




Environmental Regulations: Impacts and Implications



U.S. Environmental Protection Agency
Region 4



AL, FL, GA, KY, MS, NC, SC, TN



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Animal Feeding Operations (AFOs)

- Are facilities where animals are stabled/confined or fed/maintained for 45 days or more within any 12-month period
 - and
 - Do not produce any crops, vegetation or forage growth
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Concentrated Animal Feeding Operation (CAFO)

Is an AFO which:


- houses more than 1,000 animal units (AUs),
or
 - houses 301 to 1,000 AUs and wastes are discharged through man-made conveyance or directly into U.S. waters (Method of Discharge), *or*
 - is designated a CAFO by the permitting authority on a case-by-case basis
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CAFO Description

- Method of discharge includes:
 - use of ditch, flushing system, or similar man-made device, or
 - direct discharge to a stream, creek, wetland, etc.
- An operation may be designated a CAFO
 - after an on-site inspection of the facility and
 - if it is determined to be a significant contributor of pollution




Statutory History

- 1972 — Clean Water Act (CWA) defined CAFOs as point sources
 - Illegal to discharge pollutants into U.S. waters without a **National Pollutant Discharge Elimination System** (NPDES) permit.
 - 1976 — NPDES regulations
 - promulgated to define the term concentrated animal feeding operations
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Statutory History

- 1977 — CWA amended to allow States to assume responsibility for Federal programs
 - 1987 — CWA amended to address non-point source pollution
 - Framework for funding State and local efforts
 - States submit assessment reports and identify best management practices (BMPs) for non-point source controls
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Regulatory Framework

NPDES Permit Requirements

- CAFOs must meet NPDES permit and effluent guideline requirements
- Zero discharge

Exceptions for permitted facilities

- 25-year/24-hour storm events
 - catastrophic and chronic rainfall events
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Regulatory Framework

NPDES Permits May Address


- Land application
- Nutrient management
- Manure management plans
- Specific construction requirements
- Operation training/
certification





Regulatory Framework

Current Implementation

- NPDES permits are issued by State agencies
 - 42 States authorized to issue NPDES permits for CAFOs
 - Fewer than 2,000 NPDES CAFO permits issued
 - State requirements augment Federal requirements
 - Inspection type and frequency vary by State
 - EPA inspections may occur in both authorized/unauthorized States
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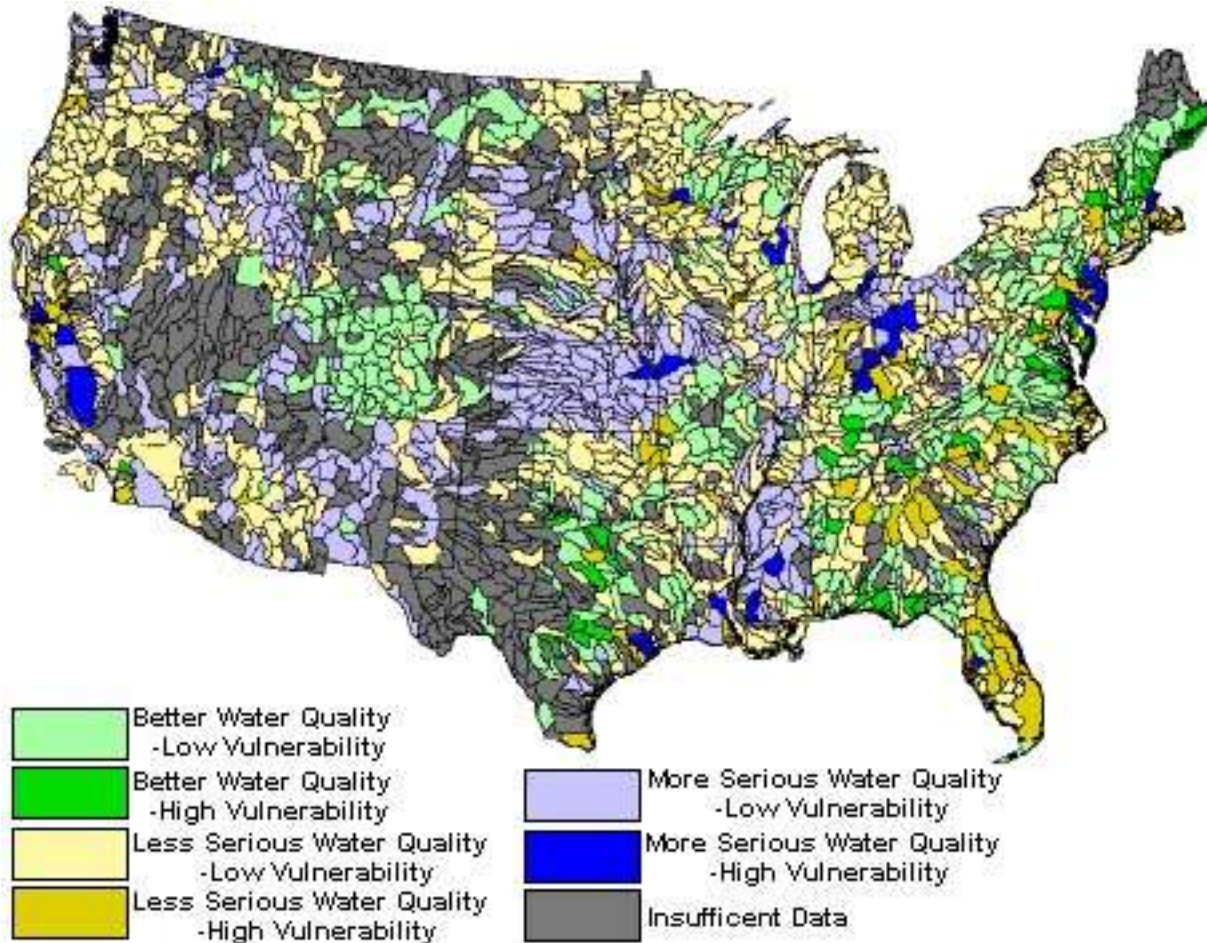
Animal Waste and the Environment

Index of Watershed Indicators — Provides the First National Picture of 1996 Watershed Health

- 16% of our watersheds nationally have relatively good water quality
 - 36% have moderate problems
 - 21% of the watersheds have more serious water quality
 - 27% do not have enough information to be characterized
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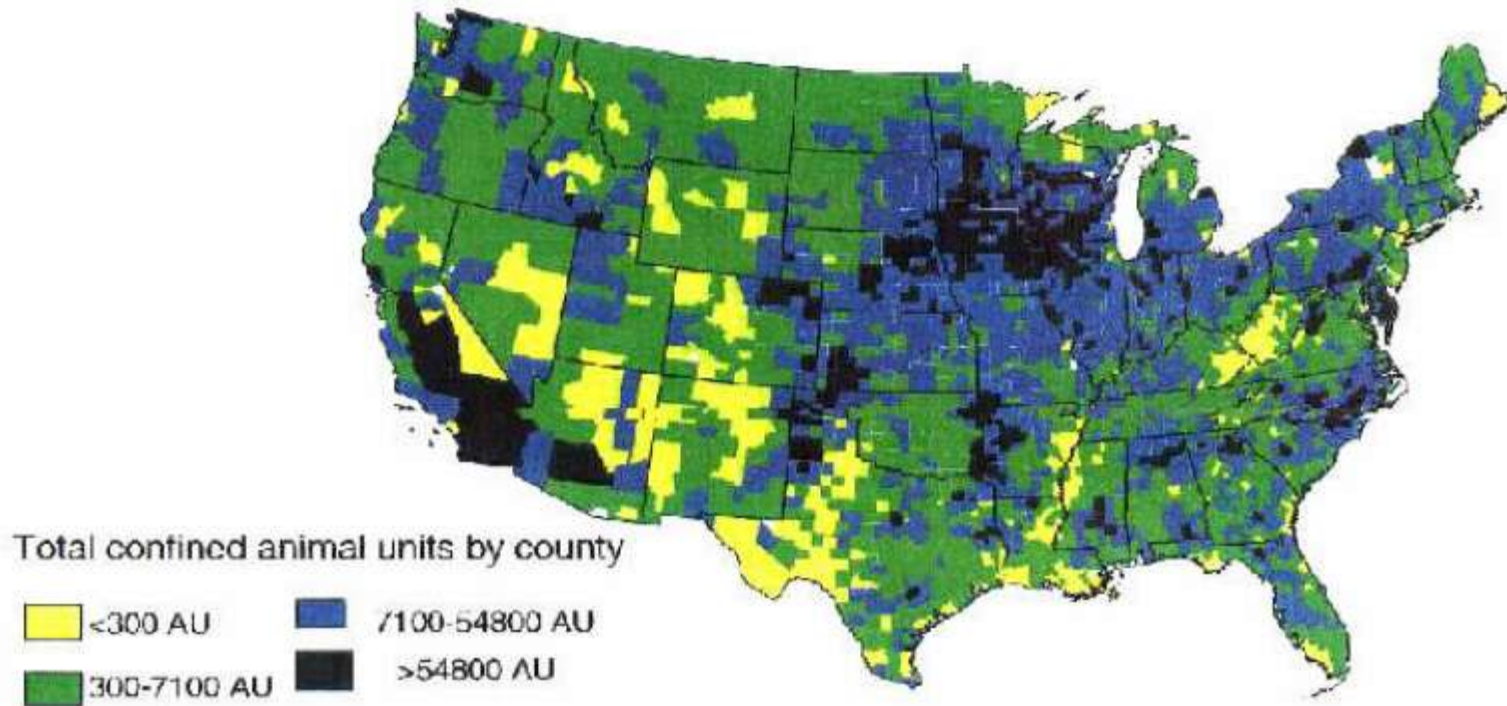
Animal Waste and the Environment

National Watershed Characterization



Animal Feedlot Sector

Concentration of Livestock and Poultry Operations by County, 1992

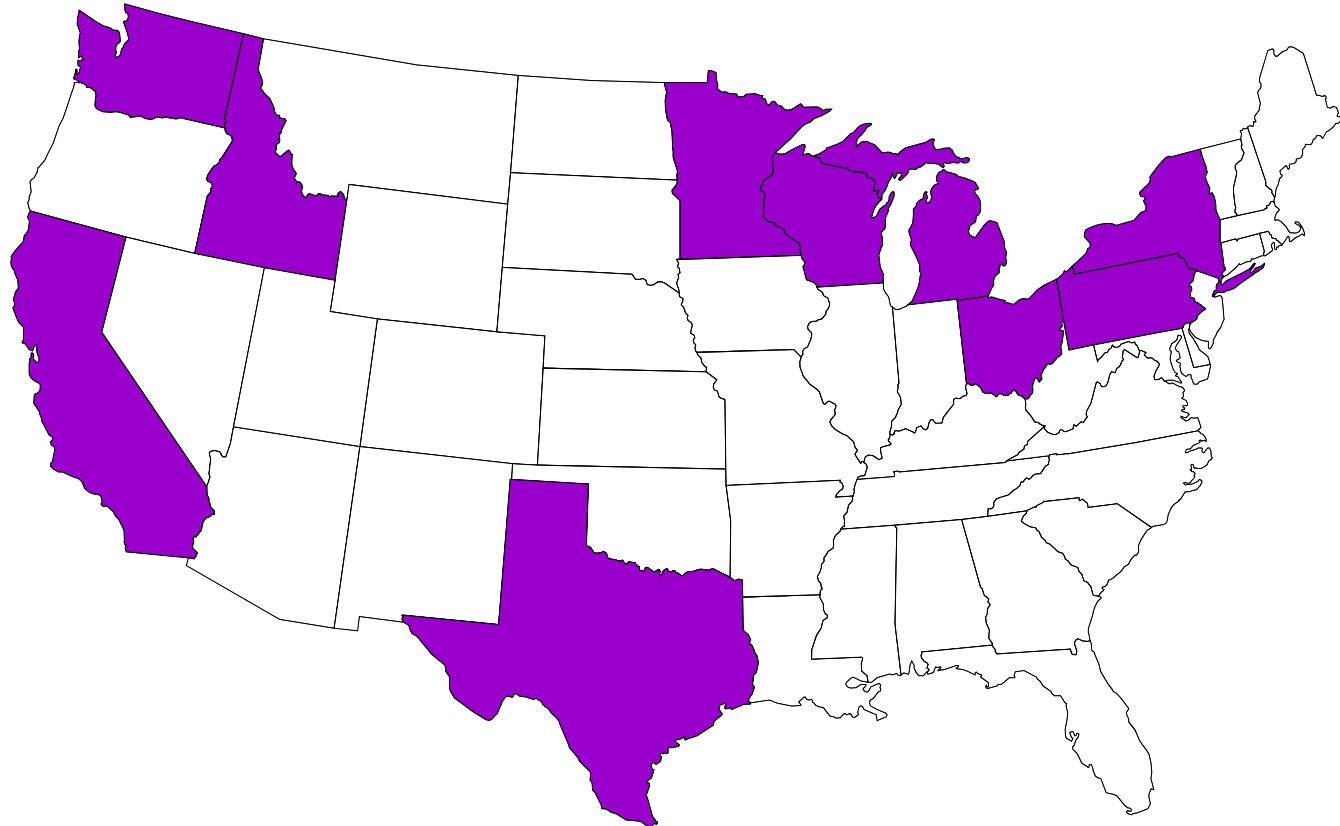


Note: 1000 Animal units (AU)=1,000 beef cattle; 700 dairy cattle; 2500 hogs; or 455,000 broilers.

Source: ERS/USDA.

Animal Feedlot Sector

Top Ten States: Dairy Cow Population





Animal Feedlot Sector

Industry Consolidation Trends –

AUs per operation increased between 1978 and 1992:

- Beef 56%
- Dairy 93%
- Hog 134%
- Layer 176%
- Broilers 148%




Animal Feedlot Sector

Livestock or Poultry Sector	Total Number of Operations	Number of Operations with > 1,000 AU Equivalents	Number of Operations with NPDES Permits
Beef Feedlot	147,201	943	632
Broiler	35,759	1,398	5*
Dairy	155,339	939	992
Hog	206,450	2,578	324
Layer	88,235	599	24*
Turkey	10,566	102	10*

* Not CAFOs



Guiding Principles

- Minimize water quality and public health impacts from AFOs
 - Focus on greatest risks
 - Encourage long-term sustainability of livestock production
 - Establish national goal and performance expectations
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Guiding Principles

- Coordinate Federal, State, Tribal, and local activities
- Foster public confidence that AFOs are meeting their performance expectations
- Focus technical and financial assistance to support AFOs in meeting the national performance expectations



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Goal and Performance Expectations

- **National goal:** For AFO owners to take actions to minimize water pollution
 - **National performance expectation:** For AFO owners to develop and implement Comprehensive Nutrient Management Plans (CNMPs)
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Components of CNMPs

- Feed Management - reducing nutrients
- Manure handling and storage
 - diverting clean water
 - providing storage
 - preventing leakage
- Land application of manure
 - maintaining nutrient balance
 - timing and application





Components of CNMPs

- Land management
 - crop residue management
 - conservation practices
- Record keeping
 - amount of manure
 - locations of applications
- Other utilization options - alternate uses in vulnerable watersheds



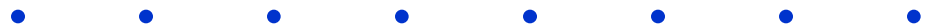
Implementing CNMPs

- Voluntary for AFOs; required for CAFOs
- Site specific
- Technical assistance from qualified specialists
 - private
 - federal, state, and tribes
- Financial assistance
- Goal: All AFO owners have CNMP by 2008



Priorities for Regulatory Program

- Significant manure production
- Unacceptable conditions
- Significant contributors to water quality impairment
 - Impacts on watershed scale
 - Impacts on individual water bodies




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Additional Information

- USDA's website at:
<http://www.nhq.nrcs.usda.gov/>
 - EPA's website at:
<http://www.epa.gov/owm/afostrat.htm>
 - USDA Service Centers
 - EPA Offices and Water Resource Center
(202) 260-7786
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CA Partnership Agreement

- **Purpose:** to support voluntary, cooperative education and facility evaluation programs
 - **Objective:** to assist CA dairy producers in meeting all federal and state requirements relating to manure and nutrient management
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CA Partnership Agreement

- Requirements for **Producer Certification**
 - complete environmental short course
 - complete an Environmental Stewardship Farm Management Plan (specific to each dairy)
 - participate in initial on-site evaluation by a third party
 - **Participation does not exempt producer from regulatory actions**
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Region 4 CAFO/AFO Issues

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