Emergency Livestock Disposal Planning

By failing to prepare, you are preparing to fail.

Benjamin Franklin (1706-1790)
Why Plan?

- **Catastrophic poultry & livestock death losses do happen!**
  - Fire, blizzard, ventilation failures, heat stress, contagious disease, accidental or malicious poisoning, flooding

Photo courtesy of Iowa DNR
Why Plan?

- During emergencies **time is critical**!
  - Rapid carcass containment is essential
    - Disease control
    - Odor control
    - Water and soil pollution prevention
Why Plan?

○ Making decisions in haste can be frustrating and costly!
  ● Options overlooked
  ● Consequences not considered
  ● Limitations not recognized

○ Incorrect assumptions
  ● Can cost you time and money; and
  ● Slow down recovery from catastrophic losses
Assumption
“‘I can always send them to the landfill’“

- Some landfills accept carcasses ... and some do not ... have you checked with yours?
  - Small landfills often do not have sufficient capacity for sudden catastrophic losses from large operations
  - If there is human disease risk ... service may be denied
    - During avian influenza outbreak in British Columbia in 2004 ... public landfills closed their gates to poultry producers
Assumption
“\(I\) can always bury them on-farm“

- Not always ... emergency burial of catastrophic mortalities requires **prior approval** by Iowa DNR

- About 30% of Iowa is mapped as “restricted” for burial of large quantities of poultry and livestock
  - Why? ... Shallow bedrock, steep slopes, shallow groundwater, wetlands, streams, public wells

Iowa DNR Animal Burial Zone Map
Pink = areas where mass burial is restricted

Developed by Dr. Tom Glanville, Department of Agricultural & Biosystems Engineering, Iowa State University, for ISU Manure Applicator Certification Program meetings winter/spring 2008.
Assumption
“I can always bury them on my farm”

- Even if emergency burial on your property is approved ... consider this
  - 1,000 lbs of carcasses contains 20 lbs of nitrogen
  - High density mass burial practices like this...are equivalent to applying 25,000 lbs of N per acre !!
    - A serious threat to shallow groundwater
    - Pollution this strong can persist for many years
    - Iowa DNR requires mass burial sites to be recorded on the property deed, and installation of groundwater monitoring wells

photo courtesy of Iowa DNR
Assumption
“"I can always burn them on my farm“

- Open pyre incineration (below left) during foot-and-mouth disease outbreak in Great Britain (2001) created serious air pollution.

- To protect air quality Iowa DNR prohibits carcass incineration in open fires.

- Air-curtain incinerators (below right) produce much less air pollution, but this specialized equipment is not commonly found in Iowa.

Source: BBC
http://news.bbc.co.uk/hi/english/sci/tech/newsid_1260000/1260776.stm

Source: Air Burners LLC
http://www.airburners.com
Assumption
“The rendering plant will take them“

Maybe ... Iowa is fortunate to have access to 7 major plants
- But haul distances can be long (costly)
- And a plant may not always have sufficient capacity to handle a large surge during an emergency

Blue Earth, MN
Sioux City
Quimby
Bellevue, NE
Clinton
Des Moines
Assumption
“"I can always compost them”"

- Yes ... but emergency composting requires **LARGE volumes of cover material**
  - 8-12 cubic yards of cover materials per 1000 lbs of carcasses
  - Cornstalks or straw need to be ground before use
  - Unless stockpiled ... difficult to acquire in a hurry
Developing an emergency disposal plan ... before the emergency ... allows time to

- Consider all alternatives
- Collect & record important contact information
- Acquire equipment, stockpile materials
- Identify important service providers
  - Transportation
  - Excavation
  - Cover material suppliers
- Document emergency plan & inform employees
If you plan to rely on rendering for emergency disposal …

- Contact nearest rendering service providers to determine
  - Ability to accept your entire flock/herd
  - Disposal cost
  - Will the rendering firm supply transportation
If you plan to rely on land filling for emergency disposal ...

- Contact local landfill(s) to determine
  - Will they accept carcasses ... under what conditions ... at what disposal cost
If you plan to rely on **incineration** for emergency disposal ...

- **Contact emergency service provider that can provide high capacity/high temperature incineration**
  - If incineration service is mobile, establish standing contract for emergency service
If you plan to rely on on-farm burial for emergency disposal ...

- Determine if there is unrestricted area on your property for emergency burial
- Check Iowa DNR “Livestock Burial Zones” map on WWW
  - [http://csbweb.igsb.uiowa.edu/imsgate/introduction/home.asp](http://csbweb.igsb.uiowa.edu/imsgate/introduction/home.asp)
    - Click on “Livestock Burial Zones”
    - Zoom in on your location
    - Pink colored areas are restricted, mass burial not permitted
If you plan to rely on on-farm burial for emergency disposal ...

- **Print burial zone map for your property**
  - Outline unrestricted areas on the map that you plan to use for burial

- **Be sure to check records for underground utilities in proposed burial area**
  - Contact Iowa One Call 1-800-292-8989
  - **NOTE:** Iowa law requires that Iowa One Call be notified 48 hours prior to any excavation within the State

- **Burial sites of any size must be at least**
  - 50 ft from property line
  - 100 ft from private well or stream
  - 200 ft from public well
  - 500 ft from a residence

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If you plan to rely on On-Farm Burial for emergency disposal …

- Identify 2 or more earthmoving contractors having sufficient equipment & capacity to quickly excavate burial pit

**NOTE**

- Emergency burial of catastrophic mortalities requires prior approval by Iowa DNR
- **IDNR 24-hour emergency phone number 515/281-8694**
If you plan to rely on On-Farm Composting for emergency disposal ...

- Estimate required quantity of cover material needed for your total herd/flock
  - Corn silage @ 3.2 tons/1,000 lbs of carcasses
  - Ground cornstalks @ 1.4 tons/1,000 lbs of carcasses
  - Ground straw @ 1 ton/1,000 lbs of carcasses
- Stockpile the cover material, or establish a contract with suppliers
**If you plan to rely on On-Farm Composting for emergency disposal ...**

- Cornstalks and straw require grinding prior to use
  - Locate 2 or more portable grinding service providers
For all off-farm disposal methods
land filling, rendering, off-site incineration

- Rapid and reliable transport is essential
- Contract with 2 or more local trucking firms
  - Must be properly equipped to haul carcasses in accordance with Iowa law
    - Watertight box, enclosed or covered with tarpaulin
Benefits of Emergency Disposal Planning

○ Answers important questions **before** disaster strikes

○ Helps avoid costly mistakes due to misinformation & inaccurate assumptions

○ Documents important service providers and critical contact info for them
Put your plan in writing

- Give yourself & your employees an emergency response “road map”
  - For each disposal option ... record important names & phone numbers
    - Include “after hours” numbers
    - Regulatory Agencies
      - Iowa DNR
      - State Veterinarian, Iowa One Call
    - Available Disposal Services
      - Rendering plant manager
      - Landfill manager
      - Incineration service
    - Transportation - trucking companies
    - On-site disposal
      - Excavation contractors
      - Hay grinding contractors
Put your plan in writing

- It documents your **good faith effort** to do things right
- May help to avoid potential legal problems relating to environmental pollution, disease transmission, worker safety
Don’t forget “Plan B”

- If livestock losses are regional
  - Heat stress, disease, flooding, blizzard
- Transportation and disposal services will likely be in short supply
- Plan 2 (or more) emergency disposal alternatives
  - At least one on-farm, and one off-farm disposal option
For Additional Assistance with Emergency Disposal

- **Regional Offices – Iowa Department of Natural Resources**
  - Emergency burial site approval
  - Assistance locating emergency composting cover materials

- **State Veterinarian’s Office - Iowa Department of Agricultural & Land Stewardship**
  - Must be consulted on disposal of animals known to have died from disease.
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