



Comments of the Sierra Club Concerning
the November 21, 2001 Notice of Data Availability on
Proposed NPDES Regulations and Effluent Limitation Guidelines and Standards for
Concentrated Animal Feeding Operations

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Table of Contents

1	Introduction	1
2	Comments on Effluent Limitations Guidelines and Standards Terminology	1
2.1	Comments on the Definition of Proper Agricultural Practices (NODA IV(A)(1), p 58561)	1
2.2	Chronic Storm Events (NODA IV(A)(2), p. 58561)	2
3	Comments on Proposed Performance Standards (NODA IV(B))	3
3.1	Groundwater Controls (NODA IV(B)(1), p. 58562)	3
3.2	Setback Requirement	5
3.3	Animal Waste Application Rates Based on Limiting Nutrients (NODA IV(B)(3), p. 58563)	5
3.4	Soil Sampling Requirements (NODA IV(B)(4), p. 58564)	6
3.5	Impermeable Lagoon Covers (NODA IV(B)(6), p. 58565)	7
4	NODA Economic Re-evaluation (NODA V)	7
5	Comments on Changes to EPA’s Environment Assessment	7
5.1	Edge of Field Pollutant Loadings and Air Emissions (NODA VI(A) & (B), p. 58591)	7
6	Sierra Club’s Overarching Comments Relating to State Program Flexibility and Environmental Management Systems in the Context of Program Effectiveness Evaluation, Enforcement and Public Participation	8
6.1	EPA Should Not Undermine Public Participation by Allowing States to Issue General Permits for Medium and Large CAFO Operations	9
6.2	Comments on EPA Consideration of State NPDES Program Flexibility (NODA VII(C)(1), p. 58597)	10

6.3	Comments on the EPA’s Proposed Process for Granting State Flexibility (NODA VII(C)(1)(d), p. 58598)	13
6.4	Comments on EPA’s Proposed State Program Assessment Criteria (NODA VII(C)(1)(e), p. 58598)	13
7	Comments on EPA’s Consideration of Environmental Management Systems as Related to CAFO Water Pollution Control Regulation (NODA VII(D), p. 58601)	15

1 Introduction

These are the comments of the National Clean Water/CAFO Campaign Committee of the Sierra Club. The Sierra Club is the largest and oldest grassroots citizen environmental organization in the United States with chapters in every state. The Sierra Club's campaign to protect America's water from factory farms -- one of the organization's four national priority campaigns -- is committed to keeping factory farm pollution out of America's drinking water, lakes and rivers, and eliminating the threats that concentrated animal feeding operations pose to our public health and rural heritage.

2 Comments on Effluent Limitations Guidelines and Standards Terminology

2.1 Comments on the Definition of Proper Agricultural Practices (NODA IV(A)(1), p 58561)

The NODA called for comment on EPA's use and characterization of the term "proper agricultural practices" as it effects an "agricultural stormwater discharge" and as part of an alternative proposal for permit conditions concerning the off-site transfer of animal waste for purposes of land application. EPA goes on to indicate a "proper agricultural practice" is:

"....one of any number of conservation practices, production measures, or management techniques that the CAFO operator or manure recipient can use to improve the efficiency, economy, or environmental condition of the site and surrounding land areas and waterbodies.....What constitutes proper agricultural practices is a case by case decision that depends on the circumstances at each site and may necessitate a combination of one or more of the practices listed above or other practices not listed here." NODA at p. 58561

This type of definition creates an unenforceable performance standard when evaluating "proper agricultural practice." As a practical matter, the definition increases, not decreases, ambiguity since it affords the operator near total discretion in what constitutes "proper agricultural practice" without having any measureable effluent control outcome-based criteria that can be enforced. Because the definition confers near total discretion on the operator, there can be no assurance that effluent limitations guidelines being imposed meet the statutory requirements of the CWA.

For example, land application of animal waste without immediate soil incorporation may not necessarily cause a point source discharge, but it can be expected that sheet erosion and erosion over sloped farm fields will cause net transport of nutrients

and pathogens off of such a field. This undermines the zero discharge goal by allowing chronic area-wide pollutant effluents to continue notwithstanding the zero discharge goal in a manner that frustrates the statutorily required, technology-based effluent control requirements under the CWA.

In the case where EPA's proposed definition in practice will confer all discretion upon the operator there is neither a guarantee of effluent outcome-based performance goals being achieved nor the ability to make the effluent guidance enforceable.

The Sierra Club emphasizes that proper agricultural practices must ensure that the CAFO not violate the zero discharge standard. Therefore, proper agricultural practices must include measures that prevent discharges of pollutants from the land application area. U.S. EPA should not undermine water quality protections by expanding the definition of proper agriculture practices and thereby exempting discharges from the land application area as agricultural stormwater.

In the case where animal waste is being used to reclaim disturbed or spent lands, there will be very high potential for such applications to cause off-site water pollution because most such lands will be unvegetated and pre-existing patterns of soil erosion and runoff may create high potential for off-site discharges to area watercourses. In addition, such lands, such as mined areas, may be more likely to have direct contact with useable aquifers or surface waters because of mine drainage discharges and intrusion into area aquifers used for water supply. Nothing in the NODA discusses any best management practices to control such problems during such land reclamation techniques. At the very least, the rule should provide for clear management techniques in such circumstances and nothing in the rule should undermine zero discharge requirements for such animal waste land reclamation applications.

2.2 Chronic Storm Events (NODA IV(A)(2), p. 58561)

EPA's NODA discussion and approach of chronic storm events in the context of effluent guidance development explicitly and implicitly embraces CAFO wastewater management approaches in which strong animal waste liquids and slurries are co-mingled with storm and run-off water. Nothing in the NODA discusses whether such combined systems are, in fact, the best technology approach required under the CWA for dealing with both strong animal wastewater/slurries and with storm/runoff.

The Sierra Club opposes additional exemption schemes in which a definition of "chronic storm events" goes on to excuse operators from either permit requirements, zero discharge effluent guidance or best management practice requirements.

Sierra Club experience in Michigan, Missouri, Iowa, North Carolina, Illinois, Kentucky and elsewhere has found that operators with small lagoons, operators who do not adequately monitor freeboard in their lagoons and lagoons that allow intrusion of surface and roof runoff into lagoons cause frequent and serious pollution problems from even modest storm events, short of chronic storm events..

EPA effluent guidance for CAFOs in this matter ought to embrace physical separation of strong animal waste liquid/slurry streams from surface and roof runoff streams as a mandatory component of BPT/BCT/BAT and Best Management Practices. Systems in which such streams are co-mingled, either by design or by practice, are too easily overrun by adverse precipitation events when the amount of liquids in storage approaches the lagoon design capacity. One such facility studied in Michigan had an apparent 20+ year history of discharges to surface waters with every significant rain event, according to area citizens.

Some types of physical separation techniques that EPA must consider as part of its BPT/BCT/BAT determination obligations include the segregation of CAFO building roof runoff water, use of covered animal walkways to eliminate co-mingling of animal waste and precipitation, complete separation of solid animal waste from snow/snow-removal operations in cold climates, curbing and drain systems to keep runoff away from animal areas, covering of animal waste storage lagoons to keep direct precipitation and separate stormwater storage, treatment and disposal facilities that are apart from strong waste facilities.

EPA should proceed with effluent guidance technology rules development which adopts wastewater separation of the type described above in order to address both acute and chronic storm events and the need to maintain zero discharge standards on a practical basis. In addition, it should be noted that such wastewater separation may have positive economic benefits on the costs for compliance since operators may be able to reduce their hauling and spreading requirements as to both frequency and volume.

Finally, EPA should not reduce in any way sizing requirement for lagoons that mandate containment of all waste and stormwater less than a 25 year, 24 hour stormflow.

3 Comments on Proposed Performance Standards (NODA IV(B))

3.1 Groundwater Controls (NODA IV(B)(1), p. 58562)

EPA should adopt use of zero discharge technology for protection of groundwater for new CAFO waste storage capability (including new sites and new waste storage

facilities at existing sites) using such technologies as glass lined tanks, above ground tanks and liquid impermeable liners.

At existing waste lagoon facilities, EPA should maintain its proposal to require groundwater monitoring where there is an absence of a certification that there is no direct hydrological link between groundwater beneath the production area and surface waters.

Where new monitoring has detected groundwater contamination under an existing production area, the rule must show how such situations must be handled. There should be requirements to close and/or remediate lagoons causing such problems and the groundwater contamination that was caused.

Groundwater protection standards should set forth prohibitions on constructing or operating animal waste lagoons in regulated wetlands or perched wetlands, as well as 100 foot setback requirements from lagoons near regulated wetlands.

The rule must address facilities that presently operate animal waste storage facilities that do not conform to liner and groundwater protection requirements and set forth deadlines for closure and/or remediation.

The Sierra Club opposes the EPA proposal allowing referral to a claim that a facility was constructed to meet NRCS conservation practice standards without providing a way to verify the lagoon will meet required performance standards.

The rules governing lagoon performance and design and groundwater protection must provide Best Management Practices that ensure that solids removal operations from bottom deposits in lagoons will not cause a breach of liners and diminishment of lagoon containment capability.

EPA's NODA proposes to limit the requirement for groundwater monitoring only to situations where it is likely that such groundwater is likely to have a direct hydrologic connection to surface waters (e.g. sandy soils, karst topography, and shallow water tables). At the very least, EPA should extend this requirement to facilities operating production facilities within 150 feet of surface waters, wetlands, agricultural/rural drains, etc. However serious national problems with groundwater mitigate for groundwater monitoring under all lagoons because groundwater contamination or useable aquifers represents a serious and practically irretrievable commitment and preclusion to the use and conservation of resources....even when there is no direct connection to surface waters.

3.2 Setback Requirements

Sierra Club strongly supports maintenance of the 100 foot setback requirement for animal waste applications near surface waters, open tile drain inlets, sinkholes and agricultural drainage wells for general situations. However, even this proposal is deficient for heavily sloped land, high phosphorus soils and for certain problematic, highly permeable soils. For example, the setback requirement must be increased for heavily sloped land, particularly where it is unvegetated, or for land prone to erosive phenomena.

The authors are aware of a serious animal waste pollution incident in Lenawee County, Michigan caused by land application to drought-stricken fields with highly creviced soil features and which also had agricultural drainage tile underneath. Considerable animal waste liquids were directly transferred to surface waters from the agricultural field tile after the waste percolated through the physical cracks in the soil brought on by drought. The subsequent pollution reached a public lake in a Michigan state park. As such, the setback requirement must be amended to either prohibit animal waste application within 100 foot of such drought-affected soils in field tile areas or to otherwise prohibit such application outright.

Another setback issue involves siting of animal waste storage lagoons. The rules should provide for a setback from agricultural drainage ditches and field drain tile systems. The authors have encountered at least one case where animal waste storage lagoons were constructed directly over areas of still active field drain systems which caused a serious pollution incident from a breach in lagoon bottom containment.

3.3 Animal Waste Application Rates Based on Limiting Nutrients (NODA IV(B)(3), p. 58563)

The Sierra Club strongly opposes EPA's phosphorus "banking" proposal allowing up to 10 years worth of phosphorus application to fields as a "proper agricultural practice" and any other animal waste application scheme that envisions applications of plant nutrients at greater than an agronomic rate. Overapplication of animal waste to fields and cheating¹ on the application rate provisions of comprehensive nutrient nutrient

¹ Cheating on CNMP plans includes specifying large land areas in a CNMP plan for approval and design purposes but instead grossly overapplying animal wastes to lands close to the production area in practice. The authors can point to a number of instances where several inches of animal waste were applied to fields in such gross over-application schemes.

management plans is already a significant problem. EPA's NODA "banking" proposal will merely legitimize such abusive agricultural practices.

Nothing in EPA's "banking" proposal identifies the consequences of such animal waste application rates on other serious pollution problems, such as TSS, BOD and pathogens in runoff from banked fields. The Sierra Club views EPA's phosphorus banking proposal as little more than a regulatory legitimization of current gross overapplication practices that cause runoff, discharge and odor problems from residents adjacent to land application areas.

In addition to statements concerning "banking" in this text, the Sierra Club also supports the comments on banking made by the Natural Resources Defense Council and Clean Water Action Network which are incorporated by reference to this statement and shown as Attachment 2.

Rural, agricultural district watercourses already have frequent problems with excessive algae and plant growth caused by excessive plant nutrients in runoff. EPA's phosphorus banking proposal will merely exacerbate and continue this type of serious water quality problem for rural areas.

EPA's consideration of effluent guidance must confront the fact that runoff and sheet erosion from fields will transport applied plant nutrients offsite. Mere referral to statewide NRCS guidance on phosphorus application rates risks ignoring already occurring problems in rural watersheds. CAFO sources cannot be allowed to cause water quality standard violations, either by the effluents of a single facility or by contributing to violations from multiple facilities. Where phosphorus-related water quality standard violations occur for watershed or for areas covered by Coastal Zone Act designations, the regulatory scheme must make room for the imposition of water quality-related effluent limitations through additional phosphorus limits in land-applied animal wastes in such watersheds as an enforceable permit condition.

3.4 Soil Sampling Requirements (NODA IV(B)(4), p. 58564)

Sierra Club opposes EPA's NODA proposal to relax previously proposed frequencies on soil testing. By relaxing requirements to once in a five year period, an operator may evade accountability for excessive buildup of plant nutrients in soils by doing testing early in the five year cycle before repeated applications have occurred. The rule should not allow for these kinds of evasive and uncharacteristic testing regimes. Sierra Club urges that annual soil testing requirements be maintained so the amount of nutrients applied shall not exceed the plant uptake for that soil based on the result of such annual soil testing.

In addition, nothing in the rule should delegate sole discretion to the operator to determine what constitutes "mobile soils and high risk areas." These kind of requirements must be capable of objective and representative measurement and subsequent enforcement without affording the sole determination to the operator.

3.5 Impermeable Lagoon Covers (NODA IV(B)(6), p. 58565)

The Sierra Club strongly supports EPA's pending reviews on the matter of impermeable lagoon covers and the Club specifically urges that EPA go on to determine that such covers constitute BPT/BCT/BAT and Best Management Practices. Such covers can allow separation of precipitation from strong animal wastes and can reduce emissions of odors and air pollutants. In addition, such covers may be expected to reduce emissions of ammonia which represent both a loss of plant nutrients and a potential cause of airborne deposition of plant nutrients into adjacent surface waters.

4 NODA Economic Re-evaluation (NODA V)

The Sierra Club adopts as its own comment (on the economic analysis section) by reference the comments of John Ikerd, Professor Emeritus of Agricultural Economics at University of Missouri which are provided as Attachment 1. Dr. Ikerd did his review and provided comments upon the request of the Sierra Club

5 Comments on Changes to EPA's Environment Assessment

5.1 Edge of Field Pollutant Loadings and Air Emissions (NODA VI(A) & (B), p. 58591)

EPA acknowledges that it has not modeled subsurface drainage effects on "edge of field" loadings. Sierra Club comments again here that application of liquid animal wastes and slurries to drought-affected fields that contain soil crevices and are underlain by agricultural drainage tiles have significant potential for very high effluents of animal waste to agricultural drainage ditches and surface waters. Some highly permeable soils in tilled fields may also have similar problems and cause significant discharge of pollution.

EPA's NODA document does not appear to have considered any water quality effects associated with deposition of airborne ammonia emissions from CAFO lagoons. EPA should have created a mass balance emissions model to determine the amount of such losses and subsequent emissions.

In addition, EPA's NODA document did not consider the effect of land spreading of animal waste on surrounding surface waters, particularly lakes and ponds with a significant surface water area. Finally, EPA should have considered the effect of emissions from land application of animal wastes at offsite land application areas.

All of these are demonstrable defects in EPA's analysis, effluent and emissions models that are likely to ignore pollution problems capable of causing water quality standard violations prohibited by 33 USC 1311(b)(1)(C).

6 Sierra Club's Overarching Comments Relating to State Program Flexibility and Environmental Management Systems in the Context of Program Effectiveness Evaluation, Enforcement and Public Participation

EPA's NODA publication contains pages of discussion considering potential alternatives to NPDES permitting and so-called "environmental management systems" and other voluntary approaches. While EPA has undoubtedly heard repeatedly from state program representatives and regulated parties calling for such measures, the Sierra Club nevertheless asserts that many of the justifications offered for such programs represent efforts to escape effective national regulation and problem resolution from CAFO operations.

First EPA should consider information mentioned elsewhere in the NODA that there is very significant non-compliance with existing CAFO-related NPDES requirements (contained in NODA Section V). In such a circumstance, state water pollution programs are supposed to be the first line of defense to detect and resolve such violations. However, these programs are not working in the appropriate manner. Currently many watersheds throughout the United States do not comply with water quality standards and agricultural runoff makes a significant contribution to these problems.

As a result, EPA should view with considerable skepticism state program claims for model effectiveness in the control of concentrated animal feeding operations. When basic and required water pollution control missions fail to be carried out, far more attention must be paid to mandatory basics of federal water pollution control requirements before states and regulated parties are allowed to carve a path based on voluntary compliance, self-monitoring and discretionary approaches to water pollution control enforcement and supervision.

Ultimately, EPA must establish protective standards for approvable state programs which no state may fail to carry out in its regulation of CAFOs and exercise of authorized federal authority.

One basic concept that EPA must embrace is that CAFOs are point sources. As a result CAFO sources are requirement to have NPDES permits before they may operate legally. There exists no option not to permit certain CAFOs that meet threshold size inclusion criteria:

“...the [Clean Water] Act insists that a permit is necessary; the Administrator has no authority to exempt point sources from the [Clean Water Act permit] program.”
NRDC v Costle, 568 F.2d 1369 (D.C. Cir. 1977)

6.1 EPA Should Not Undermine Public Participation by Allowing States to Issue General Permits for Medium and Large CAFO Operations

Although part of the move by states for flexibility considerations involves use of general permits for CAFO operations, EPA should insist on individual site NPDES permits for all but the smallest CAFO sources (300 AU and under).

General permitting of CAFO operations is inherently adverse to the interests of the public in site specific matters involving CAFO operations. Public interest in the siting and operations of CAFO facilities is among the highest, if not the highest, compared to other water pollution source categories. CAFO operations can have a high environmental impact and a large footprint of operations affecting many people who are neighbors to the facility. Many members of the public are aware that CAFO operations pose serious water pollution, air pollution, biohazard and quality of life problems for residents. In addition to such serious environmental problems, CAFO facilities pose significant social, welfare and economic effects in communities, such as strong odors, reduction in property values, negative esthetic considerations, etc.

As a result, public interest in CAFO permitting is very high, particularly for new medium and large facilities and those installations that have a history of causing serious community and environmental problems.

Notwithstanding this intense public interest in the permit regulation of CAFO operations, many state officials and regulated parties seek to frustrate the site specific CAFO interest by the public through advocacy of general permits.

Use of general permits for CAFOs frustrate effective public participation and environmental review by stripping all site specific and site unique content from decisions on new CAFO site permitting and existing CAFO environmental control performance. Without individual site-specific permit consideration, the public cannot effectively participate and comment on the siting of CAFOs in sensitive areas. No public hearing with site/facility-specific deliberation of an individual permit is held under a general

permit system, thus denying the public a specific site-specific forum to air concerns, to comment and to be educated on a site specific basis about an area facility.

State use of general permits will mean the public is effectively barred from commenting on such matters as whether a CAFO site is inappropriate because of potential danger to surface and groundwater supplies (including drinking water), to sensitive natural resources, to endangered species and to other social/economic/environmental/resource values. Under general permits, the public cannot evaluate and comment on individual Comprehensive Nutrient Management Plans. Under general permits, the performance record of existing CAFO facilities is not subject to comment and the facility itself is not subject to legally enforceable site-specific conditions that are justified by pre-existing site problems.

For these reasons, the Sierra Club urges that EPA specifically reject state-initiated efforts to allow general permits rather than site specific permits for medium and large CAFOs (greater than 300 AU). In particular, newly sited CAFO facilities, CAFOs with existing environmental problems (including any history of discharge) and existing CAFOs for which the public requests an individual site-specific permit process or where there is public controversy should all be subject to site-specific permitting, along with public notice, public hearings and a public comment period process.

Finally, some states have been seeking a "functionally equivalent" determination even for non-permit systems that are only complaint driven as to enforcement and where the state has no comprehensive information about the location of all CAFO facilities presently operating in the state. Nothing of this nature should be considered or approved for "functionally equivalent" status under the rules as finally promulgated.

6.2 Comments on EPA Consideration of State NPDES Program Flexibility (NODA VII(C)(1), p. 58597)

The Sierra Club strongly supports EPA's statement that any consideration of state program flexibility must show how federal NPDES elements concerning federal enforceability, public participation, citizen suits, 5 year permit terms and permit conditions that limit the discharge of pollutants and protect water quality will be incorporated in both program operation and permit issuance.

However, EPA then goes on to discuss....

"....alternatives that could more explicitly allow states to continue their non-NPDES programs while still incorporating a degree of federal oversight to ensure public accountability for protection of water quality."

The Sierra Club urges EPA not to undermine its prior statement about federal NPDES elements by intimating that non-NPDES programs may not embrace all 5 elements of federal NPDES state program compliance. Remember that existing severe water pollution problems specifically from CAFO operations are occurring while existing state water pollution program elements are in place. Obviously, these state program elements are not sufficient to control this national problem.

As a threshold concern, the Sierra Club asserts that no EPA program rule for state program element flexibility can embrace a state program that doesn't require a site specific NPDES discharge permit and requirement for Comprehensive Nutrient Management Plan for any CAFO facility less than 1000 AU that has ever had a discharge to surface waters of the United States. Accordingly, EPA's proposal of a so-called "good faith flexibility option for first time discharges at middle tier AFOs" must be disallowed since this type of treatment is not permissible under the CWA.

EPA's NODA text (section VII(C)(1)(a), p. 58598) recognizes an apparent desire of states to limit the number of CAFO NPDES permits for facilities under 1000 AU. However, this desire to limit the number of permits does not recognize an important physical aspect of CAFO water pollution potential. Even medium and small facilities have a large potential for spills and water quality damage. Medium and smaller facilities will have less storage capacity for storing animal wastes during adverse weather conditions and will be under more pressure to land spread wastes under less than ideal circumstances. Medium and smaller facilities will have fewer personnel resources for supervision and environmental management. Medium and small facilities that are expanding the number of animals housed will frequently do so without having a commensurate upgrade of waste management capability thus making spills more likely. The waste from medium and small facilities will be just as strong and contaminated as waste from larger facilities and, when spilled from the production area or from land spreading operations, such waste will do just as much water quality damage as the waste from large CAFO operations. Finally, older medium and small CAFO facilities will be more likely to have in place primitive lagoon systems without liners or other groundwater controls.

Middle tier flexibility with negotiated time frames for permit effectiveness should not become an excuse for states to treat such facilities in a non-enforcement mode when it comes to spills, overapplication and development of Comprehensive Nutrient Management Plans.

EPA provision for state program flexibility should not allow delayed permit compliance or delayed control program elements for medium sized CAFOs located in watersheds in violation of water quality standards, in coastal zones and/or on water quality limited stream segments in watersheds having phosphorus, nitrates, pathogens,

BOD or total suspended solid water pollution problems. EPA's regulations must recognize that state CAFO NPDES programs must provide for permits contain additional and more stringent water quality-based effluent guidelines that embrace additional controls (i.e. greater land application setbacks, lower application rates, more stringent animal waste management measures, control of airborne deposition from animal waste management, etc.)

EPA's discussion of a two tiered flexibility scheme at NODA VII(C)(1)(b) (p. 58598) contains a scheme in which EPA is supposed to make a risk-based determination that the state program ensures that AFOs "posed a sufficiently lowered risk of discharging as to make them unlikely to be considered a point source." However, there will be a severe lack of information concerning such facilities since they will have been without permits and without required agency and public disclosure of comprehensive nutrient management plans. According to EPA:

"In this case, although States would not be operating an NPDES permitting program for the middle tier, federal accountability would still be retained since the State would be expected to pursue NPDES permitting and enforcement actions against facilities that continue to fail to adopt the controls called for under the state AFO program."

In other words, this particular type of so-called "flexibility" continues the current "complaint-based" system prevalent in many states that has produced serious region-wide water pollution problems across the United States. Moreover, EPA's intent appears to be that such AFO facilities will escape federal mandates for public notice and participation, citizen suits and other types of necessary federal accountability measures. The Sierra Club asserts that this type of state program "flexibility" violates both the letter and spirit of the CWA and, if adopted in regulation, will allow serious national pollution problems from CAFOs and AFOs to continue.

Finally, both types of flexibility schemes discussed so far invites new AFOs that declare to be just under the threshold of animal units (for example 950 AU in a three tiered systems) to site without having requirements for public notice, comment, hearings and participation. The facility would then be free to grow beyond 1000 AU and such operations would then be a fait accompli for community siting purposes. Any final regulations should prevent this type of abusive approach to circumventing public participation procedures. For example, facilities designed for more than 1000 AU in three tier schemes but operated at less than 1000 AU in practice should not be able to declare themselves as second tier facilities.

EPA also is considering Environmental Management Systems (EMS) in state flexibility schemes. These concepts will be discussed in a subsequent section. However,

the Sierra Club can comment at this point that voluntary compliance approaches to CAFO/AFO water pollution problems and use of unenforceable guideline systems that operators can choose to ignore is an unacceptable approach that will likely lead to more problematic water pollution problems rather than the cleanup the nation needs.

6.3 Comments on the EPA's Proposed Process for Granting State Flexibility (NODA VII(C)(1)(d), p. 58598)

EPA's NODA contains a proposed process to consider potential state program flexibility changes. The Sierra Club comments that any such change should be subjected to public notice, comment and hearing and the final decision to allow such flexibility by EPA should be supported by a record of decision and an EPA responsiveness document that reacts to public comments made. The NODA contains a suggestion that such a process might not be required and public notice and comment procedure might depend on, in part, the "degree of public interest." However, there will be no interest by the public expressed on pending decisions for which they (the public) have received no notice. In addition, EPA must not confuse regulated party enthusiasm for state program flexibility as public comment that a particular change to authorize such flexibility need not be subjected to public comment and review.

6.4 Comments on EPA's Proposed State Program Assessment Criteria (NODA VII(C)(1)(e), p. 58598)

EPA's NODA first proposes to use water quality monitoring data and attainment of state water quality standards as "the most revealing measure of a State program's effectiveness at reducing the risk of a discharge from AFOs..." However EPA does not state what level of effort is required in the geographical scope and completeness that is essential to judge whether such a monitoring effort yields complete and representative data, especially for spills. Single tests at a single location in a watershed will not yield data that will reflect the potential for episodic spills and discharges at AFO operations. In order to use water quality data as a reliable indicator as to the success a state has in controlling AFO discharges, EPA must specifically state how the overall state water quality monitoring effort will be conducted as to frequency, geographical scope, pollutants to be surveyed, reach up tributaries in watersheds, etc.²

² One example of abusive practices by a state as to water quality monitoring and watershed water quality management functions can be found in Michigan. Michigan refuses to assess or include agricultural and rural drains in its consideration of the TMDL program, even though these watercourse are waters of the United States.. As a result, there is not a single mention of agricultural drainage or CAFO effluents in the Michigan year 2000 section 303(d)

EPA goes on to describe programmatic performance measures that it proposes to rely upon in assessing overall performance and effectiveness of a state in controlling AFO effluents.

The first performance criteria goes to the ability to identify and track AFOs. What is missing from this section is the requirement that the same agency that would regulate AFOs also identifies and tracks them. It isn't enough to have a state agriculture department doing the tracking but the state water quality department being unaware of such tracking. Agriculture departments are promotional agencies that are going to be loathe to "turning CAFOs in" for enforcement by state water quality officials.

The second criteria EPA proposes to offer goes to facility standards for development of CNMPs and for zero discharge from the production area. This performance criteria is wholly inadequate because it fails to discuss whether CNMP implementation and required elements of CNMPs are mandatory and subject to application and agency approval. Further, there is no mention of civil and criminal penalties for failure to report spills.

The third criteria EPA proposes goes to the establishment of performance measures. The Sierra Club supports the idea of establishing performance measures but again reminds EPA that such performance measures depend on a comprehensive statewide water quality sampling and effluent characterization program. Requirements for such programs must be specifically stated and the performance measures will be ineffective if the surveillance effort is allowed to be vague and incomplete.

The fourth criteria EPA proposes goes to the matter of accountability on both agency and CAFO actions. Here EPA should find that voluntary programs and state voluntary guidelines are not sufficient to ensure that facilities will control their effluents. In addition, a state must be able to impose civil and criminal penalties on a CAFO operator who fails to report a spill of animal waste from a production or land spreading area.

The sixth criteria EPA proposes goes to the matter of public participation. Here again the Sierra Club comments that general permits for facilities greater than 300 AU do not effectively meet the public's need for participation on site specific CAFO operations.

listing as to causes of water quality problems. See <http://www.deq.state.mi.us/swq/gleas/gleas.htm> for the state year 2000 303(d) listing. Although the state refuses to acknowledge that CAFO operations adversely affect water quality anywhere in the state, EPA Region V has identified significant problems in this area and with Michigan's ability and willingness to regulate CAFO operations. See: <http://www.epa.gov/r5water/npdestek/micaforeport.pdf>

General permits are frequently promoted by state agencies and the agricultural industry, but the intent of such permits is to literally reduce public participation in important site-specific characteristics in new CAFO sites and in problematic operations of existing CAFOs. The matter of providing site-specific permitting must be made clear in EPA's performance criteria on public participation. In addition, public notification requirements and a 30 day minimum public comment period must also be made specific in such performance criteria.

7 Comments on EPA's Consideration of Environmental Management Systems as Related to CAFO Water Pollution Control Regulation (NODA VII(D), p. 58601)

The Sierra Club's threshold comment on the matter of Environmental Management Systems (EMS) is that the establishment and operation of an EMS cannot be regarded as either a technology-based or water quality-based effluent limitation and/or standard of performance under the Clean Water Act. Nothing in an EMS will specify deterministic requirements and standards for effluent limitation requirements or national standards of performance. As a result, implementation of an EMS cannot substitute for imposition of permit requirements containing legally enforceable and required technology-based or water quality based effluent limitations, or other national standards of performance for required effluent reduction.

Similarly, the establishment and operation of an EMS cannot be regarded under the Clean Water Act as a permit. For this reason, nothing about the establishment of an EMS can mitigate against, or substitute for, the requirement for a CAFO to get an NPDES permit if it has ever had a discharge to surface waters of the United States or it otherwise meets minimum criteria to be considered as a CAFO.

Also, the presence of an EMS should not be considered as a threshold criteria for the imposition of a permit requirement since nothing about EMS provide clear standards for effluent limitation or will necessarily prevent all spills and other effluents. As a result, it would not be appropriate for the presence of an EMS to serve as a criterion for allowing a facility to escape a permitting requirement.

The presence of any EMS requirement contained in an NPDES or other permit must be written in such a manner that compliance with the EMS does not become a defense against an allegation of a violation arising from a discharge under any "permit shield" theory.

The presence of an EMS is not a substitute for firm criteria for public participation requirements specifically provided in mandatory state program elements.

An EMS can contain elements relating to recordkeeping, self-monitoring and reporting requirements. EPA should limit any consideration of the use of EMS to only matters involving recordkeeping, self-monitoring and reporting. For example, EPA may consider third party audit reports as a substitute for certain self-monitoring requirements. However, third party audit reports should not be regarded as a substitute for inspection and enforcement programs carried out by water pollution control agencies. In addition, EPA must consider the effect of any current state audit privilege and environmental immunity statutes that may be in effect as it relates to EMS third party audits. No CAFO should be able to shield third party audits from disclosure or shield violations from penalties by invoking audit privileges while the facility is out of compliance, taking corrective measures and then producing another third party audit that shows compliance shortly thereafter. Third party audits must not become a means of violation reporting subterfuge.

Finally, the establishment of EMS should not be permitted to provide countervailing exemptions or otherwise favored regulator party treatment if the CAFO facility has any violations history in the past 10 years, has otherwise failed to comply with any applicable requirements or is unable to document prior patterns of longstanding environmental compliance.

As to EPA's specific proposals in light of these threshold comments, we offer the following:

The Sierra Club opposes EMS option 1 at NODA VII(D)(1)(a) which would provide for general permitting for facilities over 1,000 AU. This option appears to provide carte blanche even to newly sited facilities and existing facilities that are problematic violators. This kind of treatment is unacceptable. In addition, general permits are fundamentally hostile to the public's strong site-specific interests in particular sites and facilities. Nothing in any EMS system can mitigate against the public's strong interest in being consulted and offering input on new CAFOs and problematic facilities on a site specific basis. EMS should not be the promotional vehicle by which the public's interest in participation is frustrated and otherwise rendered ineffective.

The Sierra Club opposes EMS option 2 at NODA VII(D)(1)(b) and option 3 at NODA VII(D)(1)(c) which generally exclude facilities between 300 and 1000 AU from NPDES requirements if they incorporate EMS. Such facilities will have as serious a potential to pollute as large facilities from failure to contain waste in the production area and from spills from land spreading operations. For new facilities in this size range, such an exemption allows regulated facilities and state water quality agency to evade public participation requirements for facilities that later intend to be CAFOs over 1000 AU but first declare as facilities under 1000 AU in order to escape site specific public scrutiny and public participation.

The Sierra Club opposes EMS option 4 at NODA VII(D)(1)(d) on allowing a waiver of co-permitting for contract producers if EMS is adopted at a site. Such a proposal is a fundamental attack on the permit program by excusing responsible parties from the consequences and potential penalties associated with permit violations. In addition, nothing in such an EMS option or in any other part of the proposed rule should allow a generator of animal waste to evade responsibility and accountability for the disposal of animal waste by contracting land spreading operations to a third party or offsite landowner. The CAFO owner and operator must remain responsible and liable for an enforcement action for failure to ensure that CAFO animal waste was properly disposed without a violation of a CNMP or zero discharge requirement.

Finally, the Sierra Club notes that EMS use of committees with public representatives picked by the facility and/or a state water quality agency cannot substitute for public participation aspects afforded by more traditional public notice and participation procedures. Many citizens will feel intimidated in such settings or strong critics of the facility will not wish to participate in such committees. Nothing in the proposed regulations should allow a facility using an EMS committee of such nature to avoid or circumvent more traditional aspects of public notice, hearings, participation, responsiveness summaries by a water quality agency, etc.

ATTACHMENT 1

FAPRI's Analysis of EPA's Proposed CAFO Regulations Comments

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Motive: One cannot help but speculate as to what motivated the request to FAPRI, by the U.S. House of Representatives Committee on Agriculture, to conduct this analysis. Apparently, someone was not pleased with the political implications of the earlier EPA report. It seems doubtful that the Agricultural Committee would have been displeased by an EPA analysis indicating that it would be too costly and too difficult for agriculture to comply with EPA regulations. The only logical conclusion, then, is that the motive for requesting the FAPRI analysis was to show that EPA's estimates of the cost of complying with the CAFO regulations were "too low."

Given that economic analysis is far from an "exact science" and that FAPRI is funded in large part by "line item" legislative appropriations, one should not be surprised by FAPRI's conclusions that EPA's estimated costs of compliance were "too low." However, even FAPRI admitted that differences were not significant in concluding, "the analysis is largely in agreement with EPA's own analysis" (p. 21). Perhaps sensing that such a conclusion does not vindicate the call for additional analysis, FAPRI concludes, "the application of the proposed regulations will lead to a reduction in farm numbers" and, "in general, the smaller producers will be the ones faced with the greatest financial stress" (p. 21).

Neither the FAPRI analysis nor the EPA analysis was designed to evaluate the potential impacts of EPA CAFO regulations on farm numbers or the differential effects of regulations by size of farm. The FAPRI analysis attempts to estimate different costs of compliance for different size "enterprises." However, FAPRI clearly does not attempt to deal with these "enterprises" within the context of "whole farms," nor does it deal with the logical strategies that farmers would employ to mitigate costs of complying with EPA regulations.

Smaller enterprises are far more likely to be carried as parts of diverse whole-farm systems - giving smaller operations far more options for minimizing any cost of compliance than are available to larger, more specialized operations. In addition, small enterprises, representing less concentration of waste, quite often can be carried out by means that pose few if any environmental risks. This is why many smaller operations are already exempt from EPA regulations, and why many others could logically qualify for less costly methods of compliance. Any

analysis that fails to include such fundamental and basic considerations cannot possibly draw credible conclusions regarding the impacts of regulations on numbers of farms or farm size. Thus, FAPRI's conclusions regarding impacts on numbers and size of farms appear to be little more than attempts to "save face" - since after the fact, the analysis could not be justified by differences between EPA and FAPRI cost estimates.

Critical Assumptions: As with most complex economic analyses, the conclusions are largely predetermined by the preliminary assumptions. Three such assumptions are of particular relevance to the conclusions of the FAPRI analysis.

FAPRI assumes that "enterprise data" are more appropriate than "firm data," i.e. whole farm data, in analyzing costs of compliance with EPA CAFO regulations (p. 2). They admit that operations with smaller "enterprises" are more likely to be diversified, with other crop and livestock enterprises on the same farms. However, they conclude: "these diversified operations will not cross-subsidize enterprises for long periods," thus justifying their focus on "enterprise" rather than "farm" data (p. 2). They completely ignore the fact that, on many diversified farming operations, the output of one enterprise becomes the input of another and the waste of one enterprise becomes a resource for another. Enterprise analysis treats separate enterprises as if they were "independent," whereas, on diversified farms enterprises are instead "interdependent." In addition, on well-managed, diversified farms, the different enterprises are complements, not substitutes - i.e. the enterprises "cross-subsidize" each other by nature. Enterprise analysis quite simply is not appropriate to address issues where diversification is a logical management strategy - as is most clearly the case in dealing with environmental issues.

FAPRI assumes "for ease, all operations in this study are to be 'category three' operations - operations that truck all waste off site already" (p. 7). This assumption may or may not be benign from a cost standpoint - it's difficult to say without further study of the other EPA waste handling "categories" - but the assumption most clearly is not appropriate for smaller livestock enterprises. Most of the smaller livestock enterprises are parts of larger diverse whole-farm systems, as indicated above. Thus, wastes are "not" necessarily trucked off-site already, nor would they be with EPA CAFO regulations. In fact, EPA regulations could well provide an added stimulus to "utilize wastes" on the farms where they are generated, giving smaller, diversified farms a clear advantage over large specialized operations in complying with regulations.

FAPRI assumed that "industry experts" would provide superior data to the those available in USDA's Census of Agriculture and Agriculture Resource Management Study for the purposes of this analysis (p. 7). These "industry experts" undoubtedly are truthful and honest people of unquestionable integrity. However, those with expertise relevant to this particular study will most clearly be impacted by the EPA CAFO regulations. Thus, these "industry experts" have a

clear conflict of interest in providing data for such an analysis. Such “experts” simply cannot help but realize that their “bench mark” data will have an impact on the results of the analysis. And such insightful people cannot help but have a some intuitive feel for how their initial data might impact the results. Finally, the industry experts know that it is not in their short run economic interests to “underestimate” the costs of complying with EPA regulations.

Relevance of Results: FAPRI freely admits that the results of their analysis were largely in agreement with the earlier EPA analysis (p. 21). In other words, FAPRI’s estimates were not significantly different from EPA’s estimates regarding costs of complying with EPA CAFO regulations. FAPRI did not choose to comment on just how small those costs were, either for farmers or for food consumers.

- ? Even in the FAPRI analysis, virtually all of the increased costs associated with CAFO regulations would be offset by higher prices for the regulated commodities within the FAPRI 10-year timeframe (p. 5). In fact, those operations that currently present fewer environmental problems - specifically those on smaller, diversified farms - might well realize increased profits as a consequence of EPA regulations. The technical difficulty and costs of compliance might well be greater for the larger, specialized operations, leading to improving profit margins for smaller farms, as some larger operations exit the industry rather than comply. Thus, contrary to FAPRI’s conclusions, the EPA CAFO regulations might logically result in more, smaller, and more-profitable farms.

- ? FAPRI’s estimates of increased consumer costs at retail are 1 cent/lb. for beef and pork, about 0.3 cents/lb. for poultry, less than 1 cent/dozen for eggs, and 1 cent/gallon for whole milk (p. 5). In addition, these increases are quite likely inflated - if for no other reason, because they fail to anticipate the new technologies and management strategies that producers will adopt to mitigate compliance costs. For food purchased as restaurants and other eating establishments - making up roughly half of all food costs - any increases to food costs would be even less significant. It seems highly likely that food prices will be affected far more by changes in processing, packaging, advertising, or even reduced competition in processing and retailing, than by changes in environmental regulations. Given the magnitude of ecological costs that large-scale corporate CAFOs impose on society - in terms of water quality, air quality, and degradation of the natural environment - even the liberal economic costs estimated by FAPRI are quite low in comparison. Given the magnitude of the social costs that large-scale CAFOs impose on family farms and rural communities, the economic costs pale in comparison.

? Finally, FAPRI indicates, quite correctly, that the results of such analyses should be considered in dynamic, probabilistic context. FAPRI's "bottom-line" is reflected in their estimates of "probability of a negative net farm income in 2010." They compare probabilities for their "baseline" estimates (without CAFO regulations) with "CAFO" estimates. In general, the differences in the probability of loss ranged from one to five percent. Differences were larger for hogs than for any other enterprise. For the largest size hog enterprise, the probability of a negative net farm income for the "baseline" was 62 percent and with the "CAFO" regulations was 67 percent (p. 9). (The larger differences between "baseline" and "CAFO" for smaller hog operations result from failure to give adequate consideration to waste management alternatives for smaller operations.) Under either situation, hog producers are expected to lose money. The probability of losing money was just slightly higher with the CAFO regulations.

Even more important, with the magnitude of uncertainty indicated by FAPRI's risk assessment, there is a significant chance that the actual outcome associated with the "baseline" will be less profitable than with "CAFO" regulations. Because of variability associated with statistical response functions, any restriction of pork supplies resulting from the CAFO regulations could cause price increases that would more than offset any increase in production costs. In addition, with respect to providing justification for additional analyses, in a probabilistic sense, any "differences" between EPA and FAPRI results are statistically "negligible."

Conclusion: In summary, the FAPRI analysis does not lead to any different conclusions regarding implementation of EPA CAFO regulations than does the EPA study, and thus, does not provide any justification for still further study. Both studies indicate that any increase in economic costs to producers will be offset over time by increases in prices of agricultural commodities. Both studies indicate that any economic costs to consumers, in terms of higher food costs, will be very small - particularly when compared with the potential ecological and social benefits. The FAPRI analysis provides no justification for delay in implementing the EPA CAFO regulations.

ATTACHMENT 2 – STATEMENT OF NRDC AND CLEAN WATER ACTION NETWORK CONCERNING EPA’S PHOSPHORUS BANKING PROPOSAL

NRDC opposes the use of “banking” as an alternative to nutrient application rates based upon pollution potential and actual plant uptake requirements. Further, NRDC opposes the use of alternative methods to determine waste application rates. EPA must require states to determine enforceable nutrient application rates based upon consistent, scientifically respected methodologies that specifically consider the potential for land application of manure to foul our waterways.

Phosphorus “banking” is a fundamentally flawed concept. Nutrient-enriched runoff is a function of, among other things, nutrients in the soil, transport potential (slope of land, etc.), mitigation measures, and, most importantly, manure application rate. Based upon the ill-formed concept of nutrient “banking,” CAFOs could apply a 2-10 year supply of manure at once. By authorizing nutrient application rates in excess of crop requirements and in complete disregard for water pollution potential, EPA paves the way toward further nutrient pollution.

When manure is land-applied, nutrients may be immediately used by the plant, stored in the soil for later use, or runoff into adjacent waterways. Assuming that excess nutrients will be “banked” for later use and not increase pollution potential contradicts science. Soluble phosphorus comprises a significant portion of manure. When it is land applied, this soluble phosphorus may be absorbed into runoff water and thus pollute nearby waterways. By applying a 2-10 year dose all at once, the amount of soluble phosphorus available to runoff into surface waters increases 2-10 fold.

A recent scientific study reports that “[p]oultry litter applications have been shown to result in relatively high [phosphorus] runoff, even when litter is applied at recommended rates. Most of the [phosphorus] in the runoff is in the soluble form, which is the form most available for algal uptake. When chicken litter was land-applied, soluble phosphorus and total phosphorus concentrations increased 29 and 5 times respectively when compared pre-application levels. These runoff concentrations are over 500 times the proposed nutrient criterion for lakes in this region! Applying excess waste in hopes of “banking” some for plant use down the road will greatly increase the amount of soluble phosphorus available for immediate runoff, further contributing to nutrient impairment of our waterways. Consequently, EPA should not authorize any form of “banking” in the final regulation.