



The Iowa Policy Project

20 E Market St. • Iowa City, Iowa 52245 • (319) 338-0773
www.iowapolicyproject.org

January 2018

EXECUTIVE SUMMARY

The Explosion of CAFOs in Iowa and Its Impact on Water Quality and Public Health

By James Merchant and David Osterberg

Iowa has more than four times as many large concentrated animal feeding operations (CAFOs) as it did in 2001, and over the last decade has added nearly 500 new or expanded state-permitted CAFOs annually — now an estimated 10,000 CAFOs of all sizes.

This remarkable expansion is fueled by Iowa's robust export market for slaughtered hogs, nearly \$6 billion in 2016, up 7 percent in one year. Exports to Hong Kong/China broke the \$1 billion mark for the first time in 2016. Exports are expected to further expand to meet China's insatiable appetite for pork, and with export demand come new pork processing plants and sustained CAFO growth.

Iowa's lax "Master Matrix" process for CAFO siting is broken — 97 percent of requested permits are approved — even in fragile karst topography, over objections of county supervisors in now 20 counties, and despite the protests of neighbors and citizen groups. All have been disenfranchised by the considerable clout of the livestock industry.

A tipping point has been reached. Rural Iowans have every reason to be concerned.

While water quality is a stated priority of Iowa lawmakers, livestock production is an important contributor to water degradation and goes unchecked. Manure leaks and spills are associated with fish kills, nitrate and ammonia pollution, antibiotics, hormones, bacterial contamination, algae blooms, water quality impairments, closed beaches and are a major contributor to the "dead zone" in the Gulf of Mexico.

Continued CAFO expansion will only worsen these documented environmental impacts and must be part of the solution to Iowa's widely recognized water quality problem.

The Explosion of CAFOs in Iowa

In 2001, there were 722 Iowa Department of Natural Resources (DNR) permitted (93 percent hog) large CAFOs. By federal definition, these are 1,000 animal units (AU); smaller animal feeding operations (AFOs) are classified as permitted medium sized (500 AU to 999 AU), or small (below 500 AU in Iowa, but generally below 300 in other states). In this report, all animal feeding operations will be referred to as CAFOs.

The number of large and medium CAFOs in Iowa is not exact. In 2013, EPA Region 7 compelled the DNR to determine the total number of CAFOs of all sizes. DNR reported to EPA in 2016, through the use of satellite imagery, that it had found over 5,000 "new" CAFOs of undetermined size. In its July 31, 2017, report to EPA, DNR reported that it had identified more medium or large CAFOs, only some of which have been added to its database.* The number of animal facilities in the DNR database exceeds 10,000. Accounting for all new CAFOs the total will certainly be more.

* 2017 Annual Report for Work Plan Agreement between the Iowa Department of Natural Resources and the Environmental Protection Agency, Region 7. Iowa DNR. Aug. 1, 2017
<http://www.iowadnr.gov/Portals/id>

* See also Iowa Concentrated Animal Feeding Operation Air Quality Study, Table 12:

<https://www.public-health.uiowa.edu/ehsrc/CAFOstudy.htm>

Numerous studies in the last decade also have documented the impact of CAFO air emissions on the health of neighbors, finding significant increases in childhood asthma, adult asthma, airway obstruction, and irritant-linked eye and upper airway symptoms.

Other studies have documented negative impacts of CAFO air emissions on mood (more tension, depression, fatigue, confusion and less vigor), other psychosocial measures, and between odor and multiple quality-of-life measures. Several studies now find that property value near animal feeding operations, depending on distance, wind direction and other factors, is depressed 20 to 40 percent.

While one cannot ignore this now extensive scientific evidence, there is every indication that the industry intends business as usual. Not only happy with the Master Matrix, the industry is fortified by a new anti-nuisance suit law that prevents or severely limits real nuisance damages and seeks to eliminate from consideration evidence-based adverse health effects research.

To control and eventually diminish these negative impacts, and sustain long-term farm animal production in Iowa, we suggest six policies for rural Iowans, supervisors and legislators to consider:

- reform and revise the Master Matrix,
- pass a moratorium on new CAFOs,
- consider land covenants and other local legal strategies to limit local CAFO growth,
- challenge the constitutionality of anti-nuisance suit and ag-gag legislation,
- consider renewable energy from animal waste legislation, and
- fund communicable disease and sustainable agriculture programs.

The current industrial model is not sustainable given its high input costs, rising energy demands, fresh water needs, climate change, and adverse environmental and public health impacts. The very real pushback from rural residents and communities will, however, be sustained.

James Merchant is Professor Emeritus of Public Health and Medicine, and Founding Dean Emeritus, College of Public Health, at the University of Iowa. David Osterberg is Professor Emeritus of Occupational and Environmental Health at the University of Iowa, and co-founder of the nonpartisan Iowa Policy Project in Iowa City.