



**Manure Management Update**  
**Lethbridge Lodge**  
**Jan 19, 2015**

**Cody Metheral, P. Eng.**



**ENVIRONMENTAL STEWARDSHIP DIVISION**



# Getting the Most out of your Short Term Manure Storage

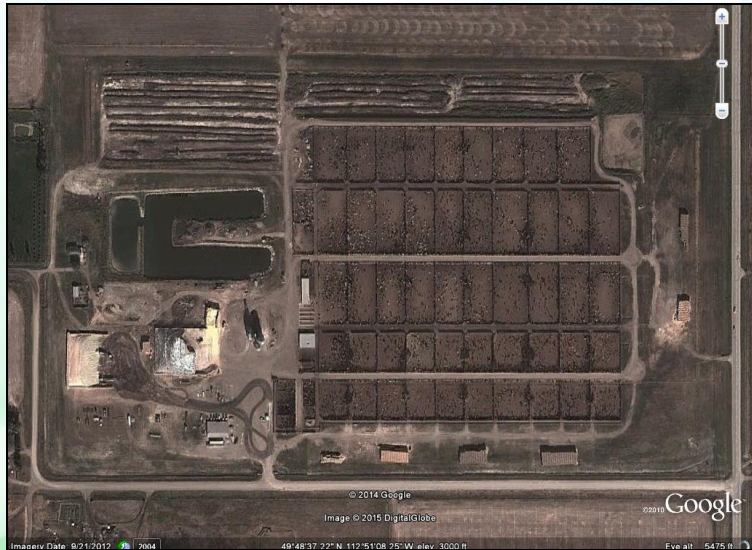


Regulations?  
Challenges?  
Advantages?

Alberta  
Government



# What do I mean?



Confined Feeding  
Operation

**VS**

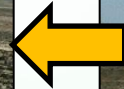


Short Term Solid  
Manure Storage





# What do I mean?



ENVIRO  
EN





# Act and Regulations



Province of Alberta

## AGRICULTURAL OPERATION PRACTICES ACT

Revised Statutes of Alberta 2000  
Chapter A-7

Current as of November 1, 2014

Office Consolidation

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Province of Alberta

AGRICULTURAL OPERATION PRACTICES ACT

## STANDARDS AND ADMINISTRATION REGULATION

Alberta Regulation 267/2001

With amendments up to and including Alberta Regulation 31/2014

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Short Term  
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[http://www.qp.alberta.ca/documents/Regs/2001\\_267.pdf](http://www.qp.alberta.ca/documents/Regs/2001_267.pdf)

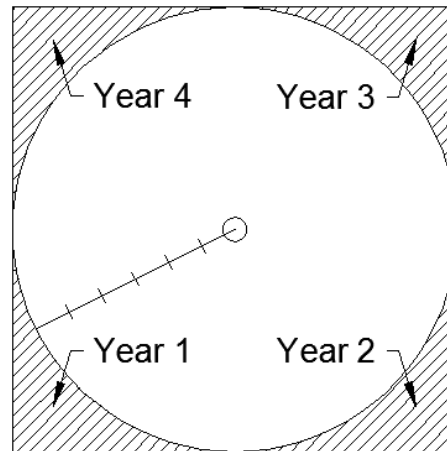
<http://www.qp.alberta.ca/documents/Acts/A07.pdf>

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# Regulations

- Accumulated total of 7 months over 3 years



Field w/ Pivot  
Example

- Minimum 150 m from the nearest residence  
(not owned by operator)



# Regulations

- Meet setbacks from water wells, springs, common bodies of water
- 1 m above water table and 1:25 yr flood level (or max flood level)

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# Regulations

Environmental Standards for Alberta's Livestock Industry

## 2008 Reference Guide

Agricultural Operation Practices Act (AOPA)

A guide to the legislation for confined feeding operations (CFOs) and manure management requirements for all agricultural operations in Alberta, including 2006 amendments



Alberta

2008 Reference Guide  
(available on-line  
or hard copy)

[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/epw5592](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/epw5592)

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# Site Selection

- Good road access
- Avoid areas that flood (surface water)
- Manage run-off







# Site Selection

- Odour consideration  
(camp ground, golf course, rural church, etc.)
- Road visibility (especially at intersections)
- Nutrient accumulation





# Challenges



Loading the  
manure twice!  
(pen and field)

Field Logistics

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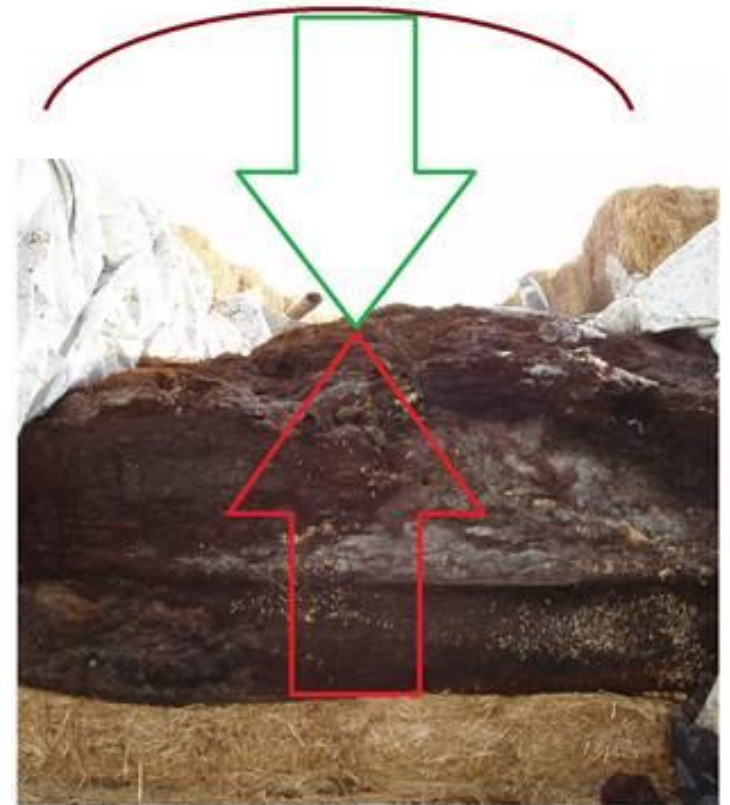
# Advantages

- Flexibility
  - Increase manure hauling days
  - Timing around pen vacancy
  - Protect the pen floor (frozen or dry)
  - avoid road bans and damage to rural infrastructure
- Access to custom applicator service (off-season, bigger equipment)



# Advantages

- Composting Strategy
  - Reduced volume/mass
  - Acts more as a fertilizer (after its broken down)
  - Pathogen destruction







# Advantages

- Improved manure consistency







# Advantages



Fall



Winter

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# Advantages



Frozen and Snow Covered Ground



Short Term Solid Manure Storage

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# Questions/Comments



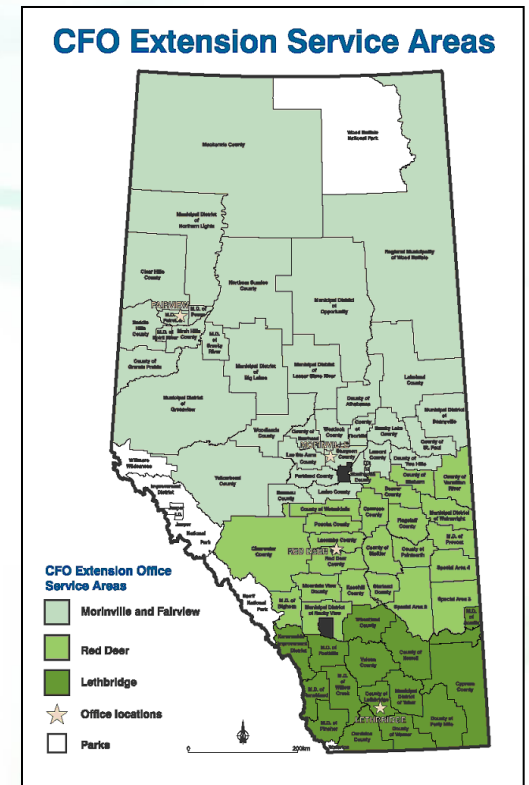
- Photos
  - Karl Ivarson, Kevin Seward (NRCB)
  - Tim Reuter (ARD)
- Information
  - Trevor Wallace, Chris Ullmann (ARD)

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