

# Concentrated Animal Feeding Operations



Paul Koberstein/Cascadia Times

**C**oncentrated animal feeding operations, or CAFOs, are agricultural facilities that keep large numbers of animals together for feeding, resulting in a large amount of manure in a relatively small space. Animal waste, if not managed properly, can run off farms and pollute nearby water bodies. Runoff from these facilities, rich in nutrients like nitrogen and phosphorus, can cause serious pollution problems. In 1999, when Hurricane Floyd hit North Carolina, at least five manure lagoons burst and 47 lagoons were completely flooded with river water mixed with waste from the lagoons. When the flood receded, polluted water had saturated the walls and floors of many homes and caused untold damage to aquatic life.

Runoff from CAFOs has been linked to problems with dangerous micro-organisms. The drinking water system for Milwaukee, Wisconsin was contaminated in 1993 by *cryptosporidium* (bacteria). This outbreak, most likely caused by dairy cattle waste, killed over 100 people and made more than 400,000 people ill. Another CAFO-

related micro-organism, *Pfiesteria piscicida*, is widely believed to be responsible for fish kills in Maryland, North Carolina and Virginia and poses risks to human health.

In 2002, the EPA adopted a new rule requiring all CAFOs to apply for an NPDES permit, submit an annual report, and develop and follow a plan for handling manure and wastewater. CAFOs are defined in the rule as operations raising more than 1,000 cattle, 700 dairy cows, 2,500 swine, 10,000 sheep, 125,000 chickens, 82,000 laying hens or 55,000 turkeys in confinement. About 500 million tons of manure are generated annually by an estimated 238,000 of these livestock operations. From 1982 to 1997 these operations grew by 51 percent, with some of the largest facilities now exceeding 1 million animals. About 4,500 operations were required to obtain permits under the old regulation, but under the new rule, EPA expects that up to 11,000 additional facilities will be required to apply for permits by 2006.



## Using the Clean Water Act

- **NPDES** — CAFOs are point sources of pollution and must obtain NPDES permits. There had been little enforcement of this requirement until rules were passed in 2002. Check with your state agency to determine whether feeding operations in your watershed need or already have permits. (Chapter 2)
- **Antidegradation** — Before a state can issue a NPDES permit for a CAFO that will degrade water quality, an antidegradation analysis must be performed and be subjected to public review. In this analysis, the state must examine whether all existing uses and all outstanding waters would be protected, and, to protect high quality waters, whether all alternatives have been considered with respect to their social and economic impact. (Chapter 1)
- **Water quality standards** — Identify the existing and designated uses downstream of CAFOs. Which uses are the most sensitive to polluted CAFO runoff? To protect those uses, identify water quality criteria for bacteria, pathogens, nitrogen, phosphorus, temperature, sediment (total suspended solids), habitat, streamflow and biology. Evaluate whether the criteria are stringent enough to protect existing and designated uses. (Chapter 1)
- **303(d)** — Do the waters around and downstream of CAFOs in your watershed support uses and meet water quality criteria? If not, or if they are threatened by CAFO(s), make sure they are on the 303(d) list for the appropriate pollutants, problems and threats. (Chapter 3)
- **TMDL process** — Is there a TMDL scheduled or in progress in your watershed? Are poor CAFO management practices included as sources of the impairment? Have changes to CAFO permits and management practices been included in the TMDL implementation plan? If not, encourage your agency to include them. (Chapter 3)

## Using other laws (Chapter 10)

- **SDWA** (p. 183) — Is the surface water or groundwater downstream of a CAFO used or designated for drinking? If so, it is likely that human health concerns will provide leverage to ensure that CAFO problems are addressed. The bacteria, nitrogen and micro-organisms flowing from CAFOs can cause serious problems to your drinking water. Identify the risks and talk to the agency in charge of developing the Source Water Assessment for your watershed. Be sure that CAFO risks to drinking water sources are included in the assessment and considered by your drinking water provider.
- **Local land-use laws** — Are the CAFOs located in areas that are zoned for agricultural activities? Study local ordinances to learn what activities are and are not allowed.
- **CREP/Farm Bill** (p. 188) — The Conservation Reserve Enhancement Program provides federal money to farmers willing to set aside farmland for conservation and protection. These resources can be instrumental in addressing agricultural runoff. Find out whether any money has been directed toward your watershed, and encourage use of the program, especially to implement TMDLs.
- **ESA** (p. 186) — Are there threatened or endangered species in your watershed? If so, you have another tool for protecting against the damaging effects of CAFOs. The Endangered Species Act prohibits any activity that would result in harmful impacts to the species or its habitat.