Establishment of Health Regulations for Concentrated Animal Feeding Operations (CAFOs)

AN ORDINANCE ESTABLISHING HEALTH REGULATIONS FOR CONCENTRATED ANIMAL FEEDING OPERATIONS; PROVIDING STANDARDS FOR THE PERMITTING OF CONCENTRATED ANIMAL FEEDING OPERATIONS; PROVIDING DEFINITIONS; PROVIDING AN EFFECTIVE DATE; AND PROVIDING FOR SEVERABILITY.

Pursuant to Section 192.300 RSMo., the County Commission may make and promulgate Ordinances as will tend to enhance public health and prevent the entrance of infectious, contagious, communicable or dangerous diseases into such county.

Section 192.300 RSMo. provides that the County Commission may establish reasonable fees to pay for any costs incurred in carrying out such Ordinances and that any such fees generated shall be deposited in the county treasury and shall be used to support the public health activities for which they were generated.

Section 192.300 RSMo. also provides that any person, firm, corporation or association which violates any such Ordinance adopted, promulgated and published by the County Commission is guilty of a misdemeanor and shall be prosecuted, tried and fined as otherwise provided by law.

The County Commission or County Health Board has full power and authority to initiate the prosecution of any action under Section 192.300 RSMo.

H.B. No. 1207, 1288, 1408 & 1409 of the Missouri 88th General Assembly, Section 640.710.5 RSMo., recognizes that local controls may be used to regulate concentrated animal feeding operations.

Without proper operation, waste from livestock operations are a key source of agricultural pollution, air quality contamination, and odors. The increasing number of animals and modern methods of raising them contribute to the continuing degradation or pollution of ground and surface waters by animal waste. The major sources of actual or potential water pollution from animal wastes are created by beef cattle, poultry, and swine feeding operations, along with dairy farms.

Current livestock production operations in Platte County fall within a Class II or smaller CAFO as defined in this Ordinance, and have operated in a sound and acceptable manner.

Platte County has a land area of 420 square miles or 268,800 acres (United States Department of Commerce, County and City Data Book (Aug. 1994), at 326) and an estimated population of 66,529 persons and 22,142 occupied housing units, or approximately 0.08 dwelling units per acre or one dwelling unit per twelve (12) acres (G. Hall, 1997 County and City Extra, Annual Metro, City, and County Data Book (Beman Press, 1997), at 360, 366).

Platte County has approximately 704 farms comprising 189,000 acres, with an average farm size of 268 acres (G. Hall, 1997 County and City Extra, Annual Metro, City, and County Data Book (Beman Press, 1997), at 368).
Health standards and criteria for concentrated animal feeding operations consistent with state law have been prepared based upon state law and professional studies presented to and considered by the Platte County Commission as well as the experience of the members of the Platte County Commission with local conditions (see references, Appendix C hereto).

The adoption and enforcement of said standards is hereby found to be necessary in order to enhance public health and prevent the entrance of infectious, contagious, communicable or dangerous diseases into Platte County.

The County Commission has held a public hearing regarding the advisability of this ordinance on October 26, 2000.

The Platte County Commission does hereby order as follows:

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1. DEFINITIONS

Unless the context clearly indicates to the contrary, words used in the present tense include the future tense and words used in the plural include the singular. The words, terms and phrases set forth in this Ordinance shall have the meaning set forth in Section 640.703 to 640.755RSMo.; and ASAE Standard S292.4 (ASAE Standards 1994) published by the American Society of Agricultural Engineers; which documents are hereby incorporated by this reference as if set forth in their entirety herein, and which documents shall remain on file with the County Clerk for public inspection, unless a different meaning is prescribed in this Section. For purposes of this Ordinance, the following words, terms and phrases shall have the following meanings unless otherwise indicated:

1.1 **ANAEROBIC LAGOON:** A Lagoon in which the degradation of organic matter is conducted without the availability of free molecular oxygen.
1.2 **ANIMAL UNIT ("AU"):** A unit of measurement to compare various animal types at a concentrated animal feeding operation. One animal unit equals the following: 1.0 beef feeder or slaughter animal; 0.5 horse; 0.7 dairy cow; 2.5 swine weighing over 55 pounds; 15 swine under 55 pounds; 10 sheep; 30 laying hens; 55 turkeys; 100 broiler chickens or an equivalent animal unit. The total animal units at each operating location shall be determined by adding the animal units for each animal type.

1.3 **ANIMAL UNIT EQUIVALENT:** An equivalent animal type and weight that has a similar amount of manure produced as one of the animal unit categories set forth in the definition of “animal unit” herein. This also applies to other animal types which are not specifically listed.

1.4 **ANIMAL WASTE:** Any animal excrement, animal carcass, feed waste, animal water waste, or any other waste associated with animals.

1.5 **ANIMAL WASTE WATER:** Any of the following:

1.5.1 animal excreta;
1.5.2 process wastewater;
1.5.3 any liquid which comes into contact with any manure, litter, bedding or other raw material or intermediate or final material or product used in or resulting from the production of animals or products directly or indirectly used in the operation of a CAFO;
1.5.4 any spillage or overflow from animal watering systems;
1.5.5 any liquid used in washing, cleaning or flushing pens, barns, or manure pits;
1.5.6 any liquid used in washing or spraying to clean animals; or
1.5.7 any liquid used for dust control on the premises of a CAFO.

1.6 **AQUIFER:** An underground, porous, water-bearing geological formation composed of a layer of permeable rock, sand or gravel that provides a groundwater reservoir.

1.7 **AWMFH:** The *Agricultural Waste Management Field Handbook* published by the Soils Conservation Service of the United States Department of Agriculture and dated April 1992 and revised through July 1996, Chapters 1 through 17, which document is hereby incorporated by this reference as if set forth in its entirety herein.

1.8 **CENTER PIVOT IRRIGATION:** An automated irrigation system consisting of a sprinkler line rotating about a pivot point at one end and supported by a number of self-propelled towers. The water is supplied at the pivot point and flows outward through the line supplying the individual outlets.

1.9 **CLASS IA CAFO:** see section 2.1 of this Ordinance.

1.10 **CLASS IB CAFO:** see section 2.2 of this Ordinance.

1.11 **CLASS IC CAFO:** see section 2.3 of this Ordinance.

1.12 **CLASS IICAFO:** see section 2.4 of this Ordinance.
1.13 **COMMON OWNERSHIP**: Ownership by the same person, corporation, firm, entity, partnership, limited liability company, limited partnership, or unincorporated association; or ownership by different corporations, firms, partnerships, entities, limited liability company, limited partnership, or unincorporated associations, in which a stockholder, partner, or associate, or a member of his family owns an interest in each corporation, firm, partnership, entity, limited liability company, limited partnership, or unincorporated association.

1.14 **CONCENTRATED ANIMAL FEEDING OPERATION ("CAFO")**: All land and/or a lot, facility, parcel, or operating location in which animals have been, are or will be stalled or confined and fed or maintained for a total of forty-five (45) days or more in any twelve (12) month period and a ground cover of vegetation is not sustained over at least fifty percent (50%) of the animal confinement area. A “concentrated animal feeding operation” shall not include any land area, structure, lot, yard, or corral or other area which does not meet the numerical threshold for animals as set forth in the classification system of section 2 of this Ordinance. For purposes of this definition, the Concentrated Animal Feeding Operation means and refers collectively to an animal production facility which includes at least one **confinement area**, **livestock lagoon**, and a **plant filter area**. Two or more **confinement areas** under common ownership are considered, for purposes of this Ordinance, to be a single CAFO if they adjoin each other and use a common area or waste management system. For purposes of this subsection, the use of common equipment or machinery shall not be considered a “common area or waste management system.”

1.15 **CONFINEMENT AREA**: Any land area, structure, lot, yard, feedlot or corral or other area, whether enclosed with a roof or fence, or unenclosed, wherein livestock are confined in close quarters for the purpose of fattening, feeding, growing, raising, or birthing such livestock for final shipment to market or slaughter. A “confinement area” includes any land area in which at least one-hundred fifty (150) animal units are confined on not more than one (1) acre of land. A “confinement area” does not include unenclosed pasture areas which are used for the raising of crops or other vegetation upon which livestock are allowed to graze or feed. A “confinement area” includes the building or structure, including any feedlot, corral, barn, or other enclosure in which animals are confined, but does not include contiguous land used as plant filter areas over which liquid waste is applied and/or other areas upon which grass or crops are used for waste disposal, landscaping, or land upon which crops or other vegetation are raised independent from the animal feeding operations.

1.16 **CONSTRUCTION PERMIT**: A construction permit or letter of approval required of a CAFO by the Missouri Department of Natural Resources pursuant to the Missouri Clean Water Law.

1.17 **COUNTY HEALTH PERMIT**: Written authorization issued by the Platte County Commission to erect, construct, develop, use, occupy, expand, modify or operate a CAFO.

1.18 **DILUTION WATER**: Wash water, overflow from waterers, precipitation minus evaporation from the lagoon surface, and other water added to a Lagoon which has not previously come into contact with manure or other waste materials.
1.19 **DRY LITTER**: A waste management system where the animals are confined on a floor that is covered with wood chips, rice hulls or similar materials and the resulting litter/manure mixture has at least fifty percent (50%) dry matter and is not exposed to precipitation or storm water runoff during storage.

1.20 **FILTER STRIP**: A permanent vegetated strip designed to retard surface runoff and to remove sediment, nutrients, and other contaminants from surface runoff.

1.21 **LAND**: Any land owned or leased by the CAFO to comply with the requirements of section 4.9 herein.

1.22 **LAND APPLICATION**: The removal of wastewater and waste solids from a facility for the storage or retention of animal waste and distribution to, or incorporation into, the soil. "Land application" includes the injection, spraying, or spreading of animal waste or animal waste water onto a plant filter area.

1.23 **LINER**: A continuous layer of soil, man-made materials, or both, beneath and on the sides of a Lagoon or other waste disposal area, which controls and minimizes the downward or lateral escape of animal waste.

1.24 **"LIVESTOCK LAGOON" OR "LAGOON"**: An excavated, earthen structure designed for the biological stabilization, treatment and/or storage of liquid wastes generated by a CAFO. A "Lagoon" does not include a fully enclosed storage tank constructed of concrete or metal and designed for the storage of manure.

1.25 **LEASE**: A written contract for the exclusive use of real property, which contract specifically grants unto the lessee the right to apply animal waste and animal waste water to the leased premises.

1.26 **LIVESTOCK**: Cattle, sheep, swine, poultry, and other animals or fowl, which are being produced primarily for use as food or food products for human consumption.

1.27 **MANUAL 115**: *Missouri Approach to Animal Waste Management, Planning and Design Guidelines* (Manual 115, published by the University of Missouri-Columbia Extension Division & Missouri Department of Natural Resources, 1999, document is incorporated by reference as if set forth in its entirety herein.


1.29 **NUTRIENT APPLICATION LEVELS**: The levels of nutrients applied to the Plant Filter Area.

1.30 **OCCUPIED DWELLING**: Any residence, or any church, school, adult care home, medical care facility, child care facility, library, community center, public building, office building, licensed food establishment or lodging establishment which has been in use at any time during the 12 month period immediately prior to the date upon which an application for a County Health Permit is submitted pursuant to this Ordinance.
1.31 **OPERATING PERMIT:** An operating permit and/or letter of approval required of a CAFO by the Missouri Department of Natural Resources pursuant to the Missouri Clean Water Law.

1.32 **OWNER:** Anyone who owns, either individually and/or with any other persons, any of the following interests in the real property upon which a CAFO is situated:

1.32.1 Fee simple title,
1.32.2 A leasehold interest,
1.32.3 Any interest in any entity which holds fee simple title; or
1.32.4 Any interest in any entity which has a leasehold interest.

1.33 **PERSON:** Includes natural persons and also includes corporations, partnerships, associations, limited partnerships, limited liability companies, and any other business or charitable entities, including a natural person who has supervisory authority over the operation of a CAFO, whether or not such person is an owner of the CAFO, and a natural person who applies animal waste or animal wastewater originating from the CAFO.

1.34 **PLANT FILTER AREA:** Land with vegetative cover used or reserved for the application and/or infiltration of liquid wastes from a Livestock Lagoon.

1.35 **POPULATED AREA:** Any circular area inscribed by a radius of 1,442 feet and a circumference of 9,059 feet (such area including not more than approximately one hundred fifty (150) acres) and having at least 10 occupied dwellings, which area is not on CAFO property, as measured in a straight line from the nearest occupied dwelling to the nearest CAFO confinement building, confinement lot, or other confinement area, or waste handling facility. *(See Figure 1)*

1.36 **PROCESS WASTEWATER:** Any wastewater as defined in 10 CSR 20-6.300(1)(B).15 (November 30, 1996) (defining "process wastes").

1.37 **PUBLIC USE AREA:** Any of the following:

- A park or recreation area operated by Platte County or a municipal or state governmental agency; or
- a school; or
- a cemetery.

1.38 **REGISTERED ENGINEER:** An individual registered as an engineer in the State of Missouri.
1.39 **SETBACK**: The distance for the CAFO facility to the nearest occupied dwelling not on CAFO property, as measured in a straight line from the occupied dwelling to the nearest confinement area, lagoon or other waste handling facility.

1.40 **SHALLOW AQUIFER**: A saturated permeable geologic unit that can transmit significant quantities of water under ordinary hydraulic gradients.

1.41 **SLOPE**: The vertical drop divided by the horizontal distance of a land area multiplied by one-hundred, and expressed as a percentage.

1.42 **WASTE MANAGEMENT SYSTEM**: Includes all flush, recycle, storage, digestion, pumping, irrigation, waste spreading, and solids handling facilities, equipment, machinery, sewers, piping, valves, land, tanks, basins, lagoons and any other device, method and process for beneficial use of animal waste and/or process wastewater.

1.43 **WET HANDLING SYSTEM**: The handling of manure that contains less than fifty percent (50%) dry matter or has free draining liquids. Wet handling includes the storage of dry manure or dry litter so that it is exposed to rainfall or storm water runoff.

2. **CLASSIFICATION OF CONCENTRATED ANIMAL FEEDING OPERATIONS**

2.1 A Class IA CAFO is one that has a capacity of at least 7,000 AU.

2.2 A Class IB CAFO is one that has a capacity between three thousand (3,000) and six-thousand nine hundred and ninety-nine (6,999) AU inclusive.

2.3 A Class IC CAFO is one that has a capacity between one-thousand (1,000) and two-thousand nine-hundred ninety-nine (2,999) AU inclusive.

2.4 A Class II CAFO is one that has a capacity of at least three-hundred (300) but less than one-thousand (1,000) AU.

3. **PERMIT REQUIREMENTS FOR ALL CAFOS**

3.1 No CAFO shall be erected, constructed, developed, used, operated, occupied, expanded to a different classification of CAFO, or otherwise established in Platte County until a County Health Permit authorizing the same has been issued by the Platte County Commission. Class II CAFOs in existence as of the effective date of this ordinance may expand to Class IC by notifying the County Commission and paying the permitting charges. Security requirements and remediation fees will not be assessed pursuant to section 5 of this Ordinance. To apply for a County Health Permit the proposed CAFO shall submit to the County Commission all of the application materials submitted to the Department of Natural Resources, a completed application as set forth in Appendix B hereto, and an application fee as established pursuant to Section 9 of this Ordinance. If the CAFO is issued a Construction Permit and an Operating Permit and if the proposed CAFO meets the requirements of this Ordinance, then the County Commission shall also issue a County Health Permit.
3.2 At least one public hearing shall be held by the County Commission before approving any County Health Permit. Such public hearing may be continued from time to time and additional hearings may be held. The receipt and consideration of evidence at said hearings shall comply with the requirements of section 536.070 RSMo.

3.3 Once a CAFO has received a County Health Permit, the CAFO shall apply for a renewal of said permit each calendar year. All applications for renewal permits shall be submitted, along with the applicable renewal fee, at least thirty (30) days prior to the anniversary date of the issuance of the initial County Health Permit. If the County Commission determines that the CAFO has complied in all respects with the permit previously issued, then the County Commission will issue the renewal permit. Otherwise, the County Commission may not issue a renewal permit and the CAFO shall immediately cease operation.

3.4 It shall be a violation of this Ordinance and unlawful for any person not exempt from this Ordinance to operate a CAFO without first obtaining a County Health Permit from the County Commission.

3.5 It shall be a violation of this Ordinance and unlawful for any person not exempt from this Ordinance to operate a CAFO with a number of Animal Units in excess of the classification number specified in the permit issued by the County Commission.

3.6 It shall be a violation of this Ordinance and unlawful for any person not exempt from this Ordinance to apply animal waste or animal wastewater in a manner inconsistent with the requirements of this Ordinance.

4. RULES APPLICABLE TO ALL CAFOS

The County Commission shall not issue a County Health Permit unless and until the County Commission has rendered findings of fact and conclusions of law that the proposed CAFO complies in all respects with the standards and criteria established herein. If the proposed CAFO does not comply in any respect with the standards and criteria established in this Section, the application for a County Health Permit shall be denied.

4.1 Generally. The proposed CAFO shall be in compliance with the provisions of Sections 4 through 6 of this Ordinance, as applicable.

4.2 Waste Disposal.

4.2.1 Design of the waste lagoons shall comply, at a minimum, with ANSI/ASAE EP403.2 (August 1993), published by the American Society of Agricultural Engineers, which standard is hereby incorporated by this reference as if set forth in its entirety herein provided, however, that where a different standard is prescribed by this Ordinance, the provisions of this Ordinance shall govern. Center Pivot Irrigation shall not be permitted as a method of applying animal waste water into the soils.
4.2.2 Dilution water shall be provided at a rate of not less than four (4) times the annual amount of excreted manure. No animal waste shall be discharged into the Lagoon until it has first been filled to not less than fifty percent (50%) of its design volume with fresh water which has not previously come into contact with animal waste. The waters in the Lagoon shall at all times maintain a pH level of not less than 6.7. A minimum of two (2) feet of freeboard shall be maintained between the crest of any spillway or outflow device and the top of the lagoon embankment.

4.2.3 A covered storage basin or covered manure storage structure may be used instead of a waste lagoon.

4.2.4 The lagoon system and land application shall comply with the minimum requirements of 10 CSR 20-8 (March 11, 1979), which provision is hereby incorporated by reference as if set forth in its entirety herein, provided, however, that if any requirement therein conflicts with any requirement of this Ordinance, the provisions of this Ordinance shall apply.

4.3 Water Quality.

4.3.1 All CAFO’s shall be designed in such a manner as to avoid the unlawful degradation the quality of surface or subsurface waters, water courses or other bodies of water as defined in Chapter 7 of Division 20 of the Code of State Regulations.

4.3.2 No lagoon, confinement area or plant filter area shall be located closer than three hundred (300) feet to a water source drawing from a bedrock formation with a sealed casing, or within one hundred (100) feet of any public or private water well.

4.3.3 The provisions of 4.3.3.1 through 4.3.3.4 shall apply only to any Class IB or Class IA CAFO, and shall not apply to any CAFO existing on the effective date of this Ordinance which does not exceed the number of Animal Units for a Class IC CAFO. The operator shall install monitoring wells as follows:

4.3.3.1 At least one (1) monitoring well shall be installed upgradient from each confinement area and livestock lagoon, and at least one (1) monitoring well shall be installed downgradient from each confinement area and each livestock lagoon. Where a livestock lagoon receives waste from more than one confinement area, one upgradient monitoring well may be installed for all of the confinement areas and the Livestock Lagoon, and one monitoring well may be installed downgradient from the confinement areas and Livestock Lagoons.

4.3.3.2 At least one (1) monitoring well shall be installed upgradient from each area where waste is disposed (areas designated as a soil plant filter area or where subsurface injection occurs), and at least one (1) monitoring well shall be installed downgradient from each such area.
4.3.3.3 The upgradient wells shall be used to establish a baseline for the chemical constituents set forth in section 4.3.4, below. The downgradient wells shall be used to monitor changes in the contaminant levels of the chemical constituents set forth in section 4.3.3.4, below, on a quarterly basis. The operator shall submit a report describing any changes in contaminant levels to the Platte County Commission on a quarterly basis. In no event shall the pollutant concentrations in water quality samples taken from the downgradient wells exceed the baseline established by the upgradient wells or the maximum contaminant levels established by the Missouri Department of Natural Resources, whichever is more restrictive. The “the maximum contaminant levels established by the Missouri Department of Natural Resources” means and refers to the acute toxicity criteria as set forth in 10 CSR 20-7.031 (filed March 1, 1996), which is hereby incorporated by reference as if set forth in its entirety herein provided, however, that the water quality standards shall not be waived as provided in subsection (2)(B)3 of 10 CSR 20-7.031.

4.3.3.4 The following chemical constituents shall be monitored pursuant to this section 4.3:

- Nitrate nitrogen (NO₃⁻)
- Nitrite nitrogen (NO₂⁻)
- Kjeldahl nitrogen
- Ammonia nitrogen
- Total phosphorous
- Dissolved phosphorous
- E. coli (escherichia coli) or fecal coliform bacteria
- pH
- Temperature
- Sulfate
- Total dissolved solids
- Total organic carbon
- Conductivity
- Total alkalinity
- Chloride
- Biochemical oxygen demand
- Sodium

4.3.4 No lagoon shall be located over a shallow aquifer. Animal waste and animal waste water shall not be applied within one-thousand (1,000) feet of any sink hole, well, spring or other water supply or one-hundred (100) feet from any stream (including intermittent streams) or strip pits. This rule shall not apply to waste lagoons on the CAFO property, but shall apply to all other wells, water supplies, streams, ponds, strip pits, lakes, springs and sink holes on the CAFO property. In Platte County, the larger shallow aquifers include the flood plains of both the Missouri and Platte Rivers. Both of these aquifers have significant
interactions with the rivers. Other shallow aquifers in Platte County may exist in the flood plains of smaller rivers and creeks or within the unconsolidated deposits (soils, loess, and glacial till) that overlie bedrock.

4.3.5 Liner Systems. In order to minimize the risk of leakage from a Lagoon into groundwater systems, and to thereby minimize the risk to public health and safety posed by groundwater contamination, no Lagoon shall be constructed or operated, and no waste shall be deposited in a Lagoon, unless and until a liner is installed on all surfaces on the bottom and side of the Lagoon. Provision shall also be made to construct the side walls to prevent the migration of leachate and methane gas. The liner shall consist of two components, as follows:

4.3.5.1 An upper component that shall consist of a minimum thirty (30) mil thick geomembrane. Geomembrane components consisting of high density polyethylene (HDPE) shall be at least sixty (60) mil in thickness. The geomembrane component shall be installed in direct and uniform contact with the compacted soil component so as to minimize the migration of animal waste through the geomembrane should a break occur.

4.3.5.2 A lower component that shall consist of at least two foot (2') layer of compacted soil with a hydraulic conductivity of not more than $1 \times 10^{-7}$ centimeters/second ($2.82 \times 10^{-4}$ feet/day). The compacted soil liner, at a minimum, shall consist of at least two feet (2') of soil constructed of six to eight inch (6'-8") lifts, compacted to ninety-five percent (95%) of standard Proctor density with the moisture content between two percent (2%) and four percent (4%) above the optimum moisture content. The pad shall be protected from the adverse effects of desiccation or freeze/thaw cycles after construction, but prior to the placement of animal waste. The soils used for this purpose shall be classified under the Unified Soil Classification System as CL, CH or SC (ASTM Test D487-85).

4.4. Adequate Water Sources. No health permit shall be issued or renewed for a CAFO unless the applicant demonstrates that an adequate supply of water is available for the proposed operations.

4.5. Air Quality. All confinement areas and Livestock Lagoons shall be designed in such a manner as to avoid the unlawful degradation of air quality.

4.5.1 In no event shall the concentration of gases at the property line resulting from the operation of a Livestock Lagoon or confinement area exceed the following levels:
4.6. **Soils.** The applicant shall demonstrate that the soils on the premises, including an plant filter area, are suitable for and compatible with the proposed CAFO operations with respect to the location of confinement areas and Livestock Lagoons and the application of liquid, slurry or solid animal waste onto or into the soil on the premises.

4.6.1 No Lagoon shall be constructed, operated or established unless it is designed and inspected by a registered engineer retained by the Applicant.

4.6.2 Waste loads shall not exceed the agronomic rates of the plant filter areas. In order to ensure protection of groundwater from nutrient contamination, the land application rates of both process wastewater and manure, shall not be applied at a rate exceeding the recommended agronomic rates for the crop(s) grown on the land application site(s).

4.6.3 No animal waste from a Livestock Lagoon shall be applied when soils are water saturated, frozen, or covered with snow, or when other soil conditions would result in waste runoff.

4.7 **Compliance with Applicable Regulations.**

4.7.1 The applicant shall demonstrate that the confinement areas and Livestock Lagoons shall at all times be operated in compliance with any required local, state or federal permits, licenses or other approvals, and in compliance with all applicable state and local laws and regulations.

4.7.2 No Class IA, Class IB, or Class IC CAFO shall be erected, constructed, developed, used, operated, expanded, occupied or otherwise established unless the owners and any other persons responsible for operation of the waste management systems have been certified in accordance with the requirements of 10 CSR 20-14 (November 30, 1996), which provision is incorporated by reference as if set forth in its entirety herein.

4.7.3 The design and operation of the waste management system shall comply in all respects with the provisions of Manual 121; Manual 115; and the AWMFH;
4.8 Minimum Land Area. The CAFO shall own, acquire or execute a lease of not less than one (1) acre of land for each four (4) AU of capacity for wet handling systems or shall own or lease not less than one (1) acre for each eight (8) AU of capacity for a dry litter system. The nutrients generated by livestock within the CAFO shall not exceed the nutrient removal capabilities of the plant filter areas. Nutrient Application Levels for the CAFO shall comply with Appendix A hereto, which Appendix A is hereby incorporated by reference as if set forth in its entirety herein.

4.9 Waste Application.

4.9.1 Land application of animal waste water shall not occur within 750 feet of an occupied dwelling or within one-thousand (1,000) feet of a Public Use Area which existed prior to the date the CAFO is constructed. This rule shall not apply to occupied dwellings owned by the CAFO. The owner of an occupied dwelling may apply for a variance from this rule as part of the application for a County Health Permit.

4.9.2 Animal waste and animal waste water cannot be applied to land with a slope exceeding ten percent (10%), except land with a permanent vegetative cover or an approved Soil Conservation Plan approved by the Natural Resources Conservation Service.


4.10 Setbacks.

4.10.1 CAFOs. No Class IA CAFO shall be located within one and one-half miles of another Class IA CAFO or within 1 mile of any other CAFO. No Class IB CAFO shall be located within one mile of any other CAFO. No Class IC CAFO shall be located within 1 mile of a Class IA CAFO or Class IB CAFO or within three-fourths (3/4) of a mile of any Class IC CAFO or Class II CAFO. No Class II CAFO shall be located within one-fourth (1/4) of a mile of any Class IC CAFO, Class IB CAFO, Class IC CAFO, or Class II CAFO. This distance shall be measured from the nearest point of one CAFO’s confinement area and waste management system to the nearest point of another CAFO’s confinement area and waste management system. This distance shall apply only to the application for a
County Health Permit, and shall be measured only from a CAFO in existence at the time of an application for a County Health Permit (see Table 4.10-1).

### Table 4.10-1

<table>
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<th>CAFO’s existing at the time of an application for a County Health Permit</th>
<th>(A) Setback Distances</th>
<th>(B) Class IA</th>
<th>(C) Class IB</th>
<th>(E) Class IC</th>
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<tr>
<td></td>
<td>(3) Class IC</td>
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<td>1 mile</td>
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<tr>
<td></td>
<td>(4) Class II</td>
<td>1/4 mile</td>
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</tbody>
</table>

4.10.2 Occupied Dwellings. No Class II CAFO shall be located within one-thousand (1,000) feet of an occupied dwelling. No Class IC CAFO shall be located within one-fourth (1/4) mile of an occupied dwelling. No Class IB or Class IA CAFO shall be located within three-fourths (3/4) of a mile of an occupied dwelling, which setback requirement shall increase by one-fourth of a mile for each 500 AU (or fractional portion thereof) of capacity in excess of 7,000 AU. This rule shall not apply to occupied dwellings owned by the CAFO or to dwellings not in existence at the time of issuance of the County Health Permit.

4.10.3 Populated Areas. No Class II CAFO shall be located within one-half (1/2) of a mile of a populated area. No Class IC CAFO shall be located within one (1) mile of a populated area. No Class IA or Class IB CAFO shall be located within two (2) miles of a populated area. This setback shall increase one-fourth (1/4) mile for each 500 AU (or fractional portion thereof) of authorized capacity in excess of 7,000 AU.

5. WASTE DISPOSAL SYSTEMS CLEANUP AND FINANCIAL SECURITY

5.1 Lagoons or other waste storage structures which are no longer in use shall be closed in accordance with the requirements of 10 CSR 20-6.300(4)(B). The owner shall also be responsible for the cost of cleaning or remediating any contamination or pollution, including any water resources (as defined in sections 4.3.1 and 4.3.4 hereof), wells, or soils which become contaminated, polluted, defiled or soiled from leaks or spills from any lagoon or other waste storage facility on the premises. The mechanisms used to demonstrate financial assurance shall ensure that the funds necessary to meet the costs of clean-up and remediation, as established herein, will be available when they are needed. In establishing financial assurance, owners and operators shall choose from the following options set forth in sections 5.2, 5.3 or 5.4 herein. The amount of the surety bond,
insurance coverage or self-insurance deposit shall be computed based on the following schedule for closure and remediation, which amount shall be:

5.1.1 Not less than $8,000 per acre-foot of lagoon storage capacity for closure of a Class IA; $7,000 per acre-foot of lagoon storage capacity for closure of a Class IB; $1,000 per acre-foot of lagoon storage capacity for closure of a Class IC or a Class II.

5.1.2 Not less than the following for remediation activities:

5.1.2.1 Class II CAFO: $30,000
5.1.2.2 Class IC CAFO: $50,000
5.1.2.3 Class IB CAFO: $100,000
5.1.2.4 Class IA CAFO: $150,000 and $20,000 for each additional 500 AU over the initial 7,000 AU.

5.2 Surety Bond. An applicant for a County Health Permit may demonstrate financial assurance by obtaining a payment or performance surety bond which conforms to the requirements of the section. The bond shall be effective before the initial receipt of livestock into the facility, and a copy of the bond shall be filed with the County Treasurer and the County Commission. The surety company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal Bonds and Circular 570 of the U.S. Department of the Treasury. In addition, the bond shall:

5.2.1 Be in an amount at least equal to the financial assurance schedule established under section 5.1 above.

5.2.2 Provide that the surety will become liable under the bond obligations when the facility fails to perform as guaranteed by the bond.

5.2.3 Provide that the surety may cancel the bond by sending notice of cancellation by certified mail to the owner and to the County Commission one-hundred twenty (120) days in advance of the cancellation. If the surety cancels the bond, the facility shall obtain alternate financial assurance or cease operations.

5.3 Insurance. An applicant for a County Health Permit may demonstrate financial assurance by obtaining insurance which conforms to the requirements of this section. Insurance shall be effective before the initial receipt of livestock at the operation. At a minimum, the insurer shall be authorized to transact the business of insurance in Missouri. A copy of the policy shall be filed with the County Treasurer and the County Commission and shall provide:

5.3.1 All funds will be available for any on-site or off-site clean-up resulting from the operation. The policy shall also guarantee that once environmental clean-up has begun, the insurer will be responsible for the paying out of funds to the facility or other persons authorized to conduct the clean-up an amount equal to the face amount of the policy.
5.3.2 The policy shall be issued for a face amount at least equal to the cost estimate for financial assurance established pursuant to section 5.1 above. The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payment by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of payments.

5.3.3 The policy shall contain a provision allowing assignment of the policy to a successor facility. Said assignment may be conditional upon consent of the insurer, provided that such consignment is not unreasonably refused.

5.3.4 The policy shall provide that the insurer may not cancel, terminate or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy shall, at a minimum, provide the insurer with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may cancel the policy by sending notice of cancellation by certified mail to the facility and to the county auditor one-hundred twenty (120) days in advance of the cancellation. If the insurer cancels the policy, the facility shall obtain alternate financial assurance or cease operations.

5.4 **Self Insurance.** An applicant for a County Health Permit may demonstrate financial assurance by depositing with the County Treasurer unsubordinated debentures, U.S. Government bonds or notes, or Certificates of Deposit issued by federal or state chartered banks with a market value equal to or exceeding the sum of the financial assurance requirement established pursuant to the provisions of section 5.1 above. Said financial instruments shall be held by the County Treasurer for so long as the provisions of this Ordinance apply and may not be otherwise pledged by the facility. Interest payments, if any, from the financial instruments pledged as security shall be paid to the owner.

6. **VARIANCE**

Where, due to an extraordinary or exceptional situation or condition of a specific piece of property, the strict application of this Ordinance would result in peculiar and exceptional difficulties to, or an exceptional and demonstrable undue hardship upon, the owner of the property as an unreasonable deprivation of use as distinguished from the mere grant of a privilege, the County Commission may authorize, as part of the application for a County Health Permit, a variance from the strict application so as to relieve said demonstrable difficulties or hardships, provided the relief can be granted without substantial detriment to the public good and without substantially impairing the intent, purpose, and integrity of the regulations, standards and criteria established in this Ordinance.

7. **APPLICATION OF ORDINANCE**

A CAFO lawfully in existence at the time of the enactment of this Ordinance is exempt from its terms and conditions; provided, however, that before a CAFO in existence at the time of the enactment of this Ordinance may expand or change its operation in terms of a change of classification, the CAFO shall be in compliance with this Ordinance in every respect and shall obtain a new County Health Permit.
8. DISPOSAL OF DEAD ANIMALS AND AFTER BIRTHING MATERIAL

The proper disposal of dead animals and after birthing material shall be completed by the end of the next working day (excluding Sundays and holidays recognized in Chapter 9, RSMo.) from the time of occurrence.

9. ADMINISTRATIVE FEES

9.1 No application for approval of a County Health Permit shall be accepted until the applicant has paid all processing fees as set forth below. Fees paid shall be non-refundable except as provided in section 9.4 below.

9.2 The fee amount shall not exceed the amount needed to recover the cost of inspection, investigation and review of the proposed application, which fee amounts are based upon the anticipated costs of review, inspection and investigation, and which fee amounts have taken into consideration the need for special investigative services including geologic inspections, hydrologic inspections, groundwater monitoring, soils evaluation, and other unique costs of a scientific or technical nature associated with the processing of the application. For purposes of this Ordinance, the administrative fee amounts shall be as follows:

<table>
<thead>
<tr>
<th>Classification of CAFO</th>
<th>Application Fee</th>
<th>Fee for Renewal of County Health Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class IA</td>
<td>$10,000 plus $1.00 per Animal Unit exceeding 10,000 Animal Units</td>
<td>$500</td>
</tr>
<tr>
<td>Class IB</td>
<td>$7,000</td>
<td>$300</td>
</tr>
<tr>
<td>Class IC</td>
<td>$3,000</td>
<td>$200</td>
</tr>
<tr>
<td>Class II</td>
<td>$1,000</td>
<td>$100</td>
</tr>
</tbody>
</table>

9.3 There shall be established with the County Treasurer an escrow fund, for each application for a County Health Permit, for the purposes of reimbursing the County Commission for services rendered in connection with administration of this Ordinance. Said escrow account shall include the proceeds of project review fees established pursuant to this Section. The funds contained in said escrow account shall be used solely to reimburse the County Commission for actual costs associated with administration of this Ordinance, for actual services rendered for investigation, administration and processing of a County Health Permit including costs associated with the retaining and compensation of experts on scientific and technical issues associated with the application, and costs associated with public hearings. The County Treasurer shall disburse payments based upon billings supplied by the County Commission and approved by the County Commission.
The applicant for a County Health Permit may apply to the County Commission for a credit against the fee previously paid in the event that a portion of the costs of review and processing is duplicated, pursuant to the standards of applicable case law or statutes then in effect. After the approval, conditional approval or denial of a County Health Permit, the County Treasurer shall refund to the applicant any unexpended or unencumbered balance of the escrow account established pursuant to this Section for said application.

10. VIOLATION OF ORDINANCE

The County Commission may designate a qualified individual to inspect any lagoon used by a CAFO which has been issued a County Health Permit, and may initiate an enforcement action as provided by section 192.300, RSMo. Any person violating this Ordinance shall be subject to punishment by imprisonment or fine as provided by law. Each day a person operates a CAFO in violation of this Ordinance, and each time a person applies animal waste or animal waste water in a manner inconsistent with the requirements of this Ordinance, shall be considered a separate offense.

11. SEVERABILITY

The chapters, sections, paragraphs, sentences, clauses, and phrases of this ordinance are severable, and if any phrase, clause, sentence, paragraph, or section of this ordinance shall be declared unconstitutional or otherwise invalid by the valid judgment or decree of any Court of competent jurisdiction, such unconstitutionality or invalidity shall not affect any of the remaining phrases, clauses, sentences, paragraphs, or sections of this ordinance since the same would have been enacted by the Platte County Commission without the incorporation in this ordinance of any such unconstitutional or invalid phrase, clause, sentence, paragraph, or section.

12. REPEAL OF ORDINANCES NOT TO AFFECT LIABILITIES, ETC.

Whenever any part of this ordinance shall be repealed or modified, either expressly or by implication, by a subsequent ordinance, that part of the ordinance thus repealed or modified shall continue in force until the subsequent ordinance repealing or modifying the ordinance shall go into effect unless therein otherwise expressly provided; but a suit, prosecution, proceeding, right, fine or penalty instituted, created, given, secured or accrued under this ordinance previous to its repeal shall not be affected, released, or discharged but may be prosecuted, enjoined, and recovered as fully as if this ordinance or provisions had continued in force, unless it shall be therein otherwise expressly provided.

13. EFFECTIVE DATE

This Ordinance shall be in full force and effect from and after its passage by the Platte County Commission, except as provided above.

(Adopted by County Commission Order #58-00 on October 26, 2000.)
APPENDIX "A"

PLANT AVAILABLE NITROGEN (PAN) APPROACH FOR ANIMAL FEEDING OPERATIONS

INTRODUCTION

The “Plant Available Nitrogen” (PAN) approach is used to determine the nitrogen application rates for animal manure and wastewaters. Other cookbook methods, such as the “Conservative” and “Intensive” management approaches are based on average textbook numbers. The actual nitrogen content of any individual operation may vary significantly from the textbook average numbers; thus, actual testing results from each operation should be used.

PLANT AVAILABLE NITROGEN APPROACH

The PAN method uses actual on-site testing results as a basis to develop and implement a specific land application plan that is tailored to each individual operation. The land application rates are based on the amount of nitrogen that will be available for crop uptake during the growing season. This requires testing applied wastes and soils; predicting and recording crop yields; and calculating nitrogen removal for each specific operation. Predicted nitrogen volatilization, denitrification and mineralization rates are used to determine the plan available nitrogen. Thus, the organic wastes from the animal feeding operations are utilized as a “nutrient resource.” The adopted nitrogen availability rates for the PAN approach are shown below. Alternative nitrogen availability rates on a site-specific basis may be considered upon submittal of adequate documentation. See Reference #1 and #3.

PAN Formula: 
\[ wPAN = CNR - sPAN \]

\[ CNR = \text{pounds per acre of nitrogen utilized by harvested crop:} \]
\[ \text{[crop yield unit/acre]} \times \text{[lbs N/yield unit]} \times \text{[% crop removal]} \]

\[ sPAN = \text{soil PAN in pounds per acre:} \]
\[ \text{[% organic matter in soil]} \times \text{[OR rate]} \]

\[ OR = \text{nitrogen availability rate for soil organic matter based on soil CEC and crop season (See Reference #2 and #5):} \]
- Summer crops: 10 for CEC 18; 20 for CEC 10-18; 40 for CEC 10.
- Winter crops: 5 for CEC 18; 10 for CEC 10-18; 20 for CEC 10.

\[ wPAN = \text{wastewater PAN application rate in pounds per acre:} \]
\[ [(\text{TKN-ammonia N}) \times \text{MR}] + \text{[ammonia N x VR]} \times \text{[nitrate N x .9]} \]

\[ MR = \text{nitrogen availability rate for mineralization: Mineralization of organic nitrogen in animal manure is slowly raised over the first five years but reaches a constant by the fifth year when animal wastes are added every year. See Reference #3.} \]
VR = nitrogen availability rate for volatilization + denitrification: Ammonia nitrogen availability varies depending on weather conditions and application method. Department recommends factors (See Reference #3):

VR = .60 for sprinkler irrigation or surface application; and
VR = .90 for surface application followed by incorporation.

CROP YIELDS

Crop yields shall be based on actual measured yields or anticipated yields established by the University of Missouri Extension based upon a soil test for each field. Crop uptake of nitrogen shall be based on nitrogen uptake per actual unit (ton or bushel) of crop removed from the field. Annual crop nitrogen rates for pasture land and for land in the USDA Conservation Reserve Program (CRP) shall not exceed a PAN of 65 pounds/acre/year. See Reference #2 and #5.

SOIL TESTING

Soil testing shall be conducted as near as possible to the start of wastewater application for the year. Soil PAN (SPAN) is predicted based on soil testing for percent (%) Organic Matter times the nitrogen availability factor. This method predicts nitrogen availability from plant residues but does not predict original matter added by animal wastes. New predictive methods should as the presidedress soil nitrate test (PSNT) may also be considered.

MANURE AND WASTEWATER TESTING:

Material to be land applied shall be tested for Nitrogen as follows:

Total Kjeldahl Nitrogen (TKN) as N;
Ammonia Nitrogen (NH3) as N; and
Nitrate/Nitrite Nitrogen (NO3/NO2) as N.

Wastewater, sludge and biosolids should be sampled and tested separately if each is to be land applied. Anaerobic lagoon wastewater samples shall be collected at lagoon depths and locations which represent the range of lagoon water levels to be removed. Samples should be collected at the same relative depth as the irrigation pump intake level. If a lagoon is to be stirred or mixed to facilitate removal, the sample should be collected immediately after stirring and again near the completion of pumping.

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lagoons: all animal types</td>
<td>.35</td>
<td>.53</td>
<td>.62</td>
<td>.66</td>
<td>.70</td>
</tr>
<tr>
<td>Poultry: slurry/dry litter</td>
<td>.60</td>
<td>.70</td>
<td>.75</td>
<td>.80</td>
<td>.85</td>
</tr>
</tbody>
</table>
Plant Available Nitrogen from applied wastes (wPAN) should be based on testing as near as possible to when wastes will be land applied. Testing should be conducted once every two to three months during land application periods. Nitrogen content may vary significantly throughout the year due to differences in moisture content, animal diet, stocking rates, rainfall amounts, temperature, and other factors. For example the nitrogen content in a swine lagoon varies by as much as 30 percent depending upon the season of the year. See Reference #4, Table 37.

NUTRIENT MANAGEMENT PLAN

The applicant shall develop a nutrient management plan taking into consideration nitrogen and other nutrient factors as described in Reference #5.

REFERENCES


This information was revised January 23, 1997 by the Missouri Department of Natural Resources, Water Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.
The application shall be prepared by a professional engineer licensed by the Missouri Board for Architects, Professional Engineers and Land Surveyors (hereinafter "Professional Engineer"). The Application to be covered by this permit shall include the following:

1. Any and all applications for other governmental approval for the proposed CAFO, including any application for a construction permit from the DNR, or any current or previous NPDES permit number if applicable.

2. Facility owner's name, address and telephone number.

3. Facility operator's name, address and telephone number.

4. Types of waste handling practices to be used for processing wastes (such as containment in a waste storage pond plus land application). The applicant shall provide, as part of the application for a County Health Permit, all of the information required by 10 CSR 20-8.

5. Name of receiving water(s) to which wastewaters are (or may be) discharged from the facility (receiving waters include canals, laterals, rivers, streams, etc.).

6. The type of livestock and number of animals confined, in AU's or, where animals will be included that are not listed in the definition of AU's, the number of animal unit equivalents.

7. A sketch of the operation, including control facilities, diversion ditches, building structures, feeding areas, slope, direction of overland and surface water flow, and proximity to surface waters.

8. A site plan, at a scale of one inch equals one-hundred (100) feet, showing the following:
   - Each confinement area;
   - Each lagoon or other waste disposal facility;
   - All plant filter areas;
   - All land areas in which the slope is greater than ten percent (10%).
   - All rivers, streams, and wetlands.

9. A vicinity map, at a scale of 1 inch equals five hundred (500) feet, showing all occupied dwellings and populated areas, water sources, water wells, ponds, rivers, streams, and lakes within a two-mile radius of the property.

10. Construction plans and specifications for the liner system for each lagoon. The design shall include a detailed explanation of the construction techniques and equipment necessary to achieve ninety five percent (95%) of the standard Proctor density under final conditions. The
design shall also include quality assurance and quality control procedures to be followed during construction of the liner.

11. A report, which shall be certified by a Professional Engineer which demonstrates that the water consumed or utilized by the proposed CAFO on a daily, monthly and annual basis shall not exceed the available groundwater supplies or the capacity of any water source, treatment or distribution facilities which will serve the proposed CAFO.

12. The applicant shall submit a soils map of the entire property based upon an on-site soils investigation, soil interpretative data, and a soils engineering report which includes a rating of the suitability of the soils for livestock waste management which shall be based upon a description of soil properties and their variability, available water capacity, bulk density, cation-exchange capacity, depth to bedrock or cemented pan, depth to high-water table, flooding, rock fragmentation, intake rate, permeability rate, soil Ph, ponding, salinity, slope, and sodium adsorption. Said soils engineering report shall be consistent with part 651 of the AWMFH. The foregoing submission shall be prepared by a professional engineer licensed in the State of Missouri.

13. A report which provides the nutrient values for the CAFO; soil-plant filter size, in acres; plant species to be grown in the plant filter areas including expected yields, harvest methods and uses of the harvest; and the nutrient removal capabilities based upon the type(s) of plant species utilized in the soil-plant filter areas.

14. A sworn statement indicating whether the owner or any operator has had a permit or license revoked by any federal, state or local environmental or health agency within the past five (5) years.
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