



## It's Time to Dump "THE MATRIX"

Iowa is home to thousands of concentrated animal feeding operations (CAFOs) that concentrate animals and their waste. A CAFO consists of large buildings that are used to house animals raised for meat, to produce eggs and to produce milk. The animals spend their entire lives in buildings or being transported between buildings; they do not go outside for fresh air or to eat.

Some of the operations, particularly poultry, store the manure in a dry form. In other situations, particularly hogs, the manure produced is mixed with water in enormous lagoons or pits, creating disposal problems and water and air pollution on a scale that would never have been possible in a diversified family farm system.

Manure spills are regularly reported in Iowa.<sup>1</sup> Some of those spills have polluted rivers and streams across the state, killing hundreds of thousands of fish. Groundwater pollution is also a serious problem; well water contaminated with nitrates from animal waste can result in methemoglobinemia, or "blue baby syndrome."

Air pollution from these factory farms, including toxic hydrogen sulfide and ammonia, destroys the quality of life in many of Iowa's rural communities, devastates property values of rural homes and threatens public health.



*Photo by Jeff Vanuga, USDA NRCS*

One would think that an industrial operation that creates these kinds of issues would be regulated in a manner that would reduce the problems. In Iowa, a half-hearted effort was created to address the issues – the issuance of a construction permit for the largest CAFOs. Underlying the issuance of the permit is a scoring mechanism called The Master Matrix.

### Construction Permits for Confined Animal Feeding Operations

A construction permit must be obtained from the Iowa Department of Natural Resources (DNR) if a CAFO houses a number of animals above the threshold laid out in the following table:

Category of animals	Threshold number
Slaughter and feeder cattle	1,000
Immature dairy cattle	1,000
Mature dairy cattle	714
Butcher or breeding swine weighing more than 55 pounds	2,500
Swine weighing 15 pounds but not more than 55 pounds	10,000
Sheep or lambs	10,000
Horses	500
Turkeys weighing 7 pounds or more	55,555
Turkeys weighing less than 7 pounds	117,647
Broiler or layer chickens weighing 3 pounds or more	100,000
Broiler or layer chickens weighing less than 3 pounds	400,000

<sup>1</sup> Between 2003 and 2013, more than 500 manure spills were reported in Iowa. See Matthew Patane, "Iowa manure spills jump 65% in 2013," *The Des Moines Register*, February 14, 2014

A CAFO is allowed to be built without a construction permit if the number of animals housed in the building falls below the threshold. If more than one CAFO building is being constructed on a property or already exists on the property, consult with the Department of Natural Resources since there are some special rules for counting the animal units.

### **The Master Matrix**

When the owner submits an application for a construction permit, the owner must include a Master Matrix evaluation of the proposed CAFO.

The Master Matrix consists of a list of questions and a determination of points that are awarded based on the answers. The matrix is a 44-question scoring system with point allocations in three categories: water, air and community impacts. Applicants must obtain a minimum overall score of 440 out of 880 possible points for DNR to issue a construction permit. The applicant must score at least 53.38 “air” points, 67.75 “water” points and 101.13 “community impacts” points. CAFOs constructed before April 1, 2002, are allowed to expand to 1,666 animal units without submitting a matrix application.



*Injecting liquid manure into a farm field.  
Photo by USDA NRCS*

### **Problems with the Matrix**

The matrix process was intended to give counties more local control, but the scoring system is lax. A county’s recommendation does not have to follow the results of the matrix application, but the DNR’s final decision is based solely on compliance with the state’s CAFO regulations and the matrix score. If a CAFO proposal meets both requirements, the DNR must issue the permit regardless of county or public opposition.

The Matrix process is so complex that many county officials do not fully understand their responsibility to carefully analyze matrix applications for accuracy, what is required for each step of the process and the time-frame allotted for each step. Failure to follow the steps will result in a CAFO being permitted when the County Board of Supervisors did not intend it to be given a permit. On the other hand, in some counties the oversight amounts to little more than a rubber-stamped approval.

Clearly, a bias exists throughout the permitting process that favors the permit applicant over the public interest. The public has a limited amount of time to challenge the master matrix and the application to build a CAFO. Obviously the process is designed to allow the CAFO to be built as quickly as possible with as little public oversight as necessary.

While a construction permit is required for the largest facilities, many CAFOs are built just under the threshold for a construction permit. Iowa laws have a hand full of regulations affecting the smaller CAFOs; however, the neighbors have fewer protections from the side-effects of those CAFOs and little opportunity to object to the siting of those buildings.

Furthermore, many county supervisors are confused about the matrix and how it works. Every year the supervisors must pass a resolution that agrees that the county will use the matrix. Some counties forget to pass the resolution and some counties do not want to be bothered with the matrix process creating inconsistent procedures across the state.

Only the county can appeal the issuance of a construction permit to the Environmental Protection Commission; the neighbors have no right to do so. Yet, the neighbors are left to deal with the poor quality of life issues caused by a neighboring CAFO and its manure application fields.

The topics covered by the matrix do not address all of the water quality, air quality and odor issues forced upon the neighbors. Although the matrix is designed to keep the CAFO away from people and water bodies, it does a very poor job of keeping the CAFO out-of-sight, out-of-mind, out-of-smell.

The current matrix allows the CAFO to be constructed if the project scores 50 percent or more points. Some of the points are inappropriately weighted. In some counties, an applicant who has never owned a CAFO is given free points for the criteria that he has never had a CAFO violation in the past. Points should not be given for never having a violation if the applicant has never owned a CAFO.

### **It's Time to Dump "THE MATRIX"**

The Iowa Chapter supports the following policies with respect to construction of CAFOs:

- Eliminating the master matrix.
- Requiring all CAFOs, regardless of size, to submit a construction permit to the Department of Natural Resources.
- Allowing the neighbors or other interested parties to challenge the issuance of a construction permit.
- Setting no time limit for issuing a construction permit thus allowing the Department of Natural Resources time to conduct thorough reviews of the construction permit application and to make site visits.
- Allowing local zoning laws to define appropriate locations for CAFOs just like any other industrial operation.
- Developing state standards to address water pollution, air pollution and odor. Solving the odor problem does not solve the air pollution problem; they both need to be solved.
- Aggressively enforcing CAFO regulations by the Iowa Department of Natural Resources, with fines and penalties strong enough to encourage people to obey the laws.
- Denying egregious violators of the CAFO laws the opportunity to continue to operate. Violations include manure spills, fish kills, air pollutants leaving the CAFO property and land application of fertilizer in excess of permitted amounts.
- Giving neighbors more power in ensuring that the laws are followed, including the ability to file citizen suits.
- Requiring all CAFOs have National Pollution Discharge Elimination System (NPDES) permits to ensure that they are not polluting Iowa's water bodies.

In conclusion, the master matrix has failed the neighbors and the rural communities, all of whom are dealing with stench, water pollution and air pollution. Across the state, Iowans who want to recreate in clean water are instead greeted with polluted lakes, streams and rivers.



*Photo by Jeff Vanuga, USDA NRCS*