

# Secure Milk Supply for Wisconsin Preparedness Plan (SMS-WI)

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# Table of Contents

<b>1. Executive Summary</b>	<b>page 3</b>
<b>2. Purpose of the SMS-WI Preparedness Plan</b>	<b>page 4</b>
<b>3. The Four Phases of Emergency Management</b>	<b>page 5</b>
<b>4. SMS-WI Emergency Management Strategies to Secure the Milk Supply</b>	<b>page 7</b>
<b>5. Controlling Milk and Milk-Product Movement Authority and Response</b>	<b>page 9</b>
<b>6. Wisconsin Dairy Industry Stakeholders</b>	<b>Page 10</b>
<b>7. Initial Assumptions</b>	<b>page 10</b>
<b>8. Permitting Process</b>	<b>page 11</b>
<b>9. Permitting Requirements</b>	<b>page 12</b>
<b>10. Triggers for Implementation</b>	<b>page 13</b>
<b>11. Phases of FMD Response</b>	<b>page 13</b>
<b>12. Plan Maintenance</b>	<b>page 14</b>

## 1. Executive Summary

This document is a continuity of operations/continuity of business preparedness plan for an animal-disease incident in Wisconsin. The plan describes proactive ways to reduce risks to dairy farms, dairy processing plants, associated commerce, consumers, taxpayers, and the environment in the event of a Foot-and-Mouth Disease (FMD) outbreak. Hoof and Mouth Disease is another name for FMD. FMD is a concern for the United States because 96 countries experience FMD all the time. Many other countries have occasional FMD outbreaks.

Preparedness plans can improve and shorten response times. Preparedness strategies include a process for issuing permits to ship unpasteurized milk from producers, via milk haulers, to fluid milk and cheese processors, while controlling the spread of FMD. Strategies also include ways to increase biosecurity throughout the Wisconsin dairy industry, use of checklists and assessments, and pre-event training.

Controlling a potential FMD outbreak is vital because Wisconsin's dairy industry is a \$26.5 Billion annual industry that includes:

- Production of 13 % of the nation's milk and 26 % of the nation's cheese
- Each day, 77 million pounds of milk move within and through Wisconsin
- 27.6 billion pounds of milk from 1.27 million dairy cows on 10,541 dairy farms in 2013
- 2.8 billion pounds of cheese from more than 200 dairy processing plants in 2013
- Each dairy cow generates about \$21,000 in total sales at the state level.

There also is the "Secure Milk Supply for Wisconsin Response Plan (SMS-WI)" for milk movement during a Foot-and-Mouth Disease outbreak that in detail describes the actions required to permit raw milk movement from Wisconsin farms, via haulers, to processing plants that produce fluid milk and cheese products. The Response Plan includes enhanced biosecurity requirements needed during a FMD outbreak, along with roles and responsibilities of dairy industry members and governmental agencies. A Secure Milk Supply for Wisconsin Communications Plan is also under development.

All of the SMS-WI plans are available at [www.securemilksupplywisconsin.org](http://www.securemilksupplywisconsin.org).

A key element of this Preparedness Plan, the Response Plan and the Communication Plan is to maintain consumer confidence in the Wisconsin milk supply and dairy industry. FMD is a highly contagious animal virus, but poses no health hazard to humans, meaning that with conventional pasteurized milk- and cheese-processing technology, pasteurized milk and milk products will be safe for human consumption. FMD poses distinct health hazards to cloven-hoofed animals (cattle, goats, sheep, swine, llamas, alpacas, and sometimes members of the deer and antelope families).

[Foot-and-Mouth Disease](#) often is confused with [Hand, Foot and Mouth Disease](#). However, the two diseases are caused by different viruses and are not related. Humans do not get the animal disease, and animals do not get the human disease.

[Vesicular stomatitis](#) in livestock has similar symptoms to FMD.

## 2. Purpose of the SMS-WI Preparedness Plan

This Preparedness document describes some of the preparedness steps to secure the supply of milk in Wisconsin in the event of an outbreak of FMD and to reduce associated environmental and economic risks. Goals of the SMS-WI Preparedness Plan include the state's ability to:

- Minimize the dumping of raw milk that cannot move from farm to processors immediately;
- Avoid interruptions in raw milk movement from dairy farms (with no evidence of infection) in a FMD Control Area to commercial processing;
- Provide a continuous supply of wholesome milk and milk products to consumers;
- Explain and describe how Wisconsin will use a mechanism to measure and assure biosecurity for dairy farms, milk haulers, and milk processors; and
- Maintain business continuity for dairy producers, haulers, and processors through preparedness, response and communications planning.

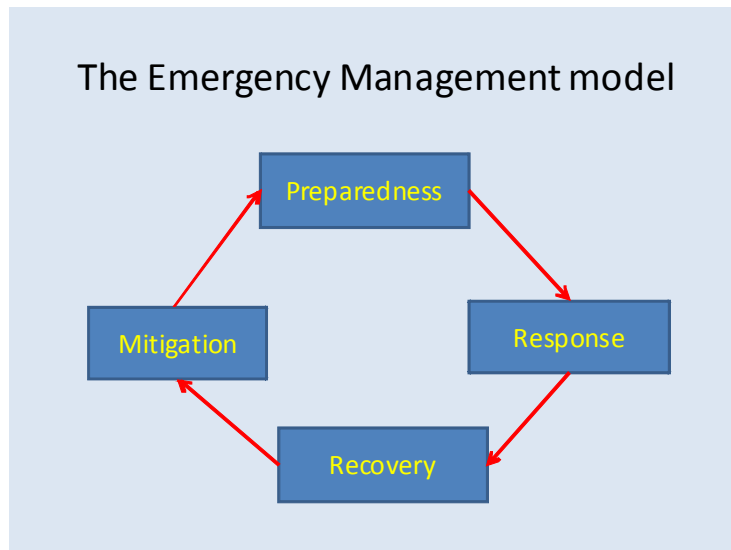
The document also aims to promote compliance with national plans – particularly the USDA-APHIS-National Center for Animal Health Emergency Management (NCAHEM) [Foot-and-Mouth Disease Response Plan: The Red Book](#) and the [Secure Milk Supply Project SMS Performance Standards](#) – while accommodating distinctive features of the dairy industry in Wisconsin and for local response requirements.

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. Grade A standards are recommended by the National Conference on Interstate Milk Shipments (NCIMS), that is composed of voting representatives from state and local regulatory agencies, and nonvoting representatives of the dairy industry and FDA. Generally, FDA accepts the Conference recommendations and incorporates them into the revised PMO. The state regulator (which is usually either the State Department of Agriculture or the State Health Department) adopts the PMO standards as a minimum, and in many cases requires stronger standards.

The SMS-WI Plan recognizes the PMO and follows its standards for milk quality. The SMS-WI Response Plan also parallels the National SMS planning documents. The national SMS Plan document [Milk Handling from FMD Infected, Suspect or Contact Dairies](#) discusses milk handling during an extended FMD Outbreak. Consistency of SMS plans among all states will provide better management of FMD nationally should an outbreak occur.

### 3. The Four Phases of Emergency Management

To understand how emergency management works, consider that there are four phases as pictured in the diagram below.



Emergency management generally has four defined phases that include mitigation, preparedness, response and recovery. Each of the four phases links with other phases, and sometimes the line separating each of the phases blurs because one phase tends to blend into the next. There is no “first” phase because of the blending process and the circular nature of the four phases. **All parts of Wisconsin’s dairy industry can use the Emergency Management model to plan for, respond to and recover from FMD, based on individual needs and situations.**

What often happens in emergency management is that an incident or disaster, such as FMD, creates the need for a response. Mitigation and Preparedness can provide tools, training, resources and written plans to help guide the response. In the response, mitigation strategies can reduce the effects of a disaster. Using an example of a FMD outbreak, trained personnel and stockpiled medical and other supplies are key mitigation strategies that feed directly into preparedness, and thus support an effective response and recovery. Such mitigation strategies can reduce the severity of a FMD outbreak, enhance response and recovery, and keep milk moving from the farm into commerce.

**3.1 Mitigation** is the process of reducing a disaster occurring or minimizing the effects of a disaster that does occur to speed the return to normal conditions. A simple definition of mitigation is: *Elimination or reduction of frequency, magnitude, or severity of exposure to environmental, economic, legal, or social risks, or minimization of the potential impact of a hazard, threat or warning.* In many cases, Mitigation also includes Prevention measures to reduce or even stop the effects of identified vulnerabilities in an incident. **Increased biosecurity is an example of Prevention when considering FMD mitigation strategies.**

Creating, maintaining and validating biosecurity on the farm will allow, in a FMD outbreak, decisionmakers to make rapid determination of when and how milk can move via haulers to processors. Strong biosecurity with haulers will let trucks pick up milk from biosecure farms and move milk safely without danger of spreading FMD. With processors maintaining strong biosecurity, milk brought by haulers can move easily through fluid-milk processing, cheesemaking, and other uses safely without danger of spreading FMD.

For the cycle of Emergency Management, developing mitigation strategies involves planning, using lessons learned from prior incidents and disasters, continually reviewing hazards and vulnerabilities, and testing and validating mitigation strategies with exercises. Training in the use of mitigation strategies helps validate those strategies and helps fold strategies into emergency operations plans. Preparedness plans then can support a better response and quicker recovery.

**3.2 Preparedness** involves a planning process to save lives and help response operations. This includes identifying potential hazards through an assessment process, identifying resources that may aid in the response, developing a response mechanism to address the hazards, and testing the plans developed through exercises. Preparedness also involves written planning documents.

For SMS-WI, Preparedness plans will allow a quicker response and recovery to keep milk moving through commerce to consumers with minimal risk of spreading the FMD virus. The better prepared the dairy industry is, the better the response and recovery can be. As seen in the 2001 FMD outbreak in Great Britain, the severe economic after-effects of FMD may last for years. Preparedness can prevent the mass euthanization of productive cows and other affected livestock, help maintain milk movement and minimize the economic effects on agriculture and the rest of the economy.

Overall, the focus of the SMS-WI Preparedness and Response plans are to show producers, haulers and processors the benefits of Preparedness. Unless Preparedness plans are in place before a FMD outbreak occurs, locales, states and the United States will not be able to contain FMD because the virus spreads so easily and quickly. The United States resolved the last case of FMD in 1929 in the states. Just because we have not seen FMD since then, we cannot let agriculture become lax. **Unless producers, haulers and processors agree with and use adequate and tested SMS-WI plans, a widespread FMD outbreak could damage or halt livestock and livestock-product movement for months or even years.**

Wisconsin already has a number of state and national FMD preparedness and response plans in place:

- Wisconsin has a [Foreign Animal Disease Response Plan](#) and a [Carcass Disposal Plan](#).
- The state has premises registration to locate agricultural facilities quickly, licensing is in place for the dairy industry, and the state has a proven Geographic Information System to provide rapid information and mapping capabilities.
- Wisconsin Emergency Management's statewide [Emergency Response Plan](#) contains specific information to guide animal-disease preparedness and response.
- The state also has a dedicated Incident Management Team (IMT) that can respond to FMD.

- The National Animal Health Laboratory Network (NAHLN) has detailed plans and responsibilities so when a large-scale animal-disease outbreak occurs, tracking its progress and performing diagnostic tests on thousands of diagnostic samples is a big challenge. NAHLN now forms part of a nationwide strategy to coordinate the work of all organizations providing animal disease surveillance and testing services.
- The Wisconsin Veterinary Diagnostic Laboratory is a NAHLN laboratory.

An important element of the SMS-WI plans is the use of [Biosecurity Performance Standards](#) (BPS) as developed under the SMS National Plan, to establish expectations to prevent FMD spread. The standards are the overarching goal by which states can develop more specific protocols or procedures. Members of the various national and state SMS Plan Working Groups are developing the performance standards and some corresponding general protocols. Standards are objective, realistic, verifiable, and clearly stated pre-event. On the farm for example, designated and trained employees may provide [Active Observational Surveillance](#) as a biosecurity effort to notice any unusual animal conditions. Those employees then will report those conditions to authorities for further action.

**3.3 Response** is how we use resources and actions to save lives and preserve health, and to prevent damage to property and the environment when an incident or disaster occurs. Response is putting plans into action. Some disasters may need a wide spectrum of resources, such as a hurricane, flood or earthquake, and some may require minimal resources, such as a local fire. Proper use of identified and required resources is essential to contain the disaster and to minimize its effects. A fire or local disease outbreak provide good examples in that if emergency management can extinguish the fire or use vaccines or other steps to stop disease spread, that action will minimize the spread and devastating effects of the fire or disease. Depending on the extent of an outbreak, FMD may require tremendous amounts of resources deployed at once. Advanced planning can help define and possibly allocate some of those resources before an incident. Even a localized FMD outbreak would require local, state and federal resources.

**3.4 Recovery** is the ultimate goal of emergency management. Returning conditions to normal as quickly as possible can reduce or halt devastating effects and help a community, state or nation return to a stable economy. We usually think of recovery in two terms, short-term and long-term. Short-term recovery begins immediately with the response and may continue for several months. Long-term recovery blends with short-term recovery and may continue until we return to normal or to a near-normal condition. In some cases, recovery may last for many years, depending on the nature and scope of the disaster. FMD is a good example of possible long-term recovery.

## **4. SMS-WI Emergency Management Strategies to Secure the Milk Supply**

### **4.1 Control infection:**

During a FMD outbreak, the best way to protect livestock and dairy production is to prevent exposure to the virus. Since every person and vehicle that enters or leaves a site in the supply chain is also a potential carrier of infection, restrict (monitor, minimize, and sanitize) traffic between sites. Restrictions in commerce during a FMD outbreak also are mandated by U.S.

agricultural regulations and international trade agreements. Controlling potential infection will call for increased biosecurity throughout the dairy industry to prohibit the spread of FMD.

#### 4.2 Sustain commerce:

Since every person and vehicle in the supply chain also provides inputs (such as labor, feed and fuel for the farm, milk for the processor) and outputs (food and cash) that are essential to dairy operations and to maintain farm-to-market traffic. In Wisconsin, even a short interruption in that traffic could pose grave environmental, animal welfare, nutritional, and economic challenges. Restrictions in commerce could drive a great number of dairy farms and processors out of business rapidly.

The response plan emphasizes striking a balance between strategies for controlling infection (including restriction of dairy farm traffic) and strategies for sustaining commerce to keep milk moving. Increasing standards of sanitation in dairy operations and commerce can strike that balance. Please see diagram below.



#### 4.3 Striking a balance chiefly depends on effective biosecurity.

Experts generally agree that, once livestock shipments are suspended, the greatest risk of spreading disease in a FMD outbreak is with traffic to and from farms with susceptible livestock. The single most worrisome potential carrier is the exterior – especially the tires, wheel wells, and undercarriage – of milk tankers that travel farm-to-market roads every day and that must continue if dairy operations are to survive or to recover, to prevent or reduce massive dumping of raw milk, and stores are stocked with dairy products for consumers. Research has shown that FMD can be slowed significantly with proper biosecurity for control, cleaning, and disinfection during loading, transit, and unloading of unpasteurized milk.



The SMS-WI Response plan also aims to establish criteria for permitting milk movement that are uniform among Wisconsin and other states. Permits issued in states of origin must be recognized in states of destination or transit and vice versa. Such consistency is important because the dairy supply chain in Wisconsin is dependent on interstate movement of unpasteurized milk.

For Wisconsin, permitting unpasteurized milk movement depends on risk assessments to determine the safety of moving milk, based on the severity and extent of the FMD outbreak. Permitting will allow Wisconsin to maintain milk movement when producers, haulers and processors meet designated BPS.

#### **4.4 Permitting participation is mandatory**

In the event of a FMD outbreak that would affect Wisconsin in any way, participation in the permitting process and the SMS-WI Response Plan is mandatory to maintain business continuity for all dairy operations. Preparedness and verification of BPS will allow producers, haulers and processors to move milk from farm to market with little downtime if FMD should occur. **Without SMS-WI dairy industry participation, no milk will leave the farm or arrive at a processing plant.**

### **5. Controlling Milk and Milk-Product Movement Authority and Response**

In contrast to the initial emergency response to a fire, flood, or tornado, a foreign animal disease (FAD) response will require a rapid initial response from state agencies with special expertise. Statutory authority to conduct a FAD response, such as posed by FMD, is held by the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) under Wis. Stat. 93.07(10). Further, veterinarians and laboratories are required to report suspicion of a foreign animal disease to DATCP. DATCP and the U.S. Department of Agriculture, Animal and Plant Health Inspection Service - Veterinary Services (USDA/APHIS-VS) will provide the technical veterinary expertise required to implement measures to control the disease. The current Wisconsin FAD plan is an important element of emergency-management mitigation and preparedness for FMD management.

The USDA/APHIS has responsibility, expertise and authority to address diseases that threaten U.S. agriculture. USDA provides the bulk of the funding at the local, state and national level for response to disease outbreaks because outbreaks all have a national impact. This funding may be delivered directly from USDA to supporting agencies such as DATCP. Consequently, DATCP and USDA maintain a unique relationship of cooperation in safeguarding Wisconsin's livestock resources.

**5.1** As with local and national responses, a FMD incident will use the [Incident Command System \(ICS\)](#) and the National Incident Management System (NIMS) as management tools to allocate proper resources to minimize, counteract and resolve a FMD presence in the United States.

In general, ICS is a standardized, on-scene, all-hazards incident management approach that:

- Allows for the integration of facilities, equipment, personnel, procedures and communications operating within a common organizational structure.

- Enables a coordinated response among various jurisdictions and functional agencies, both public and private.
- Establishes common processes for planning and managing resources.

Federal, state and local agencies have received training in ICS and NIMS to allow them to plan for and respond to a wide range of incidents including those that can affect agricultural interests. Incident Command (select knowledgeable personnel) will manage the incident in Wisconsin, perhaps with an Incident Management Team (IMT). A Wisconsin Industry Advisory Group also will provide a discussion and decision-making forum prior to a FMD event.

## **6. The Wisconsin Dairy Industry Stakeholders (not an inclusive list):**

### **1) The dairy industry**

- Dairy producers, milk haulers, milk processors and trade associations
- Wisconsin Milk Marketing Board
- Dairy Management, Inc.
- Wisconsin Cheese Makers Association
- Wisconsin Dairy Products Association

### **2) Federal agencies**

- USDA/APHIS-VS
- U.S. Department of Health and Human Services, Food and Drug Administration

### **3) State agencies and universities**

- Wisconsin DATCP
- Wisconsin Department of Health
- Wisconsin Department Natural Resources
- Wisconsin Emergency Management
- Wisconsin Department of Transportation
- Wisconsin Department of Health
- University of Wisconsin Veterinary Diagnostic Laboratory
- University of Wisconsin Cooperative Extension System

### **4) Local and nongovernmental entities**

- Commercial businesses that support the dairy industry
- Private veterinarians and private companies
- The Wisconsin Animal Health Emergency Management System
- County public health and emergency management
- Wisconsin Agro-Security Resources Network (WARN).

## **7. Initial Assumptions**

A fundamental assumption of any continuity of operations plan is that it can be an effective part of overall emergency response. In particular, Secure Milk Supply (SMS) plans such as this one presume that the procedures that decisionmakers designate for transport of unpasteurized milk can reduce economic, environmental, animal-health, nutrition and welfare risks for the whole of society.

More specific assumptions about conditions for this Wisconsin response plan are the same as for the national SMS plan. In particular, these plans consider the following conditions:

- FMD has been diagnosed in the United States or in North America.
- Control Area(s) have been established around Infected Premises.
- Animal and product movement restrictions are in place for dairy farms in the Control Area.
- Dairy premises with no overt symptoms of FMD infection need to continue to move raw milk to processing.
- SMS biosecurity performance standards are being implemented and verified.
- Milk is picked up by a tanker and transported under Permit to a processing plant.
- Other product/animal/people movement (such as delivery of feed and supplies, manure handling) will be examined as the SMS-WI response plan develops.

## 8. Permitting Process

The Permitting process is presumed to be selective. Incident Command may deploy an IMT to assess and judge that the risks associated with issuing a Permit (such as the increase in potential for spreading infection) are more tolerable than the risks in denying one (that may include the increase in potential damage to the environment and animal health, the supply chain, and its ability to recover). The IMT will require evidence that the best possible practices will be those to keep milk moving while preventing shipments from inadvertently carrying FMD onto a premises that is free of infection or carrying FMD away from a premises that has been infected.

Although the focus of the SMS-WI Response Plan is the permitting of producers, all parties to milk transport – the farmer/producer, the hauler, the coop, and the handler or processor – also must accept responsibility for meeting conditions (including elevated biosecurity standards) that business continuity requires.

**8.1** The Response Plan focuses on producers, haulers and processors and recommends procedures for selecting farms from which milk pickup will be Permitted. Milk will be Permitted to go to specific processing plants via Permitted haulers. Permitting qualifications, such as enhanced biosecurity, are key considerations that affect producers, haulers and processors to keep milk flowing into commerce, perhaps using designated routes. **During a FMD outbreak, no milk in Wisconsin will move without a permit.**

In general, Incident Command will require a detailed Permitting process to manage risk in moving fluid, unpasteurized milk from farms to processors. The Permitting process is vital to assure biosecurity is in effect with producers, haulers and processors to assure that the FMD virus cannot be moved from one premises to another, and to safeguard animal health. FMD is not a human-health hazard with properly processed fluid milk and cheese, but definitely could be a hazard to certain livestock.

The Permitting process includes specific biosecurity requirements for producers, haulers and processors, based on control areas as determined by Incident Command. The Permitting process also involves pre-event risk assessments for producers, haulers and processors to minimize the

movement of the FMD virus. The overall goal of the SMS-WI Response Plan is to keep raw milk moving from the farm (producers) to the processing plants. This plan will ensure economic stability within the dairy industry and will assure consumers of safe-to-consume milk products.

## **9. Permitting Requirements**

Detailed Permitting requirements are under development among Wisconsin state agencies and the dairy industry. To keep dairy products moving with minimal disruption during a FMD outbreak, Permitting requirements for the dairy industry must be in place **before** a FMD incident.

Key items within the SMS-WI Response plan to guide Permitting include:

### **General Requirements for each individual Producer**

- Check susceptible livestock twice daily for clinical signs of infection and find none.
- Secure pickup service from a hauler with adequate, documented truck biosecurity and delivery to a processing plant with approved biosecurity.
- Establish and document adequate premises biosecurity, including:
  - Control farm access (secure the perimeter of dairy operations),
  - Establish and maintain a log of all traffic to and from the farm, and
  - Clean and disinfect vehicle and foot traffic to and from the premises.

### **General Requirements for each individual Hauler**

- Assure biosecurity is in effect on the producer's premises.
- Haulers may not cross potentially contaminated areas of ingress and egress, such as presence of manure, picking up milk within livestock containment areas, and assuring that milk-delivery hoses from the bulk tank are clean and do not contact potentially contaminated surfaces.
- Maintain truck biosecurity and delivery to a processing plant with approved biosecurity.
- Assure recommended cleaning and disinfection of exterior and interior surfaces of the hauling truck.
- Establish and maintain a log of all milk pickups from the farm.

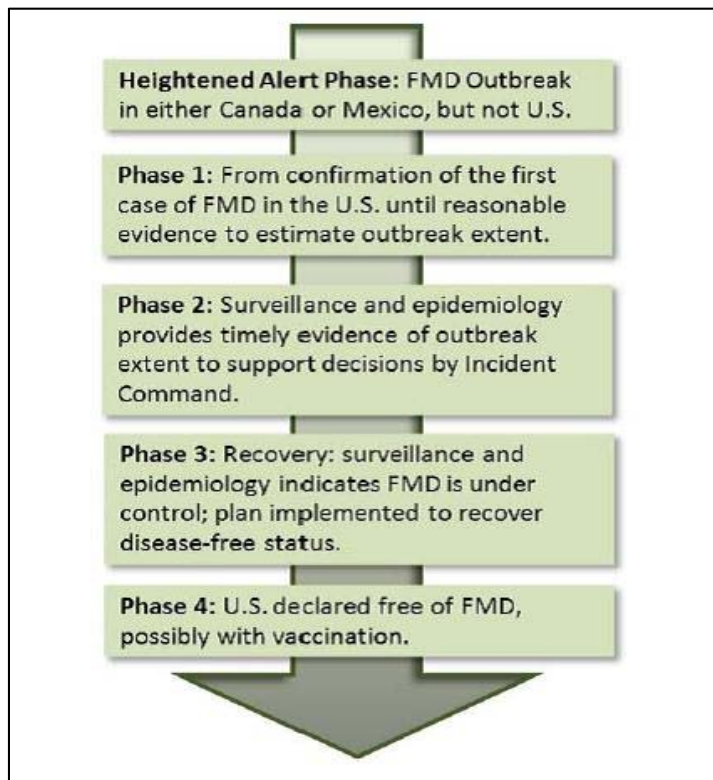
### **General Requirements for each individual Processor**

- Maintain biosecurity at processor's unloading dock.
- This may include having the driver remain in the cab of the truck, boot washes and other measures.
- Maintain regular sampling procedures.
- Establish and document adequate premises biosecurity, including:
  - Clean and disinfect dock areas as needed,
  - Establish and maintain a log of all trucks arriving,
  - Clean and disinfect milk-unloading hoses and couplings as needed.

## 10. Triggers for Implementation

Wisconsin will implement the SMS-WI Response Plan when USDA/APHIS-VS confirms the establishment of a FMD Control Area in one or more states or North American countries. Note that prior to implementation (when USDA/APHIS-VS confirms an outbreak elsewhere in North America but not in the U.S.) dairy biosecurity enhancements as well as a public information campaign may be recommended or required by State Veterinarians. Any response will be based on the [“Phases and Types of FMD Outbreak”](#) specific scenario.

## 11. Phases of FMD Response



Success in implementing controls on milk movement will depend not only on the scale of the outbreak but also the capabilities and vulnerabilities of stakeholders and priorities of Incident Command. Phase 1 in the diagram above, for example, may describe the first case of FMD in any of the states, with research and sampling to provide an estimate of the extent of the outbreak and possibly potential spread as well.

Success also will depend on a strict permitting process that Incident Command or the IMT will use to facilitate milk movement during a FMD outbreak. Incident Command or the IMT will use DATCP-gathered information on premises identification, licensing, Geographic Information Systems (GIS) coupled with biosecurity compliance, to assess risk and economic priorities in issuing permits.

## **12. Plan Maintenance**

Annual reviews of the SMS-WI Preparedness and Response plans will be ongoing to keep both plans current. Additionally, emergency-management exercises will test the plans' components to validate and maintain the accuracy of both plans.

This SMS-WI Preparedness Plan provides a general overview of the contents of the SMS-WI Response Plan and serves as an introduction to the more-detailed SMS-WI Response Plan.

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