

# **Dairy Air Quality Issues and Status Report**

**Daniela Bals  
Regulatory Affairs Coordinator  
National Milk Producers Federation**

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# Why is air quality a dairy problem?

## Three EPA Regulations:

1. Clean Air Act (CAA)
2. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
3. Emergency Planning and Community Right-To-Know Act (EPCRA)



# How we got the EPA Consent Air Consent Agreement

- 2002 National Academy of Sciences report
  - lack of data to regulate livestock operations
  - need data for regulatory and enforcement decisions
- Livestock industry decided to develop data
- EPA agreed to provide protection against enforcement and lawsuits



# EPA Air Consent Agreement

- Who is impacted:
  - Anyone emitting a pollutant above CAA permitting requirements or CERCLA and EPCRA reporting requirements
  - Varies by operation and throughout year
  - This is not a large vs. small herd issue - could be as low as 100 cow dairy
- National data needed to determine exact emissions



# EPA Air Consent Agreement



- 599 dairy farms signed-up
- Producer agrees to participate and offer farm for monitoring
- Small penalty paid by producer
- EPA protections given
- Monitoring study conducted per industry recommendations
- EPA will develop “look-up” charts based on data from air emissions study



# Dairy Environmental Task Force

- NMPF and other dairy organizations formed Task Force to address EPA Consent Agreement
- 35 dairy producers and producer representatives
- 12 scientific advisors



# National Air Emissions Monitoring Study (NAEMS)

- Cost = \$6 million
  - \$5 million for NAEMS, \$1 million for process-based model
- Funding:
  - Task Force agreed study should be paid for on national level
  - Legislative effort to get 1-time use of check-off money
  - National Dairy Promotion and Research Board approved \$6 million to fund air emissions research
- Overseeing Funds for NAEMS:
  - Agriculture Air Research Council (AARC)
    - Non-profit group set up to oversee the study and funds
    - Dairy will have 2 board seats on AARC
    - Swine, broilers, eggs also participating



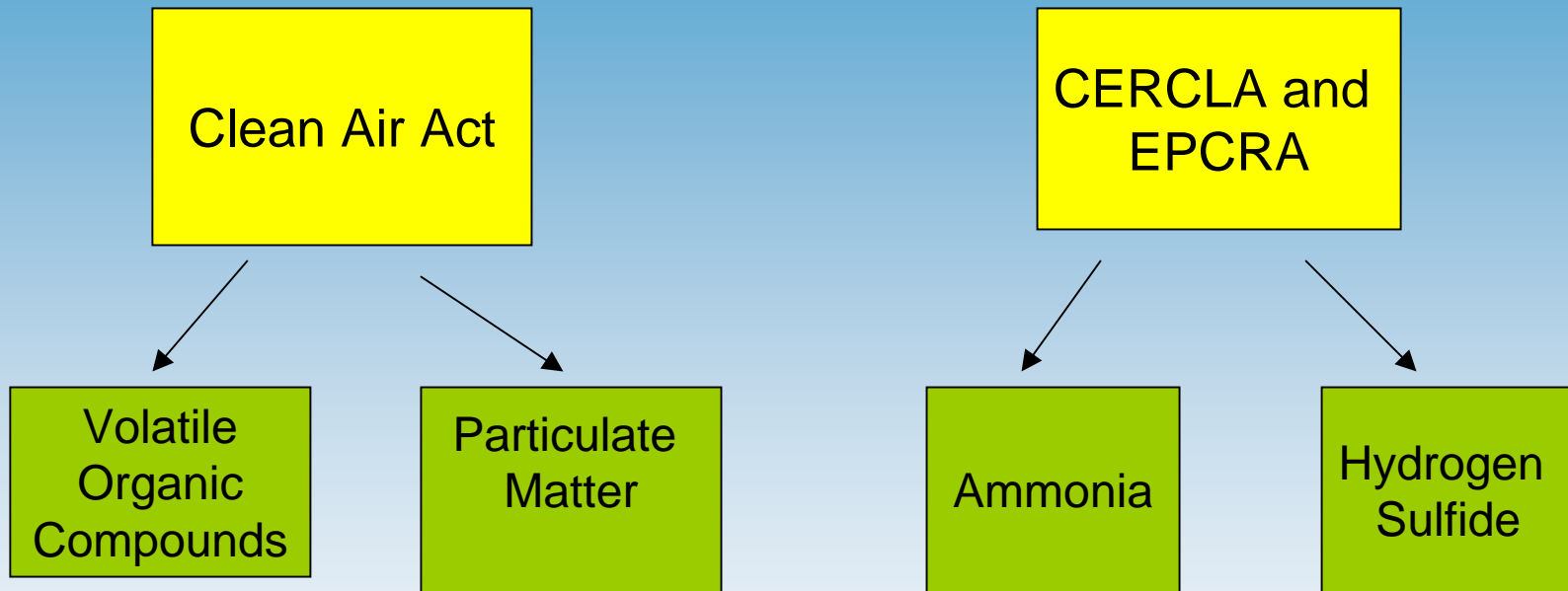
# National Air Emissions Monitoring Study (NAEMS)



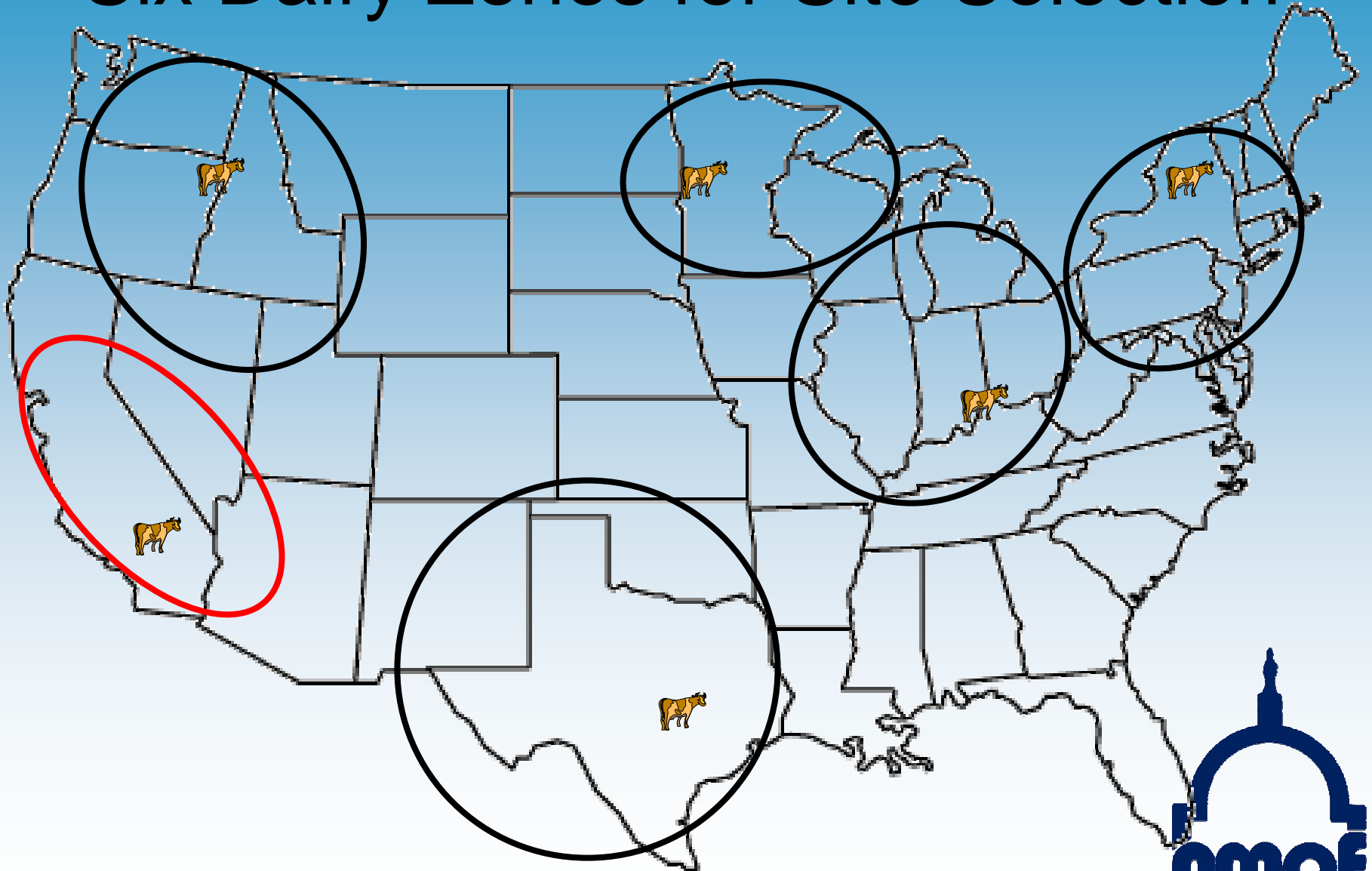
- 6 dairy sites, 2 year study
- Purdue University overseeing research
- Building types, manure management systems, geographical locations all considered when selecting sites



# What will be monitored?



# Six Dairy Zones for Site Selection



# Suggested Sites

Region	Type	Ventilation	Manure treatment	Storage
AZ, TX, NM	Corral	Natural	Flush	Lagoon
CA	Freestall	Natural	Flush	Lagoon
ID/OR/ WA/ UT	Corral	Natural	Scrape	Basin
WI/ MN	Freestall	Mechanical	Scrape	Lagoon
MI/ IN/ OH	Freestall	Mechanical	Scrape	Basin
NY/ PA	Freestall	Mechanical	Scrape	Basin w/ separator



# Timeline for NAEMS

- February 2006 – EPA approves Consent Agreements, NMPF joins AARC
- September 2006 – Study begins
- September 2008 – Study ends
- March 2010 – EPA completes Emissions Estimating Methodologies (“look-up” charts)
- July 2010 – Participating producers certify compliance with “look-up” charts

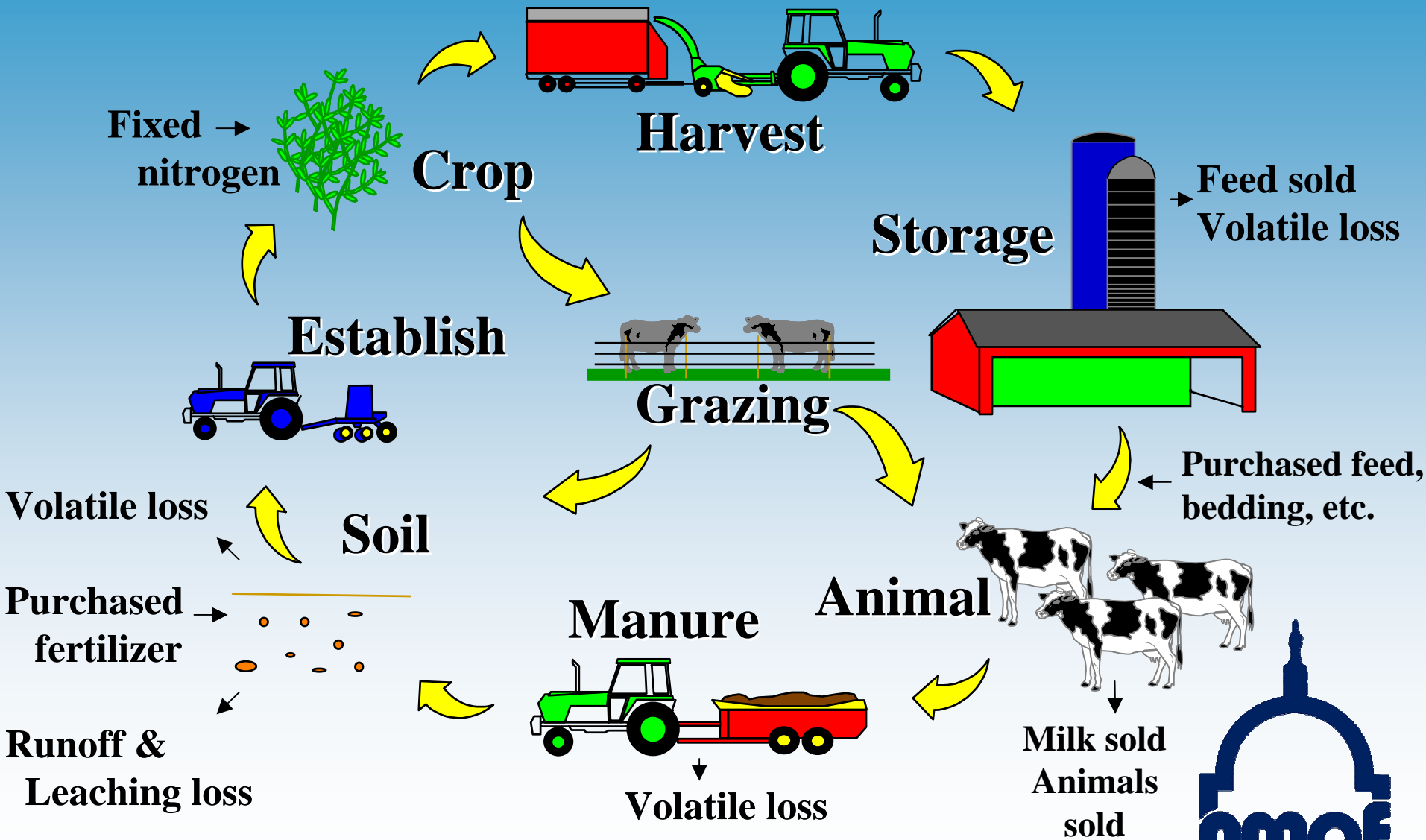


# Process-Based Model Research

- Project overseen by UC Davis and USDA
- Purpose – serve as a tool for dairy producers to estimate their on-farm emissions, possible ways to mitigate emissions
- Additional research (example – feed trials)



# Process-Based Model Approach



From Al Rotz, USDA ARS



# What's Next

- Legislative effort to clarify that agriculture was never intended to be regulated under CERCLA and EPCRA
- Dairy Environmental Task Force:
  - Additional air and water quality research beyond NAEMS
  - Possible research grants with USDA or other companies
  - Possible Environmental Research Fund??



# Questions?



Daniela Bals

[dbals@nmpf.org](mailto:dbals@nmpf.org)

(703) 243-6111

