

FACT SHEET

Draft Air Emission Models for Dairy Animal Feeding Operations

ACTION

- On July 14 2022, the U.S. Environmental Protection Agency (EPA) published preliminary draft air emission models for dairy operations, developed using data gathered during the National Air Emissions Monitoring Study (NAEMS).
- The preliminary draft models estimate daily and annual air emissions of ammonia, hydrogen sulfide, and particulate matter from barns, manure lagoons, and basins on dairy farms.
- The models characterize air emissions while drawing on information that producers already record or that is easily attainable, ensuring the models remain useful and easy-to-use for as many producers as possible.
- The preliminary draft emission models allow producers to estimate farm-scale emissions, considering the number of cows at the operation, as well as local environmental conditions.
- While some of the preliminary draft emission models were developed to account for certain operational factors at a dairy operation, the models do not reflect all site-specific management factors that affect emissions. The preliminary draft emission models are not “process-based,” and therefore are not intended to compare the impacts of adopting various best management practices or quantify the emission reductions that could be achieved by changing those practices.
- After the preliminary draft emission models for all animal sectors (swine, broiler chickens, egg-laying operations, dairies, and volatile organic compounds (VOCs)) are released, EPA will take time to revise and improve the preliminary draft models for all animal types. Once all the models have been reviewed and revised, EPA will release the entire set of revised draft models for a formal public comment period.
- Once finalized, the emission models will be used by animal feeding operations participating in a voluntary consent agreement known as the Air Compliance Agreement to determine whether their emissions trigger certain Clean Air Act (CAA) permitting requirements.
- EPA also expects the final models may be useful for general estimates of air emissions from dairy operations across the United States or comparisons between operations in different regions.

BACKGROUND

- Under the 2005 Air Compliance Agreement (the Agreement) with the animal production industry, EPA is responsible for using NAEMS data to develop emission models for emissions of ammonia, hydrogen sulfide, particulate matter, and volatile organic compounds (VOCs) at animal feeding operations raising swine, broiler chickens, egg-laying operations, and dairies.
- In 2013, EPA’s Science Advisory Board (SAB) reviewed the original draft emission models and made recommendations for improving their development. SAB’s recommendations have been incorporated into the draft dairy emission models.

- The Agency plans to release draft emission models for VOC emissions from all animal sectors by summer 2022.

FOR MORE INFORMATION

- Today's action and other background information are also available electronically at: <https://www.epa.gov/afos-air/national-air-emissions-monitoring-study>.
- Questions, suggestions, and voluntary submissions of supplemental data or information can be sent to NAEMS@epa.gov.