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Controlling Externalities Associated with Concentrated Animal Feeding Operations: Evaluating the Impact of H.B. 1207 and the Continuing Viability of Zoning and the Common Law of Nuisance

by Jerome M. Organ and Kristin M. Perry

I. INTRODUCTION - UNDERSTANDING THE PROBLEM

This article addresses the environmental problems presented by concentrated animal feeding operations (“CAFOs”). Although CAFOs exist with respect to a variety of livestock operations, because the economic and environmental problems associated with large hog operations have generated the most publicity of late, prompting the Missouri Legislature to pass H.B. 1207 earlier this year, this article focuses largely on the impacts of hog CAFOs. The article begins with a discussion of the impact of hog CAFOs on the hog industry and a description of some of the environmental problems that hog CAFOs present. The next section of the article analyzes the environmental controls reflected in H.B. 1207. Finally, the concluding section of the article evaluates the extent to which zoning and the common law of nuisance may provide local communities and residents with opportunities to control the impact of CAFOs in their communities.

A. Dramatic Change in Missouri’s Hog Industry

Hog production is the most profitable single enterprise in Missouri agriculture. In 1971, Missouri ranked fourth in the nation in hog production. Although Missouri had dropped to seventh by 1994, Missouri still offers many advantages for hog production. Missouri is located near the cornbelt providing easy access to the traditional food for hogs. Missouri offers favorable climatic conditions for hogs. Northern Missouri’s deep clay pan soils, low population density and inexpensive land offer a good location for hog waste lagoons and the extensive pasture land in the surrounding area can effectively utilize hog waste for land application.

The hog industry is becoming increasingly concentrated. The seven largest producers raised 6.6 million hogs at their facilities nationwide in 1994. That represented a 21 percent growth increase in 1994 over 1993. It was estimated that they would have a 30 percent growth in 1995 over 1994. Meanwhile, the overall hog market posted a 1.5 percent growth. In 1995, the 30 largest producers were expected to produce one-quarter of the of the hogs marketed in the U.S.

Recently several large multi-state producers have either located in Missouri or have aggressively expanded in the state. The growth of these operations has been extremely rapid and the number

1 Jerome M. Organ is an Associate Professor of Law at the University of Missouri-Columbia School of Law. Kristin M. Perry, a 1995 graduate of the University of Missouri-Columbia School of Law, is an associate with McIlroy and Millan in Bowling Green, Missouri. The authors want the readers to know that to the extent the footnotes contain any references to materials that are not generally available, copies of such materials are available from the office of the Missouri Environmental Law and Policy Review.
3 Conversation with Professor Ron Plain, Agricultural Economics Department, University of Missouri-Columbia.
4 Agricultural Statistics Board, USDA. Hogs and Pigs, June 1994 at 10. Missouri is ranked behind Iowa, North Carolina, Illinois, Minnesota, Indiana and Nebraska. Missouri went from producing approximately 5 million hogs per year, comprising approximately 7.5% of the U.S. market in 1970 to producing approximately 3 million hogs per year, comprising approximately 4.8% of the U.S. market as of 1992.
5 Conversation with Professor Ron Plain, Agricultural Economics Department, University of Missouri-Columbia. Notably, although this article focuses on CAFOs in the context of the Missouri hog industry, as this note suggests, several states throughout the country presently are experiencing problems with CAFOs. Thus, the issues discussed in this article in the context of the legal framework that exists in Missouri for addressing the environmental problems associated with CAFOs may provide some guidance to individuals in other states regarding legal issues they may wish to review.
6 See D'Pietre, supra note 2.
7 Conversation with Bob Perry, agronomist, biochemist and manager, Perry Agricultural Lab, Inc., Bowling Green, Missouri.
9 Id.
11 See D'Pietre, supra note 2. Four of the top five producers in the country, Cargill, Murphy Family Farms, Premium Standard Farms and Tyson Foods, have operations in Missouri. See Successful Farming, supra note 10.
of hogs they produce in concentrated animal feeding operations [CAFOs] are staggering.\textsuperscript{12}

Murphy Family Farms\textsuperscript{13} of Rose Hill, North Carolina, is the nation's largest producer of hogs, with 180,000 sows in full production.\textsuperscript{14} The company markets over three million hogs a year. In July 1994 a branch of the company, Murphy of Missouri, broke ground on a new feed mill near Nevada, Missouri. This mill will be able to produce 120 tons of ground feed and 40 tons of pelleted feed per hour. This would be enough feed to supply 500 finishing barns each holding 1,100 pigs at a time.\textsuperscript{15} In 1994, Murphy Family Farms had 25,000 sows in Missouri.\textsuperscript{16}

The third largest producer in the nation, Premium Standard Farms, of Princeton, Missouri, went from zero to 96,800 sows in five years.\textsuperscript{17} Premium Standard Farms controls the entire production process. Through a system known as "vertical integration," Premium Standard Farms raises the hogs, slaughters and processes the hogs, and markets the finished product.\textsuperscript{18} Their slaughterhouse in Milan, Missouri has plans to process 8,000 hogs per day. The plant began operation in October 1994.\textsuperscript{19}

Fourth ranked Tyson Foods, with experience in broiler chickens, plans to have 150,000 sows in the next two years under the direction of John Tyson, son of Chairman Don Tyson.\textsuperscript{20} Tyson Foods offers finishing contracts in Missouri and in 1992, purchased the processing plant in Marshall, Missouri.\textsuperscript{21} Tyson has the ambitious goal of controlling ten percent of the U.S. hog slaughter in five years.\textsuperscript{22} "Pork is where poultry was in the 1970's," says the younger Mr. Tyson, "Now the train is leaving the station."\textsuperscript{23}

For about eight years, Cargill, the nation's fifth largest pork producer, has offered Missouri farmers farrowing, nursery and growing/finishing contracts.\textsuperscript{18} In September 1994, however, Cargill's effort to initiate a contract hog operation near Kingdom City, Missouri, was met by strong public opposition prompting the company to withdraw its proposal.\textsuperscript{25} Continental Grain Company, the nation's twelfth largest hog producer, recently began a $50 million pork production project in Daviess and Harrison counties in northwest Missouri.\textsuperscript{26} They expect to add 20,000 sows to Missouri.\textsuperscript{27} This expansion is not focused only in Missouri. Fourteen of the largest 30 producers have operations in North Carolina, seven have operations in Iowa.\textsuperscript{28} Expansion has also begun in states with low population densities that did not formerly raise many hogs. Seaboard, which is tied with Continental Grain as the nation's twelfth largest producer, has expanded operations in Oklahoma.\textsuperscript{29} Premium Standard Farms, which began operations in Missouri five years ago, has expanded into Texas.\textsuperscript{30}

B. Effect of the Rapid Expansion of Large Producers on Traditional Missouri Hog Producers

Raising pigs has traditionally been called the "mortgage burner." With a small lot and a wooden shed, a young farmer could tend a few sows, sell the offspring, and make enough money to buy some cropland. As time went on, the hog income could buy a new truck and maybe send a child to college. Many smaller producers fear that the concentration of hog production will result in the loss of this important supplemental income.

Will the demise of the family farm follow in the wake of this rapid expansion of huge hog facilities? That is the prediction of some experts. Dr. Harold Breimyer, an agricultural economist and professor emeritus at the University of Missouri-Columbia, describes these large hog operations as "hog factories," that constitute a stage in the "remaking of all agriculture."\textsuperscript{31} Dr. Breimyer predicts that a hog farmer no longer will be at the same time worker, owner, and

\textsuperscript{12} See Successful Farming, supra note 10.
\textsuperscript{13} The company changed its name in July 1994 from Murphy Farms. See Successful Farming, supra note 10, at 22.
\textsuperscript{14} Id.
\textsuperscript{15} Id.
\textsuperscript{16} Mike Hendricks, Farms Causing a Sink, K.C. Star, Nov. 29, 1994, at A-1.
\textsuperscript{17} See Successful Farming, supra note 10.
\textsuperscript{19} Information supplied by plant employee during tour of the plant.
\textsuperscript{21} See Report of Commercial Agriculture Swine Focus Team, supra, note 2.
\textsuperscript{22} Power Pork, supra note 20, at A5.
\textsuperscript{23} Id.
\textsuperscript{24} See Report of Commercial Agriculture Swine Focus Team, supra note 2, at 71.
\textsuperscript{25} Theodore P. Roth, Neighbors Against Hog Farm, Columbia Daily Tribune, Sept. 13, 1994, at SB.
\textsuperscript{26} Gallatin Industrial Development Authority, Position Paper, March 21, 1994.
\textsuperscript{27} See Successful Farming, supra note 10, at 20-21.
\textsuperscript{28} Id. at 20.
\textsuperscript{29} Id.
\textsuperscript{30} Id. at 21.
\textsuperscript{31} Presentation at Public Policy Forum on Hog Farm Issues, University of Missouri-Columbia, July 25, 1994.
proprietary manager. Rather, the farmer will be relegated to a lower status as a worker in a megacorporation that controls the food supply, huge acreages of land, and the people they employ. That fear has rallied a coalition of concerned social organizations.32

Dr. Ron Plain, also an agricultural economist at the University of Missouri-Columbia, believes that independent producers can still compete with the mega-producers.33 Some farmers have expanded their operations, hoping to do just that.34 Some farmers are forming cooperatives to match some of the advantages of large scale production and marketing.35 Yet, some producers have felt the recent crunch of the market and have discontinued their hog operations. A few have taken advantage of a new opportunity, a market for their land. One hundred farmers sold 37,000 acres to Premium Standard Farms for its facilities in Northern Missouri.36

The success of both large and small producers, however, depends significantly on the marketplace. In the last quarter of 1994, hog prices plummeted to approximately 24 cents per pound, the lowest price in fourteen years.37 Although prices were back up to 41 cents per pound in the beginning of 1995,38 in the first week of May 1995, Premium Standard Farms announced that it would delay construction on its expansion plans into Texas due to lower than anticipated market conditions.39 Over time, the impact of the depressed hog market had even more significant consequences for Premium Standard Farms, as it recently declared bankruptcy forcing it to renegotiate its agreements with its creditors,40 in spite of the fact that hog prices rebounded to the 55 cents per pound range in recent months.41

C. Hog Farming and Externalities - Of Water Pollution and Odors

Most large hog operations in Missouri are CAFOs. Hogs are grown inside large barns with slated floors which allow the manure to fall below the pens to a concrete pit which in turn is flushed or scraped periodically to an outdoor lagoon. In the lagoon, the manure decomposes and is stored until it can be applied to the land as fertilizer. Lagoons potentially present both water pollution and air pollution problems. Releases of the hog waste, from leaks in lagoons or problems with overfilling, can contaminate streams and lead to fish kills.42 Though there is some odor from the animals themselves, the odors from swine production facilities are predominantly from manure decomposition, with odor from fresh manure generally less offensive than odor released when manure undergoes anaerobic decomposition in the lagoons. Anaerobic lagoon odors are most common in the spring and early summer when the water temperature warms and manure accumulated during the winter undergoes rapid decomposition.44 Anaerobic bacteria are slow growing. It can take more than a year for bacteria populations to "mature" to desired concentrations. Until a lagoon reaches maturity, there may be elevated odor problems.45

The most common compounds that cause the offensive odors during the decomposition process are: ammonia, hydrogen sulfide, skatole, indole, and the amines and mercaptans.46 Odor dispersion depends on meteorological factors: wind direction and velocity, ambient temperature, degree of cloudiness, and air pressure. Other factors affecting odor emissions are surface area and lagoon depth.47

Water pollution and air pollution problems also result when hog waste is applied to the land as fertilizer.48 Applying excessive amounts of hog waste can result in releases into streams and rivers,

32 Betsy Freese, Fed Up with the Big Boys, SUCCESSFUL FARMING, Apr. 1994, at 18, 19.
33 Conversation with Professor Ron Plain, Agricultural Economics Department, University of Missouri-Columbia.
34 V. James Rhodes, Research Paper, Do Large Hog Operations in a State Drive Out Its Smaller Hog Operations?
35 Linda K. Smith, Hog Producers Go to the Net, FARM JOURNAL, Nov. 1994, at 18, 19.
37 Yesterday’s Commodities Line, Columbia Daily Tribune, Nov. 23, 1994, at 6B.
38 Yesterday’s Commodities Line, Columbia Daily Tribune, Jan. 27, 1995, at 8B.
40 Bankrupt Hog Farm is Industry Role Model, St. Louis Post-Dispatch, July 4, 1996, at C3.
41 Many attribute the boom in hog prices in recent months to reduced breeding during the hot summer of 1995, the increasing costs of feed, and the increased demand resulting from several fast food restaurants adding bacon to their sandwiches. Cheryl Strauss Einhorn, Corporate Hogs - The USDA Can’t Keep Up, BARRON’S, Aug. 12, 1996, at MW12.
43 Anaerobic decomposition describes a decomposition process produced by bacteria existing in the absence of oxygen.
44 J. Ronald Miner & Clyde L. Barth, Controlling Odors from Swine Buildings, Purdue University Cooperative Extension Service PIH-33 (1994) at 2-3.
46 Id. Traces of as many as 200 other compounds may be present. Conversation with Dr. Charles Fulhage, Agricultural Engineering Extension Specialist, University of Missouri-Columbia.
47 Controlling Odor from Swine Buildings, supra note 44, at 7. See also Steward W. Melvin & Dwayne S. Bundy, Agriculture and Biosystems Engineering Department, Iowa State University, Prediction of Odor Transport from Animal Production Systems.
48 Manure provides an excellent source of nitrogen and phosphorus for non-legume forage crops (hay fields). Conversation with Bob Perry, agronomist, biochemist and manager Perry Agricultural Laboratory, Inc., Bowling Green, Missouri. See also Lagoon Management, supra note 45, at 5.
D. Balancing the Costs and Benefits of CAFOs

As a result of the new hog operations, residents of Northern Missouri counties are experiencing the first rise in population since the turn of the century. Many residents see these corporations as bringing community development and needed jobs for their children. Other residents fear these corporations will destroy their opportunity to farm on a small scale and will dramatically deteriorate their quality of life. The debate has reached beyond agricultural journals and local newspapers.

Discussions on the fate of the family farm and the future of agriculture often include the issues of hog waste and hog odor. Hog waste and hog odor are new problems. They affect every hog producer. The concentration of such large numbers of hogs in small areas is new, however. Also, our environmental awareness is more acute now than it was thirty years ago when northern Missouri saw similar hog counts spread throughout the area. As increasing numbers of hogs are concentrated in larger and larger CAFOs, the CAFOs must handle increasing volumes of hog waste. It should not be surprising, therefore, that some of these CAFOs have experienced releases of hog waste from leaking lagoons or over-application of wastes to agricultural lands. Although these spills, which frequently have resulted in fish kills, have garnered the most public attention, these large CAFOs also present large odor problems for neighbors. Indeed, with the increasing number of hogs concentrated in CAFOs, it should not be surprising that increasing volumes of hog waste would create more significant odor problems affecting a larger geographic area. There is little disagreement that hog waste has a strong odor. How offensive that odor is may be related to a person’s views on the changing hog industry, which in turn may reflect that person’s situation and values. To some it smells like money. To some it just plain stinks.

In the midst of the social and economic debate regarding CAFOs, sit the residents who live near the hog facilities, feeling used like pawns for other people’s political agendas. The CAFOs affect their daily lives. They are pulled in both directions. They want to see their towns grow; yet, they worry about their future in agriculture. They live on land that has been in their families for generations, they don’t want to move, and they want to get along with their neighbors, but it smells bad. Sometimes, they can’t open their windows on a warm spring day as they could just last year or the year before. Some days they can’t go out and play in the yard or work in the garden. Sometimes, they experience physical discomfort and nausea. Some days the smell is intense. Other days, it doesn’t smell at all. They have received no compensation for their discomfort. They are too few in number to affect the political process and generally lack the resources to wage expensive legal battles. What are they to do?

How many streams should we allow to be contaminated by hog waste? How much odor is too much odor? How many bad days are too many bad days? How much discomfort should they have to bear for the growth of their community? Does the law meet the needs of the people of the State of Missouri?

II. THE LEGAL FRAMEWORK FOR REGULATING CAFOS IN MISSOURI PRIOR TO THE ENACTMENT OF H.B. 1207

Prior to the enactment of H.B. 1207, Missouri did have some regulations addressing water pollution problems attributable to CAFOs, but essentially had no direct regulation addressing odor issues.

A. Water Pollution from CAFOs is Regulated by “No-Discharge” Permits Under the Clean Water Act

Prior to this year, CAFOs were subject to few efforts to minimize their impact on the environment. The only direct regulation of CAFOs arose under the Clean Water Act. Among other things, the

Concerned Area Residents for the Environment v. Southview Farm, 34 F.3d 114 (2d. Cir. 1994) (holding that animal feeding lot operation which spread waste onto land resulting in release to waters of the state was a point source under Clean Water Act and was not exempt under agricultural exemption). Testing of both manure and soil to determine proper rates of manure application is recommended. Lagoons must have sufficient capacity to allow storage until land application can be accomplished under the most favorable weather conditions. Conversation with Bob Perry, agronomist, biochemist and manager Perry Agricultural Laboratory, Inc., Bowling Green, Missouri. See also Lagoon Management, supra note 45, at 5.

See Prediction of Odor Transport, supra note 47. Soil injection rather than surface spreading can minimize the release of odorous gases during the land application process. Id.

The Economic Effect of Premium Standard Farms on Missouri, supra note 18, at 21.


See supra note 42 and accompanying text.

Id.

Corporate Hog Production in North Missouri, supra note 36, at 9.

These comments are derived from conversations with affected residents.

The Federal Water Pollution Control Act, commonly known as the Clean Water Act, is located at 33 U.S.C. §§ 1251-1387 (1994).
Clean Water Act generally regulates the discharge of pollutants from point sources into the waters of the United States. Although the Clean Water Act specifically identifies CAFOs as point sources, the Second Circuit Court of Appeals also has ruled that land application of manure from a CAFO can constitute a point source discharge under the Clean Water Act, thus requiring a permit prior to discharge. With respect to CAFOs, Missouri's regulations under the Clean Water Act specifically provide that CAFOs containing more than a certain number of animal units must obtain a "no-discharge" permit. Even those livestock operations that are not required to obtain a permit, however, nonetheless must comply with the Clean Water Act's "no point-source discharge" requirement.

III. MISSOURI'S LEGISLATIVE RESPONSE TO WATER POLLUTION AND AIR POLLUTION FROM CAFOS - H.B. 1207

In response to a spate of hog waste releases in the last couple of years that resulted in significant fish kills, and to public complaints about the odor problems presented by CAFOs, the Missouri General Assembly concluded that the existing regulation of CAFOs needed to be significantly upgraded. Accordingly, in May 1996, the Missouri General Assembly passed H.B. 1207, which the governor signed into law on June 25, 1996. H.B. 1207 creates several new sections describing both the Department of Natural Resources' authority to regulate CAFOs and specific obligations that shall be imposed on CAFOs. In brief, H.B. 1207 forces CAFOs to internalize external costs by requiring greater efforts to prevent releases of hog waste to the waters of the state and by requiring buffer zones to minimize the impact of odors on residents near CAFOs.

A. Preventing Releases of Waste to the Waters of the State

Section 640.710 requires the Department of Natural Resources (DNR) to "promulgate rules regulating the establishment, permitting, design, construction, operation and management of class I facilities," which constitute all facilities with a capacity of 1,000 animal units or more.

Most of the specific mandates contained in H.B. 1207, however, apply only to class IA facilities, those with 7,000 or more animal units. For

60. Section 402 of the Clean Water Act describes the National Pollutant Discharge Elimination System, under which any point source must obtain a permit. 33 U.S.C. § 1342 (1994). Section 502(14) of the Clean Water Act defines a point source as "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." The definition expressly excludes "agricultural stormwater discharges and return flows from irrigated agriculture" from the definition of point sources. 33 U.S.C. § 1362(14) (1994).

61. Concerned Area Residents for the Environment v. Southview Farm, 34 F.3d 114 (2d. Cir. 1994) (holding that animal feeding lot operation which spread waste onto land resulting in release to waters of the state was a point source under Clean Water Act and was not exempt under agricultural exemption).


63. The Missouri Code of State Regulations defines "animal unit" as follows: "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; 10 sheep; 30 laying hens; 55 turkeys; 100 broiler chickens or an equivalent animal unit. The total animal units at each operating location are determined by adding the animal units for each animal type. Mo. Code Regs. tit. 10 § 306.300[2](B) [1996].

64. Mo. Code Regs. tit. 10 § 206.300[2](A)(B)(D) [1996]. The no-discharge requirement is incorporated by reference to 40 C.F.R. 412.194 (1992). Facilities with 1,000 or more beef feeder or slaughter cattle, 700 or more dairy cows (milking and dry cows), 2,500 or more swine each weighing over 55 pounds, 500 or more horses, 10,000 or more sheep, lambs or goats, 55,000 or more turkeys, 100,000 or more broiler chickens, or 30,000 or more laying hens are considered class I facilities which must obtain a permit. The regulations also give the DNR authority to require smaller facilities to obtain a permit under certain circumstances. Mo. Code Regs. tit. 10 § 206.300(2)(A)(B)(C)[1996].

65. Mo. Code Regs. tit. 10 § 206.015 and tit. 10 § 206.300[2](B) [1996].


68. See supra note 42 and accompanying text.


71. H.B. 1207 creates the following new sections that address the Department of Natural Resources' authority to regulate CAFOs or that specifically define the obligations that are imposed on CAFOs: 640.700, 640.703, 640.710, 640.715, 640.717, 640.725, 640.730, 640.735, 640.740, 640.745, 640.747, 640.750, 640.755, 1 and 2.

example, section 640.710 authorizes the DNR to “require monitoring wells on a site-specific basis when . . . class IA . . . lagoons are located in hydrologically sensitive areas where the quality of ground-water may be compromised.”

In addition, section 640.700 specifically provides that sections 640.725, 640.730, 640.735 and 640.750 “shall only apply to class IA facilities as defined by the department rules in effect as of January 30, 1996 which use a flush system” to clean waste out of the animal confinement facility. Section 640.725 requires that a class IA facility employ someone “who shall visually inspect the animal waste wet handling facility and lagoons for unauthorized discharge and structural integrity at least every twelve hours with a deviation of not to exceed three hours.”

Section 640.730 requires any class IA facility that “poses a risk . . . to any public drinking water supply or any aquatic life, or lies within a drainage basin and is within three hundred feet of any adjacent landowner,” to “have a failsafe containment structure or earthen dam that will contain, in the event of an unauthorized discharge, a minimum volume equal to the maximum capacity of flushing in any twenty-four hour period from all gravity outfall lines, recycle pump station, recycle force mains.” Section 640.735 requires class IA facilities to report within twenty-four hours, to the DNR and all adjoining property owners, “any unauthorized discharge . . . that has crossed the property line of the facility or any unauthorized discharge . . . which the failsafe containment structure or earthen dam” fails to contain such that it crosses the property line of the facility or enters waters of the state. Finally, section 640.750 requires the DNR to conduct at least one quarterly on-site inspection of each class IA facility.

One other significant aspect of H.B. 1207 concerns the creation of a “Concentrated Animal Feeding Operation Indemnity Fund.” The fund, which is financed by a fee on class IA facilities of ten cents per animal unit permitted, will be used “to close class IA, class IB, class IC and class II” CAFOs that have been placed in the control of the government due to bankruptcy, failure to pay property taxes or abandonment of the property. Notably, no more than $100,000 can be spent per lagoon for animal waste lagoon closure activities.

In addition, to the extent that the owner or operator of any class I or class II CAFO successfully closes the CAFO, section 640.747 requires that the DNR return to such CAFO all moneys it paid into the indemnity fund.

B. Minimizing the Impact of CAFOs on Neighboring Residents

H.B. 1207 also makes some effort to minimize the impact of CAFOs on neighboring residents as it imposes a “buffer zone” requirement on all new class IA facilities. Section 640.710.2 forces the DNR to require buffer distances “between the nearest confinement building or lagoon and any public building or occupied residence.” The buffer distances increase with the increase in the number of animal units at the facility. Thus, for CAFOs with at least 1,000 animal units the buffer distance is at least 2,000 feet. For CAFOs with between 3,000 and 6,999 animal units inclusive the buffer distance is 2,000 feet. For CAFOs with 7,000 or more animal units the buffer distance is 3,000 feet. The statute also allows the DNR to impose a lesser buffer distance based on a review

74 Mo. Rev. Stat. §640.700 (Supp. 1996). The DNR rules in effect as of January 30, 1996 define class IA facilities as follows:
Class IA is an operating location for a concentrated animal feeding operation which contains or is designed to contain equal or more than the following number and types of animals: (I) 7,000 beef feeder or slaughter cattle; (II) 4,900 mature dairy cows (milking and dry cows); (III) 17,500 swine weighing over 55 pounds; (IV) 3,500 horses; (V) 70,000 sheep, lambs or goats; (VI) 385,000 turkeys; (VII) 700,000 broiler chickens; (VIII) 210,000 laying hens; or (IX) 7,000 animal unit equivalents.
76 Mo. Rev. Stat. §640.725.1 (Supp. 1996). The section also requires the facility to maintain the records of such inspections for three years. Id.
77 Mo. Rev. Stat. §640.725.2 (Supp. 1996). The section requires all new construction permits to require such shut-offs, and requires existing facilities to have such shut-offs installed by July 1, 1997. Id.
of the “prevailing winds, topography and other local environmental factors,” provided that the DNR sends its recommendation regarding a lesser buffer distance to the governing body of the county in which the facility is located and the governing body does not reject the recommendation by a majority vote at their next meeting.\textsuperscript{90}

Notably, the buffer distance focuses solely on the location of the lagoons and does not encompass any concern for the location of the fields on which the hog waste ultimately is applied, even though odor problems are known to result from the location of the fields on which the hog waste lagoons and the process of applying hog waste to the surrounding fields.\textsuperscript{91} In addition, the buffer zone concept does not apply to residences owned by the CAFO in question or to residences “from which a written agreement for operation” has been obtained.\textsuperscript{92} Further, the buffer zone concept does not apply to CAFOs “in existence as of the effective date of this act.”\textsuperscript{93} Finally, the General Assembly specifically opted not to preempt local control over land use decisions. Section 640.710.5 expressly provides that “[n]othing in this section shall be construed as restricting local controls.”\textsuperscript{94} Section 640.755.1 further provides that “[t]he provisions of this section shall have no effect on pending litigation.”\textsuperscript{95}

One other significant aspect of H.B. 1207 that relates to impacts on neighboring residents concerns the permit application process. Although the legislature probably opted for the relatively low-tech solution reflected in “buffer zones” because there is no easy, relatively inexpensive technological solution to the hog waste odor problem. Site selection has been the traditional, least expensive method of odor control. Although the legislature could have developed a more sophisticated method of developing the various buffer distances, it essentially tried to equate distance with perceived impact based on number of hogs. The legislature, however, could have and probably should have given attention to alternative waste treatment methods that can reduce odor, because in the absence of regulation, CAFOs are unlikely to pursue such alternatives given the additional expense.

C. Evaluation of H.B. 1207 as a Tool for Controlling the Environmental Impacts of CAFOs

With the enactment of H.B. 1207, the legislature has imposed on the largest CAFOs, those in class IA,\textsuperscript{98} a host of new regulations designed to reduce the likelihood that such CAFOs will experience releases of livestock waste to the waters of the state. In deciding to exclude class IB and class IC facilities from such regulations, the legislature tried to balance its concern for the environment with its desire to avoid imposing undue burdens on smaller livestock producers. Although some may question whether the legislature found the appropriate balance, its decision to exclude class IB and class IC facilities does not insulate such facilities from potential liability should their activities result in releases of waste to the waters of the state in violation of the Clean Water Act’s “no discharge” requirement. Accordingly, class IB and class IC facilities continue to have an incentive to take voluntary steps to reduce the likelihood of releases of waste to the waters of the state.

With H.B. 1207’s “buffer zone” concept, the legislature also makes a nominal effort to adjust the balance of rights between CAFOs and neighboring residents. The “buffer zone” should provide some relief for landowners faced with the prospect of a CAFO arriving on a nearby parcel of land. Unfortunately, because the “buffer zones” described in H.B. 1207 range from just under one-fifth of a mile to just under three-fifths of a mile, and focus solely on the location of the lagoons without addressing odor problems associated with land application of hog waste, H.B. 1207 fails to offer meaningful relief to many potentially affected residents who live in or just beyond these “buffer zones.” Moreover, H.B. 1207 does nothing to assist those residents already affected by CAFOs that have located in their vicinity, as H.B. 1207’s “buffer zones” concept applies only prospectively.\textsuperscript{99}

\textsuperscript{90} Mo. Rev. Stat. §640.710.2(c) (Supp. 1996).
\textsuperscript{91} See supra note 70 and accompanying text.
\textsuperscript{93} Mo. Rev. Stat. §640.710.3 (Supp. 1996).
\textsuperscript{98} See supra note 74.
\textsuperscript{99} The legislature probably opted for the relatively low-tech solution reflected in “buffer zones” because there is no easy, relatively inexpensive technological solution to the hog waste odor problem. Site selection has been the traditional, least expensive method of odor control. Although the legislature could have developed a more sophisticated method of developing the various buffer distances, it essentially tried to equate distance with perceived impact based on number of hogs. The legislature, however, could have and probably should have given attention to alternative waste treatment methods that can reduce odor, because in the absence of regulation, CAFOs are unlikely to pursue such alternatives given the additional expense.
IV. The Impact of H.B. 1207 on Other Forms of Local Control of CAFOs - Zoning and Nuisance

So what does H.B. 1207 mean for residents and municipalities troubled by existing CAFOs or by the prospect of potential CAFOs? This section explores some of the issues that residents and municipalities face as they look at controlling CAFOs through zoning and through common law nuisance actions.

A. County and Township Zoning

Because the legislature specifically opted not to preempt local control over land use decisions,100 zoning remains a potentially viable option for local governments to use in an effort to control the location of CAFOs within their communities.

1. County Zoning

Zoning in Missouri for second and third class counties (the classification of most rural counties) may consist of planning only, zoning only, or planning and zoning. It requires approval of a majority of voters.101 The county zoning enabling statute, however, precludes counties from making zoning applicable to the raising of crops, livestock, or the erection, maintenance, repair, alteration or extension of farm building or farm structures used for such purposes in an area not within a flood plain.102 In addition, it provides that zoning powers shall not be construed so “as to deprive the owner, lessee or tenant of any existing property of its use or maintenance for the purpose to which it is then lawfully devoted.”103 Thus, even though H.B. 1207 does not preempt local control, the county zoning enabling act does not give counties the ability to exercise zoning control over agricultural or livestock operations.

County zoning has not been all that popular in any event. Very few counties have zoning in Missouri. In Pike County in northeast Missouri, for example, where swine production is very important, county zoning was surprisingly defeated.
in the 1994 election. Nonetheless, a few counties have approved zoning. For example, Worth County, the smallest county in Missouri (pop. 2,465, area: 266 sq. miles), located along the Iowa border and the site of a new Continental Grain hog operation, approved zoning by a vote of 694-583. While admitting that the residents were concerned about zoning, the presiding county commissioner said that the voter approval showed that residents wanted hog operators to be accountable. Of course, it remains to be seen whether such direct efforts to apply zoning to hog operations will withstand challenges given the statutory exemption provided for the raising of agriculture and livestock.

Pettis County has tried to avoid the constraints contained within the county zoning enabling act by recently passing a “health ordinance” that implements a more expansive “buffer zones” concept and imposes other regulations on CAFOs. Whether such a thinly disguised effort at “zoning” the raising of livestock will withstand legal challenge remains to be seen.

2. Township Zoning

In 1989, the Missouri legislature created the possibility of township planning, and/or zoning in any unincorporated areas (areas outside the corporate limits of any city, town or village which has adopted a city plan) if that township is located in a county that does not have county zoning. The question of township zoning may be put upon the ballot by motion of the township board, or upon petition signed by a number of qualified voters in the “county” [not township] equal to five percent of the total vote for governor in such township at the most recent general election at which a governor was elected.

The township zoning enabling statute, much like the county zoning enabling statute, does not authorize townships to enact zoning that regulates agricultural crops or farm buildings or structures. Unlike the county zoning enabling statute, however, the township zoning enabling statute does not preclude regulation of livestock. In addition, the township zoning enabling statute provides that township zoning regulations are controlling when they require a more restricted use of land or impose other higher standards than are required in any other statute.

The question arises whether a hog waste lagoon is a “farm structure” under the township zoning enabling statute. Lagoons are constructed by bulldozing earth, similar to creating a pond. No concrete or building materials are used, although they are “connected” to the barns (and sometimes fields) by pipes. Some townships apparently believe the exemption does not apply to lagoons as they have passed zoning regulations to control lagoon siteselection. A few years ago, York Township in Putnam County prevented Farmland Industries of Kansas City from locating a hog operation in the area by requiring hog lagoons to be located at least one mile from the nearest farmhouse, the local equivalent of H.B. 1207’s “buffer zones.”

More recently, Lincoln Township passed a township zoning ordinance that has resulted in litigation over a number of issues including the “farm structures” issue. On February 21, 1994, Premium Standard Farms voluntarily held a public meeting to inform residents of Lincoln Township in Putnam County of expansion plans. Four days later, voters in Lincoln Township petitioned to place township zoning on the ballot. Between February 17 and April 6 Premium Standard spent $1.9 million toward the purchase of property in Lincoln Township where the company planned to build 12 hog
operation sites, with a total of 96 hog barns and 12 lagoons. On June 7, 1994, Lincoln Township voted to adopt zoning regulations that would require, among other things, a one-mile setback for each lagoon. Premium Standard’s proposed lagoons did not meet that buffer requirement.

On July 29, 1994, Premium Standard Farms filed suit against Lincoln Township requesting injunctive relief to exempt Premium Standard Farms from the regulations and claiming $7.9 million in damages. Lincoln Township filed a counterclaim asserting that Premium Standard Farms’ operation constituted a nuisance.

The Putnam County Circuit Court dismissed Lincoln Township’s nuisance claim, holding that Lincoln Township did not have standing to assert a nuisance claim. Premium Standard Farms then moved for summary judgment on three grounds: (1) that the township zoning enabling act is unconstitutional because section 65.652 requires members of the Township Planning Commission to be “freeholders;” (2) that Premium Standard Farms lagoons are exempt from zoning as “farm structures;” and (3) that Lincoln Township does not have the authority to require bonds to assure post-closure cleanup of lagoons. The Putnam County Circuit Court granted summary judgment in favor of Premium Standard Farms on the “freeholder” issue and the “post-closure bonds” issue, but denied Premium Standard Farms’ request for summary judgment on the “farm structures” issue.

Both parties have filed notices of appeal with the Missouri Supreme Court. The case should be heard in the next several months.

3. Evaluation of Zoning as a Tool for Controlling the Environmental Impacts of CAFOs.

Of course, zoning is not a panacea. Zoning of CAFOs may not be available at the county level, except under the guise of a “health ordinance,” and may not be available at the township level if the township is in a county with zoning. Even if zoning is available as an option, it may not do much to help with preexisting uses which will remain valid under the most common approaches to nonconforming uses. In addition, as the case involving Lincoln Township and Premium Standard Farms highlights, questions remain about the extent to which township zoning actually can control CAFOs.

Moreover, even though zoning at the county and the township levels may permit local residents to control their own destiny, many rural residents are wary of zoning. In sparsely populated areas, zoning permits a few citizens to determine the use of a disproportionately vast acreage of land. Despite the agricultural exemptions in the Missouri law, farmers apparently worry that zoning boards will keep them from building necessary farm structures or maintaining fences. In addition, litigation related to zoning regulations can be extremely costly to small-budget townships. A lawyer in Harrison County pointed out to the news media that most townships have total budgets of $20,000-$40,000. The money the townships need to defend lawsuits was intended for road repair and other services. In Southwestern Missouri, in Vernon and Barton county, where Murphy of Missouri is building a large feed mill, zoning passed in only one of 20 townships. One news account reported that residents feared zoning would mean court battles, leaving no money to fix roads.

The complaint alleges that Lincoln Township’s zoning regulations constitute a taking of Premium Standard Farms property and have taken and rendered useless property worth at least $7,991,645. Premium Standard Farms asserts that township zoning is unconstitutional because it requires a member of the Township Planning Commission to be a “freeholder;” that there is no delineation for zoning districts which would enable a person to tell where one district ends and the next begins because the Official Zoning Map does not delineate districts and boundaries, and that these zoning restrictions were done without actual notice to Premium Standard Farms. The company further claims that the lagoons are exempt as farm structures, that the zoning regulations are not uniform for each class or kind of building within the district, and that Lincoln Township did not have the authority to require bonds for the construction of lagoons, or to regulate farms, their buildings or structures. Premium Standard Farms also maintains that township regulations for farm lagoons are preempted by federal and state environmental statutes and by regulations applied and enacted by DNR. Id.

Id.

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Id.

Although H.B. 1207 defined “freeholders” to mean residents, see supra note 109, H.B. 1207 was enacted nearly two years after Lincoln Township passed its zoning ordinance. Thus, at the time in question, Lincoln Township required that the members of its Township Planning Commission had to be “freeholders.”

Id.

Id.

Id. Lincoln Township has appealed the dismissal of its nuisance claim, as well as the grant of summary judgment on the “freeholder” issue and the “post-closure bond” issue. Premium Standard Farms has appealed the denial of summary judgment on the “farm structures” issue.

Matthew v. Smith, 707 S.W.2d 411, 418 (Mo. 1986). Because the nonconforming use is inconsistent with the zoning ordinance, however, the ordinance generally is strictly construed to limit the duration of the nonconforming use by preventing expansion or terminating the right to continue the nonconforming use upon abandonment of such use. Acton v. Jackson County, 854 S.W.2d 447, 448-49 (Mo. Ct. App. 1993).

Farms Causing a Stink, supra note 16, at A-10

Id.
Accordingly, although zoning remains a possible vehicle through which local residents may be able to exercise some control over CAFOs, many questions remain concerning both the extent to which counties and townships have authority to regulate CAFOs through zoning and the extent to which residents are willing to embrace zoning as a vehicle for regulating land use in their communities.

B. Nuisance Law

Regardless of whether a community has adopted zoning, residents of a community can turn to the common law of nuisance to seek redress when someone’s land use unreasonably interferes with the use and enjoyment of another’s.

1. Understanding the Nuisance Cause of Action

A private nuisance in Missouri is defined as the “unreasonable, unusual, or unnatural use of one’s property so that it substantially impairs the right of another to peacefully enjoy his property.” A condition will give rise to a nuisance action only when it results in an unreasonable interference in the use and enjoyment of property. Although persons are expected to endure the “usual annoyances and discomforts” incident to businesses which are properly located in their community, these annoyances and discomforts must not be more than those annoyances which are ordinarily to be expected in the community. If they exceed what might be reasonably expected and cause unnecessary harm then the court will grant relief.

Essentially, the law of nuisance recognizes two conflicting rights: property owners have a right to control their land and use it to benefit their best interests; the public and neighboring land owners have a right to prevent unreasonable use that substantially impairs the peaceful use and enjoyment of their land. The unreasonable use element of nuisance balances the rights of adjoining property owners. There are no exact guidelines to follow. What may constitute a nuisance in one location may not constitute a nuisance elsewhere.

\[\text{130 Frank v. Environmental Sanitation Management, Inc., 687 S.W. 2d 876, 880 (Mo. 1985). See Comment, The Law of Private Nuisance in Missouri, 44 Mo. L. Rev. 20 (1979). A nuisance may be a public nuisance or a private nuisance or both. Although most of the following discussion focuses on private nuisance, affected residents should not overlook the possibility of bringing a public nuisance action. Someone’s conduct generally constitutes a nuisance if it affects the public health, peace or comfort of a number of persons. State v. Errington, 317 S.W.2d 326, 331 (Mo. 1958); State ex rel. Renfrow v. Service Cushion Tube Co., 291 SW 106, 108 (Mo. 1927). In Renfrow, the single fact of offensive odors, deleterious to the health of the people in the community, was sufficient to authorize a finding that a nuisance existed, and that it was of a public character. Id. Notably, a public nuisance action generally is initiated by an elected official, such as the county prosecutor, St. Charles County v. Dardenne Realty Company, 771 S.W.2d 828 (Mo. 1989); County of Shannon v. Mertzluff, 630 S.W.2d 238 (Mo. Ct. App. 1982). While private individuals may bring a public nuisance action if they can assert an injury different from the injury to the public at large. Grommet v. St. Louis County, 680 S.W.2d 246 (Mo. Ct. App. 1984).}

\[\text{131 Clinic and Hospital, Inc. v. McConnell, 236 S.W. 2d 384 (Mo. Ct. App. 1951).}

\[\text{132 Id. at 391.}

\[\text{133 Id. The Law of Private Nuisance in Missouri, supra note 130, at 21-22.}

\[\text{134 In re Hindman, 649 S.W. 2d 207 (Mo. 1983).}

\[\text{135 City of Fredericktown v. Osborn, 429 S.W. 2d 17, 22 (Mo. Ct. App. 1968); Clinic and Hospital v. McConnell, 236 S.W. 2d at 391.}

\[\text{136 Clinic and Hospital, Inc., 236 S.W. 2d at 391; The Law of Private Nuisance in Missouri, supra note 130, at 45.}

\[\text{137 236 S.W.2d at 391; The Law of Private Nuisance in Missouri, supra note 130, at 58-59. Whether Missouri completely embraces the Restatement’s definition of nuisance remains a mystery. In Frank v. Environmental Sanitation Management, Inc., 687 S.W.2d 876 (Mo. 1983), the Missouri Supreme Court held that the Restatement (Second) of Torts § 822 (1965), which provides that a nuisance exists if the defendant’s conduct is intentional and unreasonable or unintentional and otherwise actionable under the rules governing negligence, reckless or ultrahazardous conduct, does not accurately reflect Missouri’s nuisance law. Id. at 879-80. Because nuisance is not an act or failure to act, the court noted that defendant’s negligence, intention, design or motive are immaterial in determining liability for nuisance. Id. at 880 n.3 (citing White v. Smith, 440 S.W.2d 497 (Mo. Ct. App. 1969)). In so holding, the Court affirmed the use of MAI 22.06, a jury instruction that does not mention the defendant’s fault. The jury instruction has four components: First, the plaintiff must use his property as a residence. Second, the nuisance is to be described (such as “defendant operated a slaughter house in close proximity to plaintiff’s residence”). Third, the injury is to be described (such as “ill-smelling odors escaped from defendant’s property onto plaintiff’s property and this substantially impaired plaintiff’s use of his property”). Fourth, such use by defendant of his property must be unreasonable. Missouri Approved Jury Instructions, MAI 22.06 Fourth Edition (1991). Nonetheless, when the Missouri Supreme Court abandoned the common enemy doctrine with its decision in Hains Implement Co. v. Missouri Highway & Transportation Commission, 859 S.W.2d 681 (Mo. 1993), the court expressly referenced section 822 of the Restatement (Second) of Torts (1977) in describing the basis for determining liability under the rule of reasonable use. Id. at 689. (“Liability arises when the defendant’s conduct is either (1) intentional and unreasonable, or (2) negligent, reckless, or in the course of an abnormally dangerous activity.”). In addition, the Missouri Supreme Court previously has...}
Courts can grant injunctions and/or damages as remedies for private nuisances. The measure of damages may vary depending upon whether the nuisance is characterized as temporary or permanent. The measure of damages for a permanent nuisance is the depreciation in the market value of the land, while the measure of damages for a temporary nuisance is the depreciation in the rental or use value of the land. Special damages for the inconvenience and discomfort suffered by the plaintiff and his family are also recoverable in private nuisance action.

Temporary nuisance gives rise to a new cause of action for each new injury which occurs to the plaintiff's property. Plaintiff is entitled to bring successive actions, but must include all damages which have accrued at that time. When the nuisance is permanent, the statute of limitation begins to run immediately upon the creation of the nuisance and plaintiff must sue to recover all damages, present and prospective, in one action.

Unfortunately, no litmus test exists to determine whether a particular activity constitutes a temporary or permanent nuisance. Although temporary damages have been the ordinary measure for odor nuisances (i.e., actual damages to date of trial), the court in Bower v. Hog Builders, Inc., held that hog waste and odor constituted a permanent nuisance. The Bower court further ruled that when plaintiffs claim no loss of income, the depreciated value of the farm serves as the appropriate measure of damages for the permanent nuisance, and that punitive damages may be awarded. In addition, "[a] court of equity may temporarily enjoin, partially enjoin or direct alternative methods or solutions to avoid a complete and permanent injunction. This, of course, requires proof that there is no adequate or complete relief at law." Notably, given Missouri's common law doctrine of "equitable cleanup," it is unlikely that a plaintiff will be able to seek both injunctive relief and damages and have a jury hear its claim for damages.

2. Putting Nuisance Actions in Context - The Impact of Zoning and Other Regulation of CAFOs on Nuisance Actions

a. The Impact of Zoning on Nuisance Actions Against CAFOs

Because many areas in rural Missouri have no county or township zoning, the common law of nuisance may provide local residents with the only cause of action through which they can hope to minimize or eliminate the environmental problems associated with CAFOs or to receive compensation for the annoyance and inconvenience attributable to CAFOs. Even in those areas that have some type of zoning, the fact that property is zoned for a business use does not preclude injured residents from suing to abate a nuisance in the absence of other facts offsetting their rights. Nonetheless, a court may consider the zoning of a given locale constitutes a nuisance claim, but only as an indicator of the relative freedom from pollution which neighboring residents may expect. An unreasonable interference with the comfortable enjoyment of one's home in a residential area might be regarded as the normal, expected and inescapable concomitant of modern social conditions in an industrial area. Nonetheless, merely because an activity is allowed in an area zoned industrial, or commercial, does not mean that the activity can be conducted in a manner that results in an unreasonable interference with neighbors' use and enjoyment of their land.

References

[138] Clinical and Hospital, Inc., 236 S.W.2d at 390.; The Law of Private Nuisance in Missouri, supra note 130, at 68.

[139] The law of Private Nuisance in Missouri, supra note 130, at 69.

[140] Id.

[141] In McCracken v. Swift and Co., 265 S.W. 91 (Mo. 1924), the court held "a plaintiff who occupies a home is not limited to the recovery of the diminished rental value of it, but may be compensated for any actual inconvenience and physical discomfort which materially affected the comfortable and healthful enjoyment and occupancy of his home, as well as for any actual injury to his health or property caused by the nuisance."

[142] The Law of Private Nuisance in Missouri, supra note 130, at 70.

[143] Id.

[144] Id. at 71.


[146] 461 S.W. 2d 784, 803 (Mo. 1970).

[147] Id.

[148] Id. at 71.

[149] Id.

[150] Id.

[151] Plaintiffs were awarded $90,000 in punitive damages. The court stated "[p]ermitting the assessment of punitive damages was supported by the evidence."


[154] See id. at 462 (citing State ex rel. Willman v. Sloan, 574 S.W. 2d 421, 422 (Mo. 1978)(discussing the common law doctrine of equitable cleanup under which a plaintiff seeking both damages and injunctive relief essentially waives her right to a jury on the damages question)).


[156] Id.

b. The Impact of Missouri's "Right to Farm" Statute on Nuisance Actions Against CAFOs

Missouri's "right-to-farm" statute\textsuperscript{155} may provide CAFOs with limited statutory protection from nuisance cases. In the 1970s, with suburban sprawl on the rise, legislatures around the country became increasingly concerned that quality farmland was rapidly being converted to non-agricultural uses, and began enacting various farmland preservation measures,\textsuperscript{156} including "right-to-farm" statutes designed to protect farmers from nuisance liability arising from the increasing urbanization.\textsuperscript{157}

When Missouri enacted its right-to-farm statute in 1982, it patterned it after North Carolina's statute.\textsuperscript{158} Although the Missouri legislation did not include a policy statement, the North Carolina statute contained the following policy statement:

It is the declared policy of the State to conserve and protect encourage the development and improvement of its agricultural land for the production of food and other agricultural products. When non-agricultural land uses extend into agricultural areas, agricultural operations often become the subject of nuisance suits. As a result, agricultural operations are sometimes forced to cease operations. Many others are discouraged from making investments in farm improvements. It is the purpose of this law to reduce the cost to the State of its agricultural resources by limiting the circumstances under which agricultural operations may be deemed to be a nuisance.\textsuperscript{159}

Missouri's statute provides that if an agricultural operation was not a nuisance when it commenced operation and if it has been in operation for more than one year, it cannot subsequently become a nuisance (public or private) because of changed conditions in the locality.\textsuperscript{160} The statutory protection does not apply, however, when a nuisance results from negligent or improper operation or from water pollution.\textsuperscript{161}

In 1990, the legislature amended the right-to-farm statute.\textsuperscript{162} The amendment added a provision which explicitly protects agricultural operations that may "reasonably expand" so long as all county, state and federal environmental codes, laws or regulations are met. Reasonable expansion is of "like kind that presently exists" and shall not include complete relocation of the operation.\textsuperscript{163} Furthermore, to maintain protected status, a livestock operation must ensure that its waste handling capabilities and facilities meet or exceed minimum recommendations of the University of Missouri extension service.\textsuperscript{164} The revised statute also added a subsection that allows defendants to recover costs, expenses and reasonable attorney fees when a court finds a nuisance action to be frivolous.\textsuperscript{165}

Notably, Missouri's right-to-farm statute is not an absolute defense to nuisance suits when the defendant operates in a non-negligent manner. Because the statute constituted a response to creeping urbanization, it only offers protection when changed conditions in the locality, such as increased urbanization "coming to the nuisance," give rise to a nuisance claim.\textsuperscript{166} Thus, the right-to-farm statute does not prevent agricultural or non-agricultural residents who predate the

\textsuperscript{154} Scallet v. Stock, 363 Mo. 721, 253 S.W. 2d 143, 146 (1952).


\textsuperscript{156} See Jacqueline Hand, Right-to-Farm Laws: Breaking New Ground in the Preservation of Farmland, 45 U. PI. L. Rev. 289, 293-97 (1984) (discussing property tax relief, agricultural zoning and转让 of development rights). Historically, when American cities were first settled, they were located near the best quality farmland to provide food to the cities' residents. The value of the land for non-agricultural use as cities expanded exceeded what could be made from producing agricultural goods. As land values increased, property taxes skyrocketed, further increasing costs of farming. Many farm children chose not to continue farming because there were more lucrative non-agricultural opportunities and some simply could not continue the family farm operation when faced with high inheritance taxes that necessitated selling off large portions of the farm. Personal experience and conversations with Warren Stemme, farmer, Chesterfied MO (St. Louis County) about the difficulties of farming in urban areas.

\textsuperscript{157} Right-to-Farm laws, supra note 156 at 297-99. New urban residents on farmland created conflict over land use. The new residents brought complaints about use of fertilizer and pesticides, and about odor, noise and dust. Some farmers were the subject of nuisance suits. Other farmers not involved in litigation, worried that they may be sued. Therefore, they were reluctant to make farm improvements or capital investments for fear they may be forced to discontinue operations. This was termed "impermanence syndrome" because the farmers did not believe that they would be farming over the long term. Many farmers sold out. In the early 1980's, when "right-to-farm" legislation was proposed, farmland was converted to non-agricultural use at the rate of three million acres each year. Id. at 289-92. See generally E. Thompson Jr., Farming in the Shadow of Suburbia: Case Studies in Agricultural Land Use Conflict (1980).


\textsuperscript{159} Margaret Rosso Grossman & Thomas G. Fischer, Protecting the Right to Farm: Statutory Limits on Nuisance Actions Against the Farmer, 1983 Wis. L. Rev. 95, 98.

\textsuperscript{160} Mo. Rev. Stat. § 537.295(1)(1994).

\textsuperscript{161} Mo. Rev. Stat. § 537.295(3)(1994).

\textsuperscript{162} 1990 Mo. Laws S.B. No. 686, § A.

\textsuperscript{163} Mo. Rev. Stat. § 537.295(1)(1994).

\textsuperscript{164} Id.

\textsuperscript{165} Mo. Rev. Stat. § 537.295(5)(1994). Notably, although these amendments roughly coincide with the initial expansion of large hog operations in Missouri, the amendments also directly addressed concerns expressed in a 1986 law review article on the right-to-farm statute. See Stephen F. Mathews, Recent Developments in Missouri Agricultural law, supra note 158, at 610.
nuisance operation from bringing a nuisance suit.\textsuperscript{167} This can present a problem for large CAFOs because the statute only provides protection if the conduct in question did not constitute a nuisance when it began.\textsuperscript{168} Moreover, the extent to which the right-to-farm statute protects expanded operations also remains unclear, as the statute does not define "reasonable expansion" beyond that it be "of like kind that presently exists."\textsuperscript{169} Does that mean as long as it remains a hog operation it is of like kind? Does the fact that many hog operations have recently increased as much as five-fold make such major expansion "reasonable?" To date there are no reported cases to provide guidance. Moreover, even if a given expansion is "reasonable," the conduct will be immune from nuisance suits only so long as all county, state and federal environmental codes, laws, or regulations are met and the facility complies with minimum waste handling recommendations of the extension service for waste storage, processing, or removal.\textsuperscript{170}

c. The Impact of H.B. 1207 on Nuisance Actions Against CAFOs

Although H.B. 1207 makes no reference to the extent to which a CAFO constitutes a nuisance, the existence of the "buffer zone" concept presents an interesting interpretational issue as courts will have to decide whether the delineation of the "buffer zone" is controlling or merely informative. On the one hand, a court could view the legislative definition of "buffer zones" as a legislative determination of the geographic boundaries within which CAFOs of various sizes may be understood to unreasonably interfere with residents' use and enjoyment of their of land. This could be problematic for residents located just outside of the "buffer zones" with respect to new CAFOs, as a court may view the legislative decision regarding the parameters of "buffer zones" as controlling. This also could be problematic for residents located near existing CAFOs, as a court could conclude that the legislature's express refusal to apply the "buffer zones" concept to existing CAFOs constitutes a legislative determination that existing CAFOs do not constitute a nuisance. On the other hand, because H.B. 1207 expressly provides that it does not preempt local controls, a court may view the "buffer zones" concept merely as informative. Because H.B. 1207 expressly provides for local controls, it suggests that the legislature not only wanted local zoning bodies to have the freedom to define different parameters, but that it also wanted local courts to be free to make case specific determinations regarding the extent to which a CAFO "unreasonably interferes" with neighboring residents' use and enjoyment of their land.

3. Putting Nuisance Actions in Context - Reported Hog Odor Nuisance Cases

Missouri has had very few reported decisions dealing with hog nuisance problems. Because the few reported Missouri cases predate the "right-to-farm" statute and the recent trend toward huge hog operations, they may have limited applicability to a CAFO-related nuisance case, particularly given that they generally involve small hog operations and generally involve hog waste management practices that now are prohibited under the Clean Water Act.\textsuperscript{171}

\textsuperscript{167} Mo. Rev. Stat. § 537.295(1)(1994).
\textsuperscript{168} Stephen F. Matthews, Recent Developments in Missouri Agricultural Law, supra note 158, at 610.
\textsuperscript{169} Mo. Rev. Stat. § 537.295(1)(1994). When does a hog operation begin? When is it "in operation?" A hog lagoon may not be fully operational or producing any odor for many months after the first hogs are placed in the buildings. If there is no odor when the operation "begins," does that mean subsequent odor problems are not a nuisance under the right-to-farm statute?
\textsuperscript{170} Id.
\textsuperscript{171} Id. In essence, to assure protection under the right-to-farm statute, even small operations that do not have to have a permit from the Missouri Department of Natural Resources, would be required to comply with certain standards set by the University of Missouri, College of Agriculture, Food, and Natural Resources Extension.

Because the statute requires an expanding operation to comply with all county environmental codes, a question may arise regarding the counties' ability to limit the level of hog odor such that all expanded hog operations within the county that could not meet the limit could lose their protection from nuisance suits under the right-to-farm statute.

\textsuperscript{171} Missouri has three reported hog odor decisions, which are summarized below in chronological order. In State ex rel. Hog Haven Farms, Inc. v. Peary, 42 S.W. 2d 403 (Mo. 1931), the court upheld and made permanent an injunction to prevent a threatened nuisance that would have resulted if the city of St. Louis were allowed to send by barge a daily load of 200,000 pounds of garbage and refuse to be unloaded at the 1200 acre site of Hog Haven Farms, located on the Illinois side of the Mississippi River, where it was to be fed to 10,000 hogs. The court held the nuisance would be a menace to the health, happiness and enjoyment of the those living in the vicinity of Hog Haven Farms.

In Bower v. Hog Builders, Inc., 461 S.W. 2d 784 (Mo. 1970), the owners of adjacent farms, 13 miles east of St. Joseph, succeeded in a nuisance action against a neighboring hog producer with an overflowing lagoon. The plaintiffs complained of intense odor problems (upsetting the high school life of their daughter), rat and fly problems, fish kill attributed to the overflowing lagoon, pollution of their drinking water and a decline in their property values. In affirming the trial court's finding of a nuisance, the Missouri Supreme Court, applying Missouri's traditional approach to nuisance actions, in which the trial court did not evaluate the "fault" of the defendant, see supra note 128, observed that the trial court had not committed error when it refused to allow questions concerning the social and economic value of the defendant's operation because such information had nothing to do with the issue which was whether plaintiffs had sustained damages.

In Meinecke v. Stallsworth, 483 S.W. 2d 633 (Mo. Ct. App. 1972), the court, noting that the keeping of hogs does not constitute a nuisance per se, that
The limited number of reported decisions involving hog nuisance may be a result of the limited number of hog nuisance cases brought in the first instance. One scholar has suggested that the existence of strongly entrenched rural farm values that neighbors work together and help one another, has meant that traditionally, "[f]armers don't sue their neighbors." It also may be the result of the deference that appellate courts give trial court's with respect to the factual determinations surrounding nuisance. With the trend toward corporate farming and the increased impact of CAFOs on surrounding residents, however, the "social fabric" that binds rural neighbors may be starting to unravel, making it more likely that rural neighbors will consider nuisance actions.

Indeed, in the last several years, at least four such actions have been brought. One hog nuisance case was brought in Warren County, Missouri, in 1990. Although the case has no precedential value because it was neither appealed nor published, it does shed some light on some of the issues that need to be addressed in evaluating a CAFO-related nuisance action. The case was the subject of a law review article by the defendant-farmer's attorney, J. Patrick Wheeler. The case showed strong neighborhood support for the defendant. Twenty other producers who operated within a twenty-mile radius of the defendants, with six of them in close proximity to the plaintiff's property testified on the defendant's behalf. The successful attorney concluded that this support, plus proof that the defendant farmer was in compliance with all rules and regulations and that he operated his hog farm in a careful manner with state of the art equipment and designed facilities, persuaded the jury. The plaintiff's attorney stated: "I think we would have had a different result with a nonrural jury." In August 1993 a case was brought in Saline County against MFA seeking an injunction against a hog operation consisting of 2,400 sows. While the case proceeded through several stages, MFA addressed the odor problem associated with one of its waste lagoons by installing an aerator. Following the installation of the aerator, the court, in early 1996, affirmed the finding of a master that the operation did not constitute a nuisance and refused the plaintiffs request for an injunction.

As noted above, in 1994, Lincoln Township brought a counterclaim alleging nuisance in the lawsuit filed by Premium Standard Farms challenging Lincoln Township's zoning ordinance, which the Putnam County Circuit Court dismissed for lack of standing. Most recently, in August 1996, several neighbors filed a nuisance action against Continental Grain.

4. Evaluation of Nuisance as a Tool for Controlling the Environmental Impacts of CAFOs.

The common law of nuisance presents two problems for those seeking to use it to gain relief from conduct they perceive as an unreasonable interference with their use and enjoyment of their land. First, they must prove that the conduct is, it is not a nuisance at all times and under any circumstances, upheld the trial court’s bench ruling that the evidence was not sufficient to establish a cause of action for damages and injunctive relief for a nuisance. The nuisance in question was 29 hogs on five acres. With many hog lots in the area, the court held that the plaintiffs had not proven unreasonable interference and damages because the "annoyances" were not considered substantial and were held to be "part of the general atmosphere of the area."


Conversation with Professor Ron Plain, supra note 3. See, e.g., Murphy v. Carron, 536 S.W. 2d 30, 32 (Mo. 1976); Patashnick Truck Service v. City of Stilwell, 173 S.W. 2d 96 (Mo. 1943).

Conversation with Professor Ron Plain, supra note 3.


Id. at 465-66. Conversation with Darwin Hindman, plaintiff's attorney. Mr. Hindman is presently the Mayor of Columbia, Missouri and an adjunct professor at the University of Missouri-Columbia School of law.

The case was captioned Ahrens v. MFA, Inc. in Saline County Circuit Court. Conversation with Brian Griffith, Legal Counsel for MFA, Inc.

Id. The aerator cost approximately $175,000 to install. In addition, increased operating costs associated with the aerator are approximately $2,000 per month. Id.

Id. See supra notes 118-19. The case law in Missouri does suggest that in several circumstances, although not all circumstances, a municipality cannot pursue a public nuisance action on its own behalf, but must bring it on behalf of the state with the blessing of the county prosecutor or state attorney General. Compare St. Charles County v. Dardenne Realty Company, 771 S.W.2d 828 (Mo. 1989); County of Shannon v. Mertzluft, 630 S.W.2d 238 (Mo. Ct. App. 1982) [both involving claimed public nuisances affecting state highways], with City of Kansas City v. Mary Don Company, 606 S.W.2d 411 (Mo. Ct. App. 1980). In its decision in St. Charles County, the Missouri Supreme Court noted that "[u]nder certain circumstances, a local governmental unit can properly sue in its own name to enjoin a public nuisance. See, e.g., City of Kansas City v. Mary Don Co., 606 S.W.2d 411 (Mo. Ct. App. 1980)."

determining whether a nuisance exists, the test incorporating a variety of factors in different situations, it makes it hard to predict a successful case.

Because Missouri applies a balancing test incorporating a variety of factors in determining whether a nuisance exists, including the utility of the conduct, the gravity of the harm and the suitability of the conduct to the location, it is conceivable that a court in a rural county, such as Mercer County or Putnam County, could conclude that a large CAFO does not constitute a nuisance, thus leaving affected residents without a legal remedy. For example, even if a CAFO in Mercer County creates a significant odor problem for neighboring residents, the CAFO also constitutes a significant employer that has brought an infusion of income and economic prosperity into a county that has had a significantly higher than average percentage of its population in lower levels of income and has been experiencing a population decline since the turn of the century. Although one could argue that the “balancing of equities” should take place in determining the appropriate remedy rather than in deciding whether conduct is a nuisance, Missouri’s approach to nuisance law allows a court to use the balancing test to conclude that no nuisance exists even when neighboring residents might be suffering from significant annoyance and inconvenience attributable to a neighbor’s conduct.

Even if one succeeds in proving that a CAFO constitutes a nuisance, one may not succeed in obtaining the desired remedy. Many residents near CAFOs likely would desire an injunction that prevents further operation of the CAFO so that the residents can go back to enjoying their land without any inconvenience or annoyance attributable to the CAFO. Because CAFOs, especially the larger CAFOs that affect people across a larger area, contribute significantly to the economic prosperity of the region in which they locate, a court likely will be reluctant to grant injunctive relief requiring the closing of the CAFO. Rather, a court may consider awarding permanent damages (creating a servitude on neighboring lands), or may consider imposing a partial injunction requiring a facility to employ techniques, such as aerators in lagoons or soil injection of waste rather than land application, designed to reduce the extent to which the facility interferes with neighboring landowners.

Notably, zoning is unlikely to be a significant factor in nuisance decisions because few rural areas have zoning and even in those that do the zoning classification of an area does not determine the outcome of a nuisance action. The “right-to-farm” statute also is unlikely to be a significant factor in

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184 See supra notes 135-37 and accompanying text.
185 The Economic Effect of Premium Standard Farms on Missouri, supra note 18, at 35-36.
186 Id. at 1921.
187 From an economic standpoint, one could say that the purpose of nuisance law is to force people to “internalize” external costs — those costs they impose on others which they do not take into account in making decisions regarding their conduct. If we assume that the purpose of nuisance law is to force people to internalize external costs, then how do we decide whether someone is imposing “external costs?” Arguably, we could say that one neighbor imposes external costs on her neighbors anytime she interferes with her neighbors’ use and enjoyment of their land beyond whatever objective threshold of annoyance we decide everyone has to accept as part of being in society. With such an externalities approach to nuisance law, the court’s initial question simply should focus on whether the interference with the neighbors’ use and enjoyment of their property is greater than or less than the objective threshold of annoyance given their location. If not, you have no nuisance. If so, you have a nuisance and can look toward an appropriate remedy, at which time you can “balance the equities” in deciding whether to grant an injunction or damages as the remedy. The Restatement has recognized this concept to a very limited extent in section 826(b), wherein it provides that “[i]ntentional invasion of another’s interest in the use and enjoyment of land is unreasonable if . . . (b) the harm caused by the conduct is serious and the financial burden of compensating for this and similar harm to others would not make the continuation of the conduct not feasible.” Restatement (Second) of Torts, § 826(b) (1977).
188 The Law of Private Nuisance in Missouri, supra note 130, at 41 (noting that Missouri follows the Restatement’s balancing of factors approach to determining whether conduct is a nuisance).
189 The Economic Effect of Premium Standard Farms on Missouri, supra note 18, at 35-36. The facts surrounding CAFOs frequently will be quite similar to the facts of Boomer v. Atlantic Cement Co., 257 N.E.2d 870 (1970), in which the court refused to grant an unconditional injunction given that the defendant had invested $45,000,000 in a plant that employed 300 people.
190 See Boomer v. Atlantic Cement Co., 257 N.E.2d 870 (1970) [court imposed conditional injunction requiring defendant to pay permanent damages (and thereby obtain a servitude) if it wished to avoid the injunction].
191 See supra note 99. Cases from other states provide examples of situations in which courts have responded to nuisance claims concerning hog operations by imposing a partial injunction requiring installation of control technology or operational controls to reduce the impact of odors on neighbors. See, e.g., Staley v. Sagel, 841 P.2d 379 Colo. Ct. App. 1992) [mentioning limited injunction requiring defendant to implement changes in the hog operation designed to ameliorate the adverse consequences of its operation]; Valasek v. Baer, 401 N.W.2d 33 Iowa 1987) [ordering limited injunction to prevent spreading of hog waste in general proximity of neighbors property and house]; Knebel v. Metzger, No. 12-818, 1983 WL 7217 (Ohio Ct. App. 1983) (unpublished decision) (affirming portion of injunction requiring soil injection of waste to reduce odor problem). See also supra notes 179-81 and accompanying text (discussing Saline County case in which defendant was able to persuade the court that operation was not a nuisance following installation of aeration on waste lagoon in question).
192 See supra notes 151-54 and accompanying text.
nuisance cases that are brought against CAFOs because the nuisance problems giving rise to such lawsuits are not attributable to changed conditions in the area surrounding the CAFOs, they are attributable to changes in the size and operation of the CAFOs themselves. Moreover, the protections of the “right-to-farm” statute only are available with respect to operations that are non-negligent and in compliance with applicable laws.\textsuperscript{193}

H.B. 1207 could have an impact on nuisance cases given that it establishes “buffer zones.” A court may view the “buffer zones” as a legislative determination of the areas within which CAFOs of various sizes impose an unreasonable burden, such that those outside the “buffer zones” might be precluded from seeking relief through a nuisance claim. The fact that the legislature did not apply the “buffer zones” to existing facilities, however, and expressly provided for “local control,” suggests rather that courts should view the “buffer zones” simply as an effort to protect prospectively those the legislature believes clearly will be affected in almost all cases, while preserving for others outside the “buffer zones” the opportunity to demonstrate through a nuisance action that a given CAFO unreasonably interferes with their use and enjoyment of land on a case-by-case basis.

V. CONCLUSION

H.B. 1207 represents Missouri’s legislative response to the environmental problems CAFOs present. H.B. 1207 may reduce the likelihood of releases of hog waste to the waters of the state from the largest CAFOs and may provide those residents located within 1/5 to 1/2 mile of a proposed CAFO some opportunity to control whether the proposed CAFO will locate in the vicinity of their residence, but by and large it does little to resolve a host of problems associated with preexisting facilities that are impacting surrounding residents and communities. To the extent that counties and townships in counties without zoning, believe the requirements of H.B. 1207 do not go far enough to protect their residents, the counties and townships can consider adopting health regulations or zoning to control CAFOs, as H.B. 1207 specifically provides for local control.

Unfortunately, the county and township zoning enabling acts raise significant questions about the extent to which counties and townships can enact health ordinances or apply zoning to the raising of livestock or the location of farm structures related to livestock. Moreover, even if a county or township can enact such zoning, preexisting CAFOs will be protected as nonconforming uses. Given that neither H.B. 1207 nor the laws related to zoning adequately address many of the environmental problems CAFOs present, the common law of nuisance remains a viable, although uncertain, legal vehicle for trying to balance the competing interests of the CAFOs and the surrounding residents.

Although this article raises many questions, the uncertain state of the law means that the article does not necessarily provide lots of answers. Nonetheless, pending and prospective litigation certainly will provide answers to many of the questions this article raises, both with respect to the extent to which counties and townships can apply health ordinances or zoning regulations to CAFOs and the extent to which and circumstances in which courts will use the law of nuisance to require CAFOs to employ additional efforts to reduce the environmental impact of their operations.

\textsuperscript{193} See supra notes 168-70 and accompanying text.