



Transporting Diseased Carcasses Workshop

April 9-10, 2013
Des Moines, Iowa



3D Logistical Infrastructure for Carcass Disposal Rendering and Landfill

Bob DeOtte – WTAMU

with credits to

Ross Wilson – TCFA

Ben Weinheimer – TCFA

Lori Miller – USDA APHIS VS

Jon Zack – USDA APHIS VS

Jodi Sterle – formerly Texas AgriLIFE Extension

**140K head
within
1.5 mile radius**

INFECTED

**On-site Burial
Is NOT
A Realistic
Early Response**

**180 acres for
9 days to depo,
23 days to bury
\$175,000,000
for indemnification**

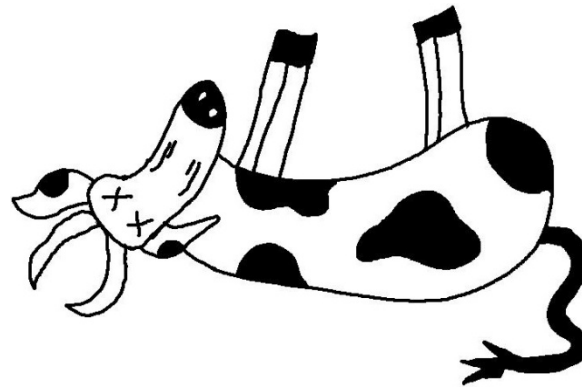
© 2009 Tele Atlas

Google

Eye alt 17877 8



Select Animal Carcass Disposal Issues in Florida

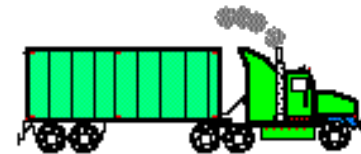
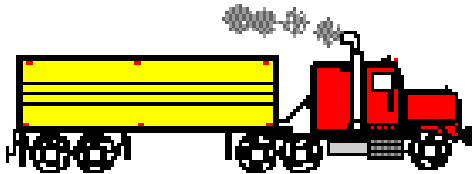


*Greg Christy D.V.M.
Emergency Programs
Division of Animal Industry
Florida Department of Agriculture & Consumer Services*



Bottom Line!!

- **In Florida we will probably have to transport animal carcasses for disposal**





NC Disposal/Transport Project

Classification, Conveyances, Disposal
resource facilities, and Permitting
Swine and Dairy Industry Focus



Overarching Goal

Utilize efforts from this workshop group to explore the possibility of developing transportation protocols (or the guidance for) to dispose of infected carcasses at **rendering plants and landfills**, should the need arise during an outbreak.



Standardized Protocol



We want to develop a standard protocol that could potentially be used as a national guideline, and possibly (*adopted*) utilized by individual states to develop regional or state protocols.



Topics to Consider

Transportation Issues

- **Biosecurity**
- **Permitting**
 - **Non-infected Animals**
 - **Infected Carcasses**
- **Routing**
 - **Conveyance Type**
- **C&D (clean/disinfect)**
 - **Conveyances**
 - **Disposal Facilities**
 - **Workers**



Topics to Share

Disposal resources

- **Rendering Facilities**
 - **Facility Type (species)**
 - **Capacities**
 - **C&D**
 - **Business Continuity**

- **Landfills**
 - **Capacities**
 - **Location**
 - **C&D**
 - **Business Continuity**



Containers

- **Transport specifications**
 - Containers:
 - Leak-proof containers
 - Air-tight container with filtered vent

- **What conveyances are available?**
 - Capacity
 - Mobility/Suitability to task
 - Labeling
 - Operations “friendly”

- **6.2: Leak proof, air tight, and protected**



Examples of conveyances/containers



Vent

21.5 cubic yard container



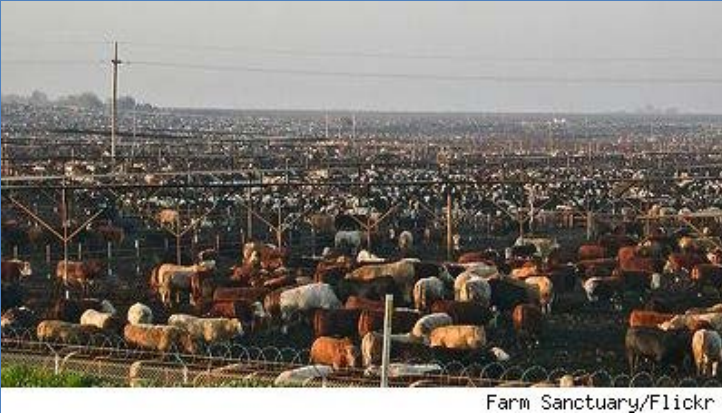
Examples of conveyances/containers



20, 30, or 40 cubic yard type container



Logistics



Feedlot population - 100,000 head at 1000 lbs each = 100M lbs = 50,000 tons

Largest commonly-available transport container is 40-ft (30-ton)...



It would take about 1700 container loads to move animals from one feedlot to disposal site



Permitting



- ✓ Permitting?
 - Allowance/permission
 - Process to allow movement
 - Compliance
 - Process to enforce proper movement
 - Use something already in existence?
 - Examples:
 - USDA 1-27
 - MSP Live movement documents
 - Hazmat permit guides- ex. documentation for 6.2



USDA 1-27

- Permit
 - Seals
 - Signatures

Movement of restricted animals must be accompanied by permit (9 CFR 71 through 85).

U.S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES

FORM APPROVED
OMB NO. 0579-0051

No. B 1250805

PERMIT FOR MOVEMENT OF RESTRICTED ANIMALS

USE A SEPARATE FORM FOR EACH SPECIES

1. NAME AND ADDRESS OF SHIPPER OR CONSIGNOR (Include Zip Code)

.....

.....

6. MOVEMENT TO BE
 INTERSTATE INTRASTATE

7. MOVEMENT FOR
Infected disposal **Non-Infected disp**

2. CONSIGNEE (Destination Name and Address, include Zip Code)

.....

.....

8. DISEASE

9. STATUS OF ANIMALS
 No. Reactor No. Exposed No. Other (Specify)

10. STATUS OF HERD OF ORIGIN 11. STATUS OF AREA OF ORIGIN

3. MOVED FROM (Name and Location of Premise if other than item 1 above)

.....

12. NO. ANIMALS IN THIS SHIPMENT 13. SPECIES (One Only)

4. NAME AND ADDRESS OF OWNER AT TIME CONDITION DIAGNOSED

.....

.....

14. TRANSPORTATION VEHICLE LICENSE NO. OR OTHER IDENTIFICATION NO.

15. SEAL NO.

16. VEHICLE REQUIRED TO BE CLEANED & DISINFECTED AT DESTINATION
 Yes No
 (If Yes, Items 32, 33 and 34 are Applicable)

VALID ONLY FOR ABOVE DESTINATION

17. ANIMALS TO BE MOVED

COMPLETE EAR TAG NO.	BREED	SEX	DISEASE BRAND	OTHER IDENTIFICATION (Complete No.)	COMPLETE EAR TAG NO.	BREED	SEX	DISEASE BRAND	OTHER IDENTIFICATION (Complete No.)

Decon/biosecurity measures

I certify that I have inspected the animals described on this permit and find them eligible to move in accordance with the requirements of State and Federal regulations.

18. SIGNATURE OF INSPECTOR	19. DATE ISSUED	20. TIME ISSUED	VOID AFTER	
			21. DATE	22. TIME

WARNING TO OWNER, SHIPPER AND TRUCKER - LIVESTOCK MUST BE DELIVERED TO CONSIGNEE WITHOUT DIVERSION

I understand that it is a violation of Federal law to move the animals identified herein interstate except in accordance with the provisions of applicable Federal Regulations. I also understand that such animals must comply with existing state laws and regulations governing movement of livestock and poultry. I have arranged or will arrange for a copy of this permit to accompany the interstate shipment and be delivered with the above described animals.

23. SIGNATURE OF OWNER OR SHIPPER	24. TITLE <input type="checkbox"/> Owner <input type="checkbox"/> Shipper	25. DATE SIGNED

I certify that the animals described on this permit were received and slaughtered/quarantined in accordance with the requirements of the State and Federal regulations on the date indicated in item 29.

26. PLACE ANIMALS RECEIVED	27. DATE ANIMALS ARRIVED	28. NO. ANIMALS RECEIVED	29. DATE SLAUGHTERED/QUARANTINED
30. DATE AND TIME SEALS BROKE	31. AUTHORIZED SIGNATURE	32. DATE CLEANED & DISINFECTED (If required)	33. SIGNATURE OF INSPECTOR
			34. DATE SIGNED



Best Practices to Reduce Risks



○ Biosecurity

- Exit positive/exposed premise
 - at Rendering Facilities
 - at Landfills
 - During transport

- Discuss the applicability of guidelines being used for Secure Milk Supply (farm and plant) and those outlined *in FADPReP* for exit from infected premises.



Best Practices to Reduce Risks



Routing-

Factors

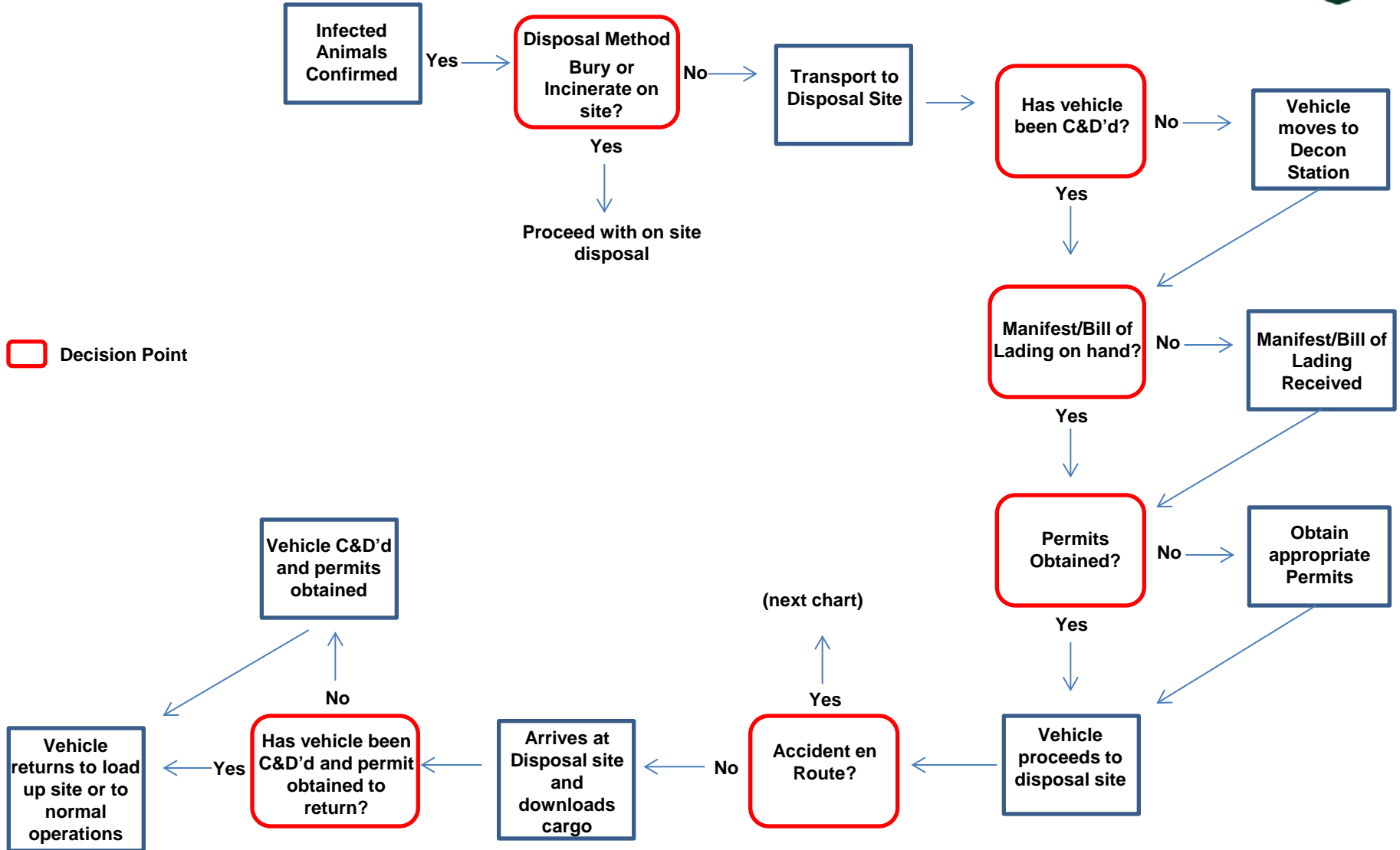
- Load/size restrictions on roads/bridges
 - Exposure to other farms
 - Traffic patterns
 - Locations of disposal options (renderer/landfill)
-
- Limitations: Have to consider that some farms may not lend themselves to transporting animals off farm due to impracticality imposed by restrictions of bridges/roads to accommodate large scale movements



Decision Tree – Transporting Diseased Cargo

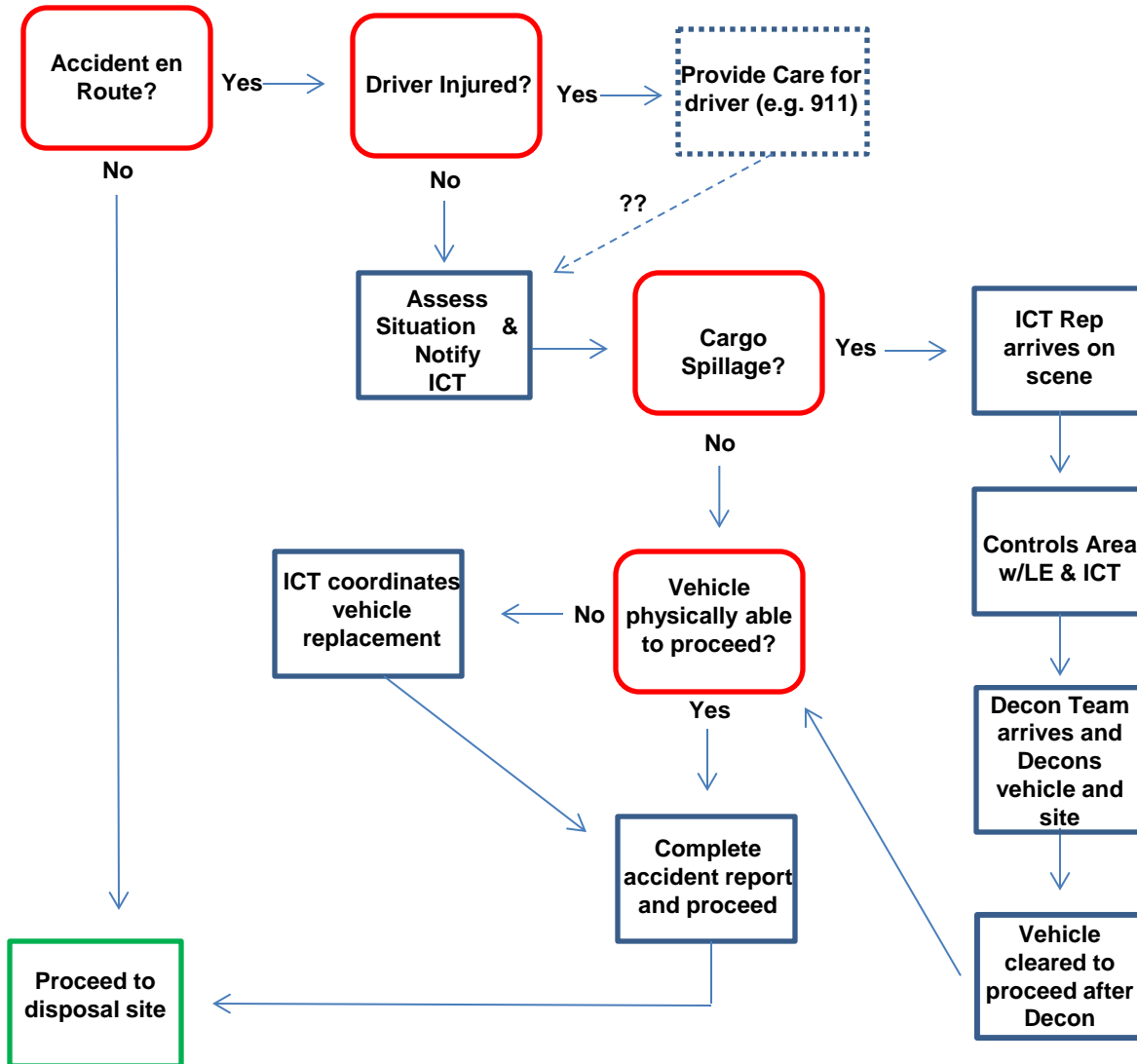


 Decision Point





Decision Tree – Transporting Diseased Cargo, with Accident en Route





Use of Rendering & Landfills



- ✓ What resources are available?
- ✓ What are the limitations of both?
 - Capacities:
 - Limited based on species type? (rendering)
 - Should agreements be developed?
 - Buy in from industry?
- ✓ C&D?
 - In a word: Challenging!
- ✓ Biosecurity!!!???



Disposal Calculator



Disposal Capacity Calculator February, 2013		Species and Total Count	Average Weight (lbs)	Percent to be Culled	Disposal Amount	
		Swine	160	10%	Pounds	Tons
		9,200,000			147,200,000	73,600
Enter animal population count in gray box						
Landfill Options (Operating Units: Tons)						
# Landfills	Current Capacity (all landfills) Per Day	Average Capacity (per landfill) Per Day	Number of Days for disposal: Current Capacity	1/4 Rule Capacity Per Day Using all selected landfills	Number of Days for disposal: 1/4 Rule	Additional capacity* required per day - beyond 1/4 Rule Capacity**
40	20,500	513	3.6	5125	14	
*Additional capacity required to dispose of material within 30 days. **1/4 Rule Capacity equals capacity of number of landfills selected multiplied by .25						
Rendering Options (Operating Units: Pounds)						
# Rendering Facilities	Current Capacity Per Week	Average Capacity Per Week	Number of Weeks for disposal: Current Capacity	Number of Rendering Facilities required to dispose of material in 4 weeks (using average capacity)	Additional capacity*** required per week - beyond current capacity****	
6	63,950,000	10,658,333	2.3	3		
To dispose of material within 4 weeks. *Current Capacity equals number of rendering facilities selected						
Conveyance Options - # Truck Loads						
Conveyance Type	Capacity (cubic yards)	approximate weight per cubic yard of material	# Truck Loads required to dispose of material	# Trucks/Conveyances Available	Total # of Trips (per truck)	
30' Dump Trailer	50	2500	1,178	50	24	
legend: <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="width: 20px; height: 10px; background-color: #90EE90; margin-right: 5px;"></div> No additional capacity required </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> <div style="width: 20px; height: 10px; background-color: #FF0000; margin-right: 5px;"></div> Additional capacity required </div> <div style="display: flex; align-items: center;"> <div style="width: 20px; height: 10px; background-color: #D3D3D3; margin-right: 5px;"></div> Options available for selection </div>						

