

**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.**

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

WHEREAS, §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; and

WHEREAS, §192.300, RSMo., provides that any person, firm, corporation or association which violates 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; and

WHEREAS, the County Commission has full power and authority to initiate the prosecution of any action under §192.300, RSMo; and

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

WHEREAS, 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 Camden County Commission as well as the experience of the Camden County Commission with local conditions; and

WHEREAS, the adoption and enforcement of said standards is hereby found to be necessary in order to enhance the public health and prevent the entrance of infectious, contagious, communicable or dangerous diseases into Camden County, its air, ground, groundwater and watershed.

**NOW, THEREFORE, BE IT ORDAINED BY THE CAMDEN COUNTY COMMISSION AS FOLLOWS:**

**SECTION 1. DEFINITIONS APPLICABLE TO THIS ORDINANCE.**

**1.01 ACTIVE OPERATION** - A CAFO which has existing buildings and/or confinement areas which have live animals contained or confined and which operate in an operating manner at the current time as a CAFO and/or existing and operating lagoon(s) which is being used to hold, store and/or treat animal waste at the current time.

**1.02 ANIMAL CARCASSES** - The dead body or fetus or any part thereof of any animal or fowl of any nature.

**1.03 ANIMAL UNIT (AU)** - A unit of measurement to compare various animal and fowl types at a concentrated animal feeding operation (CAFO). These units shall be as follows:

- One Animal Unit (AU) equals the following:
- a. 1.0 Beef Feeder or Slaughter Animal
  - b. 0.5 Horse
  - c. 0.7 Dairy Cow
  - d. 2.5 Swine weighing over 55 pounds
  - e. 15 Swine weighing less than 55 pounds
  - f. 10 Sheep
  - g. 30 Laying Hens
  - h. 55 Turkeys
  - i. 100 Broiler Chickens

or an equivalent animal unit for any other type of animal or fowl.

**1.04 ANIMAL WASTE** - Any animal or fowl excrement, animal carcasses, feed waste, animal wastewater, or any and all other waste associated with animal or fowl.

**1.05 ANIMAL WASTE MANAGEMENT SYSTEM** - Means any system (liquid or dry) used for the collection, storage, distribution or disposal of animal waste generated by a concentrated animal feeding operation (CAFO).

**1.06 ANIMAL WASTEWATER** - Any liquid containing or coming into contact with any animal or fowl excreta including any liquid that comes into contact with any manure, litter, bedding or any other raw material or intermediate or final material or product used in or resulting from the production of animals or fowls or products directly or indirectly used in the operation of a concentrated animal feeding operation (CAFO) i.e., spillage or overflow from animal or fowl watering systems; any liquid used in washing, cleaning or flushing pens, barns or manure pits; any liquid used in the washing or spraying to clean or cool animals or fowl; and any liquid used in dust control for a CAFO.

**1.07 BEST MANAGEMENT PRACTICES** - (hereinafter referred to as **BMP**) - Those schedules or activities, prohibitions of practices, maintenance procedures and all other management practices to prevent or reduce the pollution of surface or groundwater as required by this ordinance. **BMP** includes, but is not limited to, the following: treatment requirements; operating procedures; practices to control site runoff, spillage or leaks; sludge or waste disposal; odor, chemical, or noise pollution; and all items associated with or contributing to any pollution.

**1.08 CLASSIFICATIONS:**

- a. **CLASS IA CAFO** - Capacity of 7000 or more AU.
- b. **CLASS IB CAFO** - Capacity between 3000 and 6999 AU.
- c. **CLASS IC CAFO** - Capacity between 1000 and 2999 AU.
- d. **CLASS II CAFO** - Capacity between 250 and 999 AU.

**1.09 COMMISSION** - Camden County Commission.

**1.010 CONCENTRATED ANIMAL FEEDING OPERATION** (hereinafter referred to as **CAFO**) - Any area where 250 or more animal units of animal or fowl have been, are or may be, stabled or confined and fed or maintained for a total of 45 days in any 12 month period, and a ground cover of vegetation is not sustained over at least fifty (50%) percent of the animal or fowl confinement area.

**1.011 COUNTY HEALTH OFFICER** - (hereinafter referred to as **CHO**) - Administrator of the Camden County Health Center or designated

representative.

**1.012 DISCHARGE** - Any release of **animal waste** by leaking, pumping, pouring, emitting, emptying, dumping, escaping, seeping, leaching or any other means of release of **animal waste**.

**1.013 DNR** - The Missouri Department of Natural Resources or any other state or governmental agency which may in the future assume the duties of the Missouri Department of Natural Resources.

**1.014 HEALTH HAZARDS** - Any condition which may or can cause disease or harm to a person, community, animal, fowl or the environment, whether now or in the future.

**1.015 LAGOON** - An excavated, diked or walled area designed for the biological stabilization, treatment and/or storage of **animal wastewater**.

**1.016 LAND** - Any plot, parcel, lot or other area of land owned or leased by the CAFO.

**1.017 LAND APPLICATION SITES** - Any land where **processed animal wastewater** is injected or knifed, or placed into or on top of the soil in any manner.

**1.018 OCCUPIED DWELLING** - Any residence, or any church, school or business which has been in use at any time during the 12 month period immediately prior to the date upon which a permit is issued by the Department of Natural Resources for the construction of a CAFO.

**1.019 PERMIT** - Any authorization issued by the CHO and approved by the Commission, which authorizes the permittee to construct, modify or operate a CAFO.

**1.020 PERSON** - Any individual, partnership, LLC, corporation, association, firm, company, joint venture or any combination of these.

**1.021 PROCESSED ANIMAL WASTEWATER** - The **animal wastewater** placed in the lagoon.

**1.022 SETBACK** - All setbacks and distances are to be measured in a linear fashion at the nearest and closest points of such objects.

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

**1.024 STATE REGISTERED ENGINEER** - A Registered Professional Engineer, authorized and empowered to operate in that capacity in the State of Missouri, who is registered as such with the Missouri Board of Architects, Professional Engineers and Land Surveyors.

**1.025 SURFACE OR GROUNDWATER** - Liquid that is contained in or flows through all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems and all other bodies or accumulations of liquid; whether or not it is contained on the surface or underground; naturally or artificially; whether or not on public or private lands; that are contained within, or flow through the State of Missouri.

**SECTION 2. PERMIT REQUIREMENTS FOR CAFO'S AND LAND APPLICATION OF WASTEWATER**

**2.01 PERMIT REQUIREMENT.** No person shall construct, modify or operate a CAFO unless the person has first obtained a permit issued by the CHO and Commission. The person shall obtain the separate permit required for Land Application pursuant to this Section.

**a. Exempt Operations.**

1) Under 250 AU. Operations having less than 250 animal units and which are not otherwise required to have a DNR permit will not be required to obtain a permit unless specifically identified as a significant contributor of pollution by the CHO.

**2) Active and Pending Operations.**

a) All CAFO's which are required to have a DNR permit and which have a DNR permit (or a letter of approval/authority from DNR) and which are in active operation as of the date of the enactment of this ordinance shall be exempt from the requirements of this ordinance to the extent of the AU capacity granted by such DNR permit or letter, except as otherwise stated herein, unless they modify their operation under any of the provisions of this section.

b) All CAFO's with a capacity and operation between 250 and 299 AU, which would be required to have a permit under this ordinance, but which do not otherwise require a DNR permit, and which are in active operation as of the date of the enactment of this ordinance, shall be exempt from the requirements of this ordinance so long as their capacity remains under 299 AU.

c) CAFO's which either have a DNR Permit or have a pending DNR permit at the time of the enactment of this ordinance, but which CAFO's are not in active operation as of the date of the enactment of this ordinance, shall, if they become active operations within 120 days from either the date of the passage of this ordinance or the date their DNR permit is granted (whichever is

later), be only exempt from the requirements of sections 3.02.a (building setbacks), sections 3.03.a through .c (lagoon setbacks and elevations), section 3.04.f (wastewater application setbacks, unless done at a site other than those applied for in DNR application). All of the other provisions of this ordinance shall apply to such operations. Any such CAFO which is not in active operation within 120 days from the times stated above, shall not be exempt from the sections stated herein (3.02.a, 3.03.a-c., 3.04.f) or any of the other provisions of this ordinance, but shall be required to comply with this entire ordinance.

**CERTAIN PROVISIONS OF THIS ORDINANCE MAY ALSO APPLY TO EXEMPT OPERATIONS IF SO SPECIFIED HEREIN.**

b. **Permit Required.** All CAFO's with 250 or more animal units shall be required to obtain a permit, unless exempted by the above Section 2.01.a. Any CAFO's that modify operation after the date of enactment of this ordinance and which have 250 or more animal units after such modification shall be required to obtain a Camden County permit and shall be subject to the requirements of this ordinance, except as specified in the next subsection, unless otherwise exempted herein. An operation shall be deemed to be modified if any of the following apply:

- 1) Construction of any new buildings or facilities for the housing of animals;
- 2) Modification to existing buildings or structures for the housing of animals when such modification costs exceed \$15,000.00 total;
- 3) Construction of new lagoons or repair of lagoons when repair costs exceed \$5,000.00 total;
- 4) Change in ownership, management or control of a CAFO;
- 5) Any increase in the maximum permitted number of animal units by more than 25 units, at any time;
- 6) Any increase in the number of animal units over the number of animal units for which application was made in the DNR permit, if any;
- 7) Change in land application sites;
- 8) Change in the handling, treatment or disposal of animal waste and animal wastewater of any CAFO.
- 9) Deviation in any manner from the approved BMP, if a BMP exists.

c. **Modification of Operations - Exemptions.** As it may not be reasonable to require that some modifications to existing operations meet the certain requirements of this ordinance (for

instance, but not limited to the setback requirements), the following shall apply:

1) The CAFO operator may request that variance be granted by the **Commission** from certain requirements of this ordinance due to an extraordinary, peculiar and/or exceptional situation which would result from an unreasonable deprivation of use as distinguished from the mere grant of a privilege. Such variance may be granted so as to relieve said demonstrable difficulties or hardships, provided the relief can be granted without a 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. Specific application shall be made showing the proposed modification and the information set forth in Section 2.02 and the remainder of this ordinance. The **CHO** may also review such information and make a report to the **Commission** regarding such variance. In such review, the **Commission** shall include factors such as but not limited to the following:

- a) Size of the operation prior to modification;
- b) Size of the proposed modification;
- c) Environmental impact of the proposed modification, including waste, smell, potential contamination, waste storage facilities, land application of waste;
- d) Cost of the compliance;
- e) The ability of the goals of this ordinance to be met by other requirements of the ordinance or other factors involved.
- f) Any other factors which the **Commission** may feel are relevant.

2) All other provisions of this ordinance for modified operations which are not specifically varied shall apply.

3) It shall be the sole discretion of the **Commission** as to whether any variance pursuant to this section is granted or denied. The fact that compliance with ordinance provisions for a modified operation is not possible shall only be a factor and shall not of itself be grounds for variance.

**2.02 INFORMATION TO BE PROVIDED IN APPLICATION FOR A CAFO PERMIT** - It shall be unlawful and a violation of this ordinance for any person to operate a CAFO without first obtaining a permit or to operate in excess of the number of animal units specified in the permit. In order to obtain a permit for operation or modification of a CAFO, the person required

under this ordinance to obtain a **permit** must provide the following information to the **CHO**:

a. Prior to filing an application for a **permit**, the owner or operator of any **CAFO** shall provide the following information to the Commission and to all adjoining property owners located within one and one-half times the buffer distance set forth in Sections 3.02.a and 3.03.a herein:

- 1) The maximum number of animals to be applied for;
- 2) The waste handling plan and general layout of the facility;
- 3) The location and number of acres of such facility; and
- 4) Name, address, telephone number and registered agent for further information as it relates to the above information.

b. The application for a **permit** to construct, modify or operate a **CAFO** must be accompanied by a **State Registered Engineer** design with data, specifications, and other pertinent information pertaining to the **Best Management Practices (BMP) Plan**, and the requirements herein of the **BMP**, to be used in the construction, modification, or operation of the **CAFO** and any additional information requested by the **CHO**.

c. The maximum number of animals and **animal units** anticipated at such operation;

d. The waste handling plan and general layout of the operation presented in plain and nontechnical terms;

e. The density of animals per acre at such operation;

f. The expected duration of operations at the size described; and

g. The name and address of the **CAFO**, including directions and legal description of the property of the **CAFO**.

h. An accurate diagram or map, drawn to scale, showing the following items and the distances between such:

- 1) Location of all other **CAFO** facilities; and
- 2) Location of all structures associated with the **CAFO** for which permit is being applied; and
- 3) Location of waters of the State, streams, lakes, ponds, sinkholes, caves or any human water supply structure including drainage from the **land application site**, land application sites owned by, leased from, or utilized by applicant and the waste storage facilities (including drainage patterns to the nearest lake, or continuous flowing creek/river).
- 4) Location of all existing buildings or other structures within two miles of the **CAFO**, whether occupied or not. Reasonable calculated estimates may be made of such distances.

i. Provide a list of owners of all leased **land application sites** including name, address and telephone number along with a copy of the lease contract.

j. Name, address and telephone number of the **person** or his authorized agent who is seeking the **permit** to enable the **CHO** to obtain further information; and

k. All other information as requested by the **CHO**.

l. The **person(s)** applying for such a **permit** shall notify the **CHO** of all ownership arrangements and all contractual agreement for the use of the land proposed as **land application site(s)** by submitting a copy of the ownership documents and the contracts.

m. A copy of the Department of Natural Resources (DNR) application and permit, if applicable.

n. All other information necessary to assure compliance with the **BMP** plan requirements contained herein.

**2.03 LAND APPLICATION PERMIT.** A separate **permit** shall be required for all **land application sites**, except **land application sites** for those operations specified as exempt pursuant to Section 2.01. It shall be a violation of this ordinance and shall be unlawful for any person to apply animal waste in a manner inconsistent with the requirements of this ordinance. The **person** requesting a **permit** shall submit an application, which application shall include:

a. Prior to filing an application for a **land application permit**, the owner or operator of any **CAFO** shall provide the following information to the Commission and to all adjoining property owners located within one and one-half times the buffer distance set forth in Sections 3.04.f(1) herein:

- 1) The maximum number of animals to be applied for;
- 2) The waste handling plan and general layout of the facility;
- 3) The location and number of acres of such facility; and
- 4) Name, address, telephone number and registered agent for further information as it relates to the above information.

b. The site management plan;

c. The nutrient application rates;

d. The timing of waste application with respect to the nutrient uptake cycle of the vegetation found on the **land application site(s)** as required by the Missouri Department of Natural Resources and the University of Missouri Extension Specialist;

e. The waste storage and distribution method(s) prepared in accordance with the requirements of this ordinance, i.e.: **Animal wastewater** lagoons and above ground storage of **animal wastewater** and land application methods and processes;

f. Information necessary to assure compliance with the **BMP** plan for land application as set forth herein.

**2.04 CERTIFICATION REQUIRED.** A person who applies for a **permit** under this ordinance must provide a complete **permit** application and file the application with the **CHO** on such form or forms as the **CHO** may require.



Any person applying for a permit for a CAFO under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**2.05 APPROVAL OF PERMITS.** The CHO and Commission shall attempt to have all permit applications approved or disapproved within ninety (90) days from the date the application is submitted for approval to the CHO.

### **SECTION 3. BEST MANAGEMENT PRACTICES (BMP) - PLAN**

**3.01 BMP PLAN REQUIREMENTS.** For all operations for which a permit is required as specified herein, a BMP Plan shall be developed by a **State Registered Engineer**. It shall be the duty of the person(s) operating the CAFO and the owners of the CAFO to comply with the approved BMP Plan and to prevent pollution within Camden County. The BMP Plan shall be approved by a University of Missouri Extension Livestock Specialist, if possible, and the CHO. The BMP Plan shall, at a minimum specifically include (but not limited to) the following components:

- a. Specifications and location of buildings;
- b. Proposed location and specifications of **Animal Wastewater** lagoon; collection methods, any proposed above ground storage, and the distribution systems to be utilized;
- c. **Land Application Site** procedures and practices;
- d. Open Lot and Pen utilization; and
- e. Dead Animal and/or Fowl disposal;
- f. All the cleaning methods and practices of the CAFO;
- g. Provisions for laboratory testing and analysis of the monitoring wells of the lagoon and provision whereby the CHO must review all laboratory results.

**3.02 CAFO LOCATIONS.** Confinement Buildings, Confinement areas, Storage Buildings, and all other Buildings of the CAFO (hereinafter referred to as "Building"): The BMP Plan shall include these minimum standards for the CAFO:

- a. **Setback.** No animal confinement building or area shall be constructed within the following distances of the nearest existing occupied dwelling (other than those owned or operated by the CAFO or another CAFO), incorporated area, stream, river, lake, or any human water supply structure:
  - Class 1A CAFO - 2 miles
  - Class 1B CAFO - 1.5 miles
  - Class 1C CAFO - 1 mile
  - Class II CAFO - 1 mile

The following setback distances shall be required from any

other CAFO, measured from the nearest point of one CAFO, lagoon or land application site to the nearest point of another CAFO's confinement area, lagoon or land application site:

	Class IA	Class IB	Class IC	Class II
Class IA	2 miles	2 miles	2 miles	2 miles
Class IB	2 miles	1 mile	1 mile	1/2 mile
Class IC	2 miles	1 mile	1 mile	1/2 mile
Class II	2 miles	1/2 mile	1/2 mile	1/2 mile

The **BMP** shall require specifications of all building sizes, number of animals or fowl housed in each building and all structure and component specifications of all buildings, other than those owned and/or operated by the CAFO;

b. No building shall be modified in any manner without prior approval from the **CHO**;

c. No **animal waste** or **animal wastewater** may be utilized for any purpose other than applied to **land application sites** unless approved by the **CHO** and the **Commission**;

d. The **BMP Plan** shall provide plans and procedures of daily cleaning. The plan shall provide a clean and healthy environment for employees and animals or fowls. This plan shall have as its goal the elimination of disease potential for humans, animals or fowls. The **BMP Plan** shall provide for **Materials Handling and Storage** procedures and practices in order to avoid any **health hazards**;

e. The **BMP Plan** shall set forth a prevention and clean up plan related to toxic pollutants. The prevention plan is to avoid spills of toxic pollutants; i.e., fuels, medications, copper sulfate, cleaning agents, acids, pesticides, etc. for all building and grounds affiliated with the CAFO. The clean up shall comply with all requirements of the Environmental Protection Agency (EPA), Occupational Safety and Health Administration (NIOSH) Standards, Missouri Department of Natural Resources and the Missouri Department of Health rules and regulations;

**3.03 ANIMAL WASTEWATER LAGOON COLLECTION, ABOVE GROUND STORAGE AND DISTRIBUTION SYSTEMS.** The **BMP Plan** shall include these minimum standards for the CAFO:

a. **Lagoon Setback.** No lagoons shall be constructed within the following distances of the nearest existing occupied dwelling, incorporated area, stream, river, lake, sinkhole, cave, or any human water supply structure:

- Class IA CAFO - 2 miles
- Class IB CAFO - 1.5 miles
- Class IC CAFO - 1 mile
- Class II CAFO - 1 mile

b. **Five Mile Lagoon Setback from Lake of the Ozarks.** No lagoons shall be constructed within five (5) miles from the 665 foot elevation of the shoreline of Lake of the Ozarks which elevations are referred to United States Geological Survey Bench Mark at Bagnell, Missouri, which has an elevation of 586.742 feet above Mean Gulf Level at Biloxi, Mississippi.

c. **Elevation.** No lagoons shall be constructed or located on an elevation less than 675 feet above sea level in Camden County, as defined by contour lines, which elevations are referred to United States Geological Survey Bench Mark at Bagnell, Missouri, which has an elevation of 586.742 feet above Mean Gulf Level at Biloxi, Mississippi.

d. **Subsurface Investigation.** Lagoon site evaluation subsurface investigation for design plans shall be at least three (3) feet below the planned bottom excavation. If this is not practical, a geological survey of the subsurface and groundwater can be substituted when conducted by a Department of Natural Resources approved geologist;

e. **Lagoon Structure.** Lagoons constructed by a CAFO, shall insure a minimum of:

- 1) 24 inches of compacted clay which lines the bottom and sidewalls of the lagoon; or
- 2) 12 inches of compacted clay and an 80 mil (or greater) plastic liner; or
- 3) Another sufficient structure approved by the CHO; and
- 4) Foliage barriers shall be used around the entire exterior of the lagoon to help reduce odors. The foliage barriers shall be located at least twenty (20) feet away from the sidewalls, whereby the roots do not penetrate the lagoon sidewalls causing leakage.

f. **Lagoon Construction - Inspection.** The CHO shall be made aware at least seven days prior to construction is taking place upon such lagoon structures and such shall be available for inspection at all times during the construction process.

g. **Lagoon Design.** The lagoons shall be designed, constructed and operated to contain all **animal wastewater** for 365 days of storage and precipitation of a 25 year, 24 hour storm event at the location of the point source. Additionally, the lagoon size shall be sufficient to allow for surface retention, contaminated rainfall from open lots and associated areas, **processed animal wastewater** and all other wastes which may enter or may be stored in the lagoon structure;

h. **Fence.** A lagoon shall have a six foot security chain linked fence installed at least 50 feet from the outside of the lagoon to protect any animal or non-authorized individual from access to the lagoon, a gate shall be installed sufficient in size to allow the entry of equipment to drain off liquid from the lagoon for land application;

i. All equipment and facilities of the CAFO utilized to handle **animal waste** and **processed animal wastewater** shall be kept clean and odor free by providing an equipment wash station which drains into an **animal wastewater** lagoon except when handling and disposing of the same in a manner approved by the CHO.

j. There shall be no discharge of any **animal waste** or **processed animal wastewater** to surface or groundwater, except

as provided for under a **Land Application Site** permit as set forth herein at levels that reach the Maximum Contaminant Levels (MCL), according to U.S. Environmental Protection Agency (EPA), Missouri Department of Health and the Missouri Department of Natural Resources regulations. If for any reason, there is a **discharge**, the permittee is required to make immediate notification to the Department of Natural Resources and the CHO. No voluntary **discharge** by the permittee is allowed without prior approval of the CHO;

k. Removal of **processed animal wastewater** from the lagoon shall take place on a routine schedule. A record log shall be maintained indicating weekly inspections of the **animal wastewater** level in the lagoon. The BMP Plan shall cover the **animal waste management system** equipment for removing **processed animal wastewater** from the lagoon. Equipment for removing **processed animal wastewater** from the lagoon shall be available whenever needed to restore the freeboard required to accommodate the 25 year rainfall event;

l. A permanent measuring device shall be maintained in each **animal wastewater** lagoon to show the volume required for a 25 year rainfall event. The marker shall be visible from the top of the berm. A rain gauge shall be kept on site and properly maintained. A log of all measurable rainfall shall be kept in 1/4 inch increments on a daily basis at the same time daily.

m. All **processed animal wastewater** shall be tested prior to applying to land application sites for the following: pH, antibiotics, copper sulfate, total nitrogen, ammonium, potassium, phosphorous, nitrates, heavy metals and pesticides and all other pollutants or potential **health hazards** to animal, fowl and humans. The Exposure Limits, the Immediately Dangerous to Life or Health levels and the Permissible Exposure Limit (PEL) as found in 29 CFR 1910, Subpart Z, General Industry standards for Toxic and Hazardous Substances, shall not be exceeded. Costs of laboratory analysis shall be borne by the CAFO.

n. The BMP Plan shall provide for the utilization of monitoring wells. A minimum of one monitoring well shall be installed upgradient (uphill) and two monitoring wells downgradient (downhill) from all lagoons. Monitoring wells shall be drilled, so as to detect, as early as possible, migration of pollution from the lagoons. Uphill wells shall be utilized to provide background information and shall be sampled prior to any generation, storage or land application of any **animal wastewater**. All monitoring wells may be inspected and tested by the CHO at times desired. Each monitoring well shall be tested on a monthly basis and the results made available to the CHO for inspection. All laboratory analysis from the inspection and all associated costs shall be borne by the CAFO.

**3.04 LAND APPLICATION SITES AND PRACTICES:** The BMP Plan shall include these minimum standards for a CAFO:

a. All CAFO's shall have a BMP Plan for each **land application site**, prepared by a **State Registered Engineer**, and approved by the CHO. The CHO shall require proof of land

ownership or of contractual agreements for use of land as a **land application site**.

b. A notice shall be sent to all CAFO's, land owners of leased or contracted lands for **land application site(s)**, from the **State Registered Engineer** with a copy to the **CHO** informing the CAFO and owners of their responsibilities concerning obtaining a **land application site permit(s)** prior to applying any **processed animal wastewater** to the **land application site(s)**.

c. The application rate of the **processed animal wastewater** shall comply with the specifications of the "Plant Available Nitrogen (PAN) Approach for Animal Feeding Operations" which is attached hereto as **APPENDIX A** and incorporated herein by this reference.

d. **Processed animal wastewater** application shall not be applied on land with a slope of less than One-Half (1/2%) percent or in excess of ten (10%) percent. **Animal wastewater** shall not be applied when soils are saturated by water, frozen, snow covered or when other soil conditions would result in runoff.

e. Records shall be kept for applied **processed animal wastewater**. These records shall be kept in sufficient detail to determine the application rates. Records shall be kept of all **land application sites** whereby the dates, locations of application, weight and volume of **processed animal wastewater** and acreage over which the load was spread shall be included. All records shall be kept and maintained at the CAFO. The CAFO shall provide the CHO with a copy. Further, the CHO shall have access to the originals at anytime.

f. **Processed animal wastewater** application shall not be applied unless it is applied:

1) **Wastewater Application - Distance**. One mile from any existing occupied dwelling (other than those owned or operated by the CAFO) existing prior to the issuance of the Land Application Permit, and one half mile from any other CAFO lagoon, stream, river, lake, sinkhole, cave, or any human water supply structure.

2) **Wastewater Application - Setback from Lake**. No wastewater shall be applied within five (5) miles from the 665 foot elevation of the shoreline of Lake of the Ozarks which elevations are referred to United States Geological Survey Bench Mark at Bagnell, Missouri, which has an elevation of 586.742 feet above Mean Gulf Level at Biloxi, Mississippi.

g. **Discharge of animal wastes** or **processed animal wastewater** not in conformity of this ordinance shall be deemed a violation of this ordinance;

h. The **BMP** Plan shall provide for all equipment utilized to apply **animal waste** and **processed animal wastewater** to land

sites shall be kept clean and odor free. An equipment wash station with a concrete floor which drains into an **animal wastewater** lagoon shall be used to clean all equipment.

**3.05 DEAD ANIMALS AND/OR FOWL DISPOSAL:** The BMP Plan shall include these minimum standards for a CAFO:

a. The BMP Plan shall provide for proper handling practices for all **animal and/or fowl carcasses**. Such carcasses shall not be managed in a manner that would create a fly problem or cause a **health hazard**. All animal and/or fowl carcasses shall be properly disposed of within 24 hours from the time of said animal or fowl's death.

**3.06 INSECT AND PEST CONTROL:** The BMP Plan shall include these minimum standards for a CAFO:

a. The CAFO shall prevent any **discharge** of pesticides or herbicides not in conformity with EPA or State regulations into the **surface or groundwater** in Camden County. All liquid utilized in dipping vats, pest and parasite control units, for animals or fowl, shall utilize approved BMP's as defined by the University of Missouri Extension Livestock Specialist whereby no toxic pollutants may cause a **health hazard**.

**3.07 EMPLOYEE TRAINING.** All CAFO owners, operators and employees shall be trained to operate and maintain the CAFO. Employee training shall inform personnel at all levels of the goals and components of the BMP Plan. Training shall include topics such as operation and maintenance of the CAFO, land application of **processed animal wastewater**, material storage and handling practices, record keeping, spill response and cleanup requirements. the CHO shall specify the appropriate employee training frequency and topics for all levels of personnel of the CAFO. The BMP Plan shall identify periodic dates for such training. Failure to comply with all training requirements shall be deemed to be a violation of this ordinance.

#### **SECTION 4. OTHER ANIMAL WASTE.**

**4.01 APPLICATION OF OTHER ANIMAL WASTE.** All other animal waste shall comply with the specifications of the "Plant Available Nitrogen (PAN) Approach for Animal Feeding Operations" which is attached hereto as APPENDIX A and incorporated herein by this reference.

#### **SECTION 5. LAGOON FAILURE OR LEAKAGE.**

**5.01 LAGOON LEAKAGE OR FAILURE.** In the event an animal wastewater lagoon may be leaking (as determined by the CHO based upon the tests from the monitoring wells or other evidence), collapsed, fails or is otherwise discharging **animal wastewater**, the Commission may issue a **Stop Order** pursuant to Section 11, may suspend or revoke the CAFO permit, or may impose penalties as provided for in this ordinance. The **operator** shall then be responsible for all necessary cleanup costs caused as a result of the leakage or failure.

#### **SECTION 6. ACREAGE REQUIREMENTS.**

6.01 **WET HANDLING.** The CAFO shall own or lease one acre of land for each 4 AU of capacity for wet handling systems (wastewater lagoons).

6.02 **DRY HANDLING.** The CAFO shall own or lease one acre of land for each 8 AU of capacity for dry handling systems.

## **SECTION 7. AIR QUALITY.**

7.01 **AIR QUALITY.** All CAFO's, lagoons and land application sites shall be designed in such a manner as to avoid the degradation of air quality. In no event shall the concentration of gases at the boundary of the land resulting from the operation of the CAFOs, lagoons and land application sites exceed the following levels:

	<b>Maximum allowable Concentration</b>	<b>Exposure Period</b>
<b>Carbon Dioxide</b>	5000 ppm	Not Applicable
<b>Ammonia</b>	5 ppm	Not Applicable
<b>Hydrogen Sulfide</b>	10 ppm	2 hours
<b>Methane</b>	1000 ppm	Not Applicable
<b>Carbon Monoxide</b>	50 ppm	One hour

Where ppm = parts of pure gas per million parts atmospheric air and the exposure period is the time during which the effects of the noxious gas are felt by an adult human or a 150 pound livestock.

Any person operating a CAFO in violation of the above shall be deemed to be in violation of this ordinance and it shall be unlawful.

## **SECTION 8. FINANCIAL SECURITY.**

8.01 **BOND -** A cash or surety bond shall be furnished to the Camden County treasurer for any manure storage system, in an amount as set forth in Section 8.02 herein. A manure storage system may include one or more lagoons at any single CAFO. If the bond is a surety bond, the surety shall be approved by the Commission and found to be of reputable character and financially sound with respect to the obligation incurred. The bond shall be furnished prior to construction and continued in effect during operation and shall not be released until the operator has complied with all Federal, State and local laws in operation of the facility and until prompt clean up and proper disposal of any waste improperly handled or disposed of at the facility and restoration of the premises upon which the facility is operated. If a cash bond is posted, all interest earned thereon shall become a part of the bond subject to the terms and conditions, including the condition of release. The Commission shall give approval prior to the bond being released.

8.02 **AMOUNT OF BOND -** The following amounts of bond shall apply:  
\$100.00 for each AU which shall be posted for the maximum number of AU permitted or requested to be permitted herein.

## **SECTION 9. PERMIT DURATION**

9.01 **ONE YEAR PERMIT.** The permit duration for construction, installation, modification or operation of the CAFO will be recorded on the permit. The permit period shall be for one year from the date of approval by the Commission.

**9.02 PERMIT RENEWAL APPLICATION.** A CAFO shall reapply every year affirming under oath, that the operation has not been modified in any manner from the original permit issued. Any deviations from the BMP Plan or modification of the CAFO will require a new permit before such changes occur. An Application for renewal shall be considered to be properly filed when the CHO has received the following:

- a. A completed Application, on a form or forms prescribed by the CHO which shall be submitted according to CHO requirements.
- b. Cash, cashiers check, or money order from the firm in the proper amount for the permit.
- c. All other information requested by the CHO.

**9.03 Permits** will be issued only to the "Official Applicant of Record" or his authorized representative and such authorization must be in writing from the "Official Applicant of Record". Renewal permit shall only be issued when the CAFO has met all requirements of this ordinance.

## **SECTION 10. PERMIT SUSPENSION OR REVOCATION**

**10.01 SUSPENSION AND REVOCATION OF PERMIT.** The Commission or CHO may suspend or revoke a permit for a CAFO for the following reasons:

- a. Non-compliance with any term of the permit, including non-compliance with the BMP;
- b. Unauthorized modifications of the CAFO;
- c. Falsification of information submitted;
- d. Non-compliance with any provision of this ordinance or with any State or Federal Statutes or regulations;
- e. Any other reason the construction, operation or modification would constitute a violation of this ordinance or be a health hazard as determined in the sole and absolute discretion of the CHO.

## **SECTION 11. STOP ORDER**

**11.01 STOP ORDER.** A STOP ORDER may be issued by the CHO, Commission, or applicable court of law for the following reasons:

- a. Any reason set forth in Section 10;
- b. When construction, installation or modification of the CAFO is not in compliance with the State Registered Engineer design or operation requirements;
- c. When a CAFO is being constructed, installed, modified or operated in violation of this ordinance;
- d. Failure to comply with any CHO directives which are



## **SECTION 12. INSPECTIONS**

**12.01 INSPECTIONS.** The CHO shall have full power at anytime to enter onto any property to cause or conduct an inspection of any CAFO under construction, installation, modification or operation of any CAFO inclusive of all proposed **land application site areas**. The CHO may require the testing or themselves test any monitoring wells of the lagoon or reasonably require testing of soils, at the CAFO's expense. **THE PROVISIONS OF THIS SECTION SHALL APPLY TO ALL CAFO'S, WASTEWATER LAGOONS, AND LAND APPLICATIONS OF WASTEWATER, WHETHER EXEMPT OR NOT.**

## **SECTION 13. OTHER APPLICABLE LAWS AND TERMINATION OF EXEMPTIONS.**

**13.01 OTHER LAWS AND REGULATIONS.** All other laws and regulations imposed by any other federal or state law, regulation, or applicable agency shall apply hereunder and all operations hereunder shall be governed by such. A breach of such shall also be deemed to be a violation of this ordinance.

**13.02 TERMINATION OF EXEMPTION.** A total or partial exemption from the requirements of this ordinance, granted pursuant to sections 2.01.a shall be revoked and the CAFO shall be subject to all of the requirements of this ordinance if a violation of federal or state laws, regulations or requirements occurs.

## **SECTION 14. CAFO PERMIT FEES**

**14.01 CAFO PERMIT FEES.** The original and annual renewal fee for a CAFO permit shall be based on the maximum allowed number of **animal units** specified by the CAFO permit. \$1.00 per **animal unit** shall be assessed. This fee shall not be assessed for that number of animals which were previously exempt or in situations where modifications to existing operations are made (for example, if Operator increases number of animal units from 1000 to 3000, fee will be charged on 2000, the increased amount). The fee amount herein shall not exceed the anticipated amount needed to recover the cost of inspection, investigation, review of CAFO operation, 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.

## **SECTION 15. PENALTIES**

**15.01 PENALTIES FOR VIOLATION.** Any person who violates any provision of this ordinance is guilty of a misdemeanor. Every day, or any part thereof, in which a violation occurs or continues shall constitute a separate violation.

In addition to the above criminal penalties, the Commission may impose a fine of up to \$500.00 per day for violations of this ordinance which are not corrected within 10 days of being notified of the violation.

The Commission may also revoke the violating CAFO's permit after 10 days notice of violation which remains uncorrected.

## **SECTION 16. APPEALS PROCESS**

**16.01 APPEAL TIME.** Any person aggrieved by any decision of the CHO may appeal to the Commission by filing a written application with the CHO within fifteen (15) days after being notified of the decision which is the subject of the appeal.

**16.02 HEARING.** The Commission shall schedule a hearing on the appeal, and shall give the person appealing notice of the date of hearing at least ten (10) days prior to the hearing date and give the person reasonable opportunity to be heard.

**16.03 PROCEDURES.** Appeal Hearings to the Commission shall be conducted in accordance with the Commission's adopted rules and procedures.

## **SECTION 17. NOTICES**

**17.01 NOTICE REQUIREMENTS.** Any notice required herein or any STOP ORDER shall be served by one of the following methods:

- a. By personal delivery; or
- b. By depositing said STOP ORDER in ordinary mail, postage prepaid, it shall be deemed received one day after deposited in the ordinary mail; or
- c. By posting said STOP ORDER at the CAFO site.

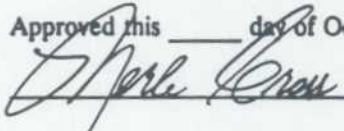
## **SECTION 18. SEVERABILITY.**

**18.01 PROVISIONS HEREIN SEVERABLE.** 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 no 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 otherwise expressly provided. 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, sections or chapters of this ordinance as the same would have been enacted by the Commission without the incorporation in this ordinance of any unconstitutional or invalid phrase, clause, sentence, paragraph, section or chapter.

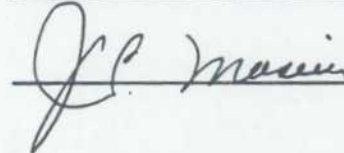
**SECTION 19. AMENDMENTS AND VARIANCES.**

**19.01 AMENDMENT AND VARIANCE.** This ordinance may be amended at anytime as may be determined by the **Commission**. CAFO operators may request the **Commission** that a variance(s) be granted from certain requirements of this ordinance due to an extraordinary, peculiar and/or exceptional situations which would result from an unreasonable deprivation of use as distinguished from the mere grant of a privilege. Such variance may be granted so as to relieve said demonstrable difficulties or hardships, provided the relief can be granted without a 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. Upon request, the **Commission** may consider, grant and/or deny reasonable variances to the requirements of this ordinance and granting of such variance(s) in any situation shall not be deemed to be a waiver of such requirements in any other situation.

Approved this \_\_\_\_\_ day of October, 1997.

 \_\_\_\_\_ Merle Cross, Presiding Commissioner

 \_\_\_\_\_ Steve West, First District Commissioner

 \_\_\_\_\_ J.C. Mosier, Second District Commissioner

ATTEST:

 \_\_\_\_\_ Leo W. Marler, County Clerk

## APPENDIX "A"

### PLANT AVAILABLE NITROGEN (PAN) APPROACH FOR ANIMAL FEEDING OPERATIONS

#### INTRODUCTION

The Department of Natural Resources recommends using a "Plant Available Nitrogen" (PAN) approach 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 plant available nitrogen. Thus, the organic wastes from the animal feeding operations are utilized as a "nutrient resource." The recommended nitrogen availability rates for the Pan approach are shown below. Alternative nitrogen availability rates on a site-specific basis may be considered by the department upon submittal of adequate documentation. See Reference #1 and #3.

PAN Formula:  $wPAN = CNR - sPAN$

CNR = pounds per acre of nitrogen utilized by harvested crop:  
[crop yield unit/acre] x [lbs N/yield unit] x [% crop removal]

sPAN = soil PAN in pounds per acre:  
[% organic matter in soil] x [OR rate]

OR = nitrogen availability rate for soil organic matter based on soil CEC and crop season (See Reference #2 and #5):

Summer crops: 10 for CEC  $\geq$  18; 20 for CEC 10-18; 40 for CEC  $\leq$  10.

Winter crops: 5 for CEC  $\geq$  18; 10 for CEC 10-18; 20 for CEC  $\leq$  10.

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

MR = 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.

<u>Waste Type</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5+</u>
Lagoons: all animal types	.35	.53	.62	.66	.70
Poultry: slurry/dry litter	.60	.70	.75	.80	.85

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 should be based on actual measured yields for each field. Crop uptake of nitrogen should 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) should not exceed a PAN of 65 pounds/acre/year. See Reference #2 and #5.

#### SOIL TESTING:

Soil testing should be conducted in the spring of each year as near as possible to the start of water 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 such as the pre-side-dress soil nitrate test (PSNT) may also be considered.

#### MANURE AND WASTEWATER TESTING:

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

Total Kjeldahl Nitrogen (TKN) as N;  
Ammonia Nitrogen (NH<sub>3</sub>) as N; and  
Nitrate/Nitrite Nitrogen (NO<sub>3</sub>/NO<sub>2</sub>) as N.

Wastewater, sludge and biosolids should be sampled and tested separately if each is to be land applied. Anaerobic lagoon wastewater samples must 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.

Plant Available Nitrogen from applied wastes (vPAN) 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

Nitrogen is only one of the nutrient factors that should be considered when developing a nutrient management plan for each field. Contact the Natural Resources Conservation Service (NRCS) concerning how to develop a complete Nutrient Management Plan. See Reference #5.

#### REFERENCES:

1. Agricultural Waste Management Field Handbook, USDA, Natural Resources Conservation Service (NRCS), April 1992.
2. Soil Test Interpretations and Recommendations Handbook, University of Missouri Department of Agronomy, December 1992.
3. Livestock Waste Facilities Handbook, MWPS-18, Midwest Plan Service, Iowa State University, Ames, Iowa, Second Edition, 1985.

4. Missouri Approach to Animal Waste Management, Manual 115, University of Missouri Extension, 1979.
5. Nutrient Management, Missouri Conservation Practice Standard 590, USDA, Natural Resources conservation Service (NRCS), July 1993.

DEPARTMENT CONTACT FOR QUESTIONS ARE:

If you have any questions regarding this publication, please contact Frank Miller or Ken Arnold at (573) 751-1300.

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.