



## Producer Guidance Document for Highly Pathogenic Avian Influenza

*July 15, 2024*

The British Columbia (BC) Ministry of Agriculture and Food (AF) and BC Public Health officials (PH) have been monitoring the highly pathogenic avian influenza (HPAI) in cattle cases in the United States closely and are developing protocols for managing HPAI if cattle in BC test positive for the virus. These protocols focus on reducing the risk of HPAI infections spreading from farm to farm and reducing the risk of HPAI infections in humans.

Surveillance testing has already begun in the province and producers are encouraged to speak to their veterinarian and submit milk samples from healthy animals in their herds to help monitor the status of HPAI in the province and help safeguard our dairy herds. More information about testing healthy animals can be found at [Animal Health Centre - Province of British Columbia \(gov.bc.ca\)](https://www2.gov.bc.ca/gov2/animal_health_centre) .

If a producer **notices illness** in cattle that could be HPAI, they are required to contact their herd veterinarian, who will then do an evaluation. If the veterinarian is concerned about HPAI, they will then notify the local Canadian Food Inspection Agency [CFIA district office](#) and the AF [Office of the Chief Veterinarian](#) promptly and testing will be initiated. In the event of a suspect case, producers should work with their veterinarian to reduce the risk of spread within the herd and to other herds until confirmatory testing can be completed. The AF [Animal Health Center](#) conducts the initial test on the milk sample, and if the result is positive, the sample is sent to the CFIA lab in Winnipeg for confirmatory testing.

If your farm tests positive for HPAI, you will be contacted by the AF Office of the Chief Veterinarian (OCV) and PH to discuss the situation and take the necessary steps to keep your family and employees safe and healthy, and to try to minimize the spread of HPAI within your herd and to other farms.

This package provides guidance for dairy producers about what to expect if a farm tests positive HPAI, and on the requirements the farm must follow to continue to ship milk from their healthy animals.

If you are a producer and require more information, please reach out to your veterinarian or the BC Dairy Association. Alternatively, you may contact the AF OCV at 604 556-3003 or 1-800-661-9903.



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## **Disease Control Measures for Highly Pathogenic Avian Influenza in Cattle: Guidance for Producers**

This section provides guidance on quarantine, testing, and biosecurity for premises infected with Highly Pathogenic Avian Influenza (HPAI) in cattle. The Canadian Food Inspection Agency (CFIA) is the lead agency on HPAI in livestock and poultry. HPAI in cattle does not impact animal health in the same manner as with domestic poultry, therefore, the CFIA's regulatory response to HPAI detection differs between the two industries. While HPAI spreads rapidly between birds and results in high mortality rates; cattle typically exhibit milder signs, with only a proportion of the herd affected. Because HPAI remains a serious concern for cattle health, poultry health, and human health, the BC Office of the Chief Veterinarian (OCV), the BC Milk Marketing Board (BCMMB), and the BC Dairy Association (BCDA) will still ensure disease control measures are in place on affected farms.

If a producer **notices illness** in their cattle that could be HPAI, they are required to contact their herd veterinarian, who will then do an evaluation. If the veterinarian is concerned about HPAI, they will then notify the local [CFIA district office](#) and the [Office of the Chief Veterinarian](#) promptly.

Once a herd is confirmed as infected, the producer is required to take actions to:

- Protect health of workers
- Protect the health of bulk tank milk graders conducting milk pick-up
- Ensure food safety
- Prevent transmission of disease to other livestock and poultry farms.

### **Prevent transmission of disease to other farms through cattle movements**

#### *Quarantine Period*

Producers are expected to initiate a voluntary quarantine as soon as they are suspicious of HPAI in the herd. BCDA can support producers on how to institute a voluntary quarantine. Producers that do not institute voluntary quarantine may be subject to provincial disease control orders under BC's Animal Health Act, or CFIA orders under the Health of Animals Act.

The quarantine requirements are:

- **To stop movement of cattle on or off the premises until;**

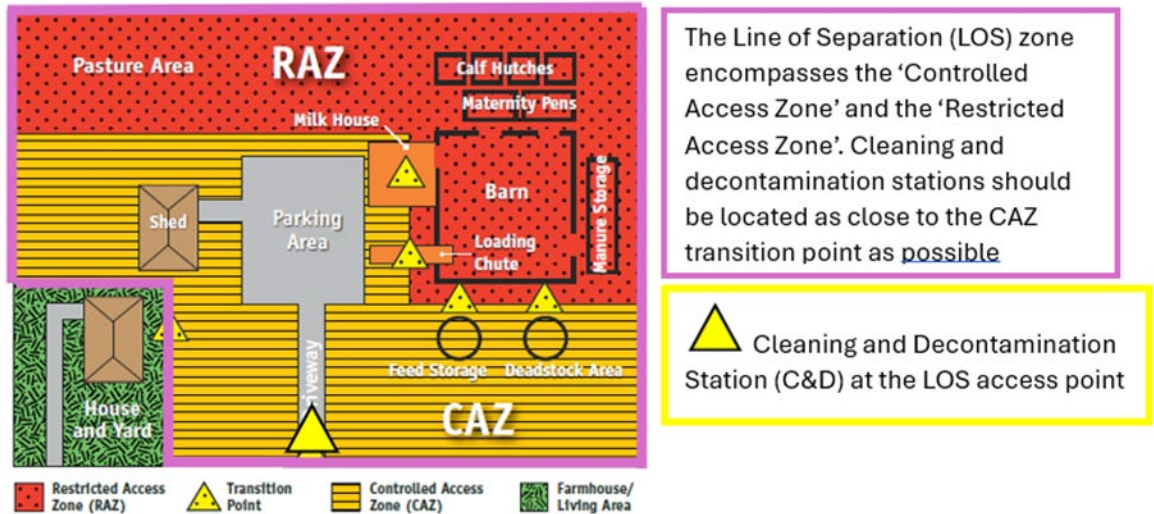


- 30 days after the herd shows no more signs of disease, OR
- the herd shows no more signs of disease and test results on at least 3 bulk milk tank loads are negative
- **Authorized movement of a limited numbers of animals during the quarantine period may be permitted on a case-by-case basis by the Office of the Chief Veterinarian for animal welfare reasons under the conditions that;**
  - the pen or group from which the animal originates show no signs of disease
  - the animal has a negative test, with the sample collected no more than 3 days before the movement
  - there is written documentation that the responsible person receiving the animal at the destination is aware it originates from a farm infected with HPAI
  - the transporter proceeds directly from the farm of origin to the destination
  - enhanced biosecurity and cleaning procedures for the transport vehicle and trailer as outlined in section 2.0 of the [National Biosecurity Standard for Livestock, Poultry and Deadstock Transportation - inspection.canada.ca](https://inspection.canada.ca) are followed.

## **Biosecurity Requirements for Lines of Separation and Cleaning and Decontamination Stations**

It is the responsibility of producers to complete a Biosecurity Risk Assessment with your veterinarian and establish a farm biosecurity map that identifies “Controlled Access Zones” (CAZ), “Restricted Access Zones” (RAZ), and “Lines of Separation” (LOS). BC Dairy has provided producers with resources for establishing biosecurity zones on their farms as part of on-farm biosecurity planning. These resources assist producers in determining the areas on their farms that fall into the CAZ and the RAZ. Please refer to the [Biosecurity for Canadian Dairy Farms: National Standards Guide](#) developed by DFC for more resources for developing a biosecurity plan, and the Requirements for Establishing Lines of Separation (LOS) and Cleaning & Decontamination Stations (C&D) discussed in the next section.

Figure 2: Sample dairy farm diagram with a Controlled Access Zone and Restricted Access Zone



If your farm tests positive for HPAI, you will also be required to establish a “Line of Separation” within the CAZ that serves to restrict access into the farmyard to necessary movement only. This is similar to a “transition zone” on your biosecurity plan, but can be located within the CAZ, versus on its perimeter. Access points on the LOS will be required to have “Cleaning and Decontamination Stations” (C&D stations) for traffic moving into the restricted area beyond the LOS (see Appendices A, B, and C for examples).

Farms that test positive for HPAI will be required to establish LOS, access points, and C&D stations on their farm to continue to have milk pick-up. Decontaminating all vehicles, including milk trucks, as they enter and leave your premises is essential to preventing the spread of HPAI between dairy farms and other livestock facilities.

### Designation of a Line of Separation and Access Points

A line of separation (LOS) creates a functional zone with a distinguishable perimeter that includes business critical areas of the dairy operation within it. This will look different for every operation but for some operations the LOS perimeter may extend all the way to the property line depending on the facility layout. Some operations with more open space or areas not considered business critical such as housing, other businesses, long-term equipment storage, non-utilized space, fields, etc., may choose to shrink the LOS to a smaller more manageable area. The LOS separates the business-critical areas from areas unrelated to dairy production on that site or adjoining properties.



The LOS interior (which includes the entire RAZ and some, if not all, the CAZ) is comprised of all essential operation structures and high traffic areas involved in the daily function of the dairy operation. This would usually include, but may not be limited to, the milk house, animal housing areas, animal movement pathways, traffic pathways, milking barn/parlor, manure storage, feed storage, calf housing, equipment storage, medical supplies, generators, pump rooms, etc.

The LOS access points should be visibly marked with proper signage (ie. Biosecurity signs). Entry points onto the premises must have C&D stations or be blocked off to prevent unauthorized access. At a minimum, the LOS should be documented and visibly clear in biosecurity plans and visibly clear to those crossing it. All access points in or out of the interior area should be secured and have appropriate signage.

Once the LOS and access points with C&D stations are established, movement into and out of the secure area should be limited to only necessary movement. Necessary employees, service providers, and visitors must be trained on and follow procedures for entering the LOS. People, vehicles, and items moving through LOS access points must follow specific biosecurity steps (see *Cleaning and Decontaminating Practices and Procedures* below). Non-essential deliveries or pick-ups that do not need to cross the LOS should leave or pick up their delivery outside of the LOS in a designated area/designated parking area.

### **Cleaning and Decontaminating Practices and Procedures**

Cleaning and decontaminating (C&D) are physical or chemical processes to kill or remove microorganisms and are vital for disease eradication efforts. This is generally a two-step process involving cleaning to remove debris, followed by the use of a disinfectant to kill remaining microorganisms. Note: when using any C&D product, follow directions and safety precautions on the label. Guidelines for products and their use are being developed and will be provided to producers. [Approved Disinfectants](#)

The C&D station requires a pressurized water source for removing visible debris from vehicles, equipment, and items needing to cross the LOS. Once cleaned, a disinfectant must be used. The C&D Station must also include a personal protective equipment (PPE) area, trash bin for PPE disposal, footwear disinfection station (optional if disposable boot covers are provided), hand sanitization station, and visitor logbook (see below for specific guidance on logbooks). Crossing the LOS requires at a minimum a change of PPE, use of footbath/disposable boot covers, and use of hand sanitizer or hand washing. Producers should designate a 'Biosecurity Manager' to oversee and maintain the biosecurity plan, C&D Stations, and PPE supply. The Biosecurity Plan should include a standard operating



procedure for the C&D Station and what C&D procedures should be taken for different scenarios. Examples of biosecurity SOPs are being developed and will be provided to producers. A biosecurity checklist can be found in Appendix D.

### *Special Provisions for Milk Truck Drivers*

Raw milk from HPAI positive herds can contain HPAI virus, therefore, additional precautions must be taken for bulk milk truck graders/drivers (BTMGs) required to take milk samples and transfer the raw milk to their milk trucks. Full requirements are provided in the "Milk Pick-Up" section below.

### *Vehicles*

Vehicles should be cleaned between visits to animal production facilities. It is best to clean the vehicle upon leaving one operation and prior to entering the next. Cleaning should include the tires and undercarriage. Interior cab floor mats should be cleaned if the vehicle crosses the LOS and the occupant(s) exited the vehicle.

For vehicles used to transport animals, enhanced biosecurity and cleaning procedures are outlined in section 2.0 of the [National Biosecurity Standard for Livestock, Poultry and Deadstock Transportation - inspection.canada.ca](http://inspection.canada.ca).

### *Equipment*

Keep all equipment clean. If possible, use disposable equipment or disinfect all equipment prior to movement to different areas. Even if equipment did not appear to come into contact with animals or their secretions, disease agents may still be present on equipment that crossed the LOS through environmental contamination. Clean and disinfect all equipment before taking it off the premises. It is critical to **stop** all movement of equipment between any other dairy, swine, or poultry operations.

### *People, Hands*

It is critical to **stop** all movement of people between an infected farm and any other dairy, swine, or poultry operations. Do not share farm workers.

On the infected farm: Provide hand sanitizer and disposable gloves and encourage use. If possible, provide a handwashing station - thoroughly wash hands with antibacterial soap when entering and leaving LOS access points. Wearing disposable gloves is not a substitute for hand washing; best practices suggest hands should be washed even if gloves are worn. Please refer to the "**Best Milking Practices for Identifying HPAI and**



***Preventing Spread to Humans or Other Animals***" document for keeping milking staff safe.

### *General*

Please consult your veterinarian about reducing disease transmission risk between animals on your farm. General recommendations are:

- Do not feed raw milk to calves, cats, dogs or other animals.
- Keep wildlife, pets and other animals away from feed, water, waste milk and manure storage areas.
- Employ rigorous pest control, as mice are now known to carry HPAI.
- Do not mix cattle from different groups, and limit movements of cattle between different areas of the farm.
- Wherever possible do not allow cattle from different groups to be in contact and use separate waterers and separate or cleaned equipment for each group.
- Do not allow visitors or drivers access to animal housing, animals, or raw milk products.
- Avoid walking through known contaminated areas; avoid direct contact with contaminated animals, items, surfaces, and vehicles; and do not carry personal items (e.g., cigarettes, gum, food, drink, etc.) into contaminated areas.

### **Establishment of a Logbook**

Every person crossing the LOS on foot or exiting their vehicle inside the LOS must complete an entry in the logbook. The farm biosecurity manager is required to accurately maintain the logbook. The logbook may be used for PH follow up. Information recorded for each entry should include:

1. Date, and entry and departure times.
2. Names and contact information of people crossing the LOS (if they exit their vehicle or are on foot).
3. The general purpose for crossing.
4. Additional information recorded for each entry could include any materials, products, or equipment that accompanied the entry.

A logbook can be found in Appendix E.





## **On-Farm Disposal of Infected Raw Milk**

Abnormal raw milk must be diverted away from the bulk tank for disposal on-farm. The HPAI virus can be highly concentrated in raw milk from infected cows, and therefore, extra care needs to be taken when handling and disposing of this milk to prevent further spread of the virus. Farm workers tasked with raw milk disposal should wear PPE such as safety goggles, medical masks, gloves, and rubber boots. Clothing should be changed after disposing of the milk.

If your herd has tested positive, it is recommended not to feed raw milk to calves or other animals (ie. barn cats) to prevent exposure.

Currently, heat-treatment or pasteurization is the best option for deactivating the virus in raw milk before feeding to calves, or before disposal into manure pits or lagoons. Biosecurity around manure pits and lagoons may need to be enhanced to prevent access by animals or birds. Please refer to ***Recommendations for Raw Waste Milk Disposal*** for additional information.

## **Milk Pick-Up**

Suspect and positive farms will be added to the “HPAI” list that is distributed to the BCMMB and the farm’s milk transport company to ensure the necessary precautions are taken. Farms will still be able to ship milk from the healthy cows in their herds as pasteurization has been shown to kill the HPAI virus. However, care must be taken as there are still risks associated with the handling of raw milk from these animals.

HPAI suspect or positive farms can expect to be picked up as the last farm on their milk routes, so pick-up times may be altered.

Enhanced procedures regarding the handling of raw milk during milk pick-up have been shared with milk transport companies to ensure their BTMGs remain safe and the risk of spreading HPAI to another farm is reduced.

We ask that producers not only uphold the health and safety of their staff, but also do their best to ensure that their BTMGs also remain safe while picking up milk.

## **Requirements for Raw Milk Pick-Up**

During milk pick-up, producers must refrain from conducting any activities within the milk house. Contact with the BTMG must be avoided except in emergency situations. It is highly recommended that farm activities, such as procedures associated with calf feeding or



other chores, are not conducted in the milk house until the farm is no longer positive for HPAI. Reducing or eliminating unnecessary foot traffic in the milk house must be considered.

Animals must be kept out of the milk house at all times. Do not feed farm cats and dogs in or near the area.

Rigorous pest control is recommended as mice are now known to carry HPAI. Keep areas clean so that spilled milk does not attract animals to the milk house.

### *Biosecurity Requirements*

The following requirements MUST be met for your farm to be eligible for milk pick-up after testing positive for HPAI:

- 1) The farm must establish biosecurity zones on their farm and designate the **Line of Separation (LOS)** and **Clean and Decontamination Stations (C&D Stations)**
  - a. Biosecurity zones establish a "Controlled Access Zone" and a "Restricted Access Zone" (Appendix A). Please see the BCDA *Additional Biosecurity Information for Producers* bulletin.
  - b. The LOS creates a functional zone with a distinguishable perimeter that includes business critical areas of the dairy operation within it.
    - i. Depending on farm layout, the border of the LOS will encompass both the CAZ and RAZ areas of the farm (Appendix B and C), or
    - ii. An LOS border may be authorized to pass through a CAZ (instead of around the parameter) to accommodate a more effective access point location for the C&D Station (ex. To accommodate a long driveway - See Appendix A)
  - c. The LOS perimeter must be visibly marked with proper signage and be visibly clear to those crossing it. All LOS access points into or out of the interior area should be secured.
- 2) The LOS access point(s) must contain a C&D station with the means to remove physical debris and then disinfect vehicles, equipment, and items needing to cross the LOS
- 3) The C&D stations should include a personal protective equipment (PPE) area, trash bin for PPE disposal, footwear disinfection station, hand sanitization station, and visitor logbook.



- a. Crossing the LOS requires at a minimum the use of footbath/spray down, use of hand sanitizer or hand washing, and vehicle C&D.
  - b. Vehicles, including milk trucks, should be cleaned upon entering the LOS and leaving the LOS.
    - i. Cleaning should include the tires and interior cab floor mats if the vehicle crosses the LOS and the occupant(s) exit the vehicles
      1. To keep the interior floor surfaces of the cab clean, occupants should don clean boot covers before exiting the vehicle, and doff the boot covers before re-entering the cab.
  - c. Please ensure that all visitors and service providers to the farm sign the logbook upon arrival and departure. Public Health may require the logbook at any time
  - d. PPE required for completing milk pick-up protocols must be ready for collection by the BTMG.
    - Disposable fluid-resistant coveralls
    - Boot covers or boot wash
    - Medical mask
    - Face shields or safety goggles
    - Disposable gloves
  - e. The C&D station should be operated and maintained by individuals (ie. the Biosecurity Manager) trained on the farm's biosecurity protocols
- 4) The farm must establish a PPE disposal site at the milk house\*
- a. Once the BTMG completed milk pick-up and exits the milk house for the last time, the PPE will be disposed of before the BTMG re-enters the cab of the milk truck
  - b. Designated containers can be provided for re-usable PPE such as safety goggles and face shields that can be sanitized for re-use.
  - c. Disinfectant solution must be provided for the BTMG to disinfect the milk transfer hose and other equipment used during milk pick-up

\*Please note that farms with milk houses located along roadways may have a combined C&D Station and PPE disposal station on site (see Appendix B). BTMGs will receive guidance documents for LOS and C&D procedures on farm.



**Please refer to Requirements for Establishing Lines of Separation and Cleaning & Decontamination Stations (above) and the Biosecurity Checklist (Appendix D) for further guidance. Please do not hesitate to reach out to Erin Cuthbert (AF OCV) or Morgan Sangster (BCDA) for assistance.**

### **Milk House Requirements**

- 1) Milk houses must be kept clean and tidy at all times. Floors and walls must be free from dirt, mud, manure, debris, etc.
- 2) Milk house floors must have adequate drainage and be free from standing water.
- 3) Hand washing facilities must be operational and clean. BTMGs must be able to wash their hands before, during, and after milk pick-up.
  - i. BTMGs will be donning additional personal protective equipment while on your farm, but this does not take the place of clean environmental conditions or hand washing.
- 4) The hose used for rinsing the tank must be in good working order.
- 5) External surfaces of the bulk tank, including the ladder, must be kept clean.
- 6) No animals shall be in or around the milk house.

### **Further information about human health**

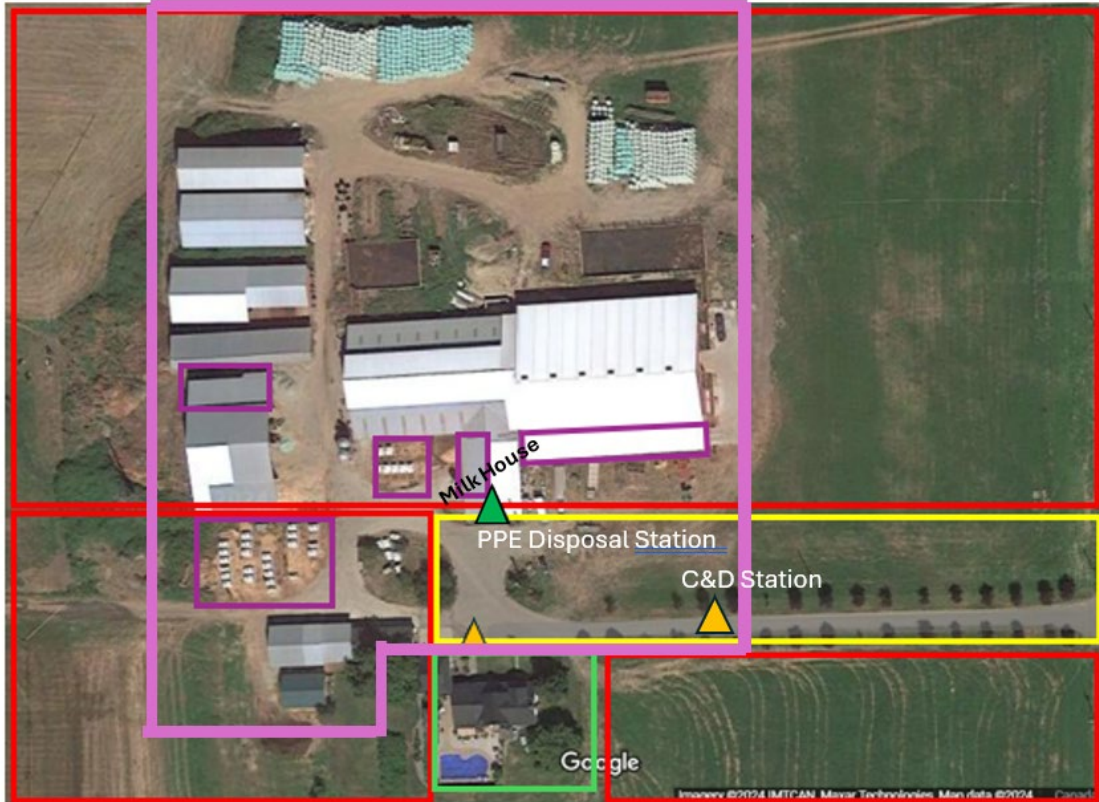
While rare, avian influenza virus can also infect people and can cause severe illness. Further, influenza viruses are adaptable and can change markedly when strains from humans or different animal species mix and exchange genetic information. Therefore, it is important to promptly detect avian influenza infection in people, minimize co-infections of human and avian influenza viruses, and monitor for any further transmission. Guidance is [to contact a physician if you experience any flu-like symptoms](#) and let them know about the exposure to avian influenza virus.

[Highly pathogenic avian influenza \(HPAI\) in livestock - Canadian Food Inspection Agency \(canada.ca\)](#)

[Guidance on human health issues related to avian influenza in Canada - Canada.ca](#)  
[CCOHS: How to Protect Yourself from Avian Influenza A\(H5N1\) at Work](#)

[Avian influenza - Province of British Columbia \(gov.bc.ca\)](#)

## Appendix A – Single LOS Access Point and C&D Station and Milk House PPE Disposal Station



Line of Separation (LOS) border may be authorized to pass through a CAZ (instead of around the parameter) to accommodate a more effective access point location for the C&D Station

Controlled Access Zone

Restricted Access Zone

 Clean and Disinfect Station (C&D) and PPE Disposal

 Milk house PPE Disposal Station

## Appendix B – Combined C&D and PPE Disposal Station



Milk Truck Positioning along milk house:




## Appendix C – Multiple LOS Access Points and C&D Stations



Controlled Access Zone

Restricted Access Zone

Line of Separation (LOS) encompasses all biosecurity zones. The C&D station should be located as close to the LOS perimeter as possible

 Clean and Disinfect Station (C&D) and PPE Disposable Station

 Milk house PPE Disposal Station



## Appendix D – Biosecurity Checklist

<b>Biosecurity Planning</b>	
	<b>Establish “Controlled Access Zone” and “Restricted Access Zone” for the farm</b>
	<b>Establish “Line of Separation” and access points</b> <ul style="list-style-type: none"> <li>- Consider most appropriate location for access point C&amp;D stations based on access to pressurized water for cleaning vehicle tires etc</li> </ul>
<b>Equip C&amp;D stations at the access point</b>	
	Water source for removing debris from vehicle tires
	Disinfectant solution for disinfecting vehicle tires, equipment, and other items needing to cross the access point
	Logbook for all visitors, employees and service providers to sign
	Hand sanitizer
	Boot wash or spray bottle with disinfectant
	<b>Personal protective equipment</b> for service providers that will be in contact with animals or raw milk
	Disposable gloves
	Disposable boot covers
	Disposable coveralls
	Medical Masks or N95 respirator
	Face shields or safety goggles (can be sanitized for re-use)
<b>Set-up PPE disposal station at the milk house</b>	
	Garbage bag for used PPE
	Containers for re-usable PPE that can be sanitized (sanitized PPE should be place in Ziploc bags and returned to C&D station)
	Disinfectant solution for milk truck driver to disinfect milk transfer hose and equipment after milk pick-up (ie. backpack sprayer)
<b>Other</b>	
	Daily checklist for restocking C&D Stations and PPE Disposal Stations
	Daily cleaning checklist for the milk house and external sidewalks





<b>Daily Checklist for C&amp;D Stations and PPE Disposal Station</b>	
<b>Equip C&amp;D stations at the access point</b>	
	Check water source for removing debris from vehicle tires
	Check and refill disinfectant solution for disinfecting vehicle tires, equipment, and other items needing to cross the access point
	Take a picture of logbook for all visitors, employees and service providers to sign
	Check and refill hand sanitizer
	Check and refill boot wash or spray bottle with disinfectant
<b>Replenish Personal protective equipment</b>	
	Disposable gloves
	Disposable boot covers
	Disposable coveralls
	NIOSH approved respirator (N95 mask)
	Face shields or safety goggles (can be sanitized for re-use)
<b>Equip PPE disposal station at the milk house</b>	
	Remove and replace garbage bags for used PPE
	Check containers for re-usable PPE that can be sanitized (sanitized PPE should be place in Ziploc bags and returned to C&D station) *Optional
	Refill Disinfectant solution for milk truck driver to disinfect milk transfer hose and equipment after milk pick-up
<b>Re-Useable PPE Sanitization</b>	
	Sanitize re-usable PPE and place in Ziploc bags.
	Return sanitized PPE to C&D Station

<b>Daily Cleaning Checklist for Milk House</b>	
	Clean and disinfect sidewalks
	Dispose of garbage and remove/replace garbage bags
	Clean and disinfect milk house floors and surfaces
	Clean and disinfect external surfaces of bulk tank and ladder
	Clean and disinfect hand washing facilities.
	Restock soap and paper towel at hand washing facilities as needed

