

Permitting Pigs

Fixing Faults in Iowa's CAFO Approval Process

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The Iowa Policy Project

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The Iowa Policy Project

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In August 2008, Iowa's Environmental Protection Commission (EPC) granted an appeal by the Dallas County Board of Supervisors and, in doing so, denied two permits to build production facilities that would have each housed 7,440 hogs. Then, on October 14, 2008, the EPC reached a consent order that will allow the producer to build the two structures, however with the addition of several requirements. This rare process — of appeal, permit denial based on potential negative water-quality impacts and subsequent consent order — brought renewed attention to Iowa's Concentrated Animal Feeding Operation (CAFO) approval process.

The proposed Dallas County CAFOs passed the county's scoring of the Master Matrix — a list of steps a producer can take to reduce a CAFO's impact on surrounding neighbors and the environment. Iowa's Department of Natural Resources (DNR) also approved the permits, indicating the proposed CAFOs met state location and construction requirements. Despite having successfully passed these earlier stages of the approval process, members of the EPC heard arguments in August that persuaded them the proposed CAFOs should not be approved because of their potential to harm water quality.

Although appeal to the EPC is available under the CAFO decision-making process, this case raises the question of whether the earlier steps of the process adequately address the water-quality concerns associated with proposed CAFOs. How did these CAFOs both pass the Master Matrix and meet the state's regulations if the EPC felt that, prior to the consent order, they posed a significant threat to Iowa's water quality?

This report approaches this question by analyzing the CAFO permit decision-making process and addressing the question of what is missing from the current process. After examining the structure of the CAFO permitting process in Iowa, this analysis returns to the Dallas County case to describe how the current CAFO permitting process allowed scant protection from spreading manure near an already impaired river that is source water for Iowa's largest drinking water system. We close with recommendations for improving the permitting process, focusing, as with the rest of the report, specifically on water quality. This report does not address the several other concerns related to permitting and operating CAFOs.

CAFO Impacts on Water Quality^{a,b}

Twenty million swine live in Iowa,¹ compared with just fewer than 3 million humans.² Swine are increasingly being raised inside and under one roof in CAFOs. Further, swine production is becoming more concentrated in certain regions of the state. This density, coupled with the fact that swine produce 2.8 times more urine and feces per pound of body weight than humans³ and that these waste products are spread over the land untreated, creates a possible recipe for substantial adverse water-quality impacts.

The most noticeable impacts, often exhibited by the sight and smell of dead fish, are fish kills resulting from manure spills. In 2007, there were 63 reported manure spills in Iowa.⁴ These manure spills yield “extremely high concentrations of ammonium, total phosphorus, suspended solids, and fecal coliform bacteria.”⁵ Significant water-quality problems can result from CAFOs even when they are under normal operation.⁶

Iowa’s CAFO Permitting Process

Iowa approved construction permits for 318 CAFOs in 2006; 251 in 2007; and 191 as of mid-September 2008.⁷ The vast majority of these CAFOs went through the following process to reach DNR approval without significant attention or controversy.

A producer wanting to construct a livestock facility of more than 1,000 animal units^c must submit a Manure Management Plan; a construction permit application; and, in counties that have adopted it, a self-scored Master Matrix to the county auditor and the DNR. The county has 14 days to notify the public of the application and has the option to hold a public forum on the application. The county has 30 days to complete its own scoring of the Master Matrix (discussed in detail below); if the producer does not receive 50 percent of possible points, then the county recommends the DNR deny the permit. Even if the score is more than 50 percent, the county can choose to recommend that the DNR deny the permit based on public comment.

The DNR makes its final decision within 30 days of receiving the county’s recommendation. The DNR’s decision is based on compliance with the Matrix and with state CAFO regulations. However, the DNR does not review an applicant’s Matrix if the county recommends a CAFO permit be approved. The DNR will only review an applicant’s Matrix if the county recommends denial of a permit. If an applicant fails the county’s scoring, the DNR performs its own scoring of the Matrix. If the DNR approves the application, the county has 14 days to appeal the decision to the EPC. The EPC then has 35 days to decide whether to approve, deny or modify the permit based on information received from the county, the DNR and the producer.

The following sections describe some of the process in greater detail.

^a For more information on CAFOs’ impacts on water quality and a summary of other concerns, see past IPP reports, *Concentrating on Clean Water: The Challenge of Confined Animal Feeding Operations*, April 2005 and *Hog CAFOs and Sustainability: The Impact on Local Development and Water Quality in Iowa*, October 2007 available at www.IowaPolicyProject.org.

^b Though this report describes the CAFO approval process generally, it uses examples based on the hog industry because Iowa raises 28.5 percent of the nation’s hogs, as compared to between 3 and 14 percent of other livestock animals (three percent of turkeys, 4 percent of cattle and sheep/lambs and 14 percent of chickens). USDA, National Agricultural Statistics Service, available at

http://www.nass.usda.gov/Statistics_by_State/Iowa/Publications/Annual_Statistical_Bulletin/2008/78_08.pdf.

^c In the case of swine, this equals 2,500 hogs over 55 pounds.

The Master Matrix

In 2002 the Iowa General Assembly passed legislation setting guidelines for the establishment of the Master Matrix, which was later created and adopted by the DNR. The Legislature acted in response to citizens calling for greater community-level control over the CAFO permitting process.⁸ The Master Matrix gives counties a voice in the CAFO approval process, though it does not give them final decision-making authority. The Master Matrix is not required; counties have discretion to decide whether to adopt it. As of 2008, only 12 of Iowa's 99 counties have not adopted the Master Matrix.^{d,9}

The Master Matrix is a scoring system that awards points for the adoption of additional practices beyond the minimum that state law requires to approve a CAFO permit. For example, separation is required between CAFOs and residences, churches and vulnerable natural amenities. The Master Matrix awards points for increasing the required separation distances. More stringent manure management practices also gain additional points. The Master Matrix has a total of 880 points, of which 440 are required to "pass." In addition to this overall score, 25 percent of available points must be earned in each of three subcategories of impacts on air, water and the community in order to receive a passing score.¹⁰

The 2002 law that established the Master Matrix, as well as a previous 1995 law, preempted local governments from approving, denying or creating new regulations for CAFOs. Preemption (either expressed or implied) is a common mechanism used by higher levels of government to ensure consistency of laws at lower levels. When the federal government preempts the states, it generally allows individual states to require more than minimum federal requirements.^e Where environmental legislation is concerned, state governments do occasionally bar local governments from passing stronger environmental standards.¹¹ Iowa counties have tested their role in the CAFO decision-making process a number of times and lost each time.

The Iowa Legislature, via the authority set forth in the Iowa Constitution, has curtailed local government authority over siting CAFOs and limiting CAFO discharges. Several Iowa Supreme Court cases have affirmed this. In *Kuehl v. Cass County*, the Iowa Supreme Court held that all agricultural operations, including animal feeding operations, are exempt from county zoning (*Kuehl v. Cass County, 1996*). When Humboldt County later attempted to exercise its home-rule authority by putting controls on CAFOs, it lost in the Iowa Supreme Court (*Goodell v. Humboldt County, 1998*). Later, a Worth County ordinance sought to regulate CAFO operators based on the county's ability to protect public health. This ordinance was held void and unenforceable because it ran contrary to state law.^f The opinion of the court was that the Iowa Legislature intended livestock production to be exclusively governed by state regulation. As such, any regulation by the county was impermissible (*Worth County Friends of Agriculture v. Worth County, 2004*). This legal framework leaves counties to choose: utilize the flawed Master Matrix in order to take advantage of its minimal benefits or have no additional protections beyond the base required by state law.

^d According to the DNR website, counties must adopt or readopt the Construction Evaluation Resolution annually in January in order to use the Master Matrix.

^e See, for example, Clean Water Act, 33 U.S.C. § 1370; Resource Conservation and Recovery Act, 42 U.S.C. § 6929.

^f The Iowa Supreme Court has supported laws that preclude local jurisdictions from regulating livestock with ordinances. However, it has also established that the legislature cannot prevent individuals from suing livestock producers under nuisance law. Though the legislature has attempted to prohibit nuisance lawsuits through Iowa Code §§ 357.11, 657.11, the court has sided with claimants and against the hog industry in three cases, even going so far as to find these sections unconstitutional (*Weinhold v. Wolff* (Iowa 1996); *Bormann v. Kossuth County Bd of Supervisors* (Iowa 1998); and *Gacke v. Pork Xtra LLC* (Iowa 2004)).

While some might believe the Master Matrix is similar to an Environmental Impact Statement (EIS), the two are not comparable. The Master Matrix functions as a menu from which prospective CAFO operators can choose which extra guidelines they will follow. By contrast, an EIS is a report designed to outline the “predicted environmental effects of a particular action” or “highlight the significant environmental ramifications of a project.”¹² As the two are the same in neither form nor function, they should not be compared, and citizens, producers and policy makers should not presume a completed Master Matrix will serve the purposes of an EIS.

The Master Matrix has the potential to be a valuable tool more akin to an EIS; however, it has a number of flaws that prevent it from meeting its potential. These flaws include:

- There are no “negative” points. For example, producers do not *lose* points for being within a specified distance of a drinking water source, or for any other problematic siting factors;
- Points are awarded for practices that are likely to be adopted regardless of whether the producer needs to pass the Master Matrix. For example, points are awarded if an applicant does not have previous environmental or work violations, even if the applicant has not previously operated a CAFO and for using formed manure structures, which are the industry standard.¹³
- The condition of the waterbodies in the watershed is not part of the scoring process. A proposed CAFO along an impaired river would receive the same score if it were near an unimpaired waterbody;
- The format is inappropriate and leaves decision makers with partial information. The Master Matrix only requires producers to provide enough information to achieve a passing score and does not require the producer to give information on how or whether they will be addressing the other items.

DNR Approval

Until 2006, if a proposed CAFO attained the minimum score on the Master Matrix and met other state-mandated CAFO regulations, the permit was approved by the DNR, even if there was public opposition to the operation and the county recommended denial.¹⁴ But in June 2006, the EPC voted to approve a rule that would allow, but not require, the director of the DNR to use more discretion and look beyond the Master Matrix and state regulations and require modifications or deny construction permits and manure management permits for CAFOs.¹⁵ This rule applies to proposals for construction or expansion of CAFOs that require a construction permit or a manure management plan. When the DNR decides to evaluate proposals under this rule, it considers the following factors:

- 1) The likelihood manure will be applied to frozen or snow-covered cropland.
- 2) The proximity of the structured or manure application areas to sensitive areas ...
- 3) Topography, slope vegetation, potential means or routes of conveyance of manure spilled or land-applied. ...
- 4) Whether the operation or manure application area is or will be located in a two-year capture zone for a public water supply.¹⁶

This rule gives the DNR director discretion to deny a construction permit, disapprove a manure management plan or bar construction where proposed if the director determines that “the operation would reasonably be expected to result in” pollution of a water of the state; violation of state water-quality standards; or an adverse effect on natural resources or the environment in a specific area because of the current concentration of confinement feeding operations or associated manure application areas.¹⁷

The director’s discretion rule went into effect in August 2006, but the Administrative Rules Review Committee (ARRC) of the Iowa Legislature filed an objection to the rule in October 2006 saying it was beyond the DNR’s authority.¹⁸ This objection did not strike the rule, but shifted the burden of proof from the producer to the DNR. This shift means that, in any judicial review or enforcement proceeding,

the DNR must prove that the rule is not unreasonable, arbitrary, capricious, or *otherwise beyond the authority delegated to it* (emphasis added).¹⁹ Thus, although this rule remains, the ARRC's objection has diminished the likelihood that the DNR will deny a permit based on director's discretion and commit itself to defending its action if challenged.

The EPC's Role

Once the DNR has approved a permit for a CAFO, an Iowa county has one remaining option to stop the construction of a CAFO it finds objectionable: It can appeal to the EPC.

The EPC is one of two citizen boards that oversee the DNR. Iowa has a tradition of citizen bodies constituted to advise state agencies and ultimately the Governor. The Governor makes appointments to most commissions and boards annually and state law requires these entities to be balanced both by gender and political affiliation. Often geography also plays a part in the selection of commissioners.²⁰

Very few CAFO decisions are appealed to the EPC. In fact, over the 12-month period from October 2007 to September 2008, only seven permits were appealed. The EPC voted to deny permits in three of the appeals and to approve the other four permits. Two of the decisions to deny permits came in the most recent appeal from Dallas County heard by the EPC, though permits were later granted after filing the consent order.

The Dallas County Case

In the case of the proposed Dallas County CAFOs, the Dallas County Board of Supervisors agreed the proposed CAFOs passed the Master Matrix but recommended to the DNR the permits be denied. The DNR then approved the CAFOs. Based on water-quality concerns, the county supervisors appealed this decision, asking the EPC to deny the permits. The appeal was heard on August 19, 2008. Public comment was followed by presentations from attorneys representing the DNR, the Dallas County supervisors and the applicant.

Some of the information included in the public's and attorneys' testimonies and in written public comments to the EPC included:

- ***The Raccoon River, the waterbody to which any pollution from the proposed facilities would discharge, is impaired and included on the federal government's Impaired Waters (303(d)) list.***²¹

The Raccoon River had been assigned a Total Maximum Daily Load (TMDL), which specifies the maximum amounts of particular pollutants that can enter the river in one day in order for it still to meet Iowa's water-quality standards. Unlike violation of a National Ambient Air Quality Standard, which would limit development in an offending air shed, the DNR is limited in improving an impaired river. As stated on the DNR website:

For any real improvement to be made on a stream or lake that has a water quality improvement plan, it is up to local communities and landowners to put the plan into action. By organizing a watershed improvement group, locals can apply for funding from the DNR and other agencies to help landowners and others install conservation practices.²²

Thus, while the Raccoon River is impaired no action is required to improve it and more pollutants can be added on top of those already causing the stream to be out of compliance.

If the proposed CAFOs are constructed, nearly 15,000 more hogs would live in the already impaired Raccoon River watershed. Although it is perhaps possible the CAFOs would add no additional pollution to the Raccoon River, the history of CAFOs in Iowa shows this is unlikely. Iowa's existing method for improving water quality does not adequately meet current challenges, let alone address the concerns of adding another potential pollution source to an already impaired watershed.

- ***The Raccoon River is the source for the Des Moines Waterworks (DMWW), which provides drinking water for 400,000 Iowans.***

Christopher Jones, a chemist at the DMWW, stated that DMWW's monitoring data showed nitrate levels in the river had doubled since 1974 and that the Raccoon had the highest average nitrate levels of any of the largest tributaries in the Mississippi River basin. Jones went on to state that average *E. coli* concentrations in the river were four to five times what was allowed for recreational contact.²³

Jones and DMWW's Research/Regulatory Coordinator Linda Kinman emphasized the strain that pollution caused in providing clean drinking water. For example, increased ammonia levels in Spring 2008, believed to be caused in part by agricultural practices, required adjustments to the treatment process.²⁴ This resulted in increased costs and "hundreds of consumer complaints" about the smell and taste of drinking water, and placed DMWW at risk of violating the Disinfection and Disinfection Byproducts Rule of the EPA.²⁵

After hearing these and other concerns, the EPC based its August 19, 2008, decision to reject the two CAFOs on the following rationale:

1. The DNR is responsible for protecting Iowa's water resources. The EPC believed that its decision furthered the DNR's duties to protect the environment.
2. The proposed CAFO could "reasonably result in pollution to the water of a state based on [the authority set forth in the director's discretion rule, 567 IAC 65.5(3)(b)]."
3. The addition of the proposed CAFO to the impaired Raccoon River "will negatively impact the waterway based on the credible data already found in the TMDL."²⁶

Following this decision, the producer sought judicial review of the EPC's decision. The producer and the EPC entered a Consent Order, filed October 14, 2008, to resolve the producer's claims. Through the Order, the DNR agreed to issue construction permits for the two CAFOs in Dallas County provided one of the proposed CAFOs meets additional guidelines and water quality protections. These included tree lines, grass buffers, emergency plans and restrictions on manure spreading.²⁷ By signing the Consent Order, the producer waived his right to appeal.²⁸ In addition, the Dallas County Board of Supervisors did not object to entry of the Consent Order.

In many ways, the approval, denial and approval of the Dallas County CAFO permits highlights the uncertainty and inefficiency of the permit process — for producers, residents and regulators — as well as the insufficient protection of water quality. More restrictions were placed on the new hog facilities through the Consent Order. However, the Raccoon River is still impaired and the addition of more swine will not improve the water quality of Iowa's largest drinking-water system. Given the current limits on considering water quality, the parties involved in the regulatory process may have gone as far as they could to protect the Raccoon River watershed. The following section recommends changes that would improve the process.

Recommendations

The two proposed Dallas County CAFOs qualified for approval under the Master Matrix and existing state regulations, but the review process did not evaluate the quality of the river basin and its use as an

important drinking-water source. The EPC initially upheld Dallas County's appeals because it determined these specific CAFOs would be harmful to water quality. The Consent Order reached in October included elements that allayed the concerns of members of the EPC in this specific case, while leaving other aspects of the case and concerns that might arise in future cases unaddressed.

The current process for approving CAFOs has been in place for six years. Iowa's water quality is poor and by some measures deteriorating. CAFOs are one part of this problem. The decision-making process for approving or denying CAFOs needs to be changed to better address Iowa's water-quality problems. The following are recommendations that, if heeded, could help put Iowa on the path toward cleaner water and a better CAFO approval process:

- The state should set stronger minimum requirements for the approval of new construction permits and manure management plans. In particular, the DNR should consider 1) whether the watershed is impaired, 2) any existing water quality improvement plans, 3) the proximity to drinking-water sources and 4) the number of existing CAFOs in the watershed.
- The Legislature should codify the director's discretion rule to allow an additional level of review while maintaining producers' rights to appeal a decision.
- All counties should adopt the Master Matrix. In order to offset the county's cost, applicants should pay an administrative fee equal to the cost incurred to review each Master Matrix. In addition, rather than being a menu from which producers respond only to sections of their choosing, the Master Matrix should require producers to fill in responses to every item. This would provide counties access to complete information about proposed CAFOs so supervisors and the public could address any concerns early in the process. Finally, the Master Matrix should be adapted so applicants lose points for problematic environmental issues.
- Iowa should expand the permitting process to include smaller CAFOs. Currently, only Manure Management Plans are required for facilities with 500 to 999 animal units. Iowa should also require construction permits and the Master Matrix (in counties where adopted) for facilities above 500 animal units. Lowering the threshold would require more producers to complete these steps and provide a more accurate picture of the number and size of CAFOs in a watershed.
- The Legislature should increase local decision-making authority over CAFO approval by allowing counties to adopt rules for the limited purpose of protecting air quality, water quality, public health and community well-being. Additionally, the Legislature should consider giving county boards of supervisors the authority to deny or allow the applicant the opportunity to modify their application if it fails the Master Matrix, rather than simply recommending denial to the DNR.
- Counties and the state should make every effort to clearly outline the items an applicant must meet in order to have a permit application approved. (Following the recommendations in this paper, such a list would include: a completed Master Matrix, a Manure Management Plan, a construction permit and adherence to any applicable local rules) There will occasionally be individual and site-specific circumstances that cannot be addressed within the framework of the standard process. Wherever possible, applicants deserve the certainty that comes with knowing they have met all of the requirements and can expect to have their permit approved.

Conclusion

Given the number of livestock raised in Iowa, there is potential to improve our water quality if the permitting process is strengthened and improved. Permitting new CAFOs has been a contentious and

sometimes community-dividing issue. Iowa needs to improve the CAFO permitting process so the health of our water and citizens are better and fairly represented in this process.

Notes

¹ United States Department of Agriculture, National Agricultural Statistics Service Quick Stats <http://www.nass.usda.gov/QuickStats>.

² American Community Survey, 2007, available at <http://factfinder.census.gov>.

³ Carol J. Hodne, *Concentrating on Clean Water: The Challenge of Confined Animal Feeding Operations*, The Iowa Policy Project, April 2005.

⁴ Personal communication with Kenneth Hessenius, Iowa DNR, on September 19, 2008.

⁵ JoAnn Burkholder, Bob Libra, Peter Weyer, Susan Heathcote, Dana Kolpin, Peter Thorne, and Michael Wichman. *Impacts of Waste from Concentrated Animal Feeding Operations on Water Quality*. Environmental Health Perspectives, February 2007.

⁶ See Carol J. Hodne, *Concentrating on Clean Water: The Challenge of Confined Animal Feeding Operations*, The Iowa Policy Project, April 2005; Jan L. Flora et al., *Hog CAFOs and Sustainability: The Impact on Local Development and Water Quality in Iowa*, The Iowa Policy Project, October 2007.

⁷ Personal communication with Bob Palla, Iowa DNR, on September 18, 2008.

⁸ Leana Stormont, Detailed Discussion of Iowa Hog Farming Practices, 2004.

⁹ Available at <http://www.iowadnr.com/afo/files/08cermap.pdf>.

¹⁰ Available at <http://www.iowadnr.com/afo/matrix.html>.

¹¹ Minnesota Environmental Quality Board. Final Technical Work Paper on the Role of Government: Prepared for the generic environmental impact statement on animal agriculture, page 29 (2001).

¹² Available at <http://ohioline.osu.edu/cd-fact/0188.html>.

¹³ Baer, Nathaniel. *Failure of the Master Matrix: Industrial Livestock Operations Still Harming Air, Water, and Communities*. Environment Iowa Research & Policy Center. February 2007.

¹⁴ Leana Stormont, *Detailed Discussion of Iowa Hog Farming Practices*, 2004.

¹⁵ 567 IAC 65.5(3).

¹⁶ 567 IAC 65.5(3)(a)(1-4).

¹⁷ 567 IAC 65.5(3).

¹⁸ Administrative Rules Review Committee, Objection to 567 IAC 65.5(3) and 65.103(5) filed October 10, 2006.

¹⁹ I.C.A. § 17A.4(5)).

²⁰ Available at <http://openup.iowa.gov/boards/>.

²¹ Category 5 of Iowa's Final-Approved 2006 Integrated Report: The Section 303(d) List of Impaired Waters, available at http://wqm.igsb.uiowa.edu/WQA/303d/2006/Iowa_06-final-approved-IR-Cat-5-303d.pdf.

²² Available at <http://www.iowadnr.com/water/watershed/tmdl/tmdl.html>.

²³ Christopher S. Jones, Ph.D., Laboratory Supervisor, Des Moines Waterworks, Public Comment to the EPC, August 19, 2008.

²⁴ Linda Kinman, Research/Regulatory Coordinator, Des Moines Water Works, Comment Document, Raccoon River Watershed Total Maximum Daily Load, August 19, 2008.

²⁵ Linda Kinman, Public Policy, Iowa Association of Water Agencies and Research/Regulatory Coordinator, Des Moines Water Works, Written Comment to the EPC, May 13, 2008.

²⁶ Environmental Protection Commission, August 19, 2008 meeting minutes.

²⁷ Consent Order, Judgment and Decree in the District Court in and for Polk County, Dallas Pork, LLC, and Lincoln 1 Pork, LLC v. State of Iowa, October 14, 2008.

²⁸ Consent Order, Judgment and Decree in the District Court in and for Polk County, Dallas Pork, LLC, and Lincoln 1 Pork, LLC v. State of Iowa, October 14, 2008.