specific FMD response plan which meets the BPS. Review/share plan with local/regional animal health officials for pre-approval if possible. • <i>Processors:</i> Determine state and local regulations for waste water management when developing FMD plan • <i>Processors:</i> Partner with government to ensure personnel obtain the necessary training to safely and effectively implement protocols 	
<p>6.3 Milk Haulers/Drivers at the Processing Plant</p>	<ul style="list-style-type: none"> • Determine whether the processing plant or hauler will be responsible for supplying the protective wear, and any additional backup protective wear. 		<ul style="list-style-type: none"> • <i>Haulers and Processors:</i> Determine options and have a plan to obtain 	

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
<p><i>6.3.1 Exiting the cab of the tanker, the performance standard is to prevent raw milk from contacting exposed skin, street clothing, and footwear</i></p> <ul style="list-style-type: none"> • This PS is designed to prevent potential FMD virus contaminating the milk hauler who may travel to multiple dairy premises in a work shift 	<ul style="list-style-type: none"> • Early in an outbreak, supplies may be hard to rapidly obtain from a supplier; determine acceptable protective wear barriers to protect the hauler from contaminating their clothing and footwear with raw milk • Importance of compliance and training materials could be provided through a variety of entities; Examples: milk hauler associations, state and national cattle associations, SMS website, state officials, incorporated into licensed milk sampler/hauler training at the state level, etc. 		<p>resources needed to accomplish tasks</p> <ul style="list-style-type: none"> • <i>Processors</i>: Incorporate procedures for obtaining and expectations for wearing necessary protective wear into plant FMD response plan • <i>Haulers</i>: Obtain necessary training to effectively implement protocols 	
<p>6.4 Personnel Involved in Raw Milk Receiving</p> <p><i>6.4.1 Plant personnel or haulers responsible for tasks involving raw milk contact (collecting tanker sample for antibiotic screening, off-loading/assisting with off-loading/cleaning pumps, hoses, and collection equipment working in the lab), the performance standard is to prevent raw milk on their clothing and footwear from leaving the designated raw milk handling areas of the plans.</i></p> <ul style="list-style-type: none"> • This PS is designed to limit cross contamination between raw milk and finished products and to prevent potential FMD 	<ul style="list-style-type: none"> • Raw milk can contain the FMD virus and cross contamination between raw milk and finished product areas should be avoided. Many plant protocols already account for this due to other concerns. • Clothing and footwear worn while raw milk areas must not be worn around susceptible animals; plants need to build prevention practices into their FMD response plan to prevent contaminated clothing from leaving the plant premises. 		<ul style="list-style-type: none"> • <i>Processors</i>: Develop plans for handling raw milk to ensure their clothing and footwear does not get worn around susceptible animals or cross paths with finished product personnel. 	

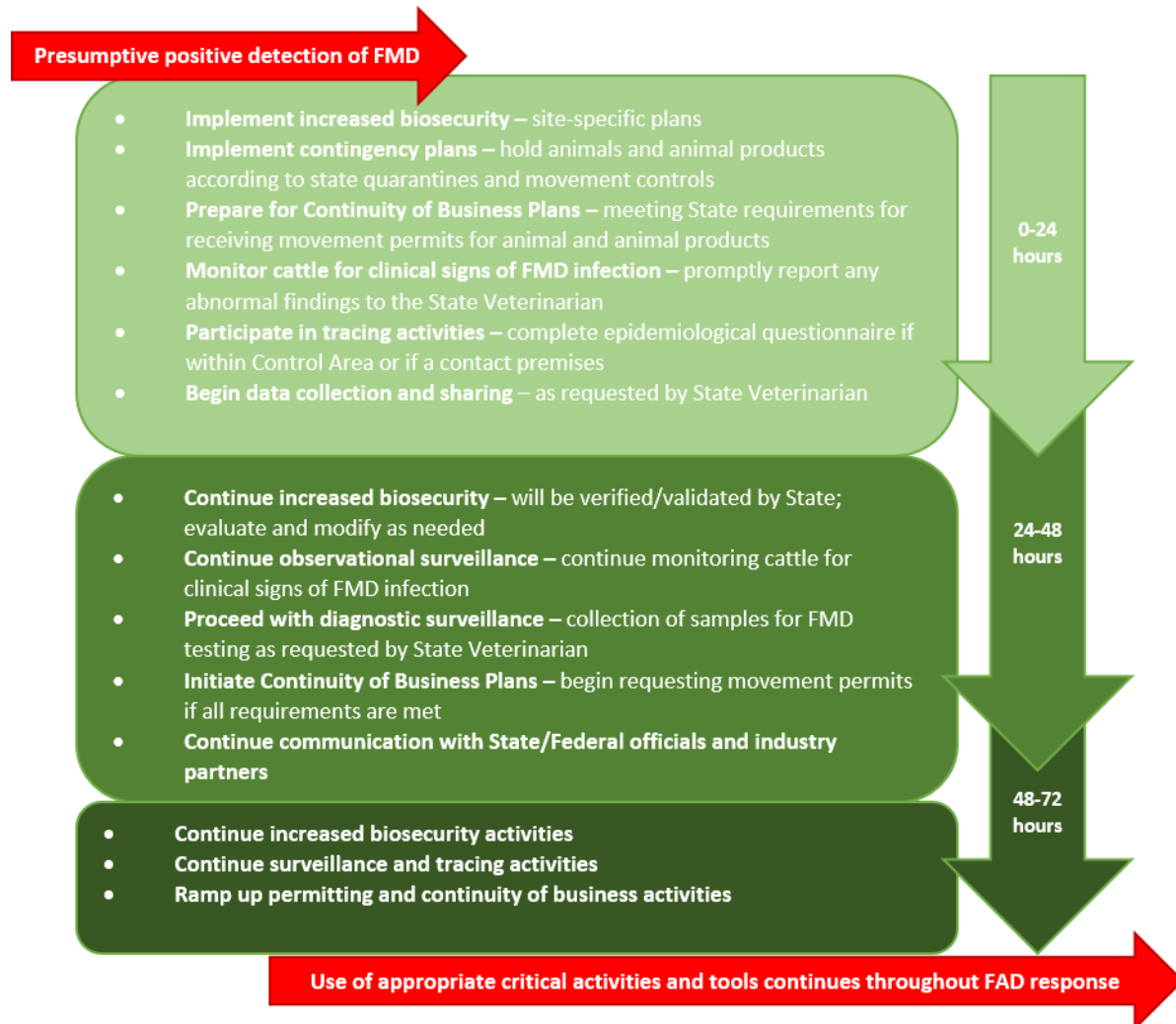
Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
virus leaving the dairy processing plant				
<p>6.4.2 When collecting tanker samples, the performance standard is to not spill milk on the outside of the tanker.</p> <ul style="list-style-type: none"> • This PS prevents raw milk contamination on the exterior of the tanker and thus, less potential infectious burden to require C&D. 	<ul style="list-style-type: none"> • Common practice is currently to dump the residual milk from the collection down the side of the milk tanker. • A collection bucket could be placed in the area to capture the residual milk. 		<ul style="list-style-type: none"> • <i>Processors</i>: The plant FMD response plan should include options for capturing milk instead of dumping it down the side of the tanker 	
<p>6.4.4 After off-loading milk, the performance standard is to ensure no residual raw milk in the tanker and hose leaks upon leaving the processing plant.</p> <ul style="list-style-type: none"> • For tankers picking milk from more than one farm with CIP between off-loads, this PS is designed to prevent the potential spread of FMD virus between farms. 	<ul style="list-style-type: none"> • Complete CIP of the tanker after each off-load may not be possible in many situations • A sanitary rinse may not be possible due to the lack of a permit for waste water disposal. <p>It has been noted that not all plants have CIP on site to clean the interior of the tanker. Per PMO, this normally occurs once per 24 hours.</p> <ul style="list-style-type: none"> • Full CIP is a time-sensitive process (30-40 minutes) that could greatly impact the ability to pick up milk in some parts of the country. A CIP required for each load could increase the daily occurrence by a factor of 6-8 in some areas and lead to issues with waste water amounts. • A plan needs to be established for waste water handling; is recapturing it, deactivating it and spreading it an option? Another possibility for emergency waste-water containment is pumping into a secondary tanker, or off-site, sealed location, for later disposal. 	<ul style="list-style-type: none"> • Determine if a full CIP will be required upon every milk tanker off-load. Communicate decision to industry. • If a full CIP is not required, provide acceptable protocols to industry, including definitions of procedures. 	<ul style="list-style-type: none"> • <i>Processors</i>: Communicate to SAHOs and haulers your capabilities to perform CIP at receiving plants. • <i>Processors</i>: Communicate other challenges, such as high numbers of loads, multiple unloading bays, no waste water permit, etc. with SAHOs and haulers pre-event • <i>Processors</i>: Identify where tankers that off-load milk can undergo CIP if not on-site 	

Performance Standard (PS)	Factors to Consider and Options	Government Tasks	Industry Tasks	Colorado
8. APPROVED DISINFECTANTS FOR FMD VIRUS	<ul style="list-style-type: none"> ● Obtaining approved disinfectants is an area that all stakeholders need to be involved in ● Contact time in various climate conditions needs to be considered ● When determining the SOP, determine how often fresh solution needs to be mixed based on product selected, environmental temperature, storage 	<ul style="list-style-type: none"> ● Discuss options and communicate what will be made available to industry 	<ul style="list-style-type: none"> ● <i>Premises, haulers, and processors:</i> Identify a source of disinfectant that is labeled effective against FMD virus. Be prepared to obtain a minimum 4-day supply in the event of an FMD outbreak. 	
9. PERSONAL PROTECTIVE EQUIPMENT (PPE)	<ul style="list-style-type: none"> ● Proper use of PPE requires training pre-event. Ensure personnel involved in C&D and milk handling have the knowledge to properly don, perform tasks, doff, and dispose of PPE ● Training could be developed for various tasks and provided as a resource through milk associations, the SMS website, government agencies, etc. ● All stakeholders need to be aware of what supplies are needed, where they can be obtained, and how to properly dispose of items 	<ul style="list-style-type: none"> ● Provide available training resources to industry on PPE during an FMD outbreak aimed at limiting virus spread between animals and locations on people 	<ul style="list-style-type: none"> ● <i>Premises, haulers, and processors:</i> Identify the supplies needed and maintain a 4-day supply ● <i>Premises, haulers, and processors:</i> Ensure personnel are trained to safely and effectively wear, perform tasks, and remove without contaminating street clothes ● <i>Premises, haulers, and processors:</i> Develop a plan for proper disposal of all PPE 	

APPENDIX F: CRITICAL PRODUCER, HAULER, and PROCESSOR RESPONSES

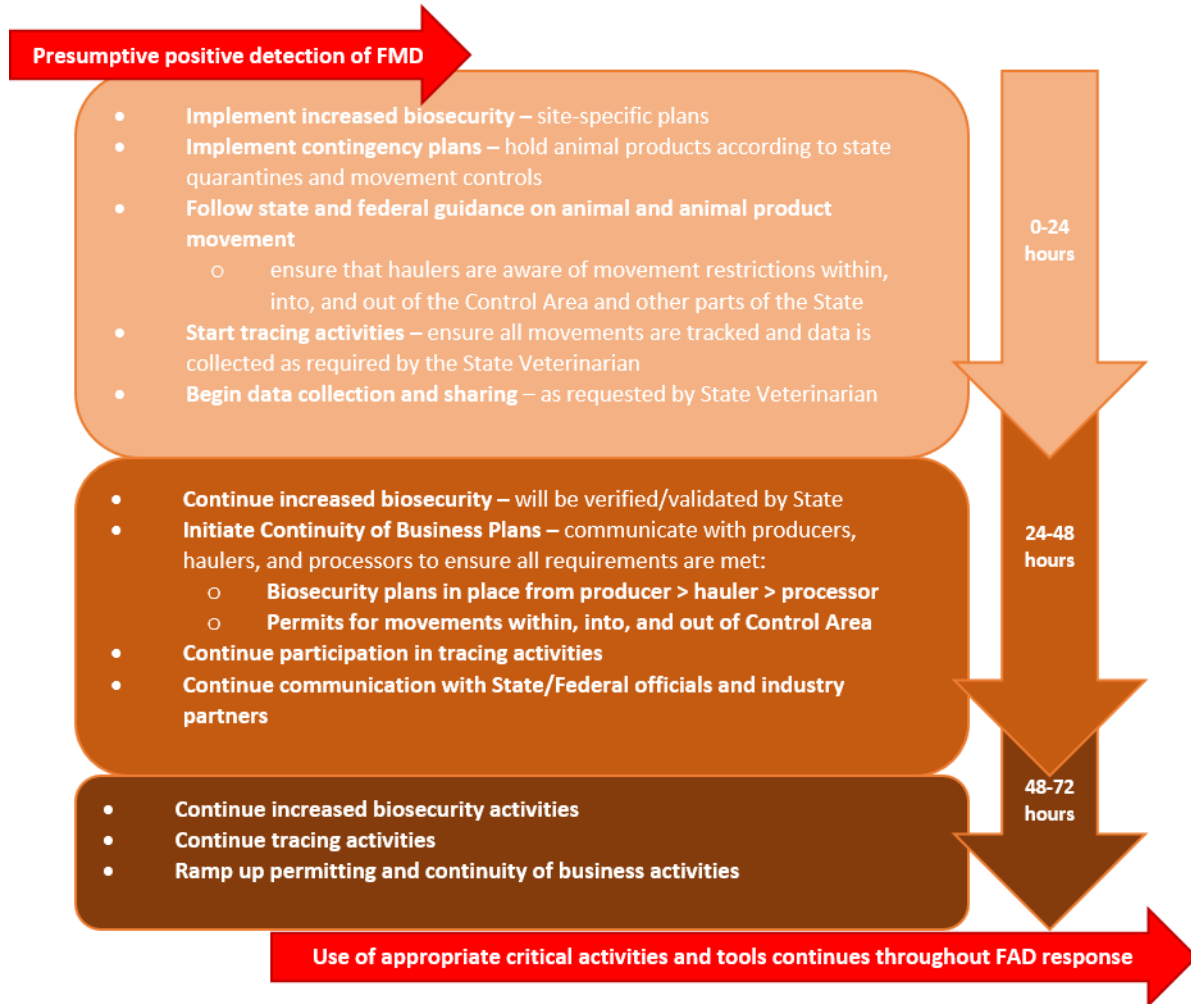
The figures below outline some of the initial responses that producers, haulers, and processors must take in the first 72 hours of a FMD outbreak in order to receive movement permits for milk. Please be aware that these are specific to requirements for movement permits and are subject to change.

Figure F-1 **PRODUCER**: Critical Movement and Control Response Activities from 0-72 hours



Source: Adapted from NAHEMS Guidelines: Quarantine and Movement Control

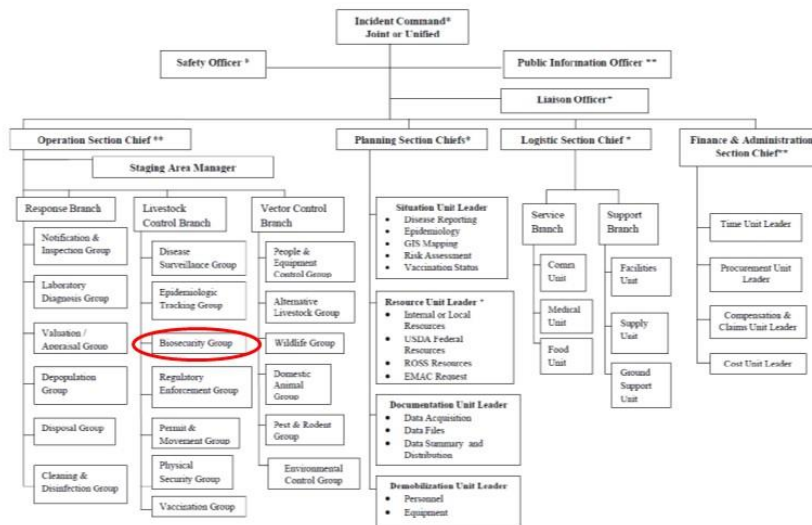
Figure F-2 **HAULER and PROCESSOR: Critical Movement and Control Response Activities from 0-72 hours**



Source: Adapted from NAHEMS Guidelines: Quarantine and Movement Control

APPENDIX G: BIOSECURITY VALIDATION GROUP

Colorado ICS Incident Organization Chart for Animal Disease Response



1

CDA FMD Biosecurity Operations

