

# Carcass Disposal:

## Off-Site Transport and Locations



The use of rendering facilities or landfills may be necessary for carcass disposal when on-site methods, such as burial or burning, are not feasible or are not permitted.

### Rendering

- **Heat conversion of animal carcasses into useable products**
  - Meat and bone meal (protein-based solids)
  - Melted fat (tallow)
  - Water
- **Temperature between 240-275°F - Moisture converted to steam**
  - Destroys harmful pathogens
- **Considerations**
  - Disposal of final product (e.g., landfill or burial)
  - Coordination of transport to facilities
  - Surge capacity may be limited
  - Biosecurity and wastewater procedures in place
  - Process is closely regulated

### Landfills

- **Public and privately owned**
  - Existing site with liners, leachate and gas collection systems
  - Minimal environmental risk
- **EPA's I-WASTE tool to find locations.**
  - <http://www2.ergweb.com/bdrtool/>
- **Highly regulated**
  - Resources Conservation and Recovery Act (RCRA)
    - Title 40 Code of Federal Regulations Parts 239-299
- **Considerations**
  - Immediately available
  - Minimal environmental risk
  - May have limited capacity
  - Owner acceptance and terms of use
  - Transportation biosecurity and cost
  - Public opposition

### Off-Site Transportation

The transportation of carcasses off-site will require thoughtful planning to ensure good biosecurity measures are used to prevent further spread of disease.

- **Planning**
  - Ensure all personnel have training & guidelines
  - Obtain enough transport vehicles
  - Determine a direct travel route
  - Supplies for
    - Cleaning and disinfection
    - Personal protective equipment
  - Permits and official documents
    - Federal, state & local
- **Transport Containers**
  - Biohazardous waste must be transported in closed, leak-proof containers or trucks.
  - Additional or secondary containment may be necessary.
  - Containers must be liquid tight and equipped with an absorption or liquid collection system.
    - Approximately one foot of wood shavings, or other absorbent material should be distributed on the floor of the container to absorb liquid in the transport container
    - A heavier concentration of sawdust should be placed near the rear door
  - Containers for hauling the carcasses should be double lined.
    - Polyethylene plastic is commonly used
    - There should be sufficient lining material on all sides to allow "wrapping" of the carcasses
- **Loading the Containers**
  - Fill container
    - One foot from top
    - Maximum weight limit
  - Spray carcasses with disinfectant
  - Wrap and seal load
  - Cover the container with its lid or several layers of tarpaulin and polyethylene plastic
  - Before leaving the loading site, check for leaks
  - Clean and disinfect the container exterior before leaving the site

### ➤ **Transportation Regulations**

- Special procedures and permitting will be needed
- Regulations on handling and transport
  - Environmental Protection Agency (EPA)
  - Department of Transportation (DOT)
  - Dot Hazardous Materials Program Definitions and General Procedures – 49 CFR Part 105
- Additional official documents may be required by local, state, or federal authorities
  - Movement permit
  - Certificate of disinfection
- Special escort vehicles may be needed

### ➤ **Transport Process**

- Use designated routes
- Avoid unplanned stops (unless for an emergency)
- Have drivers take breaks on long distance trips
- Two-way communication at all times

### ➤ **Unloading at the Disposal Site**

- Unloading procedures specified by facility
- Unload close to the disposal site
- Prior to unloading, check for any leaks and lid/cover integrity
- Clean and disinfect after unloading
  - Vehicle interior, exterior, undercarriage
  - Tools and equipment
- Dispose of PPE at the end of the shift

### **Additional Resources**

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USDA Foreign Animal Disease Preparedness (FAD PReP) Guidelines: Disposal  
[http://www.aphis.usda.gov/animal\\_health/emergency\\_management/downloads/nahems\\_guidelines/disposal\\_nahems.pdf](http://www.aphis.usda.gov/animal_health/emergency_management/downloads/nahems_guidelines/disposal_nahems.pdf)

Carcass Disposal: A Comprehensive Review. National Agricultural Biosecurity Center Consortium. <http://fss.k-state.edu/FeaturedContent/CarcassDisposal/CarcassDisposal.htm>

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Development of this educational material was by the Center for Food Security and Public Health at Iowa State University through funding from the Multi-State Partnership for Security in Agriculture MOU-2011-HSEMD-012. December 2012. Revised July 2014.

