ABOUT CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOS)

BACKGROUND

During the past three decades, animal production in the United States has become increasingly specialized. Many farms function as links in the chain of animal production, housing and feeding cattle and poultry. In 2003, the nation's 238,000 feeding operations produced 500 million tons of manure. The U.S. Environmental Protection Agency mates that a small percentage of those facilities—called **concentrated animal feeding operations (CAFOs)**—accounted for more than half of the manure.

CAFOs are agricultural facilities that house and feed a large number of animals in a confined area for 45 days or more during any 12-month period. Federal regulations require CAFOs to carry a permit and to develop nutrient-management plans designed to keep animal waste from contaminating surface water and groundwater. The number and type(s) of animal(s) the operation houses, and the extent to which waste from the operation could pollute surface water and groundwater, determine whether EPA considers a feeding operation to be a CAFO.

When EPA began regulating CAFOs during the 1970s, compliance with waste-storage and waste-disposal guidelines was voluntary. However, in April 2003, a revised EPA rule took effect that required all CAFOs to obtain a point-source permit; develop a plan for storing, using, and disposing of animal waste; and report waste-disposal practices to the federal government annually.

PUBLIC HEALTH CONCERNS

People who work with livestock may develop adverse health effects, including chronic and acute respiratory illnesses and musculoskeletal injuries, and may be exposed to infections that travel from animals to humans. Residents in areas surrounding CAFOs report nuisances, such as odor and flies. In studies of CAFOs, CDC has shown that chemical and infectious compounds from swine and poultry waste are able to migrate into soil and water near CAFOs. Scientists do not yet know whether or how the migration of these compounds affects human health.

Pollutants possibly associated with manure-related discharges at CAFOs include:

- **Antibiotics**, which may contribute to the development of antibiotic-resistant pathogens
- **Pathogens**, such as parasites, bacteria, and viruses, which can cause disease in animals and humans
- **Nutrients**, such as ammonia, nitrogen, and phosphorus, which can reduce oxygen in surface waters, encourage the growth of harmful algal blooms, and contaminate drinking-water sources
- **Pesticides and hormones**, which researchers have associated with hormone-related changes in fish
- **Solids**, such as feed and feathers, which can limit the growth of desirable aquatic plants in surface waters and protect disease-causing microorganisms
- **Trace elements**, such as arsenic and copper, which can contaminate surface waters and possibly harm human health

Researchers do not yet know whether or how these or other substances from CAFOs may affect human health. Therefore, CDC supports efforts to address these questions.

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