WISCONSIN'S STATE STANDARDS FOR SITING LIVESTOCK FACILITIES

Richard Castelnuovo[1]

Abstract

In 2004, Wisconsin enacted the Livestock Facility Siting Law (2003 Act 235) designed to reform local regulation affecting livestock facilities. While the new law retains local authority to control rural land use through planning and zoning, it mandates that local governments follow state standards and procedures if they require individual approval for new and expanding livestock facilities. The new law is intended to ensure a more predictable and fairer system of local regulation. Central to Act 235 are science-based standards that local governments must apply whenever they make decisions to approve or deny applications for livestock facilities. These state siting standards will be developed through rule making, in accordance with specific requirements set forth in the legislation. As proposed by the technical expert panel, the standards will protect air and water quality, while providing the livestock industry a predictable regulatory framework within which to grow and modernize. Before the siting standards become law in late 2005, they will be subject to review by policy makers, interest groups and the public.

Introduction

Act 235 is part of a trend among states in the Midwest to standardize and streamline the approval process for new and expanding livestock facilities. Approaches vary among states such as Michigan, Iowa and Illinois, but state officials share a common concern about improving the business climate for animal agriculture in their states. While it may not be the most critical factor in making a state more competitive, improvements in local regulation can create a more attractive business climate. Evaluating the impact of local regulation is challenging, but there is research to suggest that the nature and extent of local regulation can adversely impact business decisions to site or expand livestock facilities (Lazarus 1999). Furthermore, there is a perception in the farm community that regulation in Midwestern states such as Wisconsin is onerous, inhibiting farmers from building new or expanded livestock facilities (Sands 2001). In his "Grow Wisconsin" plan (p. 42, available at http://www.wisgov.state.wi.us/docs/Doyle_Economic_Package.pdf), Governor Doyle recognizes the connection between growth in the livestock industry and local regulation, "Currently, one of the greatest impediments to the location and expansion of agricultural businesses in our state is uncertainty in local government permitting processes and a myriad of standards that vary by jurisdiction."

Ensuring the competitiveness of Wisconsin's dairy industry has significant implications for the state's economic well being. Wisconsin's farms and agricultural businesses generate more than $51.5 billion in economic activity and provide jobs for 420,000 people, according to a March 2004 study (Deller, 2004). To maintain its competitiveness, Wisconsin needs to produce more milk to retain processors, and the state is likely to meet its need for more milk primarily through the growth of larger dairies.

> The fact that large dairy operations will be the source of the milk production gains needed to maintain the state 's dairy industry is

[1] Section Chief, Resource Planning, Department of Agriculture, Trade and Consumer Protection, 2811 Agriculture Drive, Madison, WI 53708,.

> noteworthy because it suggests that efforts to restrict the expansion of larger scale dairy farms may be ill-advised. This action would most likely curb growth in total milk production in the state and make it difficult for dairy plants to get the supplies of milk they need to stay in business. If this happens dairy plants could very well shut down their Wisconsin operations. This loss of dairy plants will hurt small and moderate sized dairy operations just as it does large dairies because the pay prices for all milk will decline as fewer dairy plants are left in the state to compete for milk. Thus all Wisconsin dairy producers could lose if milk supplies do not increase at the rates needed to keep existing dairy plants operating in the state. (Jones, 2002)

As the state's agricultural agency, the Department of Agriculture, Trade and Consumer Protection (DATCP) has taken the initiative to address this important issue. In 2003, DATCP's Secretary convened an advisory committee made up of government representatives, farmers and farm groups, and environmentalists to consider issues related to local livestock regulation. The advisory committee unanimously recognized the need to secure the future of our livestock industry, and developed a series of recommendations that formed the basis of Act 235.

Codified at s. 93.90, Stats., Act 235 provides a more predictable and fairer framework for local decisions to approve or deny livestock facility siting proposals. It addresses both the reality and perception that local decision-making is not timely, is based on standards not grounded in sound science, and imposes unpredictable and changing conditions. The new law accomplishes this by superimposing the following requirements on conditional use permits and other forms of approval used by local governments:

a. Preclude regulation of new and expanding livestock facilities under 500 animal units, unless the local government has an ordinance that meets the law's grandfathering provision for use of a lower threshold for regulation.
b. Apply science-based standards in deciding all applications for local approval, and use other standards only if they are justified based on public health and safety and are specified in advance in an ordinance.
c. Follow clear deadlines for processing applications to reduce delay.
d. Recognize that a complete application creates a presumption of compliance with the state standards.

Standards Development

State siting standards are at the core of this new regulatory framework. DATCP is required to adopt these standards by rule, making use of current runoff control standards and other laws related to farms. In specifying standards, DATCP must consider whether the standards are (1) protective of public health or safety, (2) practical and workable, (3) cost-effective, (4) objective, (5) based on scientific information, (6) designed to promote the growth and viability of animal agriculture, (7) designed to balance the economic viability of farm operations with natural resource protection and other community interests, and (8) and usable by local officials. See 93.90(2)(b), Stats.

As required by Act 235, DATCP convened a technical panel to provide recommendations concerning the state siting standards. The panel included university researchers, government experts, conservation officials, and private consultants. Experts were recruited from DATCP, the

Department of Natural Resources, and the Natural Resource Conservation Service (NRCS). The panel had expertise in barnyard runoff control, feed storage, manure storage facilities, nutrient management, and odor management. The work of the panel was enhanced by the participation of an expert from Minnesota to provide information about state-of-the-art methods for odor management. The panel met from June to October 2004 to prepare its recommendations which were presented to DATCP in the form of a preliminary draft rule including an application for local approval and worksheets. The panel's work product was reviewed by the advisory committee that originally developed recommendations for the legislation.

As recommended by the expert panel and later modified by the advisory committee, the siting standards protect air and water quality from the impacts of livestock facilities that are not properly designed, constructed and operated. Unregulated facilities may pose risks to surface water from improperly applied manure, runoff from animal lots and feed storage, and overflowing waste storage facilities. They also may create groundwater risks as a result of leaking waste storage facilities, and runoff that finds its way to sinkholes and other groundwater conduits. Potential sources of pollution include nutrients (phosphorus and nitrogen), bacteria, sediment and organic matter. The biological environment of a waterbody can be impaired by organic matter that can drastically reduce dissolved oxygen levels, nutrient loads that can result in eutrophication, or high ammonia concentrations that can be lethal to aquatic species.

Livestock housing, waste storage areas including lagoons, and field application of waste generate odors. If not properly controlled, odors may become offensive and rise to the level of a nuisance. Offensive odors are distinct from air pollutants such as ammonia and hydrogen that have been linked to public health concerns (UIEHSRC 2002). Regulation of air pollutants is not the direct focus of the siting standards.

Applicants for local approval must meet siting standards by demonstrating compliance with the following requirements designed to protect water quality. Applicants are required to meet existing water quality setbacks in local shoreland, wetland and floodplain ordinances and state well protection codes. They must document that they have adequate land to apply the manure they generate. Facilities with 500 or more animal units or those without an adequate land base for manure application must complete a checklist that demonstrates that they can manage nutrients according to technical standards. As part of this checklist, applicants must use soil test results or other values to determine manure applications.

Applicants must show that all waste storage structures can operate without risk of failure or discharges. For new and substantially altered waste storage structures, applicants must design and construct these structures according to NRCS technical standards 313 and 634. Applicants must evaluate existing facilities to establish that these facilities can operate without risk of failure or discharges. Where appropriate, they also must close storage structures according to NRCS standards 360. Applicants are required to show that they have storage capacity adequate to meet their needs based on anticipated waste the facility will generate.

Applicants must control runoff from animal lots by meeting NRCS technical standard 635 for new and substantially altered lots. They must evaluate existing facilities using the BARNY model to show acceptable phosphorous runoff. A higher level of control is required if a lot is near surface water. No lot can have discharges to sinkholes or other conduits to groundwater. For buildings, bunkers and paved areas used to store high moisture feed, applicants must divert clean water from the structure, and collect and treat leachate. New and substantially altered structures

must be built at least 3 feet above groundwater and bedrock. In addition, if a structure covers more than 10,000 square feet, it must have a system to collect leachate that may leak through the structure's floor (if the floor cracks, for example).

The siting standards require livestock operators to follow certain practices near waterways: divert clean water from animal lots and other structures, not maintain unconfined manure stacks near waterways, prevent overflow from waste storage, restrict grazing on streambanks to ensure adequate vegetative cover. Also applicants must have and follow a construction site erosion control plan if one or more acres of land is disturbed by construction. These particular siting standards incorporate the performance standards in NR 151, Wis. Admin. Code, designed to protect water quality.

The siting standards require that applicants manage odor from facilities and land application of manure. If an applicant proposes a new facility with 500 or more animal units or an expansion with 1000 or more animal units, the applicant must demonstrate that the proposed production facilities (animal housing, animal lots and waste storage) will have acceptable odor levels. Odors levels are predicted using an odor index. As the first step in modeling odor, an applicant must calculate the facility's odor generation based on the size of proposed structures. Depending on the separation distance from affected neighbors, an applicant may need to implement best management practices to reduce odor. An applicant can also get credit for implementing certain good neighbor practices (which do not reduce odor but may reduce conflicts with neighbors). A local government has additional latitude to apply a less stringent "odor index" standard, if it wishes.

For applicants that spread stored, untreated liquid manure, they must select one or more options to reduce odors when applying within 500 feet of non-farm residences or high public use areas. The options include injection or incorporation manure within 48 hours (weather permitting), compliance with a locally approved management plan, or adherence with setback requirements.

It is worth noting that the control of odors may be effective in controlling air pollutants such as ammonia and hydrogen sulfide. For example, permeable covers also reduce ammonia emissions from manure storage structures. Likewise biofilters installed to reduce odors from housing can significantly reduce hydrogen sulfide and ammonia emissions.[1] Practices such as incorporation and injection can reduce emissions of ammonia. However, in some cases, other practices such as composting may increase volatilization of ammonia.

Applicants must submit a plan for managing dead animals by identifying the method(s) of temporary storage and disposal. These management plans will reduce risks from foraging animals, public health hazards and odors.

Conclusion

By correcting the shortcomings of local regulation, Act 235 and the implementing regulations should provide a more conducive environment for modernization of existing facilities and construction of new facilities. Livestock operators will know in advance the requirements they must meet to receive local approval, and will have assurances of approval if they submit a completed application showing that the proposed facility meets the siting standards. Local determinations will be simplified by use of approved worksheets that demonstrate compliance with the siting standards. Because the siting standards are objective and based on sound science,

the participants and the public will have greater confidence in the local approval process. The standards incorporate water quality protections related manure storage and management, and provide new levels of environmental protection by addressing odor management and feed storage concerns. In their present form, the siting standards have addressed the various factors enumerated in s. 93.90(2)(b). These factors will continue to be touchstones as the standards in the proposed rule are subject to additional review. However the siting standards may change, they will remain central to the implementation of the new legal framework created by Act 235.

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Sands, Laura. 2001. Run for the Border: Onerous Permits Chase Livestock Across State Lines. *Top Producer*. A Farm Journal Publication, [article focuses on the high cost of obtaining a feedlot permit (said to be $50,000 in one in Minnesota case and $70,000 in another), threats of legal action, and negative local attitudes which are causing livestock producers to consider relocating to locations outside the Upper Midwest]

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