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## Clean Water & Oceans: Water Pollution: In Brief: Fact Sheet

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## Facts about Pollution from Livestock Farms

Giant livestock farms, which can house hundreds of thousands of pigs, chickens, or cow produce vast amounts of waste. In fact, in the United States, these "factory farms" generate more than 130 times the amount of waste that people do -- about 2.7 trillion pounds of manure a year. While a problem of this nature -- and scale -- sounds almost comical, pollution from livestock farms seriously threatens humans, fish and ecosystems. Below are facts and statistics that tell the story.

### Livestock pollution and public health

- California officials identify agriculture, including cows, as the major source of nitrate pollution in more than 100,000 square miles of polluted groundwater.
- In Oklahoma, nitrates from Seaboard Farms' hog operations contaminated drinking water wells, prompting the U.S. Environmental Protection Agency to issue an emergency order in June 2001 requiring the company to provide safe drinking water to area residents.
- In 1996 the Centers for Disease Control established a link between spontaneous abortions and high nitrate levels in Indiana drinking water wells located close to feedlots.
- High levels of nitrates in drinking water also increase the risk of methemoglobinemia, or "blue-baby syndrome," which can kill infants.
- Animal waste contains disease-causing pathogens, such as *Salmonella*, *E. coli*, *Cryptosporidium*, and fecal coliform, which can be 10 to 100 times more concentrated than in human waste. More than 40 diseases can be transferred to humans through manure.
- In May 2000, 1,300 cases of gastroenteritis were reported and six people died as the result of *E. coli* contaminating drinking water in Walkerton, Ontario. Health authorities determined that the most likely source was cattle manure runoff.
- Manure from dairy cows is thought to have contributed to the disastrous *Cryptosporidium* contamination of Milwaukee's drinking water in 1993, which killed more than 100 people, made 400,000 sick and resulted in \$37 million in lost wage and productivity.
- In this country, roughly 24 million pounds of antibiotics -- about 70 percent of the nation's antibiotics use in total -- are added to animal feed every year to speed livestock growth. This widespread use of antibiotics on animals contributes to the rise of resistant bacteria, making it harder to treat human illnesses.

- Large hog farms emit hydrogen sulfide, a gas that most often causes flu-like symptoms in humans, but at high concentrations can lead to brain damage. In 1998, the National Institute of Health reported that 19 people died as a result of hydrogen sulfide emissions from manure pits.

### **Livestock pollution and water pollution**

- Huge open-air waste lagoons, often as big as several football fields, are prone to leaks and spills. In 1995 an eight-acre hog-waste lagoon in North Carolina burst, spilling 25 million gallons of manure into the New River. The spill killed about 10 million fish and closed 364,000 acres of coastal wetlands to shellfishing.
- From 1995 to 1998, 1,000 spills or pollution incidents occurred at livestock feedlot in 10 states and 200 manure-related fish kills resulted in the death of 13 million fish.
- According to the U.S. Environmental Protection Agency, livestock waste has polluted more than 27,000 miles of rivers and contaminated groundwater in dozer of states.
- When Hurricane Floyd hit North Carolina in 1999, at least five manure lagoons burst and approximately 47 lagoons were completely flooded.
- Runoff of chicken and hog waste from factory farms in Maryland and North Carolina is believed to have contributed to outbreaks of *Pfiesteria piscicida*, killing millions of fish and causing skin irritation, short-term memory loss and other cognitive problems in local people.
- Nutrients in animal waste cause algal blooms, which use up oxygen in the water, contributing to a "dead zone" in the Gulf of Mexico where there's not enough oxygen to support aquatic life. The dead zone stretched over 7,700 square miles during the summer of 1999.
- Ammonia, a toxic form of nitrogen released in gas form during waste disposal, can be carried more than 300 miles through the air before being dumped back onto the ground or into the water, where it causes algal blooms and fish kills.

### **The growth of factory farms**

- During the past 15 years the number of hog farms in the United States dropped from 600,000 to 157,000, yet the number of hogs remains almost the same.
- In 1999, the U.S. Department of Agriculture reported that 2 percent of the hog farms in the country produce over 46 percent of the total number of hogs.
- Ten large companies produce more than 90 percent of the nation's poultry.

#### **Related NRDC Pages**

[Pollution from Giant Livestock Farms Threatens Public Health](#)

[Cesspools of Shame](#): How Factory Farm Lagoons and Sprayfields Threaten Environmental and Public Health, a July 2001 report by the Natural Resources Defense Council and the Clean Water Network.

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