

Suggested Language for Idaho CAFO Legislation

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The complete language of Colorado Amendment 14 is included as Attachment I to this paper. This language should serve as an excellent foundation for constructing Idaho legislation on Confined Animal Feeding Operations (CAFOs). However, since Amendment 14 was enacted certain provisions that should have been included or might have been more heavily stressed have come to light. The following list of suggested provisions should be seriously considered as possible additions/modifications to the Amendment 14 language:

I. Determining Which Operations Are Covered By The Bill And How The Bill Would

Be Enforced:

1. The bill should draw a clear distinction between HOUSED and NON-HOUSED animals.
2. The bill should also set a limit for the volume of processed waste water above which the operation in question is covered by the language of the bill.
3. The bill should also have a threshold number of animal units (AU) above which it would apply. One approach to this would be to set the threshold limit at the lesser of either 1,000 AU or the number of animal units that equals the capacity of the land--as determined by scientific analysis--to recycle manure. There are a number of reasons for this. First, EPA, State, and local officials cannot currently locate or monitor many facilities of 1,000 AU or more. Second, the resources necessary to monitor 1,000 AU facilities are unknown and the costs to monitor smaller facilities are even less certain. Third, the potential danger posed by 1,000 AU and greater facilities far exceeds that of smaller facilities.
4. If either (1), (2) or (3) applies to the proposed operation, it would be covered by the bill.
5. CAFO facility size must be calculated by taking immature animals into account. For example, for a 20,000 sow farrow-to-finish operation equates to approximately 400,000 immature animals a year and a steady-state population of about 220,000 animals.
6. The bill should draw a clear distinction between ruminant and non-ruminant animal waste and rules for management should be modified accordingly. Waste chemistry is species dependent, with nitrogen concentration at swine sites being about six times higher than those at cattle feedlots. The design and management of the waste treatment system (e.g., single-stage vs. multi-stage lagoons, and lagoon volumes vs. size of runoff watershed) also affects waste chemistry and large site-to-site variations in chemical concentration could affect the risk of ground water contamination and influence decisions regarding the land application of waste.
7. Because of these concerns, all CAFO permits should be individual and specific, requiring an individual review of each and every permit that takes the unique conditions associated with that permit application into account.
8. Potential operators should not be allowed to self-determine that their facility is a zero discharge operation.
9. No form of self implementation or self-monitoring by CAFOs should be allowed.
10. Enforcement of these regulations should be the sole responsibility of the state agency, but there should be an allowance for an intergovernmental agreement for local agencies to assist in enforcement.
11. Enforcement of these regulations should be based on continuous (quarterly or semi-annual), unannounced, monitoring of CAFO facilities. An inspection should not have to be triggered by a citizen's complaint.
12. A citizen should always be allowed to file a complaint under their constitutional right to due process. Citizen complaints should be encouraged by State inspectors through the use of hot lines, citizen ombudsmen, etc. Citizen complaints should be immediately investigated and real-time data should be gathered at the time the condition that caused the complaint is present.

13. All costs of State or County monitoring and compliance activities should be paid by annual fees levied against the CAFOs.

II. Mississippi Health Study Recommendations

In November, 1998, the Mississippi State Department of Health (MSDH) released a review of available scientific and medical information concerning the health risks associated with large confined animal feeding operations to the Department of Environmental Quality (DEQ). The review found studies of the effects of hydrogen sulfide and ammonia on asthmatics and the impacts of odors on the performance and mood of non-asthmatics. New studies were also cited which have shown elevated levels of Salmonella, antibiotic resistant bacteria, the oocysts of a protozoan parasite (Cryptosporidium) and nitrates in swine sewage lagoons, monitoring wells and/or surface water. Finally, the report outlines concerns about the presence of and potential for spread of human pathogens such as hepatitis E, influenza and non-pathogenic bacteria carrying genes for antibiotic resistance which could lead to evolution of resistance in bacterial populations that affect humans.

According to the MSDH, existing scientific evidence indicates that the implementation of the following recommendations would be prudent.

1. Levels of H₂S (hydrogen sulfide) and NH₄ (ammonia) should be regularly monitored in areas surrounding CAFOs.
2. Enforcement to meet monitoring standards of air quality must be in place prior to CAFO operations.
3. In areas where repeated complaints have been made regarding odor, testing for levels of H₂S and NH₄ at the sites should be done as feasible.
4. Nitrates in ground and surface water should be monitored regularly to assure the safety of water supplies in the area.
5. Enforcement to meet monitoring standards for nitrates must also be in place prior to CAFO operation.
6. Lagoon effluent being sprayed as fertilizer must be monitored for evidence of human pathogens and levels established which are acceptable to allow spraying.
7. Spraying of effluent should be done in accordance with the issued permit and with access restrictions.
8. Regular monitoring and enforcement to meet spraying standards must also be in place prior to CAFO operation.
9. CAFOs currently in operation should have intermittent checks of air and water for the above described potential health hazards until regular monitoring can be established.
10. Analysis of data collected from existing facilities should be used to determine appropriate on-site monitoring techniques for new facilities and, where appropriate, to establish emission limits.
12. Existing permits should be rescinded or modified if further peer reviewed scientific evidence indicates other hazards that cannot be dealt with in a manner adequately protective of human health.
13. Furthermore, if studies clearly indicate a need for other types of monitoring or modification of lagoon waste practices, permits should have the flexibility to require this without issuing new permits.

III. North Carolina Air Quality Rules

The North Carolina Legislature's definition of objectionable odor is:
Objectionable odor means any odor present in the ambient air that by itself, or in combination with other odors, is or may be harmful or injurious to human health or welfare, or may unreasonably interfere with the comfortable use or enjoyment of life or property. Odors are harmful or injurious to human health if they tend to lessen human food and water intake, interfere with sleep, upset appetite, produce irritation

in the upper respiratory tract, or cause symptoms of nausea, or if their chemical or physical nature is, or may be, detrimental or dangerous to human health. [See:<http://daq.state.nc.us/>><http://daq.state.nc.us/>.]

IV. Additional Air and Ground Water Protection Considerations:

Operations classified as CAFOs and who have been implementing "Best Management Practices" should already have a Comprehensive Nutrient Management Plan if they are land applying effluent or dry manure. Where these existing operations need to come into compliance is in the areas of odor, gaseous emissions, and migration of polluted water. The time frame for compliance in any of these areas should not exceed a year.

Calculations done by Kansas State University show that "subsurface ammonium-N losses from the bottom and sides of swine-waste lagoons could exceed 3,000 kg/ha-yr (2,640 lbs./acre-yr). Over twenty years of operation, nitrogen losses at a 2-ha(5-acre) swine-waste lagoon could possibly exceed 110,000 kg(250,000 lbs.) Seepage losses of ammonium-N from cattle feedlot lagoons are much lower because the soluble nitrogen in the effluent is less concentrated."

This is the same report that showed that "waste chemistry is species dependent, with nitrogen concentrations at swine sites being about six times higher than those at cattle feedlots. Conversely, chloride tended to be higher at cattle feedlots runoff lagoons."

1. For discharge of effluent to ground water or application of effluent to crop lands minimal criteria should be set for: water quality, ground water monitoring, waste analysis, soil analysis, rate of discharge, total volume discharged, ambient conditions, amount of synthetic fertilizers applied, total acreage used for land application, and type of crops planted.
2. Swine effluent should be applied to croplands only during the growing season and only at rates that closely approximate crop requirements.
3. The State should require ground water monitoring for all large-scale operations (as defined in section I) with non-concrete liners.
4. The State should require the phasing out and prohibition of all open-air earthen lagoons within specified number of years?
5. The State should require the placement of remote leak-sensing monitors below the floor and in the earthen part of the walls of any newly constructed waste lagoon.
6. The State should require air quality monitoring for all large-scale operations (as defined in section I).
7. The State should allow no exemptions to the hydrogen sulfide standards for any feedlot operations.

V. Additional Corporate Responsibility Considerations:

1. The State should require a complete site closure and remediation plan that has been approved by the permitting authorities before the site is allowed to accept any animals.
2. A Comprehensive Nutrient Management Plan should be submitted to the appropriate state agency and approved prior to any waste generation.
3. The State should require sufficient financial assurance (bonding) for large-scale operations to ensure that a facility is properly closed and remediated when abandoned or that clean up costs will be paid if there is a manure spill.
4. The State should require full disclosure of all owners of feedlot facilities and livestock kept at large-scale livestock operations. These ownership records should be available to the public at a public location such as a library.
5. The State should require the opportunity for public comment and hearings during the permit process for any CAFO.

6. The State should allow permitting authorities discretion to deny a permit if other factors outside the rules warrant denial of the permit.
7. The State should prohibit any automatic permitting of any part of a CAFO operation without public notice or comment--even if the CAFO meets design specifications as outlined in the rules.
8. The State should require co-permits between the facility owner/operator, animal owner, and landowner when any of these are different entities. Thus, co-permits should be required if:
 - a. the CAFO is integrated in any way,
 - b. the CAFO operator does not own the animals
 - c. the CAFO operator does not control the nutrient feed program
 - d. the CAFO operator does not control the time on a specific ration or determine the time in which the animal is sent to slaughter,
 - e. the effluent/manure is to be applied to land the CAFO operator does not own.
 - f. the effluent/manure is to be applied to land on a schedule the landowner does not control.
9. Responsibility should be clearly established when a Concentrated Animal Feeding Operation has an easement with an adjacent landowner to land apply effluent. This is particularly important when the CAFO operator controls the pump and valve which applies the effluent to the cropland and the landowner does not know when effluent is applied or how much is applied.

Appendix I
Colorado Amendment 14 Language

25-8-501.1 - Permit required for point source water pollution control--definitions--housed commercial swine feeding operations--legislative declaration

(1) The people of the state of Colorado hereby find, determine, and declare that the advent of large housed commercial swine feeding operations in Colorado has presented new challenges to ensuring that the quality of the state's environment is preserved and protected. As distinguished from more traditional operations that historically have characterized Colorado's livestock industry, large housed swine feeding operations use significant amounts of process water for flushing and disposing of swine waste, commonly store this waste in large impoundments, and dispose of it through land application. The waste storage, handling and disposal by such operations are particularly odorous and offensive. The people further find that it is necessary to ensure that the storage and land application of waste by housed commercial swine feeding operations is done in a responsible manner, so as not to adversely impact Colorado's valuable air, land and water resources.

(2) As used in this section, unless the context otherwise requires:

(a) "Agronomic rate of application" means the rate of application of nutrients to plants that is necessary to satisfy the plants' nutritional requirements while strictly minimizing the amount of nutrients that run off to surface waters or which pass below the root zone of the plants, as specified by the most current published fertilizer suggestions of the Colorado state university cooperative extension service for the plants, or most closely related plant type, to which the nutrients are applied.

(b) "Housed commercial swine feeding operation" means a housed swine feeding operation that is capable of housing eight hundred thousand pounds or more of live animal weight of swine at any one time or is deemed a commercial operation under local zoning or land use regulations. Two or more housed swine confined feeding operations shall be considered to comprise a single housed commercial swine feeding operation if they are under common or affiliated ownership or management, and are adjacent to or utilize a common area or system for manure disposal, are integrated in any way, are located or discharge within the same watershed or into watersheds that are hydrologically connected, or are located on or discharge onto land overlying the same groundwater aquifer.

(c) "Housed swine feeding operation" means the practice of raising swine in buildings, or other enclosed structures wherein swine of any size are fed for forty-five days or longer in any twelve-month period, and crop or forage growth or production is not sustained in the area of confinement.

(d) "Process wastewater" means any process-generated wastewater used in a housed commercial swine feeding operation, including water used for feeding, flushing, or washing, and any water or precipitation that comes into contact with any manure, urine, or any product used in or resulting from the production of swine.

(3) No person shall operate, construct, or expand a housed commercial swine feeding operation without first having obtained an individual discharge permit from the division.

- (4) On or before March 31, 1999, the commission shall promulgate rules necessary to ensure the issuance and effective administration and enforcement of permits under this section by July 1, 1999. Such rules shall incorporate the preceding subsection (3) and shall, at a minimum, require:
- (a) That the owner or operator of a housed commercial swine feeding operation must obtain division approval of construction, operations and swine waste management plans that, for any land waste application, includes a detailed agronomic analysis. Said plans shall employ the best available waste management practices, provide for remediation of residual soil and groundwater contamination, and ensure that disposal of solid or liquid waste to the soil not exceed agronomic rates of application;
 - (b) That appropriate setbacks for maintaining water quality be established for land waste application areas and waste impoundments;
 - (c) That waste impoundments or manure stock piles shall not be located within a one-hundred-year flood plain unless proper flood proofing measures are designed and constructed;
 - (d) That the owner or operator of the housed commercial swine feeding operation shall provide financial assurances for the final closure of the housed commercial swine feeding operation, the conduct of any necessary post closure activities, the undertaking of any corrective action made necessary by migration of contaminants from the housed commercial swine feeding operation into the soil and groundwater, or cleanup of any spill or breach;
 - (e) That the owner or operator of a housed commercial swine feeding operation shall ensure that no solid or liquid waste generated by it shall be applied to land by any person at a rate that exceeds, in amount or duration, the agronomic rate of application; and
 - (f) That, because waste storage and disposal by housed commercial swine feeding operations pose particular jeopardy for state trust lands, in light of the mandate in the Colorado constitution, article ix, section 10, that state land board trust lands be held in trust and be protected and enhanced to promote long-term productivity and sound stewardship, the construction, operations and waste management plans approved for housed commercial swine feeding operations on such lands, shall not permit the degradation of the physical attributes or value of any state trust lands.
- (5) Any spill or contamination by a housed commercial swine feeding operation shall be reported immediately to the division and the county health department for the county in which the housed commercial swine feeding operation is conducted and, within twenty- four hours after the spill or contamination, a written report shall be filed with the division and the county health department for the county in which the housed commercial swine feeding operation is conducted.
- (6) Housed commercial swine feeding operations shall submit to the division and county health department quarterly, comprehensive monitoring reports and agronomic analyses that demonstrate that the operation has land-applied solid and liquid waste at no greater than agronomic rates. The division shall require the sampling and monitoring of chemical and appropriate biological parameters to protect the quality and existing and future beneficial uses of groundwater including, at a minimum, nitrogen, phosphorus, heavy metals, and salts. At a minimum, the monitoring program shall include quarterly samples, analysis and reporting of the groundwater, soils within the root zone and soils beneath the root zone within each waste

application site, and shall also include monitoring to ensure that no excessive seepage occurs from any waste impoundments.

- (7) The division shall assess a housed commercial swine feeding operation an annual permit fee, not to exceed 20 cents per animal, based on the operations working capacity to offset direct and indirect costs of the program. As used in this paragraph (a), "working capacity" means the number of swine that the housed commercial swine feeding operation is capable of housing at one time.
- (8) The division shall enforce the provisions of this section and shall take immediate enforcement action against any housed commercial swine feeding operation that has exceeded the agronomic rate limit of this section. In addition, any person who may be adversely affected by a housed commercial swine feeding operation may enforce these provisions directly against the operation by filing a civil action in the district court in the county in which the person resides.
- (9) These provisions shall not preclude any local government from imposing requirements more restrictive than those contained in this section.