

Identifying Manure Storage Facilities and Manure Collection Areas at Confined Feeding Operations

Purpose	To identify manure storage facilities and manure collection areas of confined feeding operations so the groundwater protection requirements of the <i>Agricultural Operation Practices Act</i> can be met
Relevant Legislation	Agricultural Operation Practices Act <ul style="list-style-type: none"> Standards and Administration Regulation
Technical Guideline Listing	Agdex 096-100 Technical Guideline Listing

1. Introduction

The *Agricultural Operation Practices Act* (AOPA) and associated regulations set requirements to ensure groundwater protection for manure storage facilities and manure collection areas within a confined feeding operation (CFO). Manure storage facilities and manure collection areas must have either a protective layer or a constructed liner between the facility and the uppermost groundwater resource below the site. The standards for these layers or liners are based on the type of facility and the type of manure, as detailed in Section 9 of the Standards and Administration Regulation.

CFOs include areas for manure collection and storage. They also have areas for animal housing, handling and specific types of production, such as milk parlours or egg sorting. In order to better understand what part of the CFO needs to meet regulations, this guideline provides information on four types of livestock facilities: dairy, swine, poultry and feedlots.

This guideline also provides guidance to determine the specific layer or liner requirements for different manure types within these four facility types. As well, it describes features and functional areas within livestock facilities that are based on typical production systems.

As a variety of production systems can be used, not all livestock facilities are described in this guideline. If the guideline does not describe a particular production system, consult with the Natural Resources Conservation Board (NRCB) to determine how to define areas within a particular livestock facility.

2. Definitions¹

Liquid manure – manure in a predominately liquid state or manure to which water has been added

Manure – livestock excreta, associated feed losses, bedding, litter, soil and wash water, but does not include manure to which the *Fertilizers Act* (Canada) applies

Manure collection area – the floor of a barn, the under-floor pits of a barn, the floor of a feedlot pen and a catch basin where manure collects but does not include the floor of a livestock corral

Manure storage facility – a facility for the storage of manure, composting materials and compost and a facility for composting but does not include such a facility at an equestrian stable, an auction market, a race track or exhibition grounds

Solid manure – manure that is 20% or more solid matter and that does not flow when piled

¹Source: *Agricultural Operation Practices Act, RSA 2000, Chapter A-7 and Standards and Administration Regulation, AR 267/2001*

3. Dairy

The stalls in a dairy barn are considered non-manure areas because manure is not normally deposited in the stalls. If manure solids or compost are used as bedding material, operators need to contact the NRCB for clarification. Dairy barns are designed so that manure is deposited by the cattle into the alley, from which it is scraped into the manure pit. Any area where the manure is deposited and then moved into the pits is considered a solid manure area (e.g., scrape alleys). Both in-barn manure pits and connected outdoor manure storages are considered liquid manure areas.

Loose housing facilities such as dry cow barns and replacement heifer pens are often designed to hold solid manure. Milking parlours, feed bunks, holding areas and feed alleys are considered non-manure areas.

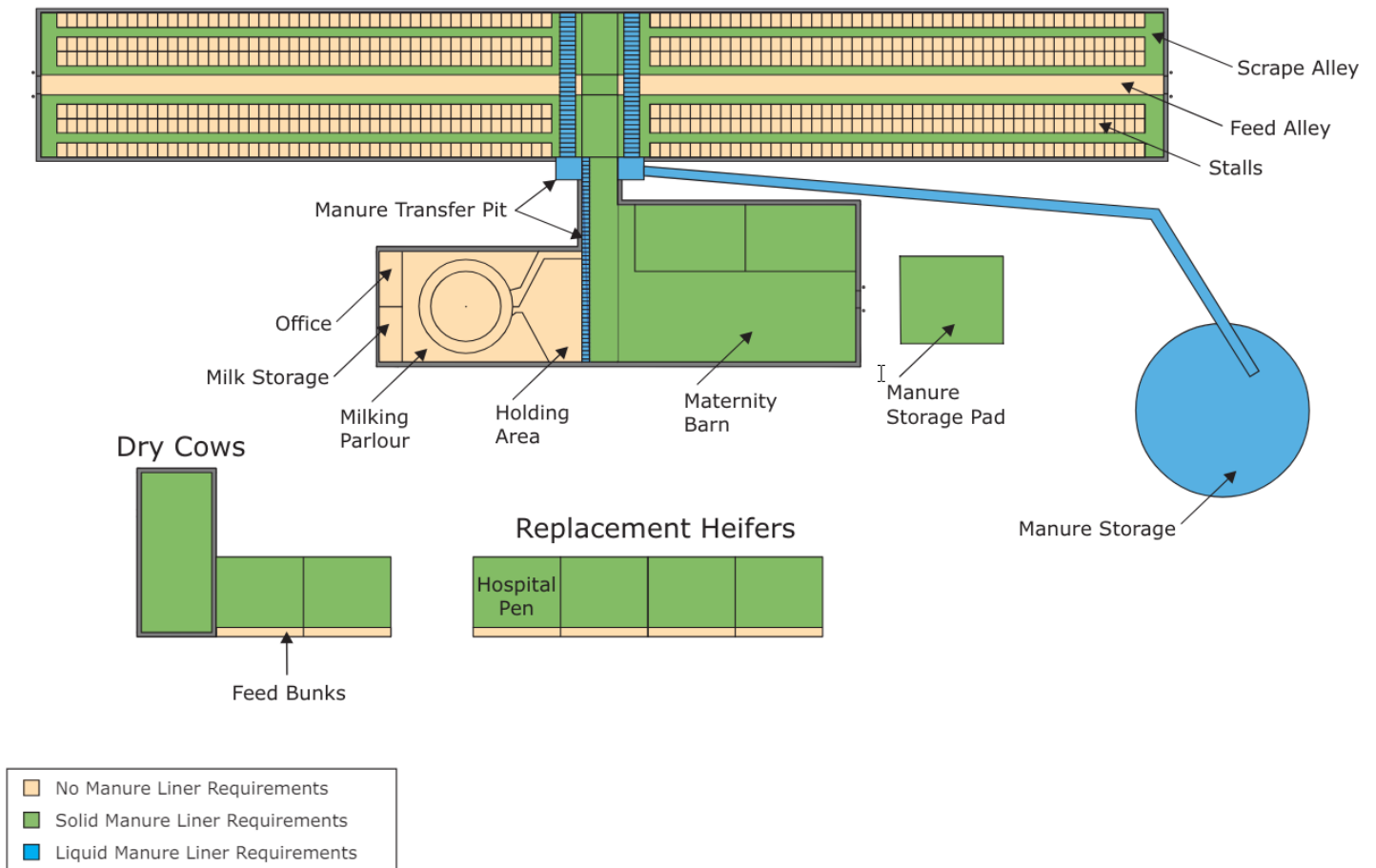


Figure 1. Dairy Facilities

4. Swine

Swine facilities can have solid floors, partially slatted floors or fully slatted floors. Partially slatted and slatted floors are located over manure pits. Solid floors, or the solid portion of a partially slatted floor, are considered solid manure areas. The in-barn pits below partially slatted and slatted floors and the associated outdoor storage are considered liquid manure areas. Walkways and alleyways are non-manure areas.

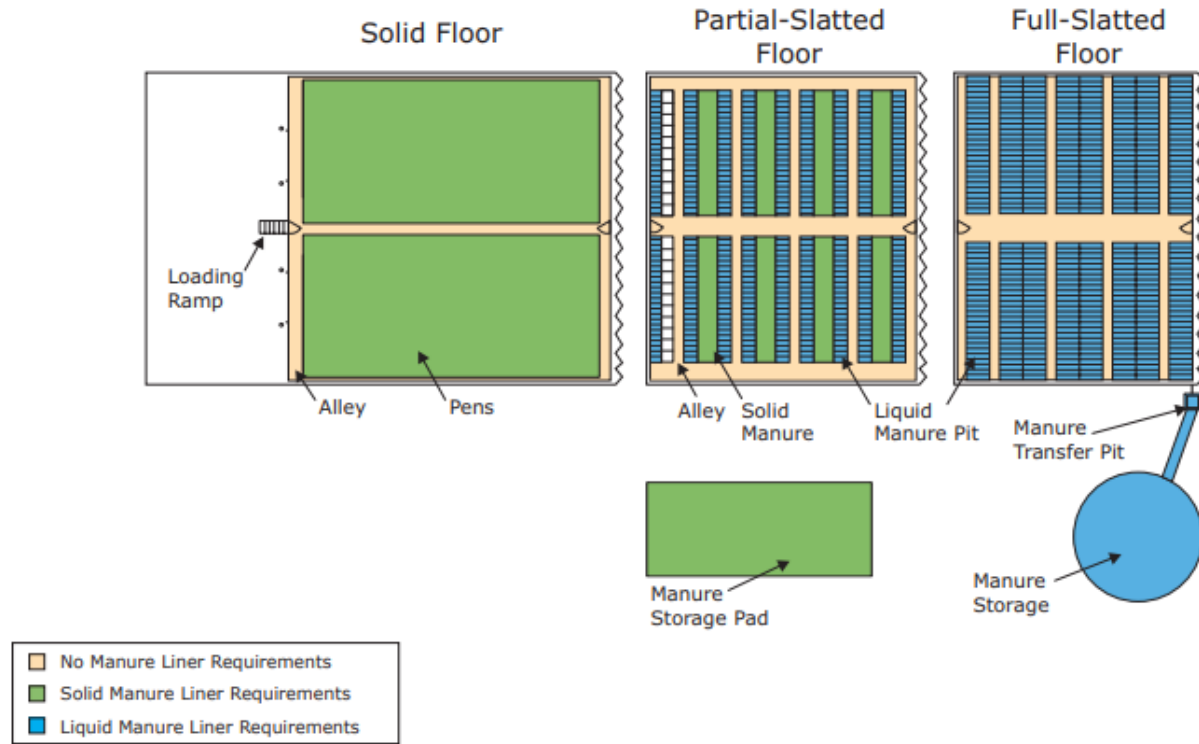


Figure 2. Swine Facilities

5. Poultry

Poultry operations, including broiler and layer barns, are considered solid manure areas. The floors of layer barns with cages and belts are considered solid manure areas to allow them to be converted to other production systems, such as aviaries or loose housing. Egg collection and office areas are non-manure areas.

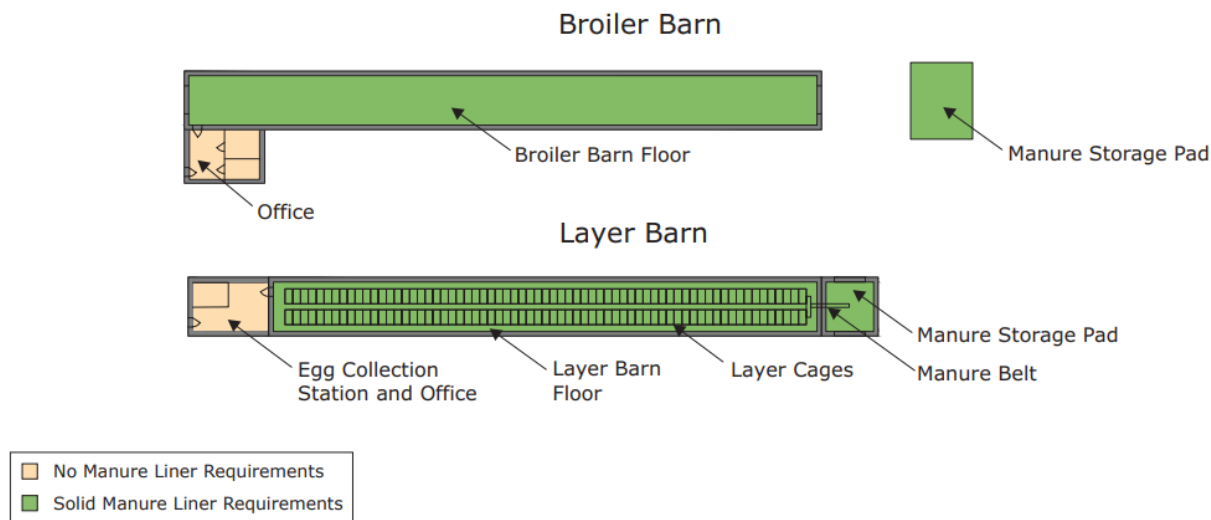


Figure 3. Poultry Facilities

6. Feedlot

Feedlot pens are considered solid manure areas. Sick pens are considered solid manure areas, as they almost always have manure in the pens even though livestock may only be present infrequently or in small numbers. A processing barn, or area of chutes and squeezes where cattle are actively handled, including the associated processing pens, are considered non-manure areas. Runoff collection channels between the feedlot pens and catch basin are considered solid manure areas, as they convey runoff rather than catch it.

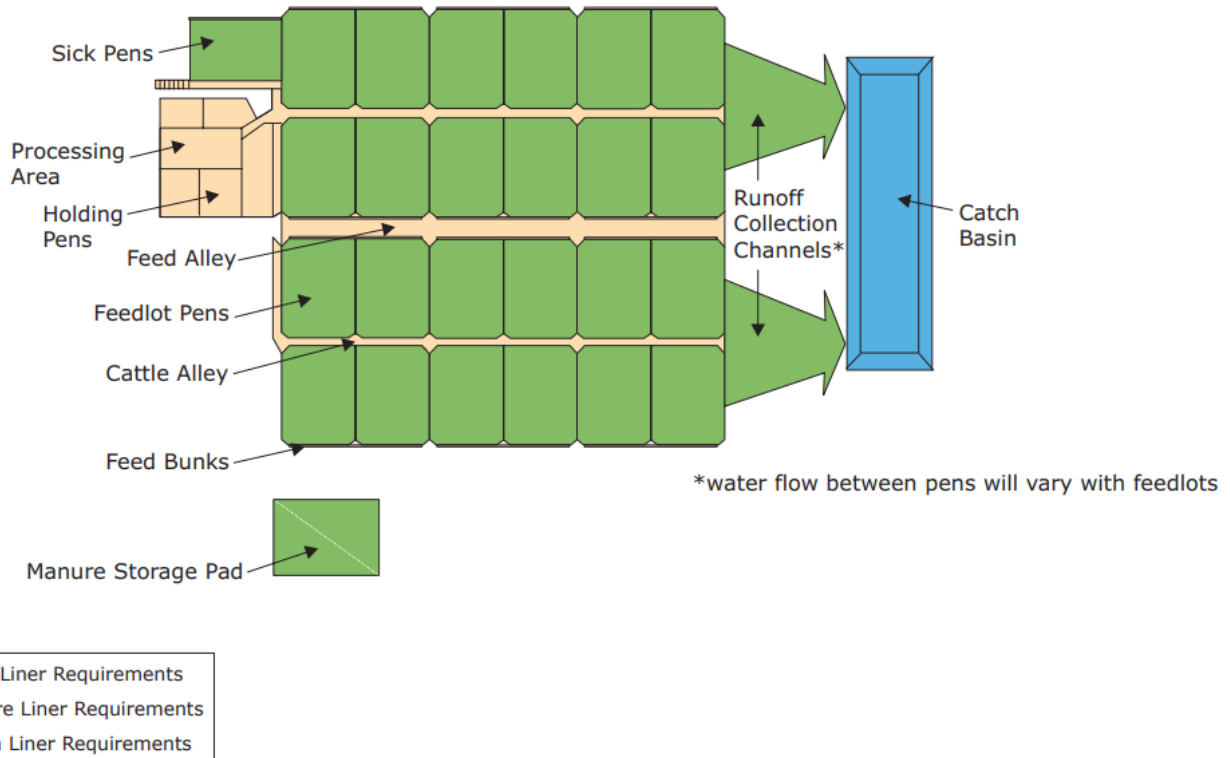


Figure 4. Feedlot Facilities

For more information

Contact your nearest NRCB field office or Alberta government staff

Government of Alberta

alberta.ca/manure-management-guidelines-and-legislation

Phone 310-FARM (3276)

Publications see [Technical Guideline Listing on open.alberta.ca](#)

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