



Emergency Livestock Disposal Planning

Failing to plan is planning to fail

Why Plan ?

- Large-scale poultry & livestock death losses DO happen all the time!
 - Fire
 - Ventilation system failures
 - Heat stress
 - Contagious disease outbreaks
 - 2001 foot-and-mouth disease outbreak in Great Britain required disposal of nearly 6,000,000 animals
 - 2004 avian influenza outbreak in Canada
 - Accidental or malicious poisoning
- Agro-terrorism – a new concern

Why Plan ?

- During emergency livestock disposal:
 - Time is critical!
 - Odors must be controlled
 - Rapid carcass containment essential for disease control
 - Water and soil pollution must be minimized
 - Cost a major issue

Why Plan?

To Avoid Unwelcome Surprises During Emergencies

Did you know that ...

- Some landfills do NOT accept carcasses
- Those that do may be reluctant to accept carcasses caused by disease especially if the disease is transmissible to humans
 - Example – 2004 highly pathogenic (H7N3 strain) avian influenza outbreak in British Columbia
 - During this outbreak many public landfills closed their doors to poultry producers

Why Plan?

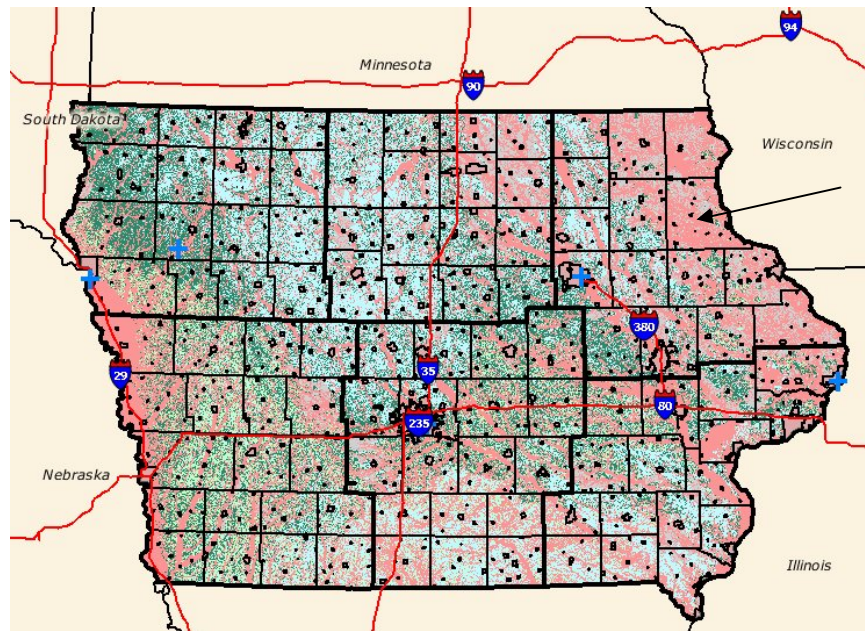
To Avoid Unwelcome Surprises During Emergencies

- Did you know that....
 - On-farm burial can pose significant groundwater pollution risks
 - Every 1,000 lbs of carcasses contains about 22 lbs of nitrogen.
 - Using typical carcass burial practices, N loading rates can exceed 25,000 lbs-N/acre!

Why Plan?

To Avoid Unwelcome Surprises During Emergencies

- Due to shallow water tables and other environmental concerns, about 30% of Iowa is restricted for burial of large quantities of poultry and livestock ... how about your farm ... does it contain areas where emergency burial may not be allowed?



Red color indicates zones where mass burial is restricted

Source: Iowa DNR "Livestock Burial Zones" map

<http://csbweb.igsb.uiowa.edu/imgate/introduction/home.asp>

Why Plan?

To Avoid Unwelcome Surprises During Emergencies

- Did you know that:
 - Due to potential for severe air pollution, Iowa prohibits carcass incineration in open fires or using homemade incinerators.
 - Open pyre incineration (shown below left) during 2001 foot-and-mouth disease outbreak in Great Britain created such serious air pollution that the practice was quickly prohibited by the government.
 - Air-curtain incinerators (below right) have been used successfully for emergency disposal, but this type of equipment is specialized and would require time to acquire in an emergency.



Source: BBC
http://news.bbc.co.uk/1/hi/english/sci/tech/newsid_1260000/1260776.stm



Air Burners T-359
Trench Burner, 36 ft (11m) Pit
Swine Carcass Disposal

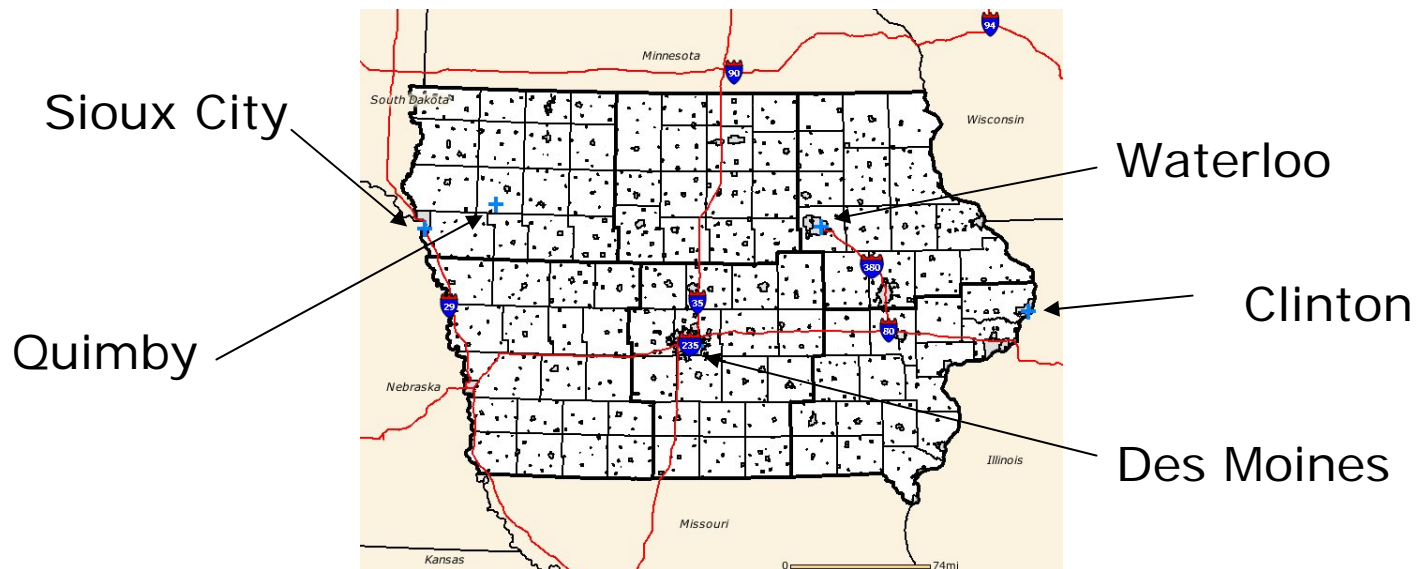
Source: Air Burners LLC
<http://www.airburners.com>

Why Plan?

To Avoid Unwelcome Surprises During Emergencies

Rendering plants have declined in number

- Iowa is fortunate to have 5 plants
- But haul distances are long for some areas of the state
- Plants may not have sufficient capacity to handle a large herd or flock, and may be overwhelmed if an emergency is regional in scope



Why Plan?

To Avoid Unwelcome Surprises During Emergencies

- Emergency composting requires **LARGE** quantities of cover material
 - sawdust, straw, cornstalks, dry manure, etc.
 - 8-12 cubic yards / 1000 lbs of carcasses
 - Some materials (cornstalks, straw) need to ground before use
 - May be difficult to acquire in a hurry should stockpile cover materials or obtain contract with emergency supplier

Why Plan?

- Developing an emergency disposal plan ...before the emergency.... allows time to:
 - Consider all feasible alternatives
 - Collect and record important contact information
 - Acquire or stockpile needed equipment and materials
 - Identify important service providers
 - Transportation
 - Excavation
 - Cover material suppliers
 - Document emergency plan & train employees

Developing an Emergency Disposal Plan

If you plan to rely on rendering for emergency disposal....

- Contact nearest rendering service providers to determine:
 - Willingness and ability to accept your entire flock/herd?
 - How will services be allocated if an emergency is regional in scope? Will you need a contract to insure service ? Disposal cost?
 - Will the rendering firm supply transportation, or will additional trucking capacity be needed?
- Contact 2 or more local trucking firms (if needed)
 - Are they properly equipped to haul carcasses in accordance with Iowa law?
 - Watertight box, enclosed or covered with tarpaulin
- Record and file in your business records
 - Name of rendering firm & contact person
 - Name of trucking company & contact person
 - Regular and emergency phone numbers for landfill and trucking company

Developing an Emergency Disposal Plan

If you plan to rely on landfilling for emergency disposal....

- Contact local landfill(s) to determine:
 - Will they accept carcasses ... under what conditions ... at what disposal cost?
- Contact 2 or more local trucking firms
 - Are they properly equipped to haul carcasses in accordance with Iowa law?
 - Watertight box, enclosed or covered with tarpaulin
- Record and file in your business records
 - Name of landfill and contact person
 - Name of trucking company and contact person
 - Regular and emergency phone numbers for landfill and trucking company

Developing an Emergency Disposal Plan

If you plan to rely on incineration for emergency disposal....

- NOTE:
 - Incinerators used for routine mortality disposal are sized for normal daily losses and generally have insufficient capacity for emergency disposal of a whole herd or flock.
 - Overloading of low capacity incinerators may result in incomplete combustion and release of smoke, odor, and active disease agents.
 - Incinerators must be operated according to manufacturers directions and emissions must meet opacity limits set by Iowa DNR.
 - Open burning, or use of home-made incinerators, is prohibited.

Developing an Emergency Disposal Plan

If you plan to rely on incineration for emergency disposal....

- Contact an emergency service provider that can provide high capacity / high temperature incineration that meets Iowa DNR air pollution prevention rules.
 - If incineration service is mobile, establish standing contract for emergency service
 - If incineration service is not mobile, contact 2 or more local trucking firms
 - Are they properly equipped to haul carcasses in accordance with Iowa law?
 - Watertight box, enclosed or covered with tarpaulin
 - Record and file in your business records
 - Name of emergency service provider and contact person
 - Name of trucking company and contact person
 - Regular and emergency phone numbers for landfill and trucking company

Developing an Emergency Disposal Plan

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 at <http://csbweb.igsb.uiowa.edu/imshow/introduction/home.asp>
 - Click on “Livestock Burial Zones”
 - Zoom in on your location
 - Pink colored areas are restricted, burial not allowed
 - Print burial map for your property, outline unrestricted areas you plan to use
 - Be sure to check records for underground utilities in proposed burial area
 - 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.

Developing an Emergency Disposal Plan

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

- Identify 2 or more earthmoving contractors with sufficient equipment & capacity to quickly respond and excavate burial pit
- Record and file with your business records
 - Proposed burial map
 - Name of excavation contractors and contact persons
 - Regular and emergency phone numbers for excavation company
- NOTE: Emergency burial of catastrophic mortalities requires prior approval by Iowa DNR. (IDNR 24 hour emergency phone number 515/281-8694)

Developing an Emergency Disposal Plan

If you plan to rely on [On-Farm Composting](#) for emergency disposal....


- Estimate total herd/flock mortality weight
- Estimate required cover material
 - 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
- Locate 2 or more emergency cover material suppliers if you do not plan to stockpile your own cover materials
- Locate 2 or more portable grinding service providers if you plan to use cornstalks, straw, or similar long and fibrous cover materials that require grinding prior to use
- Record and file in your business records
 - Names and phone numbers of cover material suppliers
 - Names and phone numbers of grinding service providers

Benefits of Emergency Disposal Planning

- Answers important questions before disaster strikes
- Documents location of important service providers and critical contact info for them
- Provides an emergency response “roadmap” for your employees
- Documents your good faith effort to do things right ... may help to avoid potential legal problems relating to environmental pollution, disease transmission, worker safety

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
 - Should be consulted on disposal of animals that are known to have died from disease.



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