

# **CAFO and Other Environmental Challenges for Livestock Production**

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Mankind has utilizing the land to produce food and fiber for the past 10,000 years. In so doing, he has adapted the natural processes of plants and animals to meet the needs of a growing population. This adapting of the natural processes (we call it agriculture) can pose environmental challenges to families that make their living farming and the communities they live in. This paper will discuss some of the legal and neighbor relations challenges that center around questions about environmental impacts of animal agriculture.

## **Legal Claims Against Farmers**

Over the past several years, many dairy farms have received that dreaded phone call. On the other end of the line is a neighbor claiming the farm is degrading the quality of their lives. Many times it's about odors from the barn, manure storage, or the spreading of manure. Sometimes, it's about noise, dusts, flies or use of pesticides. Other times, it is an official calling about the nearby stream running brown or fish dead on the bank.

Fortunately, most times the farm owner and the neighbor can work things out. Sometimes, however, a complaint turns into misunderstandings that can progress to a point where lawyers are drawn into the fray.

Legal claims brought against farms generally fall into four categories: nuisance, negligence, trespass and violating of environmental laws. Many times a legal action will contain all or some of these claims. It is important to understand these legal claims and the underlying farm practices that may result in such farm-related complaints.

### **Nuisance**

A nuisance is an activity causing unreasonable and substantial interference with another's quiet use and enjoyment of property. Odors are the most common cause of nuisance claims against dairy farms, though noise, flies and dust are also reasons for neighbor complaints.

The doctrine of nuisance is a common law concept, evolving over the centuries as judges settled disputes between individuals. It centers around two corresponding property ownership principals:

- 1) Owners have the right to use and enjoy their property free of unreasonable interference by others; and
  - 2) Owners cannot use their property in a manner that may cause injury to others.
- Activities a court finds to be "unreasonable" for a particular area and which cause a "substantial interference" with neighboring land are determined to be nuisances.

Nuisance law makes it possible to sue a neighbor whose actions adversely affect one's property. The suit can ask that the neighbor cease the activity and/or reimburse the lost value (damages) to the aggrieved party's property. A **private** nuisance generally involves two parties. A **public** nuisance is the interference of the rights of a substantial portion of the community. Many times the nuisance is believed to threaten the health and/or safety of community residents. Court action alleging a public nuisance must be taken by a public entity such as a town, county or state prosecutor.

In most states, right-to-farm laws protects farms meeting certain conditions and using sound or acceptable farming practices from claims of private nuisance.

### **Right-to-farm protections**

Because some farming practices have a potential to produce such things as odors, noise and dust, there is a long-standing relationship between nuisance law and agriculture. For this reason, many states and communities have passed "right-to-farm" legislation that protects farms from private nuisance suits as long as the farm practices are within some norm or industry standard. Right-to-farm laws recognize the unfairness that nuisance law can impose on farms when people unfamiliar with farming practices move into traditionally agricultural areas.

Right-to-farm laws were developed in the 1970s as state lawmakers became concerned about conflicting land uses as residential development moved into outlying farming areas. All fifty states have enacted such laws, though in recent years a few states' laws have been overturned in court. Besides protection from nuisance claims, right-to-farm laws in some states restrict the power of a local government to pass laws that unduly restrict farming operations within the geographic area covered by the law.

### **Trespass**

Trespassing is commonly thought of as walking onto someone's property without permission. Recent court decisions have also ruled that the movement of chemicals, soil or animal waste across property lines also constitutes a trespass, specifically if the incidence deprives use or enjoyment of the neighbor's property. Herbicide drift, sedimentation from eroding fields, and liquefied manure washing across the property boundary would be examples of trespassing. Some courts have even considered nitrates found in private wells to be considered trespassing—your nutrients in my well! Upon a court finding of guilty, a punitive fine or jail sentence may be levied.

**Example:** Every fall, Rick lowers the manure level in the storage facility on his dairy. He applies several loads of manure to a harvested corn silage field upslope from his neighbor's property. But one day, the tractor and manure spreader get stuck in a wet spot. He unloads the spreader into a soupy pile to lighten the load and get the equipment moving again. He leaves the pile, intending to distribute it with a bucket loader the next day. But heavy rains hit the area that night and wash the manure pile across the fence onto Joe's and Linda's property. They would have a case for trespassing.

### **Negligence**

Negligence is another allegation that can result in legal action against a farm. A claim can result from the careless actions or failures to act that result in injury to another or

damage to other's property. Unlike nuisances, right-to-farm laws do not protect against allegations of negligence. Courts will require restitution payment to the injured party and may levy punitive fines for negligent acts. Examples of negligence are inadequate supervision of employees, allowing cattle to stray and failure to maintain equipment or facilities.

**Example:** Poor Rick in the trespassing example may also be charged for negligence. If it can be shown that he knew about the coming rains and he did nothing to prevent his manure pile from causing damage to his neighbor's property, it would be negligence. It would also be negligence if an employee was operating the equipment and had not been properly instructed to avoid wet spots in the field or instructed on what to do when the spreader got stuck and he had to unload.

### **Violating Environmental Laws**

There is an array of federal and state laws that regulate farming practices. The objectives of these laws are to protect natural resources and the health and safety of the community. There are also state and local laws that aim to preserve farming as a local preferred use of land resources and a viable industry for rural economies. There may also be local zoning ordinances that control how private lands may be utilized. A general understanding of these laws and how they interact may be helpful for all residence of farming communities. For more specific information about administration of these laws in your state, contact your states agricultural agency or Farm Bureau.

**Example:** Winters on George's dairy farm requires some routine maintenance, including removing snow from his bunker silo and piling it alongside the structure. After the spring thaw, what remains of the snow pile is the corn silage spoilage that was scooped up while George cleared the snow. George normally cleans up the silage pile by moving it to fields when spreading manure. But this year, things were different. The winter was particularly snowy and he had no choice but to push the snow farther back toward the ditch running beside the bunker. When spring arrived, he left the old silage in place and as the temperatures warmed, the pile started to ferment again. After a heavy spring shower, runoff from the silage pile entered the ditch and traveled to a nearby stream, causing visible changes in the water quality. Environmental authorities cited the farm for polluting waters of the state.

### **Laws That Protect Water Wuality**

#### **Clean Water Act**

The **Federal Clean Water Act (CWA)** is the primary legislation that regulates potential water pollution from agriculture and other sources. Passed in 1972, the goal of the law is to restore and maintain the quality of the nation's waterbodies and estuaries to meet standards for swimming or fishing. It created a regulatory discharge elimination permitting system to address point sources of pollution. It also required states to administer programs that encouraged the voluntary implementation of best management practices to reducing non-point sources of pollution.

Over the past three decades, much progress has been made in improving the quality of our nation's waterbodies. Still, today, it is estimated that 40% of the nation's waters do not meet their quality goals.

Agriculture is identified as one of the major remaining sources of water quality degradation. The CWA defines large livestock farms, referred to as concentrated animal feeding operations (CAFOs), as point sources of pollution. For a variety of reasons, many states did not permit livestock farms until several high-profile lawsuits found these large farms in violation of the CWA. Most states today, require these large livestock farms to operate under a permit. The US Environmental Protection Agency (EPA) has recently updated their rules for CAFO permits programs. For details, go to <http://cfpub.epa.gov/npdes/afo/cafofinalrule.cfm>

For non-point source pollution, section 319 of the Act funds voluntary programs in which land owners may receive cost-sharing for implementing various best management practices to reduce the helps. Over the past few years, many states have focused much of their 319 resources on helping farms of all sizes reduce their non-point source impacts. The other significant source of cost-share funds to help farms address water quality concerns has been the Farm Bill, authorizing programs such as the Environmental Quality Incentive Program (EQIP) through the USDA.

Point Source Pollution:

A distinct, identifiable source that discharges (empties) pollutants into a waterbody. An example of a point source would be a pipe draining waste or cooling water from a factory or mill.

Non-point Source Pollution:

The diffuse and irregular movement of pollutants that enters a waterbody as rainfall or snowmelt moves over and through the ground. The amount of pollution carried in these waters is determined by the land use and level of management practices employed to control this type of pollution. An example of non-point source pollution would be runoff from a parking lot, a home building site, or from a freshly logged hillside

## **Damages to Waterbodies**

At a minimum, state laws must meet the requirements of federal regulations and programs. At the heart of state conservation laws are two key principles:

- They generally prohibit the discharge of pollutants into waters of the state without a permit; and
- They require restitution for any damages that may be caused to the natural resources of the state by private citizens or corporations.

The National Association of State Departments of Agriculture's (NASDA) website contains a state-by-state summary of environmental laws that affect agriculture in their state at

<http://www2.nasda.org/NR/exeres/EF8521A6-FC8B-4270-B67C-F8233A3C94D7.htm>

These laws are in place to protect natural resources from damage. They outlaw discharges that change the character of or impede the beneficial use of the state's waters. A common agricultural example is a manure discharge. The released manure stimulates microbial activity, reducing oxygen levels. Combined with the toxic effect of ammonia in manure, fish can die off and wash up onto the bank. Farms must ensuring manure storages are properly designed and operated. They should also have an emergency spill

plan to minimize the damage should a spill occur. Appropriate fields for winter and early spring manure spreading should carefully selected to ensure nearby waterbodies will not be impacted should a heavy rain follow spreading. A well-designed nutrient management plan addresses will address these issues.

Occasionally farm fuel storages have developed leaks and polluted the ground water preventing the farm and their neighbors from using the ground water. This is very expensive problem to remediate. Careful evaluation of fuel storages, regular inspections of tanks and techniques for early leak detection are important.

## **Laws That Protect Air Quality**

### **Clean Air Act**

Farming has historically benefited from a broad exemption to the **Federal Clean Air Act (CAA)**. Odors are the major noticeable air quality issue for livestock farms. However, odor is considered a nuisance, and historically has been protected by right-to-farm laws. More recently, concerns over particulate matter have drawn the farming exemption from air quality laws into question. Dust and emissions of ammonia may fall under air quality regulations as more becomes known about the impacts of particulate matter on community health.

When the CAA was reauthorized in the late 1990's, standards were developed for airborne particulate matter as small as 2.5 microns. Previously, air quality standards only addressed PM<sub>10</sub>. PM<sub>2.5</sub> is a component of smog and comes from a variety of combustion sources, like automobile exhaust and electricity generation, and from the use of fertilizers and animal agriculture. The primary agricultural source of PM<sub>2.5</sub> is ammonia. Ammonia is a gas that is emitted from manure of animals fed high-protein diets. Livestock are the largest contributor of ammonia emissions in the US. It is also released from fields receiving manure and/or high levels of fertilizer for crop production. Once in the air, it combines with sulfur dioxide and nitrous oxide in the atmosphere to form fine particulates (PM<sub>2.5</sub>) of ammonium sulfate and ammonium nitrate.

Though no regulations are currently in place to apply the CAA to control emissions from farms, recent court rulings have forced the EPA and states to address ammonia and other emissions from farms in the future, particularly in regions with poor air quality. Because the San Joaquin Valley air quality that does not meet CAA standards (non-attainment), farms there are presently required to implement practices to reduce airborne particulates and will be soon working on ways to reduce emissions of ozone-producing compounds.

### **EPCRA and CERCLA**

In 2005, Tyson Foods and their contract operators settled a citizen's lawsuit in Kentucky alleging emissions from poultry houses they collectively farm were in violation of the reporting requirements of the federal Emergency Planning and Community Right-to-Know Act (EPCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), popularly known as the Superfund Act. These laws require reporting from facilities that releases a "reportable quantity" of certain hazardous

substances. Emissions of 100 lbs per day of ammonia are common on large livestock farms. Hydrogen sulfide and some volatile compounds are also among the list of reportable substances that are emitted from livestock operations. Normal application of fertilizer is exempt from the reporting requirement.

The National Academy of Science's National Research Council recently concluded there is insufficient scientific data for regulators to develop emission factors for livestock operations. Subsequently, EPA has entered into an agreement with parts of the livestock industry to fund research for study and quantify emissions from various livestock operations. Known as the EPA Air Quality Compliance Agreement for Animal Feeding Operations, the agreement has put on hold all court actions alleging violations to the CAA by livestock operations. More information about the agreement may be found at the EPA website, <http://www.epa.gov/agriculture/animals.html>. Reducing livestock agriculture's contribution to air pollution problems is the new environmental frontier.

### **Citizen lawsuits**

In the 1990's, legal action by citizen (environmental) groups under the Clean Water Act forced EPA and state environmental authorities to implement CAFO permits for large livestock farms. A similar situation is currently happening with lawsuit aimed at applying the Clean Air Act to farms. When the CWA and CAA were first enacted in the early 1970's, provisions were included to level the playing field across the country with respect to environmental-regulation. Called citizen lawsuit provisions, they permit local citizens to sue polluters in federal court if their state or the federal government is not enforcing the CWA or CAA. If the citizens prove the pollution laws have been broken, the polluters are fined. But more so, the polluters are also responsible for the legal costs incurred by the citizen to bring the case to trial. This is a great incentive for lawyers to take on such cases. Costs of defending against a citizen lawsuit can run into the many hundred thousands or millions of dollars.

### **Local Zoning Ordinances Can Effect Farming**

Most states permit local governments to take actions to control land uses in their jurisdictions. These zoning and planning ordinances aim to protect property values, create desirable communities and preserve natural resources in local communities. They generally address the type of activities can be conducted on the land, type of structures that can be built, setbacks from property lines for buildings or other activities, and placements of mobile homes, signage, and a host of other land-use activities.

Because land use controls restrict how property is used, it is understandably a controversial process. Each state's law clearly defines the public processes that must be conducted to administer local zoning and planning. In some states, local planning and zoning ordinances are not permitted to restrict farming practices within defined agricultural zones. In other states, meeting approval of local zoning boards can be a time consuming and costly process, particularly for livestock farms looking to expand. Check with your local planning board or Department of State for more information on land use control rules in your state.

## **Contaminating Drinking Water Supplies**

Farming activities can impact ground water used on the farm and by neighboring households. There have been numerous cases, particularly in the spring, where wells of individual households and, at times, whole neighborhoods of household suddenly turn brownish and have a tint of manure-odor. They always test high in nitrates and coliform organisms. Immediately, manure spreading on nearby fields becomes suspect, even though it may be difficult to hydrologically link the manure spreading and the contamination. Winter and spring manure spreading on fields in regions of known Karst topography or fractured bedrock should be avoided.

Infants and expectant mothers should not drink water that has nitrate levels exceeding the 10 ppm nitrate as N standard. Drinking water high in nitrates raises blood nitrate levels. Nitrates in the blood replace oxygen in the hemoglobin essentially starving the body of oxygen. This is the “Blue baby syndrome” can impact both people and animals, with the young being considerably more susceptible. Spontaneous abortions can also be a consequence of high nitrate drinking water.

Coliform organisms in groundwater indicate there is a direct connection with a surface source. Although many of the coliform organisms are harmless their presence means that other organisms can easily enter the drinking water system.

Pesticides, petroleum and other toxic compounds can also contaminate ground water. Tests for these are expensive if all inclusive. Reducing the potential for contamination by carefully examining the water sources contributing to the aquifer is the prudent way to reduce the risk to yourself, your family and your animals.

Surface water used for drinking water should be chlorinated. Farm animals drinking untreated surface water can get infected from water-borne pathogens. Aging examining the watershed above the drinking water intake can help reduce the risk of diseases. Wildlife transmissions of diseases are especially difficult to control when drinking untreated surface water.

## **Assessing a Farm’s Environmental Risk**

The granddaddy of state environmental programs to help farmers and land owners protect water quality was developed in the mid-1980’s by the University of Wisconsin Extension Service. The purpose of the program was to enable rural landowners and residents to identify environmental and health risks on their property and take action to reduce them. A series of worksheets were developed that examined a variety of practices and situations on farms that may pose a risk. For information, <http://www.uwex.edu/farmasyst/> or Farm\*A\*Syst

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Many other states have followed the lead of Wisconsin and developed similar programs in their states. Contact your State Department of Agriculture or local Soil & Water Conservation District for help in assessing environmental and health risks on your farm. NYS has developed worksheets for a variety of environmental impacts around the farm. These can be obtained from:

<http://www.agmkt.state.ny.us/SoilWater/AEM/AEMWorksheetTOC.html>

Dairy specific (and more intensive) worksheets can be obtained from:

<http://ems.unl.edu/guidebook.htm> Look Under the NY paragraph for the following topics:

[Manure Storage](#), [Pasture](#), [Land Application of Manure](#), [Farmstead-Manure and Related Effluents](#), [Farmstead-Other Issues](#), [Farm Nutrient Balance \(Part A\)](#), [Farm Nutrient Balance \(Part B\)](#), [Odors](#)

### **Farm-Neighbor-Community Relations**

Laws and regulations should not be the only concerns of livestock producers. There needs to be recognition of the current expectations of the vast majority of our society. Today, people want more from businesses that operate in their communities. No longer are local jobs, added tax revenues and the other economic benefits of having an active business in a community most important. Communities now expect businesses, farms included, to operate in a clean, non-intrusive manner and exhibit an open willingness to hear and address community concerns and needs. Many in the business world refer to this 'understanding' between a community and local business as a "license-to-operate." Corporations have responded to this changed dynamic in society by establishing community and public relations departments whose managers sit at the highest levels of the corporate hierarchy.

If one considers a neighbor as any household that lives adjacent to or across the street from a field that the farm works, most farms have considerably more neighbors than they realize. If a farm has negative impacts on their neighbors, it is at risk of being drawn into conflicts and other community scrutiny. It is disgruntled neighbors who feels a farm operation is inapproachable that look for recourse from officials or the courts. Learning that right-to-farm laws protect many nuisances produced by farms can further frustrate the situation. Being a welcomed and trusted neighbor in the community that reasonably accommodates the needs of others is better than relying on right-to-farm protections of the law.

Farms should implement three strategies to help maintain and improve relations between the farm, neighbors and communities.

- a. Implement responsible and defensible farming practices
- b. Stay involved, active and a contributing member of the community
- c. Build trusting relationships with open communications

The public image of a farm is shaped by the owner/operator's ability to build confidence; trust and goodwill with neighbors that live close and are impacted by the farm's operation. For some operations, a purposeful, active effort to open lines of

communications may be needed when a farm's negative impacts, particularly of an environmental nature, are significant in a neighborhood.

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