Comments of the Environmental Integrity Project, Iowa Citizens for Community Improvement and Sierra Club

on

Iowa Department of Natural Resources
Environmental Protection Commission
Item 5
Notice of Intended Action-Amendments to Chapters 60, 63, 64 and 65-
CAFO Regulations

November 5, 2004

Introduction

These comments are submitted on behalf of the Environmental Integrity Project, Inc. (EIP), Iowa Citizens for Community Improvement (ICCI) and the Sierra Club. EIP is a nonprofit, tax-exempt organization created to safeguard federal environmental laws by improving the quality of federal and state enforcement and permitting, and by protecting those programs from political interference. EIP assists community groups in Iowa that have long been active in efforts to reduce pollution from animal feeding operations and promote sustainable agriculture.

ICCI is a 29 year old membership-based community organization that works in both urban and rural areas on issues that people are concerned about. ICCI encourages citizen participation and holds public and private institutions accountable to grassroots people ICCI has over 2200 members statewide. The majority of ICCI members are family farmers, independent livestock producers, and rural residents. Many of the members live near CAFOs and have been impacted by the problems they create.

The Sierra Club is a national nonprofit organization of approximately 780,000 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club's concerns encompass the protection of the environment from pollution caused by animal feeding operations. The Sierra Club has approximately 6,260 members in the state of Iowa.

We appreciate the opportunity to submit comments on Iowa Department of Natural Resources' (IDNR) proposed revisions to its CAFO regulations. These regulations represent the best opportunity that IDNR has in the near future to prevent further degradation of Iowa's waterways. However, to achieve this goal, IDNR must (1) require all CAFOs to obtain a National Pollutant Discharge Elimination System (NPDES) permit; (2) ensure that NPDES permits incorporate adequate controls to protect water quality; and (3) dedicate adequate resources to CAFO permitting and to enforcement.

Attached to these comments, and incorporated by reference, is a report that EIP recently released that analyzes how IDNR regulates livestock operations under the Clean Water Act.

Background

When the first technology standard and permitting rule for concentrated animal feeding operations (CAFOs) was promulgated in the 1970's, animal feeding operations existed on a much smaller scale. Today, large-scale animal factories, which raise thousands of animals and produce enormous quantities of manure, dominate animal production. Annually, animal feeding operations generate produce about 500 million tons of manure or three times more waste than humans generate each year in the United

States.[1] This increasing concentration and industrialization of livestock production is devastating our waterways. Conservative estimates reported by states and tribes in 28 states indicate that animal feeding operations pollute 27,751 miles of rivers and streams.[2]

Consistent with the national picture, the Iowa Department of Natural Resources (IDNR) has determined that "the most visible threat to maintaining good water quality in Iowa surface waters is the recent expansion of the livestock industry." [3] Groundwater resources are also threatened.[4]

CAFOs in Iowa contribute to water pollution when waste storage structures break, spill, or fail, releasing wastewater into rivers, lakes, and streams. In addition, liquid waste is often over-applied or inappropriately applied to land, causing runoff into surface water or seepage into groundwater. Since 1992, there have been at least 329 manure spills from CAFOs in Iowa.[5] Two-thirds of the documented manure spills reached surface waters of the state and killed over 2.6 million fish.[6] IDNR estimates that the volume of manure released from only 23 out of the 329 total documented spills exceeds a staggering 4.4 million gallons.[7]

Nutrient pollution in animal waste causes eutrophication and toxic algal blooms that harm recreational waters, kill fish, and alter the species composition of our coastal fisheries.[8] Iowa data indicate that nutrient concentrations in surface water tend to be the greatest in river basins where livestock operations are concentrated.[9] Rivers in Iowa deliver nutrients from animal feeding operation waste to the Mississippi River and as far south as the Gulf of Mexico, contributing to the "dead zone" which has more than 8,000 square miles of water devoid of sufficient oxygen to support aquatic life.[10]

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[1] United States Environmental Protection Agency, *National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs)*, 68 Fed. Reg. 7176, 7180 (2003) (to be codified at 40 C.F.R. pts. 9, 122, 123 and 412). [hereinafter USEPA, *CAFO Final Rule*].

[2] U.S. Environmental Protection Agency, National Water quality Inventory: 1998 Report to Congress (2000).

[3] Iowa Department of Natural Resources, *Water Quality in Iowa During 1998 and 1999* (2001), at 1-7

[4] *Id.*

[5] Environmental Integrity Project, *Threatening Iowa's Future:Iowa's Failure to Implement and Enforce the Clean Water Act for Livestock Operations* (May 2004), at 19.

[6] *Id.*

[7] *Id.*

[8] Viney P. Aneja, et al., "Abstract," Joseph Rudek, Ph.D., NC Environmental Defense, Raleigh, NC, "Controlling Atmospheric Emissions from Animal Waste Treatment: Challenges and Opportunities," and E.B. Cowling, College of Forest Resources, North Carolina State University, et al., "Comparison of Nitrogen Emissions and Deposition in North Carolina and the Netherlands and Suggestions for a Concept of Optimum Nitrogen Management for Society," *Proceedings of Workshop on Atmospheric Nitrogen Compounds II*, The Friday Center, North Carolina Highway 54, Chapel Hill, North Carolina (June 7-9, 1999).

[9] Kalkhoff, S.J., et. al., *Water Quality in the Eastern Iowa Basins, Iowa and Minnesota*, 1996-98, U.S. Geological Survey Circular 1210 (2000) [hereinafter Kalkhoff, *Water Quality Report*].

[10] Goolsby, D.A., et. al. *Flux and Sources of Nutrients in the Mississippi—Atchafalaya and River Basin Topic 3 Report for the Integrated Assessment on Hypoxia in the Gulf of Mexico: National Oceanic and Atmospheric Administration Decision Analysis Series No. 17* (1999), at 130. An expanding hypoxic zone

Leaking animal waste storage lagoons threaten human health by contaminating groundwater used for drinking water supplies. Iowa State University scientists studying earthen manure storage structures in Iowa discovered that over one-third of the storage structures included in the study leak or seep into ground water at rates that exceed Iowa seepage standards.[11] Nitrate contamination of drinking water supplies can result in significant human health problems including methemoglobinemia in infants ("blue baby syndrome"), spontaneous abortions and increased incidence of stomach and esophageal cancers.[12] The CDC tested domestic water wells in Iowa and found nitrate levels above the federal drinking water standard in many private wells.[13] The likelihood of ground water contamination doubled if manure had been applied near the wellhead.[14]

In addition to drinking water exposures, pathogens from animal manure threaten human health through recreational contact such as swimming in contaminated waters. Eight of Iowa's thirty-seven state park beaches have been classified as "vulnerable" due to chronic high bacteria levels.[15] Livestock operations are likely contributing to the high bacteria levels at many, if not at all, of these beaches. Moreover, the practice of feeding huge quantities of antibiotics to animals in subtherapeutic doses to promote growth and compensate for crowded conditions has contributed to the rise of bacteria resistance to antibiotics, making it more difficult to treat human diseases.[16] A recent study of state swimming areas in Iowa revealed the presence of potentially dangerous E. coli bacteria that is resistant to common antibiotics.[17]

Animal feeding operations in Iowa also indirectly pollute surface waters by emitting pollutants, such as ammonia, into the air that are subsequently deposited on

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develops each spring and summer in the Gulf of Mexico. Hypoxia refers to seasonally depleted dissolved oxygen concentrations (less than 2 milligrams per liter) in a water body. Hypoxia can cause death or stress in fish and other organisms if they cannot leave the hypoxic zone. Consequently, the hypoxic zone in the Gulf of Mexico is often referred to as the "Dead Zone."

[11] Glanville, T.D., et al., *Measurement of Seepage from Earthen Waste Storage Structures in Iowa, published in* Transactions of the ASAE, A Report to the Legislature of the State of Iowa, Iowa State University (Jan. 1999), at 53 and 60.

[12] USEPA, *CAFO Final Rule*, 66 Fed. Reg. 7238. *See also*, U.S. Environmental Protection Agency, Office of Children's Health Protection, *Drinking Water Contaminants—America's Children and the Environment: A First View of Available Measures,* http://yosemite.epa.gov/ochp/ochpweb.nsf/content/drinking-water-contam.htm; Centers for Disease Control and Prevention, *Spontaneous Abortions Possibly Related to Ingestion of Nitrate- Contaminated Well Water-La Grange County, Indiana 1991-1994,* Morbidity and Mortality Weekly, Report 45 (26) (1996), at 569-571 (linking high nitrate levels in Indiana well water near confinement operations to spontaneous abortions in humans), http://www.cdc.gov/mmwr/preview/mmwrhtml/0042839.htm (last visited on April 2, 2004).

[13] Centers for Disease Control and Prevention, National Center for Environmental Health, *A Survey of the Quality of Water Drawn from Domestic Wells in Nine Midwest States*, (Sept. 1998), http://www.cdc.gov/nceh/emergency/wellwater/default.htm.

[14] *Id.* at Results.

[15] Iowa Department of Natural Resources Water Fact Sheet 2004-2, *Iowa's Beach Monitoring 2003*, (January 2004).

[16] M. Mellon et al., *Hogging It – Estimating Antimicrobial Abuse in Livestock*, Union of Concerned Scientists, January 2001.

[17] The Associated Press State & Local Wire, *Antibiotic Resistant Bacteria Found in Lakes* (Aug. 4, 2002).

surface water.[18] The livestock sector is the largest ammonia contributor nationwide and produces roughly 73% of all ammonia emissions.[19] Volatized ammonia reacts quickly with moisture in the air and falls into water bodies, acidifying the environment and accelerating vegetative growth, which chokes aquatic life.[20] Before ammonia and other toxic pollutants emitted by agricultural operations even reach surface waters, they may also cause significant health problems in workers and in nearby residents. The Iowa State University and the University of Iowa Study Group documented serious health effects in agricultural workers from CAFO emissions, including acute and chronic respiratory disease, sinusitis, acute and chronic bronchitis, decline in lung function, respiratory impairment, and even premature mortality.[21] Similarly, residents near large hog operations in Iowa have experienced increased eye and upper respiratory symptoms.[22]

For more detailed information on the public health and environmental risks associated with the use of the lagoon and sprayfield system by animal feeding operations in Iowa, we refer IDNR to the enclosed Environmental Integrity Project report, *Threatening Iowa's Future,* which we incorporate here by reference.[23]

Despite the overwhelming evidence of the damage wrought by CAFOs on the environment, the majority of CAFOs in Iowa continue to illegally operate without a federal Clean Water Act permit. For the past 26 years, IDNR has only required open feedlots to apply for and obtain NPDES permits rather than requiring all CAFOs to apply for NPDES permits if they discharge or propose to discharge. Even though there have been *hundreds* of discharges from CAFOs, IDNR has only issued NPDES permits to 42 open feedlots and has *never* issued an NPDES permit to a confinement feeding operation.[24] Today the state has over 1,800 documented confinement feeding operations that require NPDES permits.[25] The failure to issue NPDES permits to all CAFOs is a clear abdication of IDNR's responsibilities under the Clean Water Act.

Although IDNR asserts that the state regulatory system for confinement feeding operations is equivalent to, and in some cases, more stringent than, the federal CAFO program, it has not prevented confinement feeding operations from discharging wastes into Iowa's waterways in violation of the Clean Water Act. In fact, CFOs are the source of 69% of all documented manure spills. Because IDNR's current program is not sufficient to bring CFOs or open feedlots into compliance with the Clean Water Act, it

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[18] Iowa State University and The University of Iowa Study Group, *Iowa Concentrated Animal Feeding Operations Air Quality Study*, at 42 (Feb. 2002) [hereinafter Iowa State University, *Air Quality Study*].
[19] EPA, *Ammonia Emission Factors from Swine Finishing Operations*, http://www.epa.gov/ttn/chief/conference/ei10/ammonia/harris.pdf (last visited on April 12, 2004).
[20] Iowa State University, *Air Quality Study* at 42.
[21] Iowa State University, *Air Quality Study* at 121.
[22] K. Thu et al., *A Control Study of the Physical and Mental Health of Residents Living Near a Large-Scale Swine Operation*, 3 J. Agric. Safety & Health 1, 13-26 (1997).

[23] Environmental Integrity Project, *Threatening Iowa's Future:Iowa's Failure to Implement and Enforce the Clean Water Act for Livestock Operations* (May 2004), at 19. [hereinafter EIP, *Iowa CAFO Report*].
[24] *Id.* at 15.
[25] *Id.*

must exercise its right in this rulemaking to be more stringent than federal law (and its current program) in order to protect the environment and public health.

In addition to protecting surface waters, we urge the agency to develop controls that will prevent groundwater contamination in light of the increasing evidence of contamination of groundwater and drinking water supplies. Furthermore, while most air emissions from CAFOs may be outside the scope of this rule, open-air waste storage lagoons and barns emit significant amounts of ammonia, hydrogen sulfide, methane, and particulate matter that need to be controlled. At a minimum, IDNR has the capability under the CWA to require controls on emissions of ammonia because volatilized ammonia redeposits onto water, contributing to nutrient pollution in surface waters. Finally, where IDNR lacks legal authority under the Clean Water Act to address CAFO pollution, it should evaluate other legal avenues, including use of the Safe Drinking Water Act and the Clean Air Act.

Detailed Comments

IDNR's CAFO regulations may not be less stringent than the federal CAFO regulations, 40 C.F.R. Parts 122, 123, and 412.[26] The comments set forth below highlight numerous instances in which the IDNR regulations fall short of the minimum federal requirements. One overarching comment is that IDNR's draft rules purport to limit their applicability to "waters of the state." IDNR's regulations are supposed to implement the federal CAFO regulations and therefore must extend to all navigable waters, not just waters of the state.[27] For simplicity's sake, the remainder of our comments adhere to the order of presentation in IDNR's proposal. This order does not necessarily correspond to the importance of the issues addressed.

ITEM 2--Amend subrule 60.3(2)

IDNR references NPDES Permit Application Form 542-4001 in ITEM 2 and states that it will become effective on the date of the amendment to subrule 60.3(2). However, IDNR has not provided the NPDES Permit Application Form itself for public review and comment. The public must have an opportunity to review and comment on the NPDES Permit Application Form before IDNR finalizes it. At a minimum, a permit application for an individual permit must include the information specified in 40 C.F.R. §122.21. If IDNR develops a general permit for CAFOs, a notice of intent to be covered by a general permit must include the information specified in §§122.21 and 122.28.

ITEM 5-Definitions

Animal Feeding Operation: IDNR adopts an unnecessarily confusing definition for animal feeding operations (AFOs) that applies different standards for purposes of air and water quality regulation. As provided in the federal regulations, two or more animal

[26] 40 C.F.R. § 123.25(a).
[27] 33 U.S.C. §§ 1311(a), 1362(12).

feeding operations under common ownership or control are considered to be a single AFO if they are adjacent to one another and share a common area or system for the disposal of wastes.[28] IDNR correctly applies this standard when defining an AFO for purposes of water quality regulation, but applies a different definition for AFO – one that excludes common waste disposal areas -- for purposes of air quality regulation. This inconsistent definition creates an uncertain regulatory climate for AFOs and is inconsistent with the Clean Air Act.[29] IDNR should adopt a uniform definition of AFO for air and water quality regulation.

In addition, to be consistent with federal law, IDNR must remove its exemption for livestock markets from the definition of animal feeding operation. If the exemption remains, IDNR will regulate a potentially smaller universe of facilities than federal law requires, making its regulation less stringent and illegal.

Large CAFO:

- ***No ducks:*** To be consistent with federal law, IDNR must add the following categories for ducks to the definition of Large CAFO:

    1. 30,000 ducks (if the AFO uses other than a liquid manure handling system); or

    2. 5,000 ducks (if the AFO uses a liquid manure handling system.

- ***Multiple species:*** We support the department's proposal to retain the current policy of adding animal units together when multiple species are maintained at the same operation to determine whether the regulatory threshold is met. However, we do not understand why the draft rules require that the type of housing must be the same when adding multiple species together if the rationale for adding the animal units together is to address the cumulative quantity of manure and its impact through the CAFO permit. Once an operation is defined as a CAFO, regardless of animal or housing type, the regulations apply to all of the manure and wastewater generated by the operation.[30] Furthermore, in the event that waste streams from multiple livestock species are co-mingled, and the regulatory requirements for each species are not the same, the permit must include the more stringent requirements.[31]

- ***Manure:*** IDNR should delete the last sentence in the definition of "manure," which provides that egg wash water is not included in the definition of manure. Egg wash water is clearly included in the definition of "process wastewater" that

[28] 40 C.F.R. § 122.23(b)(2).
[29] See 42 U.S.C. § 7661 (2) ("[t]he term 'major source' means any stationary source (or any group of stationary sources located within a contiguous area and under common control)" that meets certain requirements.)
[30] Preamble to EPA, *CAFO Final Rule,* 68 Fed. Reg. 7195.
[31] *Id.*

is subject to the same regulatory requirements as manure. Therefore, removing the exclusion of egg wash water from the definition of manure will eliminate ambiguity in the regulations.

- ***Medium Concentrated Animal Feeding Operation:*** To be consistent with federal law, IDNR must add the following categories for ducks to the definition of Medium CAFO:

    1. 10, 0000 to 29,999 ducks (if the AFO uses other than a liquid manure handling system); or

    2. 1,500 to 4,999 ducks (if the AFO uses a liquid manure handling system.

ITEM 6—65.2(2) Effluent Guidelines

Explicitly Incorporate all of the Effluent Guidelines for all CAFOs: In 2003, IDNR updated its effluent guidelines by incorporating the federal standards at 40 C.F.R § 412 by reference.[32] However, IDNR includes language from only a few specific parts of the federal effluent guideline in its draft rule and excludes most other sections. To be consistent with federal law, IDNR should expressly incorporate the federal effluent limitation guidelines for all CAFOs, including both open feedlots and confinement feeding operations, and not attempt to limit the effluent guidelines of open feedlots only. The federal CAFO regulations expressly state that "there must be no discharge of manure, litter, or process wastewater pollutants into waters of the United States from the production area" of dairy, beef, swine, poultry, and other CAFOs.[33] To be consistent with federal law, IDNR should adopt an express discharge prohibition for all CAFOs and should set forth the design, construction, and maintenance standards necessary to prevent the discharge of manure or process wastewater from the production area. In addition, IDNR should explicitly state in its regulations that "land application discharges from a CAFO are subject to NPDES permit requirements," as required by federal law.[34] IDNR should state unambiguously that discharges from the land application area are prohibited.

IDNR should adopt additional controls to ensure that CAFOs do not cause water quality standards to be violated. Under federal law, NPDES permits must contain "any requirements in addition to or more stringent than promulgated effluent limitation guidelines … necessary to achieve water quality standards established under section 303 of the [Clean Water Act]."[35] IDNR proposal is inconsistent with federal law because it does not contain adequate controls to ensure that water quality standards, including anti-degradation requirements, are satisfied.

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[32] IOWA ADMIN. CODE R. 567-62.4 (12) (2003).
[33] See 40 C.F.R. Part 412.
[34] 40 C.F.R. § 122.23(e). See also Concerned Area Residents for the Environment v. Southview Farm, 34 F.3d 114, 115 (2d Cir. 1994).
[35] 40 C.F.R. § 122.44(d).

Technology Standards for Open Feedlots: In Item 6, IDNR sets forth some of the technology standards for open feedlots. These standards require open feedlots to contain all manure and process wastewater, including the runoff and precipitation from a 25-year, 24 hour rain event or a 100-year, 24 hour rain event depending on when the facility was constructed. IDNR also states that open feedlots that use controls listed in Appendix A of its old rules are deemed to be in compliance with both technology standards. In addition, IDNR states that control of manure and process wastewater from open feedlots may be accomplished through the use of retention basins, terraces, or other runoff control methods.

IDNR should remove any reference to permitted discharges from the production area under any circumstances, unless the CAFO can demonstrate that the resulting discharge will not cause violations of water quality standards. Under the Clean Water Act, discharges that cause violations of water quality standards are prohibited.[36] The IDNR proposal falls short of federal law by permitting discharges from the production area without adequate safeguards to ensure that the discharges will not violate water quality standards.

IDNR should remove all references to Appendix A and other alternative control methods in its draft rule. Although we support the development of alternative technologies that comply with federal law, IDNR should consider them through the permitting process on a site-specific basis. IDNR has provided no information to the public that demonstrates that the referenced control methods are proven technologies and that they will meet the federal effluent guidelines when implemented at open feedlot CAFOs. The federal effluent guidelines are based on the use of storage structures to contain the process wastes and run-off during a rain event[37] so it is hard to imagine how terraces, for example, could achieve the same result. Likewise, Appendix A refers to control systems for a 25-year, 24-hour rain event, so these systems would not be appropriate for CAFOs that are required to contain precipitation and run-off from a 100-year, 24 hour rain event.

IDNR should require dairy and beef cattle feedlots to design, construct, and operate facilities to control a 100-year storm event. IDNR's proposal inexplicably limits this requirement to CAFOs maintaining swine, poultry, and veal calves.

ITEM 7-Amendments to 65.3—Requirements and Recommended Practices for Land Application of Manure

IDNR must add a section to its rules that unambiguously states that any NPDES permit issued to a CAFO must include requirements to develop and implement a nutrient management plan (NMP).[38] At a minimum, the NMP must include best management practices and procedures necessary to implement applicable effluent limitations and

[36] 33 U.S.C. § 1311(b)(1)(C) ("not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards" must be included in NPDES permits.)
[37] Preamble to EPA, *CAFO Final Rule,* 68 Fed. Reg. 7221.
[38] 40 C.F.R. § 122.42 (e).

standards.[39] The nutrient management plan must also comply with the permitting requirements in 40 C.F.R. § 122.42(e) and the federal effluent guidelines in 40 C.F.R. § 412. As discussed below in ITEM 10, IDNR's rules do not include all of the requirements of either federal regulation.

The language in IDNR's draft rules is also inconsistent with federal law, because it requires confinement feeding operations to apply manure based on calculations to determine the *maximum* manure application rate allowed. In contrast, the federal rules discourage the overapplication of waste by requiring CAFOs to apply manure based on calculations that *minimize* phosphorus and nitrogen transport from the field to surface waters.[40] IDNR should adopt standards to govern the land application of manure and process wastewater, including minimum standards for NMPs, to ensure the federal requirements are satisfied and that explicitly prohibits the application of waste in excess of appropriate agronomic rates.

ITEM 8—65.4 NPDES Permits; 65.4(1) General Permit; 65.4(2) No Potential to Discharge

NPDES Permits required for CAFOs:

- ***Permits as a Condition of Operation:*** IDNR should explicitly state that all CAFOs, unless they have received a "no potential to discharge" determination, must obtain an NPDES permit as a condition of operation.

Duty to Apply for a Permit:

- ***General Permits:*** IDNR intends to adopt a general NPDES permit for confinement feeding operations in a separate rulemaking. One state-wide general permit would be inadequate to regulate all CFOs, because it would not take into account the water quality and designated uses of the particular waters surrounding each CAFO nor would it provide for sufficient public participation.

  Even if IDNR develops a general permit, IDNR rules should require certain CFOs to have individual permits that are tailored specifically to their facilities and that have more stringent conditions than general permits. IDNR should establish triggers to require an individual permit for (1) CAFOs located in ecologically sensitive areas, including nutrient sensitive watersheds, or areas where groundwater is threatened; (2) CAFOs with a history of noncompliance; or (3) CAFOs that are exceptionally large.[41] Even smaller operations should be required to have individual permits if discharges cannot be controlled by a general permit[42] or if the operation is a significant contributor of pollutants.[43]

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[39] 40 C.F.R. § 122.42 (e)(1).
[40] 40 C.F.R. § 412.4 (c) (2).
[41] EPA, *CAFO Final Rule*, 68 Fed. Reg. 7205.
[42] *See* 40 C.F.R. § 122.28 (b) (3) (E) (2003).
[43] *See* 40 C.F.R. § 122.28 (b) (3) (G) (2003).

For those CFOs that would be eligible for a general permit, we request that IDNR develop watershed-based permits in lieu of one statewide general permit. EPA has been encouraging states to increase the use of watershed-based permitting,[44] because it leads to more environmentally beneficial results. Watershed based permits are particularly appropriate for Iowa, because CAFOs exist in high concentrations in certain watersheds and contribute to water quality impairment.[45] Watershed-based permitting may be the only way that IDNR can continue to permit CAFOs that may contribute pollution to already impaired waterways.

IDNR should also have the flexibility to address regional concerns in CAFO permits that may make water bodies more vulnerable to pollution, such as the Karst topography in northeast Iowa, the agricultural drainage wells in north central Iowa, and the hilly terrain and steep slopes in southern Iowa.

A watershed-based approach would reduce the number of permits IDNR currently has to develop while providing an increased level of public involvement. Conversely, a single statewide general permit that is not targeted to address specific water quality concerns would not only be less protective of Iowa's resources but also would essentially cut the public out of the permit decision-making process.

- ***Co-permitting:*** IDNR should hold integrators, who exercise substantial operational control, as well as the operators of factory farms, responsible for Clean Water Act compliance through co-permitting. One of the trends in livestock and poultry production is that large corporations, typically large producers or processors, enter into contracts with smaller producers to raise animals to market weight. The corporation often provides the contract farmer with the animals and instructs them on how they must be housed and fed, and the types of antibiotics that will be administered to the animals. The contract farmer provides the land, facilities and labor, and retains ownership of and responsibility for the proper disposal of animal waste. As a result, the large corporations have no incentive to ensure that their contractors are capable of properly disposing of the waste.

  Iowa restricts, to some degree, corporate control of agricultural production by banning meatpacker ownership of livestock. IDNR should go one step further and co-permit producers that own animals, or control how they are raised, along with the owner or operator of the CAFO who actually raises them. Co-permitting would make the proper disposal of manure the joint responsibility of all entities covered by the permit.

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[44] United States Environmental Protection Agency, Memorandum from G. Tracy Mehan, III to Water Division Directors, Region I-X, *Watershed-Based National Pollutant Discharge Elimination (NPDES) Permitting Policy Statement* (Jan. 7, 2003).
[45] EIP, *Iowa CAFO Report*, at 22.

No Potential to Discharge Determination: Large CAFOs should be required to apply for NPDES permits in Iowa without exception given their compliance histories and their proximity to Iowa's water supply. The "no potential to discharge" status is intended to provide relief to Large CAFOs only where there is truly no potential for a CAFO's manure or wastewater to reach water under any circumstances or condition.[46] It would be virtually impossible for a CAFO to meet this requirement in Iowa. First, CAFOs already regularly discharge waste into Iowa's waterways, contaminating both surface water and underground sources of drinking water. Second, Iowa has an extensive network of surface waters and a unique underground drainage system, so all discharges from CAFOs have the potential to reach water. Iowa is bordered by two giant watercourses, the Mississippi and Missouri Rivers, that run 500 miles along the state's borders. In between the coasts the water network includes more than 70,000 miles of creeks, streams and rivers; at least 30,000 acres of wetlands; 48 glacial lakes; and 148,000 acres of reservoirs and artificial lakes.[47] In addition, there are thousands of miles of drainage tile.[48] Many of the surface waters are already impaired due, in part, to nutrients or bacteria from animal waste spills or runoff. [49] Finally, many of the underground aquifers that serve as drinking water to 78% of Iowans[50]are shallow and are also at risk of being contaminated by CAFOs because of the operations' proximity to sinkholes and drainage wells.[51]

If IDNR keeps this provision in its rules, it should add language that allows IDNR to only consider claims from Large CAFOs that have completely closed cycle systems for managing their wastes and that do not land apply, because, for example, they send all of their manure or litter to a regulated, offsite composting facility. Even in these circumstances, CAFOs would still have to demonstrate that they operate and maintain their closed cycle system and transfer their waste in such a way that there is no potential for a discharge. This would still be a high hurdle for CAFOs to meet. There have been at least 43 documented manure spills since 1992 that occurred during the transport of waste. Trends in spill data also indicate that operation and maintenance related problems, such as equipment failures, are also increasing over time.

Additionally, IDNR should state clearly that a "no potential to discharge determination" will be made only upon written request by an individual CAFO and following a site-inspection by IDNR staff. Any CAFO requesting a determination must do so at least 90 days prior to the permit deadline in order to allow sufficient time for the site inspection. IDNR's proposal effectively delays the permit application date by allowing CAFOs to request a no potential to discharge determination on the date the permit application is due. To be consistent with federal law, IDNR should expressly state that a no potential to discharge determination will not be available for any CAFO that has the potential to discharge, under any circumstances, from the production or land application area. Any

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[46] Preamble to EPA, *CAFO Final Rule,* 68 Fed. Reg. 7202.
[47] Iowa Department of Natural Resources, *Iowa-Portrait of the Land* (April, 22, 2000), at 59-61.
[48] *Id.* at vi.
[49] IDNR, *Iowa Section 303(d) Impaired Waters Listings*, http://www.iowadnr.com/water/tmdlwqa/wqa/303d.html (last visited on May 5, 2004).
[50] Iowa Department of Natural Resources, *Iowa-Portrait of the Land* (April, 22, 2000), at 61.
[51] IDNR, *Animal Feeding Operation Maps*, http://www.state.ia.us/epd/wastewtr/feedlot/afomap.htm (last visited on May 7, 2004).

discharge from the production or land application area within 5 years prior to the request disqualifies a CAFO from receiving a no potential to discharge determination.

ITEM 9—65.5 CAFO Designation

We are not opposed to giving an animal feeding operation with an animal capacity less than that specified for a Medium CAFO a period to cure deficiencies that would otherwise necessitate a CAFO designation; however, we do not support an open-ended opportunity for small operations to take advantage of this privilege. IDNR should give small operations only one period of cure. If subsequent problems arise at an operation after it has already had one opportunity to institute necessary remedial actions at the facility, IDNR should automatically designate it as a CAFO.

ITEM 10-NPDES Permits; 65.6(2) Permit Application Deadlines; 65.6(8) Compliance Schedules; 65.6(9)(a) Manure Management Plan; 65.6(10) Permit Renewal; 65.6(11) Permit Modification

Permit Conditions: To be consistent with federal law, IDNR should revise 65.6(9) to state that "NPDES permits shall contain conditions necessary to ensure compliance with the Clean Water Act." As currently drafted, the permits are required to have conditions "to ensure compliance with all applicable rules of the department," which may be less stringent than federal law.

Permit Application Deadlines:

- ***Duty to Apply for Existing AFOs not holding an NPDES Permit***: The new federal permitting regulation does not extend the date by which operations that were defined as CAFOs under the prior regulations were required to apply for NPDES permits.[52] In other words, animal feeding operations that were defined as CAFOs prior to April 14, 2003 were required to apply for a permit 180 days prior to the date that they discharged or proposed to discharge. There have been hundreds of discharges from CAFOs prior to April 14, 2003;[53] however, most of these facilities have never applied for an NPDES permit. These facilities are in violation of the federal regulations and need to immediately apply for NPDES permit coverage.

  We do not agree with IDNR's statement that all confinement feeding operations (CFOs) were not defined as CAFOs under the previous federal regulation. Since 1992, there have been at least 63 discharges of waste to state waters from CFOs that confined more than 1,000 animal units. When these facilities discharged, they became defined as CAFOs as a matter of law and were required to apply for

[52] EPA left it up to the states to determine whether they needed to establish triggers for individual permits. USEPA, National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs), 68 Fed. Reg. 7176, 7205 (2003) (to be codified at 40 C.F.R. pts. 9, 122, 123 and 412).
[53] EIP, *Iowa CAFO Report,* at 19.

an NPDES permit. IDNR's draft regulations are illegal because they give these facilities, and other CFOs that have discharged prior to April 14, 2003, until February 2006 to apply for an NPDES permit.[54]

Compliance Schedules: IDNR's proposed language regarding compliance schedules in 65.6(8) is less stringent than federal law, because the federal regulations do not *require* a state to put a compliance schedule into a permit.[55] Furthermore, the draft rules should make clear that schedules in permits must require compliance as soon as possible and can never extend statutory deadlines under the Clean Water Act.[56] Finally, if IDNR allows compliance schedules to be included in permits, the rules should state that IDNR cannot allow a schedule to exceed one year from the date of permit issuance without establishing interim deadlines and corresponding reporting requirements that measure progress towards meeting the deadlines.[57]

Permit Condition--Manure Management Plan:

- ***Phosphorous:*** Permitted CAFOs must have their nutrient management plans (NMPs) developed and implemented by December 31, 2006.[58] NMPs must include technical standards that minimize phosphorous and nitrogen transport to surface water.[59] IDNR's draft rules violate federal law, because they allow some total confinement CAFOs to avoid developing and implementing phosphorous requirements in their manure management plans until August 25, 2008.[60]

- ***Submittal of plan with permit application:*** To be effective, NMPs (or MMPs in Iowa) must be 1) enforceable as part of a CAFO's NPDES permit, 2) approved by the permitting authority, and 3) available to the public.

  Land application of animal waste is an integral component of waste disposal at CAFOs. EPA and the courts have recognized that discharges from the land application area qualify as point source discharges under the CWA. Thus, an NMP, which implements the effluent limitation guidelines by prescribing conditions of land application, must be incorporated into a CAFO's NPDES permit in order to comply with the CWA.[61] A decision by IDNR to use manure management plans as the mechanism to control CAFO discharges without making

[54] IDNR, *Draft CAFO Rules*, at Summary of proposed items: Item 10.
[55] 40 C.F.R. § 122.47 (a) (2003).
[56] 40 C.F.R. § 122.47 (a) (1) (2003).
[57] 40 C.F.R. § 122.47 (a) (3) & (a) (4) (2003).
[58] 40 C.F.R. § 122.42 (e) (1) (2003).
[59] 40 C.F.R. § 412.4 (c) (2) (2003).
[60] IOWA ADMIN. CODE R. 567-17(1) (2004).
[61] 40 C.F.R. § 122.44; *Northwest Envtl. Advocates v. City of Portland,* 56 F.3d 979, 985 (9th Cir. 1995) *citing,* 40 C.F.R. 122.44 (a) ("Under the regulations promulgated pursuant to § 1342 of the Clean Water Act, all NPDES permits should establish technology-based effluent limitations for all permitted point sources.")

them enforceable components of NPDES permits would be arbitrary and capricious and would not meet the requirements of the CWA.[62]

IDNR should require all CAFOs, including open feedlots, to submit their NMP as part of their permit application to IDNR so that the agency can review it for consistency with CWA standards. Without such a review, IDNR will create an impermissible self-regulatory permitting regime that fails to ensure that NPDES permits for CAFOs meet all applicable requirements of the CWA and EPA regulations.

Because NMPs must be made part of the permit, they also must be made publicly available.[63] Affording the public meaningful participation is required under the CWA. EPA's regulations further outline specific steps that must be followed to ensure opportunity for public notice, comment, hearing and judicial review of NPDES permits.[64] It is crucial that citizens have access to NMPs, the records documenting NMP implementation, and have an opportunity to challenge the implementation of NMPs that do not meet CWA standards at a public hearing. Without obtaining access to the terms of a NMP, citizens will be deprived of any opportunity to meaningfully participate in the NPDES permitting process for CAFOs. Furthermore, not allowing citizens access to the NMP and the records documenting NMP implementation will have a chilling effect on enforcement as citizens will not be able to determine whether discharges from a CAFO's land application area are authorized by the NMP or whether they violate the CWA.

IDNR should eliminate separate tracks for open feedlots and CFOs in the nutrient management planning process, and should provide unambiguous requirements for nutrient management plans. IDNR's proposal creates unnecessary confusion by applying different standards for open feedlots and CFOs. Applying different standards does not make sense because both types of operations land apply waste in a similar fashion.

- ***Fees:*** Iowa collects a number of fees for its construction permit program including a permit application fee,[65] a manure management plan filing fee,[66] an annual compliance fee[67] and an educational program fee for certifying confinement site manure applicators.[68] These fees, along with civil penalties arising out of certain violations of animal feeding operations, are deposited in the animal agriculture compliance fund.[69] Moneys in the compliance fund are used

[62] *Environmental Defense Center v. EPA,* 344 F.3d 832, 855-56 (9th Cir. 2003), *petition for cert. denied, Texas Cities Coalition on Stormwater v. EPA,* 72 U.S.L.W. 3513 (U.S. June 7, 2004) (No. 03-1125).
[63] 33 U.S.C. § 1342 (j).
[64] *See* 33 U.S.C. § 1369 (b)(1), 40 C.F.R. §§ 124.10 (a)(1)(ii) and (b), 124.19.
[65] IOWA CODE § 459.400 (1) (a) (2003).
[66] IOWA CODE § 459.400 (1) (b) (2003).
[67] IOWA CODE § 459.400 (1) (c) (2003).
[68] IOWA CODE § 459.400 (1) (d) (2003).
[69] IOWA CODE § 459.400 (2) (2003).

by IDNR to administer and enforce its construction permit program.[70] In contrast, Iowa collects no fees for NPDES permits issued to CAFOs.

Even with these fees for its construction permit program, IDNR has not met its responsibilities to regulate CAFOs under state or federal laws, so it is difficult to comprehend how it will meet its additional responsibilities under the new Clean Water Act regulations without a significant increase in resources. IDNR must regulate about 3,500 CAFO facilities with only about 27 FTEs (full-time equivalent positions) dedicated to inspections, permitting and enforcement. Twelve of these FTE positions were obtained in 2002.

Given its limited resources, IDNR should require all CAFOs to pay NPDES permit fees. These fees should be set at levels sufficient to recoup the costs of NPDES permitting, monitoring and enforcement activities.

- ***Certified specialists:*** Nutrient management plans should be written by certified specialists, because they are complex documents and their preparation requires knowledge in a number of areas. To adequately address all of the requirements in the federal rules, the person who prepares a nutrient management plan should be competent in, or have a strong understanding of, a number of technical areas, including soil science and soil fertility, nutrient application and management, crop production, soil and manure testing and results interpretation, fertilizer characteristics, BMPs for the management of nutrients and water, and applicable laws and regulations.[71] For this reason, and to ensure that nutrient management plans are somewhat consistent, IDNR should require all CAFOs to have their nutrient management plans prepared by a certified specialist.

Additional manure management requirements: In 65.6(9)(b), IDNR lists only five of the nine requirements included in the federal permitting regulations for developing and implementing a nutrient management plan. All of the federal requirements must be included in each NPDES permit issued to a CAFO.[72] To be consistent with federal law, IDNR's rules must also require CAFOs to develop and implement nutrient management plans that (1) identify appropriate site specific conservation practices to be implemented to control runoff of pollutants to waters of the United States; (2) identify protocols for appropriate testing of manure, litter, process wastewater and soil; (3) establish protocols to land apply manure, litter or process wastewater in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater; and (4) identify specific records that will be maintained to document the implementation and management of the minimum elements described in paragraphs 40 C.F.R. (e)(1)(i) through (e)(1)(viii).

IDNR should revise its regulations to provide unambiguous standards for waste storage, mortality disposal, etc. As currently drafted, the draft regulations do not provide the

[70] IOWA CODE § 459.401 (3) (2003).
[71] USEPA, *Final CAFO Rule,* 68 Fed. Reg. 7213.
[72] 40 C.F.R. § 122.42 (e).

necessary standards to accomplish stated goals in the regulations. For example, the draft regulations state that a CAFO shall ensure adequate storage of manure and process wastewater but provides no standards by which to accomplish this goal. IDNR should instead provide explicit standards, including construction, operation, and maintenance requirements, to ensure proper manure storage and other goals set forth in the regulations.

IDNR's rules must also require CAFOs to incorporate the requirements of the federal effluent guideline into their nutrient management plans. These requirements address field-specific assessments of the potential for nitrogen and phosphorous transport; application rates for manure, litter or process wastewater; manure and soil sampling; inspections of land application equipment for leaks; and setback requirements.[73] Additional measures are required for dairy cows and cattle other than veal calves in 40 C.F.R. § 412.37 and for swine poultry and veal calves in section 412.47. These measures include requirements for inspections of the production area; depth markers; corrective actions; mortality handling and record keeping requirements for the production area and land application areas. CAFO operators should be required to maintain a log to document the inspections and should also report deficiencies and corrective actions taken to the permitting authority in the quarterly report that IDNR requires for liquid impoundments. In addition, the permitting authority should conduct periodic inspections, at least on an annual basis, to ensure that the operator's inspections and reports of deficiencies and corrective actions accurately reflect site conditions.

The federal requirements give IDNR discretion to set technical standards and best management practices for nutrient management. IDNR should exercise its discretion to include the following land application requirements in its regulations and NPDES permits:

- Require injection or incorporation of manure into the soil in order to prevent ammonia volatilization,[74] instead of allowing waste to be sprayed onto fields Moreover, land application of waste should be prohibited in sensitive areas, such as floodplains, wetlands, areas that drain into groundwater or drinking water sources, areas close to surface waterbodies, and lands subject to erosion.

- Prohibit application to frozen or snow covered cropland, because it increases the potential for discharges, particularly when snow or ice melts. Currently, IDNR only recommends that manure not be spread on frozen or snow-covered cropland.

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[73] 40 C.F.R. § 412.4.

[74] *See* Environmental Quality Board, *Generic Environmental Impact Statement on Animal Agriculture: A Summary of the Literature Related to the Effects of Animal Agriculture on Water Resources*, University of Minnesota, College of Agricultural, Food and Environmental Sciences (November 1999), p. G-145 (Reporting that several studies have found that if manure is not incorporated into the soil, more than half of the manure is lost, presumably to volatilization. Pennsylvania State University, "Atmospheric Disposal of Manure Nitrogen" (October 1993). http://www.inform.um…/ATMOSPHERIC_DISPOSAL_OF_MANURE_NITROGEN.htm (Finding that soil-incorporated manure may release as little as one-tenth the ammonia emitted from surface-spread manure, other factors being equal.)

- Prohibit the application of waste during precipitation events, because it increases the chances for discharges of sediment and waste. IDNR should also require that land application be delayed if rainfall with the potential to create runoff is forecasted within 24 hours of the planned application.[75] Likewise, permits should prohibit application immediately after precipitation events that saturate soils. Currently, IDNR only requires that manure applicators use practices that minimize discharges caused by runoff or other manure flow resulting from precipitation events.

- Prohibit application on slopes that have greater than 4% grade, because the application of manure on steep slopes increases the potential for discharges, even in dry weather. Currently, IDNR only recommends that application be limited where land slopes are 4% or greater.

- Remove loopholes related to setback distances from surface waters and residences. IDNR requires CAFOs to maintain separation distances between protected areas (e.g., houses, streams, wells etc.) and the area where manure is applied. There are a number of exceptions to the general rules, however. For example, when applying liquid manure, a confinement feeding operation is required to maintain a separation distance of 750 feet from a residence, business, church, or school.[76] However, the separation distance is *zero* if the manure is injected into the soil or incorporated within the soil not later than 24 hours after the original application.[77] Furthermore, facilities may even apply manure on land right next to an agricultural drainage well, drinking water well or high quality water resource if the manure is land-applied by injection or incorporation on the same date as the manure was land-applied.[78] IDNR should remove these loopholes and incorporate stringent setback requirements in federal NPDES permits to protect groundwater, surface water and public health.

Additional monitoring and reporting requirements: [see Chapter 63]

Adequate monitoring and reporting requirements are essential for the successful implementation of an NPDES permit. Most industries that receive NPDES permits are required to test the receiving waters on a regular basis and report the results to the state or EPA. Historically, CAFOs have not been held to this standard making it difficult, if not impossible, for regulatory agencies to fulfill their duties of protecting the state's surface and groundwater. Discharges from land application areas and manure storage structures in Iowa have contaminated both groundwater and surface water. Therefore, IDNR should require CAFO NPDES permittees to monitor (1) the manure and wastewater in any storage structures; (2) groundwater; and (3) surface waters that adjoin or pass through the property. Furthermore, the regulations and permits should require the CAFO owner or operator to report the results to IDNR.

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[75] USEPA, Final Internal Review Draft: Guidance Manual and Sample NPDES Permit for Concentrated Animal Feeding Operations, Appendix F: sample CAFO NPDES Permit, (Sept. 21, 2000).
[76] IOWA ADMIN. CODE § 567-67.3 (3) (a) (2003).
[77] IOWA ADMIN. CODE § 567-67.3 (3) (b) (1) (2003).
[78] IOWA ADMIN. CODE § 567-67.3 (3) (g) (1) (2003).

- ***Require CAFOs to analyze waste and process wastewater***

  To be consistent with federal law, IDNR should require CAFOs to periodically analyze the waste and wastewater as a condition of their permit.[79] The analysis should include, but not be limited to, all chemical, nutrient, or medicinal inputs used at the facility as well as any potential byproducts and waste products. The results of the waste characterization process should be submitted with the permit application. IDNR should require CAFOs to also regularly monitor groundwater and surface water for all constituents of concern identified in the analysis and report the results to the Department. The results of the monitoring will help CAFO facilities and IDNR to identify leaking manure storage structures and to determine when waste has been over-applied on cropland.

  IDNR should require permittees to characterize their waste on a regular basis. If the results of an analysis reveal any new constituents, the permit monitoring requirements should be automatically updated.

- ***Require CAFOs to monitor groundwater quality***

  CAFOs should actively operate and maintain liquid manure storage structures, including solids removal and dewatering, to retain adequate capacity to prevent seepage and overflows. Recent studies suggest that proper operation and maintenance will prevent most, if not all, discharges from manure storage structures.[80] Manure storage structure failure or overflows is the most common cause of documented spills from CAFOs in Iowa. These failures may be attributed to a number of operation and management deficiencies, including careless transfer of manure to application equipment, eroded or cracked storage berms and sidewalls,[81] and infrequent confirmation of adequate storage capacity.

  Discharges to groundwater occur as a result of seepage from manure storage structures and land application fields.[82] NPDES permits should include groundwater monitoring requirements to ensure that CAFOs are not impacting groundwater quality. The placement of monitoring wells should be based on the site-specific hydrogeology of the area surrounding the CAFO. At a minimum, groundwater monitoring wells should be placed upgradient and downgradient of the facility and upgradient and downgradient of each manure storage structure. Wells should be monitored at least twice annually for total coliform, fecal

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[79] See 40 C.F.R. § 122.48(b) (All NPDES permits must specify "[r]equired monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity.")

[80] USEPA, *CAFO Final Rule*, 68 Fed. Reg. 7215.

[81] *See* Slideshow on failed manure storage structures presented at Iowa environmental Protection Commissions meeting, http://www.state.ia.us/epd/wastewtr/feedlot/files/slideshow.pdf (last visited on April 2, 2004).

[82] Miner, J.R., Humenik, F. J., Overcash, M.R., *Managing Livestock Wastes to Preserve Environmental Quality*, Iowa State Press (2000). Seepage from land application to groundwater can occur when over application increases nitrogen loss to groundwater.

coliform, dissolved solids, nitrates, ammonia and chloride,[83] as well as other contaminants of concern identified through waste characterization. For areas of Iowa where the groundwater table fluctuates frequently in response to rainfall or other seasonal changes, more frequent groundwater monitoring should be performed to protect groundwater, surface water and drinking water. Gourndwater monitoring should be a condition of the permits; therefore, CAFOs must be required to submit the results of the groundwater monitoring to IDNR.

- ***Require CAFOs to Monitor Surface Waters that Adjoin or Run Through the Property***

  IDNR should require CAFOs to conduct in-stream monitoring of all waters of the state that adjoin or pass through their property, including land application fields. All of the monitoring results should be reported to IDNR. Without having this information, there would be no means of ensuring that the CAFO is complying with its NPDES permit and the Clean Water Act by adhering to its NMP and not causing violations of water quality standards.

  Monitoring locations for streams should be upstream of the CAFO facility, and at the exit point of the stream from the facility, as well as other appropriate locations. The monitoring protocol should include basic parameters such as flow, pH, ammonia, nitrogen as N, Nitrate+Nitrite as N, total phosphorous as P, chloride, temperature, total suspended solids, pathogens and dissolved oxygen, as well as any other contaminants of concern detected by the waste characterization. In addition, IDNR should require CAFOs to conduct biological monitoring.

Permit Renewal

- ***Agricultural stormwater exemption:*** IDNR should be more stringent than federal law and close the agricultural stormwater exemption for CAFOs. EPA's failure to close the agricultural stormwater exemption in its new regulations is not only inconsistent with the statutory scheme of the Clean Water Act and therefore illegal, it is also contrary to public policy. CAFOs often grossly over apply waste to land in order to dispose of a waste product, rather than using the animal manure as fertilizer for crop production. By applying the agricultural stormwater exemption to CAFO-generated manure, the agency would provide a shield for CAFOs to hide behind, while these operations continue to discharge waste into our water bodies. It is no more appropriate to exempt this land application from the Clean Water Act than it would be to exempt the land disposal on cropland of sludge from industrial wastewater facilities. The structure of the Clean Water Act and court interpretations provide support for not applying the agricultural

[83] USEPA, National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitations Guidelines and Standards for Concentrated Animal Feeding Operations, Proposed Rules, 66 Fed. Reg. 2960 and 3144 (Jan. 12, 2001).

stormwater exemption to CAFOs.[84] For these reasons, IDNR should exercise its discretion to define agricultural stormwater discharges to exclude discharges from the CAFO land application area.

If IDNR chooses to maintain an agricultural stormwater exemption for CAFOs, at a minimum, it should add language to its rules to make clear that (1) land application discharges from a CAFO are subject to NPDES requirements; (2) dry weather discharges from land application areas would never be considered agricultural storm water discharges; and (3) discharges from the production area at a CAFO (e.g., the feedlot and lagoons) are not eligible for the storm water exemption.[85]

- ***Closing Operations:*** IDNR's proposal does not address the problem of abandoned lagoons. Instead, the proposed regulations indicate that a permittee that ceases to be a CAFO does not need to reapply for a permit as long as there is no remaining potential for a discharge of manure or process wastewater. In no way does this provision ensure that a CAFO that ceases operation will properly close its waste storage lagoons and dispose of wastes in a manner that will protect the environment. Across the country, abandoned lagoons are an increasing problem. For example, the State of North Carolina alone hosts over 1,000 abandoned lagoons that need to be properly closed.[86] At a minimum, IDNR must require CAFOs that cease operation to maintain permit coverage until waste storage lagoons are properly closed.

ITEM 12

Even if the February 2003 amendments to the federal CAFO regulations are declared to be invalid or stayed, IDNR's current program for CAFOs still violates the Clean Water Act and EPA's regulations, because, among other things, it covers a much smaller universe of facilities than federal law requires, and the construction permits do not include all of the federal operation permit requirements. IDNR should take this opportunity to revise its CAFO program so that it conforms to federal law regardless of whether the February 2003 amendments remain in effect. Otherwise, IDNR's current CAFO program, as well as individual CAFOs, remains vulnerable to legal challenges.

[84] *See* Brief for Environmental Petitioners at 53, Waterkeeper Alliance, et. al. v. United States Environmental Protection Agency, No. 03-4470 (L) (2nd. Cir. June 17, 2004).
[85] 40 C.F.R. § 122.23 (e); USEPA, *Final CAFO Rule,* 68 Fed. Reg. 7198.
[86] The Environmental Review Commission of the North Carolina General Assembly, *Report on The Inventory & Ranking of Inactive Animal Waste Lagoons*, April 25, 2000.

OTHER ISSUES:

Discontinue the Use of Unacceptable Waste Management Practices

Despite the growing evidence of the risks posed by lagoon systems to store and treat animal waste,[87] the proposed regulations would allow the riskiest lagoons to continue to operate and allow new lagoons to be built. In order to protect the environment and public health, IDNR should ban new lagoons from being built and phase-out the use of existing lagoons. IDNR has the authority to require the use of best control measures and practices as a component of its effluent guidelines for existing and new sources.[88] Phasing out (or prohibiting for new sources) the use of a specific waste control practice, such as the use of a lagoon, is well within IDNR's authority. While lagoon liners and covers mitigate some pollution risks, covering and lining a lagoon will not prevent overflows and breaches. In addition, lagoons lined with concrete can crack and those lined with clay often seep, contaminating groundwater sources.

The final regulations should phase-out existing lagoons over a five-year period. Alternatives to lagoons are available and now in use. During the phase-out period, surface and ground water quality should be monitored to ensure that no discharges occur. Furthermore, existing operations should line and cover their lagoons to prevent further contamination and should construct berms around existing lagoons in order to retain waste from bursting lagoons. Moreover, existing operations should be prevented from expanding lagoons in 100-year flood plains and in any areas where there is a potential for seepage into groundwater that may be hydrologically connected to surface water.

IDNR should ban new lagoons and phase out existing lagoons because of their surface water, groundwater and air impacts. Failed manure storage structures is the number one cause of manure spills to surface waters in Iowa.[89] Numerous scientific studies have also documented groundwater contamination caused by wastewater seepage from lagoons in Iowa.[90] Furthermore, significant quantities of hydrogen sulfide, methane, and ammonia are emitted from waste lagoons into the atmosphere.[91] EPA estimated that nearly 13 percent of the total U.S. methane emissions were from livestock manure in 1998.[92] EPA attributes the increase in methane emissions to the growing number of large hog and dairy operations and their use of liquid manure storage systems.[93] Moreover, up to 80 percent of a hog lagoon's nitrogen may volatilize into the air.[94] Once the ammonia is

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[87] Robbin Marks, *Cesspools of Shame: How Factory Farm Lagoons and Sprayfields Threaten Environmental and Public Health*, NRDC and the Clean Water Network (July 2001).
[88] *See* 33 U.S.C. §§ 1311(b), 1314(b); 40 C.F.R. § 401.12.
[89] EIP, *Iowa CAFO Report,* at 20.
[90] EIP, *Iowa CAFO Report,* at 10.
[91] Iowa State University, *Air Quality Study*, at 42.
[92] EPA Global Warming Site: "National Emissions-Methane Emissions," http://www.epa.gov/globalwarming/emissions/national/methane.html, information compiled from "Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-1998" (April 2000) EPA 236-R-00-001.
[93] *Id.*
[94] Laura L. Jackson, Large-Scale Swine Production and Water Quality, *Pigs, Profits, and Rural Communities*, Kendell M. Thu and E. Paul Durrenberger, ed., (Albany State Univ. Press of N.Y., 1998), at 107.

volatilized, it can be redeposited onto land and water up to 300 miles away.[95] Thus, in essence, waste storage lagoons themselves are point sources of water pollution. Surface water, groundwater, and air impacts can all be reduced by phasing out lagoons. IDNR can and should be more stringent than EPA and set technology standards that move beyond obsolete lagoon approaches.

Statutory Changes: If IDNR determines that statutory changes are needed to be consistent with federal law, the changes should reflect the substance of these comments.

In the interest of protecting our communities and the environment, we hope that you will consider our views.

Sincerely,

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[95] R. Dennis, "Atmospheric Transport and Fate and Links to Water Resources," presented at the Annual North Carolina Water Resources Research Conference on Water Resources Protection: Understanding and Management, North Carolina State University (1998).