

Evaluating the Cumulative Impacts from Animal Feeding Operations within Impaired Watersheds in Texas: A Regulatory Approach

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The State of Texas benefits from a thriving livestock and poultry production industry. The diverse geography and climate of Texas allows each industry to concentrate in regions suited to its production demands. Beef cattle feedlots and swine operations are located in the West Texas High Plains; the dairy industry has developed in Central Texas; while broiler and layer hen operations are concentrated in East Texas. However, the cumulative impacts of these facilities have resulted in water-quality impairments in certain watersheds in the State.

In 1998, Texas submitted a list of impaired water bodies to the U.S. Environmental Protection Agency (EPA) to meet the requirements of Section 303 (d) of the Clean Water Act. Through the National Pollutant Discharge Elimination System (NPDES), the EPA has subsequently proposed additional regulations to address concentrated animal feeding operations (CAFOs) located in these watersheds. Preliminary studies conducted by EPA have indicated that discharges from CAFOs occur frequently and have the potential to contribute to water-quality impairments.

Concurrently, the State of Texas has initiated its own studies to independently evaluate the potential water-quality impacts associated with CAFOs. Three studies are presented outlining the latest research initiated by the Texas Natural Resource Conservation Commission (TNRCC). The research presented includes (1) a study on the impacts of nonpoint-source pollution associated with dairies located in Central Texas; (2) a poultry operations study on the existing or potential adverse impacts on water quality in three East Texas watersheds; and (3) a study on the impacts from point-source discharges from feedlots and swine operations located along the Canadian River in the Texas High Plains.

Armed with the results of these on-going studies, the TNRCC has proposed new regulations to address the potential impacts to water quality in Texas. The new regulations include additional requirements for nutrient utilization planning to limit pollutant runoff from land-application practices, as well as additional training and education requirements for facilities located in impaired watersheds. Furthermore, the TNRCC is coordinating with stakeholders and local and state agencies in the development of a total maximum daily load evaluation to further identify cumulative impacts from CAFOs as well as other sources of pollutants. And with the recent delegation of the NPDES program to the State of Texas, the TNRCC has increased coordination with EPA to provide a comprehensive and multi-media regulatory approach to solving the environmental problems associated with animal feeding operations.

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