Lower Yakima Valley Dairy Cow Deaths

Chuck Matthews
Emergency Debris Management Coordinator
May 1, 2019
2019 ASTAWMO Mid Year Meeting
• Event Background
• Set the stage
  – Geography
  – Social
  – Environmental
• Weather Event & Response
• Major Lessons
On February 9th, a major winter storm hit Central Washington. The storm had been predicted but the potential severity was not anticipated until hours before when weather models indicated localized protracted high winds and major snow accumulation.

After the storm subsided, fifteen dairies in the Lower Yakima Valley (LYV) reported a loss of ~1800 dairy cows from extreme cold and wind to their association. Numerous other animals suffered injury from frostbite and other producers outside the LYV also reported impacts to livestock to the Washington State Department of Agriculture.

Two impacted dairies reported that the number of animals that eventually were sold for meat due to injury were 3-4 times the number of those killed directly by the storm.
Geographic Area
Geographic Area
(Yakima Basin Project)
Lots of Agricultural Activity in the LYV

- Orchards (apple*, sweet cherry*, pear, peach, apricot, other orchard products)
- Mint*
- Hops*
- Grapes (wine)
- Asparagus
- Dairies
- Beef Cattle
- Vegetables
- Seed
- Field crops
- Cereal grains
- Silage

* - leading producer among all counties in the U.S
Environmental

➢ Water Rights

➢ Groundwater Issues
Water Rights

➢ Yakima Basin is considered “over appropriated”.
➢ 42 Year-Old WR case (Ecology v. Acquavella) final decree to be entered May 9th.
➢ Yakima Basin Integrated Water Management Plan
Groundwater Issues

- Groundwater Contamination
  - Nitrates
  - EPA Consent Decree
  - Citizen Lawsuits
  - Groundwater Management Area
Arctic air surges southward. Combination of deep moisture and Arctic air made for a nasty winter storm.
Typical Dairy Shelters

(Photo from Google Maps)
The Storm

- February 8th, ahead of the storm, the Governor proclaimed a State of Emergency for Washington State.
- February 9th – In the LYV, snow began falling around 7:00 a.m. and by 9:00 4”-5” had fallen.
- Winds throughout the day were steady 40-50 mph with gusts to 80.
- By February 10th, up to 24” of snow had fallen creating feet deep drifts.
- Wind chill was around 5°F.
- Efforts throughout the storm to provide windbreaks, food, break ice off water sources but not enough.
February 11, the Washington State Dairy Federation (WSDF) appealed to the Governor’s Office for assistance due to significant losses of dairy livestock in the LYV.

A formal letter was submitted by the WSDF to the Governor on February 12th including a request for:

- $250,000 in financial assistance to compost the mortalities at a central location on property owned by the Port of Sunnyside.
- An expedited approval process for use of the property at the Port of Sunnyside.
The First Few Days

- The Governor’s Office asked Ecology’s SWM Program to take lead in assisting producers with carcass management efforts.
- Assessed the limited initial information and found many efforts were under way but not coordinated.
- An team was assembled that grew to eventually include:
  - Ecology (HQ & CRO)
  - Washington State Department of Agriculture
  - Washington State Department of Health
  - Washington State Conservation Commission
  - Yakima Health District
  - Yakima County Emergency Services
  - South Yakima Conservation District
  - Port of Sunnyside
  - Washington State Dairy Federation (and its compost consultant)
- Ecology facilitated daily morning briefing calls.
First order of business was to evaluate the WSDF request for utilizing centralized mass composting and expedited permitting. Quickly determined this was not feasible because...

- There is no provision for emergency permitting
- The Commissioners for the Port of Sunnyside did not support using the property under consideration
- The proposal for this approach was made with no details for construction, operating, or monitoring
- There was no time to develop a credible/defensible operations and monitoring plan
- Likely violation of state contracting requirements
The 1st Few Days

While management options were evaluated, Ecology worked with the Governor’s Office to secure emergency funding.

On February 19th, The Governor committed $100,000 for Ecology’s use for carcass management.

Disposal logistics were coordinated while funding was under consideration.
Ecology-facilitated efforts focused on hauling and placement in a MSW landfill.

- Arrangements made with waste hauler to begin disposal services on February 18th.
- Removal and disposal completed from three dairies February 21st.
- 600 animals, 18 trips, 384 tons
- ~$47,000 ($78 per cow)
  - Original Alternative - $5,400 (haul) $15,360 (tip fee) $20,760 (total) $35 (per cow)

Options employed by those dairies managing their own carcasses included:

- Rendering
- On-site composting
- Burial
- Very Limited Capacity
- Lone Company conducting pickup for deadstock
- Basically Serviced Regular Customers
- Addressed 300-400 Mortalities over First Week
On-Site Composting

- Utilized by many of the producers with limited mortalities
  - Standard practice for most producers

- Two facilities used for large number of mortalities
  - ~235 at one, ~650 at the other
    - Required considerable assistance to get sufficient cover in place and temperatures up for proper decomposition
    - Approximate 3,000 lf of windrow

- Between large and small scale producers, accounted for roughly 1/2 of management needs for reported carcasses
Unsanctioned but time became pressing issue for some
- Not know to have been widespread
- Local Health and WSDA inspected and determined to allow to remain in place
- Not near surface or groundwater
- Good example of the “Need for Speed” for responders.
Note

THE LESSONS DISCUSSED FOCUS ON A MORTALITY EVENT RESULTING FROM NATURAL DISASTER OR SIMILAR SITUATION.

IN THE EVENT OF INTRODUCTION OF A REPORTABLE FOREIGN ANIMAL DISEASE, USDA/APHIS WILL USUALLY TAKE LEAD IF STATE Ag RESOURCES ARE EXHAUSTED OR OVERWHELMED.
Lessons

➢ Establish relationships early, preferably ahead of time as part of contingency planning. Also understand roles.

- Environmental Agencies need Ag agencies and vise versa
- Take the opportunity to connect with local emergency planning agencies
  - Utilize Incident Command to formalize response structure
  - Assist with added element in local emergency response plan
- Local Conservation Districts and NRCS staff can be bridges with producers
- In Washington, local health is lead in solid waste management oversight
Lessons

➢ Consider Incident Command Structure
  o Familiar to many
  o Establishes single point of contact
  o Establishes response lead
  o Establishes single source communications
    • Establish list of PIOs from all involved jurisdictions
  o May create buffer from political involvement
Lessons

➢ Ground truth the initial information
  o Investigate whether impacts exist beyond the initial geographic area reported.
  o Expand the involvement of additional local jurisdictions as the situation warrants
Lessons

➢ MONEY!
  
  ▪ Okay to strategize on carcass management but if mortality management assistance is beyond technical assistance, identify needs and source(s) of revenue as one of the first orders of business.
    • Governor’s Emergency Funding
    • Washington Conservation Commission
    • USDA/NRCS Farm Assistance Program
    • FEMA – New Direction?
Lessons

➢ Find a way to communicate with producers early
  o Communicate management option(s) under consideration
  o Communicate a timeline
  o Understand immediate needs and prioritize
  o Silence generates frustration
  o Less desirable carcass management choices are made
Get to know your resources ahead of time
  - Landfill locations & understanding of willingness to accept
  - Hauling requirements
  - Bulking material sources (for composting)
  - Rendering availability
  - Mapping

Lessons
Lessons

➢ For significant numbers of larger animal (bovine) mortalities, understand that time is critical!
  o Producer pressures to remove from sight
    • Public and Media Perception
    • Emotional
    • Decomposition sets in quickly limiting options
Lessons

➢ Understand impacted parties and local dynamics
  o Producers
  o Community
  o Any on-going conflicts/legal
  o Will the event amplify issues
Lessons

➢ Reach out to your State Emergency Management agency
  o Examine Emergency Support Function 11 (Agriculture and Natural Resources)
  o Are there contingencies for response to large mortality events?
What’s next for large animal mortality management?

- Working with field level staff from primary agencies, develop written plans to help quickly identify and mobilize appropriate agencies in response to any future non-FAD large mortality event.
- Convey lessons learned to Environmental Health Districts state-wide.
- Share experiences with other states through USDA, ASTSWMO
- For vulnerable counties, work to include mortality disposal into local emergency debris management plans.
- Follow USDA research on mortality management options