



# FACT SHEET

## Office of Wastewater Management

### *Concentrated Animal Feeding Operations (CAFOs) and Their Effect on Water Pollution*

#### What are CAFOs?

Basically, CAFOs are animal feeding operations (AFOs) that confine or house livestock or poultry prior to the animals being sent to market for sale, or to processing plants for slaughter and packaging for consumption. CAFOs can range in size of operation from less than 100 individual animals to several thousand, depending on species and type. The designation of an AFO to that of a CAFO is dependent on the number of animal units (AUs), the length of time the animals are maintained at the facility, and the method of confinement (barns, open pasture, etc.) and means of waste containment and disposal used by the facility.

#### What are "animal units" (AUs)?

The term "animal unit" refers to a unit of measurement used to standardize measurements of size of AFOs. The number of AUs is determined by multiplying the number of animals of each species (other than poultry) by an equivalency factor and adding the totals. Species equivalency factors for mammalian livestock are:

<u>Species</u>	<u>Factor</u>
Horses	2.0
Mature dairy cattle	1.4
Slaughter/Feeder cattle	1.0
Swine (>55lbs.)	0.4
Sheep or lambs	0.1

#### How are AFOs defined, and when do they become CAFOs?

An animal feeding operation, or AFO, is a facility where animals are, have, or will be confined and fed or maintained for a total of 45 days or more in any 12-month period. These confinement areas (barns, sheds, yards, etc.) do not sustain crops or forage growth in the normal growing season. If the AFO houses more than a total of 1,000 animal units, 55,000 or more turkeys, 100,000 or more laying hens or broilers with continuous overflow watering, 30,000 or more hens or broilers on a liquid manure system, or 5,000 or more ducks, then the facility meets the definition of a CAFO.

If the facility has more than 300 total animal units; 16,16,500 turkeys, 30,000 laying hens or broilers on continuous overflow watering, 9,000 laying hens or broilers on a liquid manure system, or 1,500 ducks, and discharges pollutants into nearby waters by means of a man-made ditch, flushing system, or other similar man-made device, or discharges pollutants directly into

nearby waters that originate outside of or pass over, across, or through the facility, or otherwise come into direct contact with the animals confined there, then these facilities are also considered to be CAFOs.

In addition to the above criteria, any AFO may be designated as a CAFO based on water quality concerns. Factors used in making this determination include the size of the operation, the amount of waste entering nearby waters, the location of the facility in relation to nearby waters, the means of conveyance used to carry process-generated wastewater into nearby water bodies, site-specific factors such as slope, vegetation, and rainfall, and the type and frequency of discharge into nearby waters.

#### Why are CAFOs of concern in terms of water pollution?

CAFOs may potentially contaminate nearby creeks, streams, rivers, lakes, and estuaries from runoff and discharges during normal operations. Additionally, CAFOs are of special concern during periods of excessive precipitation, because animal waste collection devices and holding facilities are likely to be overwhelmed during these events, allowing large volumes of wastewater to enter nearby surface water bodies.

Public concern over the contamination of surface and ground water from animal agricultural waste is currently renewing interest on the part of both the livestock industry, the public, and regulatory agencies in developing strategies for reducing and eliminating this source of water pollution. Of particular concern are degradation of surface and ground waters from nitrogen, phosphorus, and pathogens. EPA estimates that animal agriculture contributes about one-third to one-half of all the nonpoint surface water pollution in the United States, primarily from the improper application of animal wastes from confinement operations and grazing.

#### What is being done to help solve the problem?

EPA's National Pollutant Discharge Elimination System (NPDES) program provides a means of addressing the problem by regulating the discharge of pollutants from CAFOs by permit. Under criteria set forth in the Code of Federal Regulations (CFR),

**Information on NPDES regulations governing CAFOs (con't. from p. 1):**

- *Summary of Water Pollution from Feedlot Waste: An Analysis of its Magnitude and Geographic Distribution, EPA Feedlots Workgroup, 1993.*

**Additional Information from the Code of Federal Regulations and citations in the FEDERAL REGISTER can help understand the NPDES regulations applicable to CAFOs:**

- *Criteria for Determining a Concentrated Animal Feeding Operation, 40 CFR Section 122, Appendix B (1992);*
- *Concentrated Animal Feeding Operations, 40 CFR Section 122.23 (1992);*
- *EPA Effluent Guidelines and Standards for Feedlots, 40 CFR 412 (Revised through July 1, 1991);*
- *National Pollutant Discharge Elimination System and State Program Elements Necessary for Participation: Concentrated Animal Feeding Operations, 40 CFR 54182 (Nov. 20, 1975);*
- *State Program Elements Necessary for Participation in the National Pollutant Discharge Elimination System: Concentrated Animal Feeding Operations, 41 FR 11458 (Mar. 18, 1976);*
- *National Pollutant Discharge Elimination System General Permit Requirements for Discharges from Concentrated Animal Feeding Operations (Region 6 Final Notice), 58 FR 7610 (Feb. 8, 1993).*

**Where Can I Go For More Information?**

Additional information on NPDES regulations affecting CAFOs can be obtained by contacting the Permits Branch in your nearest EPA Regional Office:

EPA Region I (CT, MA, ME, NH, RI, VT)  
JFK Federal Building, Boston, MA 02203  
(617) 565-4940

EPA Region II (NJ, NY, PR, VI)  
26 Federal Plaza, New York, NY 10278  
(212) 264-9894

EPA Region III (DC, DE, MD, PA, VA, WV)  
841 Chestnut Building, Philadelphia, PA 19107  
(215) 597-9078

EPA Region IV (AL, FL, GA, KY, MS, NC, SC, TN)  
345 Courtland Street, NE, Atlanta, GA 30365  
(404) 347-2019

EPA Region V (IL, IN, MI, OH, MN, WI)  
230 West Jackson Blvd., Chicago, IL 60604-3507  
(312) 353-2079

EPA Region VI (AR, LA, OK, NM, TX)  
1445 Ross Avenue, Dallas, TX 75202  
(214) 655-7171

EPA Region VII (IA, KS, MO, NE)  
726 Minnesota Avenue, Kansas City, KS 66101  
(913) 551-7034

EPA Region VIII (CO, MT, ND, SD, UT, WY)  
999 18th Street, Denver, CO 80202-2413  
(303) 293-1623

EPA Region IX (AS, AZ, CA, HI, GU, NV)  
75 Hawthorne Street, San Francisco, CA 94105  
(415) 744-1877

EPA Region X (AK, ID, OR, WA)  
1200 Sixth Avenue, Seattle, WA 98101  
(206) 553-1728

**FOR MORE INFORMATION, CONTACT:**

**Permitting:**

Office of Wastewater Management  
Permits Division (4203)  
U.S. EPA  
401 M Street, SW  
Washington, DC 20460  
(202) 260-9537/FAX (202) 260-1460

**Nonpoint Source:**

Office of Wetlands, Oceans  
and Watersheds  
U.S. EPA  
Fairchild Bldg.  
499 South Capitol Street, SW  
Washington, DC 20024  
(202) 260-7040/FAX (202) 260-7024

**Compliance/Enforcement**

Office of Enforcement and  
Compliance Assurance  
U.S. EPA  
Ariel Rios Bldg.  
1200 Pennsylvania Ave., NW  
Washington, DC 20044  
(202) 564-2280/FAX (202) 564-0028