

**Written Statement of the  
National Pork Producers Council**

**Submitted to the**

**Committee on Transportation and Infrastructure  
Subcommittee on Water Resources and Environment  
U.S. House of Representatives**

**April 19, 2007**

## **INTRODUCTION**

The National Pork Producers Council (NPPC), an association of 43 state pork producer organizations and the voice in Washington for the nation's 67,000 pork producers, offers the following written comments with respect to your hearing today on agriculture's effects on water quality. Thank you Chairwoman Johnson, Ranking Member Baker, and members of the subcommittee for this opportunity to provide you with our views on this critical issue.

The U.S. pork industry represents a significant value-added activity in the agriculture economy and the overall U.S. economy. Nationwide, more than 67,000 pork producers marketed more than 103 million hogs in 2005, and those animals provided total gross receipts of \$15 billion. Overall, an estimated \$20.7 billion of personal income and \$34.5 billion of gross national product are supported by the U.S. hog industry. Economists Dan Otto and John Lawrence at Iowa State University estimate that the U.S. pork industry is directly responsible for the creation of 34,720 full-time equivalent jobs and generates 127,492 jobs in the rest of agriculture. It is indirectly responsible for 110,665 jobs in the manufacturing sector, mostly in the packing industry, and 65,224 jobs in professional services such as veterinarians, real estate agents and bankers. All told, the U.S. pork industry is responsible for 550,221 mostly rural jobs in the U.S.

The hog industry in the United States has seen rapid structural changes in recent years, yet total hog numbers have trended up since 1990. In 1990, inventories were 54.5 million head; data from December 2006 showed inventories over 62 million head. And in 2006 2.74 billion pounds of pork and pork variety meats were exported; U.S. consumers purchased 18.8 billion pounds of U.S.-produced pork. Domestic consumption of pork in 2006 was 3 billion pounds higher than it was in 1990; exports were 2.2 billion pounds higher than they were in 1990.

The U.S. pork industry today provides 21 billion pounds of safe, wholesome and nutritious meat protein to consumers worldwide. In fact, 2006 will be the fifth

consecutive year of record pork production in the United States, and all indicators point to another record in 2007.

Exports of pork also continue to grow. New technologies have been adopted and productivity has been increased to maintain the U.S. pork industry's international competitiveness. As a result, pork exports have hit new records for the past 15 years. In 2006, exports represented nearly 15 percent of production.

It is without a doubt that pork producers are strong and vital contributors to value-added agriculture in the United States, and we are deeply committed to the economic health and vitality of our businesses and the communities that our livelihoods help support.

Just as importantly, though, pork producers take a broad view of what it means to be environmentally responsible farmers and business people, and we have fully embraced the fact that our pork producing operations must protect and conserve the environment and the resources we use and effect. We take this responsibility with the utmost seriousness and commitment, and it was in this spirit that our producer members have made a major commitment to environmental conservation.

The U.S. pork industry treats as its top goal meeting worldwide consumer demand while simultaneously protecting water, air and other environmental resources that are in our care or potentially affected by our operations. NPPC is proud of the reputation it and its members have earned for initiating innovative environmental improvement programs. NPPC and its producer members take an active role in advocacy at both the federal and state levels for clean water environmental initiatives, and our members have committed themselves to achieving high levels of environmental performance. Pork producers have made protecting water quality one of their top priorities for more than a decade, and the publicly available record demonstrates their accomplishments in this regard.

Over the last several years, there have been major and dramatic changes in federal water quality regulatory policy applicable to livestock and poultry producers in this country. By natural extension, these fundamentally new policies also reach to the intersection between

livestock and poultry production and crop production and the use of our animals' manure to substitute for commercial forms of fertilizer in support of crop fertility programs. It is very important that as the Committee considers the subject matter of this hearing that it also understand these policy changes, just how fundamental they are, and just how thoroughly prepared pork producers are to meet or exceed these standards. To this end, our testimony will address the following four important considerations:

1. Federal Clean Water Act regulations for concentrated livestock and poultry feeding operations now effectively encompass all animal species and all clean water aspects of the production of their animals, their manure and the use of that manure on land for crop production that the farmer controls.
2. As a result, concentrated animal feeding operations (CAFOs) now have more than adequate regulatory incentives to ensure that they do not discharge their manure to water and use sound and appropriate agronomic practices for applying their manure to land because failure to do so can result in major CWA penalties. But these water quality protections, which pork producers are treating as a "zero discharge standard," are now achievable without a CAFO having to get a federal CWA permit, and many CAFOs will choose to do that.
3. The EPA CAFO rulemaking record clearly indicates that EPA considers modern pork operations in all parts of the U.S. as capable of achieving this "zero discharge" standard.
4. The state regulatory record of pork producers operations in the major hog producing states indicates that for the last several years, except in a limited number of rare incidents, pork operations are conforming to this "zero-discharge" standard.

### **BROAD SCOPE OF CWA REGULATORY PROGRAM FOR CAFOS**

In 2003 the U.S. EPA issued a final CAFO National Pollution Discharge Elimination System (NPDES) rule and Effluent Limitation Guideline, which dramatically extended and altered the CWA regulatory provisions applicable to animal feeding operations. EPA has subsequently initiated a rulemaking to make changes to the 2003 CAFO rule as a

result of litigation that lead the federal courts to invalidate two important provisions of that rule in the so-called *Waterkeeper* decision by the U.S. Second Circuit Court of Appeals. The EPA proposed rule, expected to be issued in final form later this summer, deals with several extremely important aspects of CAFO regulation under the NPDES program. There can be a tendency to look simply at these marginal changes, between 2003 and today, and fail to see the broader sweep of change and reform that has occurred from the time preceding the 2003 rule to where we are to come out in 2007 when the current rule revisions are finalized. The scope of changes is enormous.

For example, we note that any animal feeding operation (pork, poultry, beef, dairy or horse) of almost any size faces potential enforcement and severe penalties for even a single discharge from their operations to waters of the United States. This was not the case prior to 2003, and this has been unchanged by the *Waterkeeper* decision. Perhaps even more important, the 2003 rule extended CWA protections to the application of manure to CAFO lands. Under this change, the application of manure to these lands without appropriate and documented agronomic and conservation best management practices would make any resulting stormwater runoff of pollutants to waters of the United States a CWA “point source discharge” potentially subject to extremely stiff penalties of \$32,500 a day and possible other sanctions. This new regulation of land application practices was introduced in 2003, and it also has been untouched by the *Waterkeeper* decision.

**CAFOS NOW HAVE STRONG REGULATORY INCENTIVES TO PROTECT WATER QUALITY—EVEN WITHOUT FEDERAL PERMITS**

These changes represent a monumental shift in the federal policies and regulations that govern animal feeding operations from pre-2003 to today. They have created substantial and effective incentives for CAFOs to prevent any discharge from CAFO production areas and to use sound and effective manure application practices on crop land. They represent substantial improvements in water quality protection, and there is no question that as an entire sector, livestock and poultry agriculture will improve their water quality performance as a result.

Moreover, consistent with the law under *Waterkeeper*, these incentives remain even for CAFOs that are not discharging or proposing to do so and that, under *Waterkeeper*, can choose not to get a federal NPDES permit. We argue that for the CAFO without an NPDES permit, the incentives **not** to discharge **are even greater** than for the CAFO that does get a permit. This is because a CAFO with a permit is allowed to have a discharge from its production area so long as its operation is designed, maintained and managed so as to contain a 25-year, 24-hour storm event. A non-permitted CAFO that discharges under those circumstances will be fully liable for CWA penalties under *Waterkeeper* and as a result, has a very effective incentive to design, maintain and manage its operation so as to **never** have a discharge.

We believe that EPA issued a proposed rule last summer that would result in a final CAFO rule that in many important respects remained effective, workable and within the legal constraints imposed by the Second Circuit's *Waterkeeper* decision. We offered comments to that rulemaking in the firm belief that the final rule can and will achieve the no-discharge, water-quality protection goals of the CWA without requiring NPDES permits for non-discharging CAFOs.

The bottom line for pork producers is that they now must eliminate discharges and properly manage their manure and its nutrients under the effective standards set in the CAFO rule, and the fact that this could be done by many pork producers without a federal NPDES permit does not diminish in the least the protections to water quality.

### **EPA CONSIDERS PORK OPERATIONS TO BE NO-DISCHARGE FACILITIES**

As detailed in the following section, the actual, factual regulatory record for swine operations indicates that the overwhelming majority are not discharging. This should be no surprise as EPA's own analysis and subsequent proposals in the proposed 2001 CAFO rule for the best available technology standard to be applied to swine CAFOs was predicated on the prominent use of animal and manure management systems that are essentially enclosed. EPA's findings in this regard are discussed below.

EPA proposed in the 2001 rule a “zero-discharge” standard for the production areas of swine CAFOs. While there were numerous sound policy, technical, and economic reasons for EPA to ultimately reject that “zero-discharge” standard in the final 2003 rule, the fact remains that for many properly operated manure management systems, these CAFOs do not have to discharge – as EPA correctly noted.

In the case of swine operations, many of the existing operations in the Midwest use “deep pit” systems where the animals are housed over a below-ground, concrete manure storage unit. This system is used in the vast majority of new facilities that have been built in the Midwest over the last several years. As described by EPA, “Deep pit systems start with several inches of water in the pit, and the manure is collected and stored under the house until it is pumped out for manure application, typically twice a year.” [See Development Document for the Proposed Revisions to the National Pollutant Discharge Elimination System Regulation and the Effluent Guidelines for Concentrated Animal Feeding Operations, Page 11-6 (January 2001)]. The manure in a concrete “deep pit” that is being managed according to ordinary design standards should never come into contact with rainfall during the storage period, nor does the manure leak out of the concrete pit. It only comes out when the producer pumps it out so it can be applied to cropland. Manure in a swine deep pit system does not come into contact with rainfall. The concrete “deep pit” is also a “no-discharge” system.

EPA acknowledged as much in its explanation in the 2001 proposed CAFO rule when it explained the “Option 5” technology standard for swine, veal, egg and poultry operations. Option 5 required “zero discharge of manure and process wastewater” and provided “no overflow allowance for manure and wastewater storage” from swine, veal, egg and poultry CAFOs. EPA justified its Option 5 proposal by stating that:

. . . swine, veal and poultry operations can house the animals under roof and feed is also not exposed to the weather. *Thus, there is no opportunity for storm water contamination...* Those operations with liquid manure storage can comply with the restrictions proposed under this option by diverting uncontaminated storm water away from the structure. . . .

[66 Fed. Reg. at 3,063 (emphasis added)].

EPA went on to say that those swine CAFOs with open liquid manure management systems and open manure impoundments or lagoons that were exposed to rainfall could comply with Option 5's zero-discharge requirement by "covering the lagoons or impoundments." *Id.* EPA ultimately rejected Option 5 as the technology standard in the 2003 final rule because the costs of retrofitting existing open air impoundments and lagoons with covers was found to be so costly that it would have put a large percentage of swine operations out of business. The rejected option therefore failed to meet the economic achievability standard required by the CWA. But this decision, which centered on the cost of covers for the open manure storage units, does not change the fact that all the "enclosed systems" presented "no opportunity for storm water contamination" and as they were currently designed and operated could achieve zero-discharge, as recognized by EPA.

EPA again recognizes in the 2006 proposed rule that these closed systems are zero-discharge systems. In its discussion of the application of modeling techniques that can demonstrate how classes of new CAFOs with open systems can effectively achieve zero-discharge, EPA notes that it "believes that facilities employing other manure handling technologies (*e.g.*, under house pits) will be able to ensure zero-discharge of manure, litter, and process wastewater ..." 71 Fed. Reg. at 37,762. The fact that swine operations have such a high probability that they will **not** discharge, as reflected in Table 1 in the section below, simply bears out EPA's judgments in the matter.

Some critics of the swine sector have argued that an open lagoon manure treatment system must necessarily discharge as it is exposed to rainfall. EPA's ultimate rejection of Option 5's impoundment covers for open systems, as discussed above, is thought by some to justify the view that open systems must regularly discharge. The facts do not support this view. Swine operations in North Carolina, for example, rely almost exclusively on open lagoon systems that are exposed to rainfall. As reported in Table 1, the per facility, per year incidence of discharges from North Carolina swine facilities is estimated to be 1.1 percent. Each year, therefore, essentially 99 percent of the open lagoon facilities in North Carolina do not discharge.

There are several reasons for this strong performance record. One of the most important is the lagoon's basic design. A swine lagoon in North Carolina is commonly designed according to state and USDA- Natural Resources Conservation Service lagoon storage and treatment design standards. The state has a highly developed regulatory system, and these standards are enforced. A swine lagoon in North Carolina built before the mid-1990s must be able to contain a certain number of inches of manure waste water ("minimum volume"), plus a specific, maximum number of inches of manure waste water that represents where the anaerobic treatment process will take place ("treatment volume"), plus a certain number of inches that represents the volume of rain that could fall directly into the lagoon in a 25-year, 24-hour rainfall event ("emergency storm storage"), plus 12 inches of "freeboard." The only liquid entering this system is the manure waste water coming from the animal house and the rainfall that falls directly into the lagoon.

In North Carolina, the number of inches of "emergency storm storage" that corresponds to the 25-year, 24-hour rainfall event ranges from six to seven inches. Added to the freeboard volume, swine lagoons in North Carolina have effective emergency storm storage of 19 inches. By regulation, a properly managed lagoon in North Carolina must land apply its manure waste water so that in the normal course of operation the total number of inches of manure waste water in the lagoon does not exceed the combined minimum volume and treatment volume. This means that these systems are managed so that they can contain a minimum of 19 inches of rainfall. But beyond this minimum amount, the majority of North Carolina lagoons are being managed today under normal conditions so as to maintain approximately 36 inches of effective emergency storm storage at any time. The U.S. Geological Survey reports that a 100-year, 24-hour storm in North Carolina ranges between eight to nine inches, and that 500-year storm levels are not generally calculated for most parts of the country. But even if a 500-year storm is double the 100-year amount, the 19 inches of minimum available emergency volume could contain those 16 to 18 inches of rainfall.

The fact that most swine operators in North Carolina today take the added precaution of properly applying enough of their manure waste water so that they have an effective stormwater volume of 36 inches makes these systems effectively able to meet a zero-discharge standard. It is no wonder that when it comes to North Carolina swine lagoons and production areas, the discharge data indicates that discharges from these facilities are very rare.

The analysis presented in the 2006 proposed CAFO rule regarding the New Source Performance Standard also clearly demonstrates that the commonly used design and operating standards for open, liquid manure management systems using impoundments or lagoons make them effectively zero-discharge systems. 71 Fed. Reg. at 37,760-762. In this section, EPA presents the analytical and case study record of models of open system operations based on the usual and customary design standards resulting from the application of USDA-NRCS' Animal Waste Management ("AWM") design software and simulation analysis of actual field and rainfall conditions using the USDA-NRCS Soil Plant Air Water Hydrology ("SPAW") tool.

EPA presents this information as part of its decision, in light of *Waterkeeper*, to change the New Source Performance Standard for swine, poultry and veal CAFOs to a zero-discharge rather than the 100-year, 24-hour design that was in the 2003 rule. The simulation modeling results are presented in this context to support EPA's proposal to let state agencies allow a new-source CAFO establish that its open system will attain zero-discharge through "a rigorous modeling analysis that it has designed an open containment system that will comply with the no-discharge requirements." 71 Fed. Reg. at 37,760. EPA also uses these results to support its proposal to not require that an individual new source conduct a detailed simulation of its proposed operation of an open system to justify a zero-discharge designation. Instead, EPA proposed to allow the state agency to create categories of pre-approved types of facilities that have been shown through simulation modeling to achieve zero-discharge as a class when used in certain areas of the state with certain climactic and other physical conditions. ("EPA solicits comment on this approach to streamlining the evaluation process for those CAFOs submitting 'preapproved' designs and operational procedures." 71 Fed. Reg. at 37,762.)

The proposed rule discusses several case studies that EPA has entered into the record at DCN 1-01225 and 1-01226. These case studies are of systems designed according to AWM standards based on actual Comprehensive Nutrient Management Plans (CNMPs) for livestock operations with open systems in Georgia, South Carolina, Nebraska, North Carolina and Iowa. These modeled operations were designed to contain a 100-year, 24-hour storm and then were simulated with 100 years of actual or projected rainfall data to see if the system would discharge. On the basis of these results, EPA states that “If the facility shows no discharge over the 100-year simulation, then EPA has concluded that the lagoon or pond has been designed to achieve the requirement of no-discharge.” 71 Fed. Reg. at 37,762.

As a practical matter, any open impoundment with 25-year, 24-hour emergency storm storage capability that also has 12 inches of freeboard has an effective emergency stormwater storage equal to or in excess of the 100-year storm design standard. This fact, combined with the SPAW simulation modeling results, is further indication as to why the incidence of actual discharges from these CAFOs is so rare.

**STATE REGULATORY RECORD SHOWS PORK OPERATIONS TO BE EFFECTIVELY NO-DISCHARGE FACILITIES**

EPA’s findings in the development of the 2003 CAFO rule, and further reinforced in 2006, are fully supported by the available record of discharges for the last several years from states with regulatory programs.

The major swine producing states have state regulatory programs that involve some form of permitting requirements. Under those programs, many states keep records of manure releases or discharges from livestock operations. Some also have strict requirements that CAFOs report not only “discharges” to the waters of the state or U.S., but also other types of permit violations, as well as manure spills, releases or other incidents regardless of whether they involve waters of the U.S. Some of these states actively accept and act on public complaints about incidents, releases or violations, and they record the complaints and the actions taken in response. Some of these states require each regulated CAFO to

have a periodic visit from a state regulator to check compliance. The scope, extent and consistency of these publicly available release or discharge records have grown extensively since the late 1990s. While there are differences in the information collected and reported or otherwise available at the state level, there is a sufficient quantity of information available to indicate how rare swine CAFO discharges to waters of the U.S. really are.

For example, Table 1 below summarizes this information for eight of the top 10 swine producing states in the U.S., which collectively account for 76 percent of the swine produced in the country. The states included are Iowa, North Carolina, Minnesota, Illinois, Nebraska, Missouri, Oklahoma and Ohio. Phone interviews were held with the state agency staff, who reported on the state regulatory data, gave their best professional account of the record in this regard or supplied the publicly available electronic information from these states.<sup>1</sup> Looking at the number of incidents reported, the number of years covered by the reports and an estimate of the number of regulated entities in the state, it is possible to estimate the average historical rate of incidents in a state, per year, per facility.

The average rate of swine producing facilities with discharges or release incidents for each of these eight states over the available data period ranged between zero to .036 (0 to 3.6 percent). The average for all eight states was .007 or 0.7 percent. This number is an overestimate of the actual historical rate of discharges as some of these incidents or releases did not constitute a CWA discharge because they never reached a water of the U.S.

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<sup>1</sup> This data and information was collected on behalf of the National Pork Producers Council by C&M Capitolink, LLC between April and July, 2006. For some of the states reported, the manure “release” data is available on their websites. Some other states will provide this data in written form upon request. In others, the data was gathered through phone interviews with state agency staff responsible for the CAFO permitting program. The number of estimated swine production sites is based on USDA/NASS data on the number of hog farms in the US in 2005 with more than 500 head, except in the case of Illinois, North Carolina and Oklahoma, whose state agencies reported the number shown. See Appendix A of NPPC’s CAFO rule comments of August 29, 2007, submitted with the United Egg Producers, American Farm Bureau Federal, National Corn Growers Association and the National Council of Farm Cooperatives for further detail on state specific sources of data and for comments on the extent that the data includes incidents and releases not necessarily leading to discharges.

These results for a considerable majority of swine operations across the U.S. provide a sound, factual justification for why CAFOs as a class cannot be presumed to discharge. These rates may vary in other states, but they should not vary greatly. It is entirely reasonable to expect that the actual probability of a discharge from a particular CAFO in a particular year for all of these other livestock species will be quite low. The rarity of these discharges as a percent of all the regulated facilities subject to or covered by the reporting requirements shows that a presumption that swine CAFOs are commonly discharging in a manner requiring an NPDES permit is unwarranted.

**Table 2 – History of manure release incidents involving swine operations during 2000 to 2005, selected states**

<b>Swine Operations – 8 States Representing 76% of Production</b>						
State	Rank in Production	# Regulated Sites (Estimated)	# Years Reported	# Incidents Reported, Total	Average # Incidents Per Year	Average Rate of Incidents Per Facility Per Year
IA	1	5,250	4	30	7.5	0.001
NC	2	2,300	2.5	64	25.6	0.011
MN	3	2,300	6	2	0.3	0.000
IL	4	3,400	4	6	1.5	0.000
NE	6	950	6	10	1.7	0.002
MO	7	570	6	5	0.8	0.001
OK	8	220	5	40	8	0.036
OH	10	690	6	23	3.8	0.006
Total		15,460		140	5.9	0.007

**ENERGY AND FERTILIZER USE EFFICIENCY AND THE USE OF MANURE FOR CROPS BY NON-CAFOS**

Our nation and the agricultural community have turned their considerable skills and talents to dealing with the issue of foreign oil dependence. As a sector, we have a long way to go, certainly, but pork producers are making a major contribution to energy

independence through the aggressive and efficient use of manure as a source of crop nutrients. Throughout the grain belt where hogs are being raised, the demand for pork producers' manure from non-CAFO corn farmers consistently exceeds the available supply. Many hog operators are of course applying this manure at agronomic rates on their own cropland. But many hog operators also work with their neighbors who want access to manure for nutrients and organic matter to build the quality of their soil.

The extremely high cost of commercial nitrogen fertilizer today drives this tremendous demand for hog manure. The nutrient value of the manure and its great demand ensure that CAFO and non-CAFO corn producers are not wasting this resource and are paying attention to agronomic application rates when the manure is used. CAFOs using this manure on their own land of course need to comply with this agronomic standard as a matter of compliance with the new CAFO rule's requirements governing manure use. But the economics of nitrogen fertilizer and the relative scarcity of manure as a fertilizer ensure that the non-CAFO corn producer user has equally sound financial incentives not to see the manure used inefficiently or wastefully.

## **CONCLUSION**

The new CWA CAFO rule requirements are extensive and thorough when viewed from the perspective of today relative to shortly before the 2003 rule was issued. In the short period of about five years, federal CWA regulations for concentrated livestock operations have been changed to effectively encompass all animal species and all clean water aspects of the production of their animals, their manure and the use of that manure on land for crop production that the farmer controls. CAFOs now have more than adequate regulatory incentives to ensure that they do not discharge their manure to water and use sound and appropriate agronomic practices for applying their manure to land because failure to do so can result in major CWA penalties. But these water quality protections, which pork producers are treating as a "no-discharge standard," are now achievable without a CAFO having to get a federal CWA permit, and many CAFOs will choose to do that.

It is very important that as the Committee considers the subject matter of this hearing that it also understand these policy changes, just how fundamental they are, and how well prepared pork producers are to meet them. Furthermore, it is both sound and prudent for Congress to give these policy changes time to get fully in place and adopted before contemplating other policy changes.

NPPC believes that this record of the exceedingly rare occurrence of discharges from our producers' operations and the strong demand relative to the supply of manure for crop fertility purposes are strong indicators of just how ready pork producers are to meet the no-discharge requirements of the pending final CAFO rule.

Thank you once again Chairwoman Johnson for this opportunity to provide you with our written views on this important subject. We are most happy to respond to any questions you might have on this or other related subject matters and ask that you contact us if that is the case. We also look forward to working closely with your committee on the implementation of the new CAFO rule requirements and the CWA in general to ensure that our manure is properly managed, to achieve the no-discharge standard and to protect our Nation's water quality.