

# Animal Feeding Operations

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**...A  
Utah Strategy**

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**How Will it Affect You?**

# Water: The Key to Life

Water is vital to life--all life. From the rapid riffles and cool, quiet eddies of a mountain stream; to the violent majesty of a waterfall; to the glistening beauty of a sun-drenched lake, water soothes emotions and feeds the soul. Water is also essential to health. Humans and all animals, both wild and domesticated, need clean water to sustain life.

Polluted water comes from a variety of activities. During the last quarter of the 20th century the U.S. Environmental Protection Agency (EPA), under the Clean Water Act, worked diligently to regulate and clean up industrial and municipal sources of pollution, often referred to as point source pollution. Another category of pollution which comprises several types of land uses is nonpoint source (NPS) pollution. Agriculture falls within this category and has traditionally been regarded as a significant source of NPS pollution. Runoff from fields and manure/wastewater discharge are the main forms of agricultural NPS pollution.

NPS pollution is not regulated under the Clean Water Act. Traditionally, animal feeding operations (AFOs) have been part of the non-

regulatory area. Various voluntary, incentive-based programs have been available for AFOs to make improvements to facilities and reduce NPS pollution. Many of



these have been funded under Section 319 of the Clean Water Act. Section 319 grants have been used to assist farmers and ranchers in land stewardship efforts.

In March 1999, the U.S.

Department of Agriculture (USDA) and EPA completed a joint national strategy for the management of livestock manure from animal feeding operations. The Strategy divides animal feeding operations into two categories: Concentrated Animal Feeding Operations (CAFOs) and all other Animal Feeding Operations (AFOs). **According to the strategy, all CAFOs must have a water pollution discharge permit and a comprehensive nutrient management plan (CNMP), and are subject to regulation under the Clean Water Act. AFOs are not subject to regulation.**

The purpose of this document is to provide AFO and CAFO owners, government personnel and the general public with a better understanding of the Strategy and how it will affect the livestock industry. Each page of this document has valuable information for farmers and ranchers who own livestock. Livestock owners can benefit greatly from reading the entire publication.

# Why a National Strategy for CAFOs?

In the last 25 years, the United States has made tremendous progress in cleaning up its rivers, lakes, and coastal waters. However, nearly 40% of the Nations waterways that have been assessed to this point still do not meet quality criteria for culinary or recreational use. Pollution from factories and sewage treatment plants has been dramatically reduced, but runoff from city streets, agricultural operations, and other sources continues to pollute water.

In March 1999, the U.S. Environmental Protection Agency (EPA) and U.S. Department of Agriculture (USDA) completed a strategy for livestock operations. *The Unified National Strategy for Animal Feeding Operations* represents the EPA and USDA plan for addressing water quality concerns associated with livestock production. The goal of the program is to minimize water quality impacts by identifying operations at greatest risk for pollution, and providing financial and technical assistance to these owners to assist them in meeting water quality goals.

## **Main elements**

The Strategy will initially focus on large facilities designated as concentrated animal feeding operations (CAFOs - see definition on page 4). Smaller facilities designated as animal feeding operations (AFOs - see definition on page 4) may also be affected, especially if they are

located on an impaired watershed or are identified as a significant contributor to water pollution. Once designated, CAFOs will be issued a permit by the individual states' water quality authority. The permit offers some regulatory protection for facilities in the event of a manure or wastewater discharge during a 25 year, 24 hour storm event.

Operations designated as CAFOs will also be required to develop a comprehensive nutrient management plan (CNMP). A CNMP is a written document detailing manure storage and handling systems, surface runoff control measures, manure application rates and schedules to meet crop nutrient needs, land management practices, and other options for manure disposal. Technical and some financial assistance may be available to make necessary improvements, develop CNMPs, and meet other requirements of the Strategy.

The Strategy also outlines extensive voluntary opportunities for operations to improve manure management and runoff control. Some facilities, however, may choose not to alter their operation. If these facilities are identified as a significant source of water pollution, and are not making good faith efforts to solve problems, significant fines and other penalties may be imposed.

## **Utah's approach**

The EPA included a provision that allows individual states to

develop their own plan for implementing the Strategy. Utah's plan calls for a commodity-group assessment of all livestock operations to determine the number and location of CAFOs and AFOs. Following the assessment, a general permit will be issued by the Utah Department of Environmental Quality, Division of Water Quality, covering all CAFOs with 1,000 animal units or more.

Utah's plan provides a 5-year window of opportunity for producers to make voluntary improvements to facilities. This may allow CAFOs with less than 1,000 animal units to return to AFO status without any fines or permitting requirements. Identification and permitting of CAFOs begins in the year 2000. The initial focus will be on facilities located within priority watersheds with identified water quality problems (A copy of the state's 303(d) list of impaired waters is available from the Utah Division of Water Quality 801 538-6146).

Technical and financial assistance will be provided throughout the permitting process to assist operators in improving facilities and developing CNMPs. At this time it is expected that a CNMP could be developed by the land owner, with assistance from USDA-NRCS, Cooperative Extension, Conservation District personnel, or private consultants. Regardless of who prepares the plan, all CNMPs must be reviewed and approved by a certified individual.

# How Does the Strategy Affect You?

## First Step: Understanding the Definitions

### An AFO Defined

An animal feeding operation (AFO) is defined as a lot or facility where animals are confined and fed for 45 days or more in any one year period, and vegetation is not produced on the area during the normal growing season. Consider these key points:

- The definition of an AFO is independent of facility size or number of animals. Therefore, a facility with two animals meets the AFO definition if the animals are kept for 45 or more days per year on a dry lot or other area where vegetation is not maintained.

- Regardless of size, facilities with animals on pasture or range are not normally considered an AFO as long as plants are grown on the site during the normal growing season.

### A CAFO Defined

A concentrated animal feeding operation (CAFO) is defined as any facility with more than 1000 animal units (see Table 1, next column) confined on site, or an AFO *of any size* that discharges pollutants (e.g., manure, wastewater) into any ditch, stream, or other water conveyance system, whether manmade or natural. Consider these key points:

- Operations with more than 1000 animal units are not considered CAFOs if the animals are housed or fed on areas where crops are produced during the normal growing season.

- A facility *of any size* can be designated as a CAFO if pollutants are discharged into water passing across, through, or adjacent to the facility.

- Any water that comes into contact with animals or manure must be contained on site.

**Table 1.** Approximate number of animals equivalent to 1000 animal units.

<u>Animal type</u>	<u>Number</u>
Slaughter/feeder cattle	1,000
Mature dairy cattle	700
Swine	2,500
Sheep or lambs	10,000
Horses	500
Turkeys	55,000
Laying Hens or broilers	100,000

### A Discharge Defined

A discharge is defined by the Clean Water Act as the addition of any pollutant (including animal manures or contaminated waters) to navigable waters. Navigable waters are broadly defined as any surface water source, whether in manmade ditches or natural streams, that leaves an operator's property. Consider these key points:

- Navigable waters are broadly defined to ensure that contaminated water does not leave an operator's property and end up in a stream or reservoir. Irrigation ditches often terminate at a stream. Therefore, a release of manure or wastewater into an irrigation ditch may be considered a discharge.

- There is no minimum volume required for a release to be considered a discharge.

- Facilities are not allowed by law to discharge *unless* they are permitted and *then only* during a storm event equal to or greater than a 25 year, 24 hour storm.

# Is Your Operation A CAFO?

## This Worksheet Can Help You Find The Answer

<b>AFO/CAFO Worksheet</b>	<b>Yes ☒</b>	<b>No ☒</b>
<p>1. Is your operation an AFO? (See definition on page 4)</p> <p style="margin-left: 20px;">If you answered <b>NO</b> to question 1, your operation is not an AFO, therefore it can not be a CAFO. Please see page 7 for ways to reduce pollution from your livestock operation.</p> <p style="margin-left: 20px;">If you answered <b>Yes</b> to question 1, please go to question 2 to determine if your operation is a CAFO.</p>	<input type="checkbox"/>	<input type="checkbox"/>
<p>2. Do you have 1000 Animal Units or more? (See table 1, page 4)</p> <p style="margin-left: 20px;">If you answered <b>YES</b> to question 2, you are a CAFO. Refer to the bottom of page 6 for who to contact about permitting requirements and for additional assistance.</p> <p style="margin-left: 20px;">If you answered <b>NO</b> to question 2, please answer questions 3 and 4.</p>	<input type="checkbox"/>	<input type="checkbox"/>
<p>3. Do you have areas on your facility where animal manure or wastewater can discharge or travel by pipe or ditch to navigable waters? (See the definition of a discharge on page 4)</p>	<input type="checkbox"/>	<input type="checkbox"/>
<p>4. Do you have a waterway that moves through or next to your facility that comes in contact with animals or manure?</p> <p style="margin-left: 20px;">If you answered <b>YES</b> to questions 3 or 4, you could be designated as a CAFO. Please read pages 6 and 7 carefully for ways to voluntarily reduce pollution and possibly avoid being designated as a CAFO.</p>	<input type="checkbox"/>	<input type="checkbox"/>

### What's Next?

If you answered **YES** to any of the questions above, the Utah strategy recommends further assesment of your site by a qualified individual. The purpose of the assesment is to further determine AFO/CAFO status and ways to minimize pollution from your operation. Assesments must be completed before permits are issued.

**You will have time to voluntarily make improvements (if needed) before regulations are enforced.**

# Frequently Asked Questions

**Why should I be concerned?** Regulatory programs are not desirable to farmers in Utah or to any of the cooperating government agencies or private associations which support these programs. Your voluntary participation will ensure that strict regulatory programs and penalties are not assessed to livestock operators in Utah.

**Where can I get financial help?** Many programs are available to provide financial help. Contact one of the sources listed in this publication for more information on obtaining financial help.

**Is it true that financial help is available only in certain areas of the state?** The greatest amount of financial help is generally offered in higher priority areas (such as priority watersheds). Get involved in local work groups to help designate your area as a high priority.

**How long is a CNMP good for?** A CNMP will generally be good as long as the operation stays the same. It is recommended that your CNMP be updated once every five years. When animal numbers or the method of handling and storing manure changes significantly then your CNMP should be reviewed and updated.

## Who Can You Call?

If you are a CAFO with 1,000 animal units or more—

- It will be necessary for you to get a Utah Pollution Discharge Elimination System (UPDES) permit. Contact the Utah Department of Environmental Quality, Division of Water Quality @ (801) 538-6146 for information on obtaining a permit.

If you have less than 1,000 animal units and could be designated as a CAFO--

- Don't panic – The Utah Strategy will provide a two year window of opportunity to develop voluntarily a CNMP and an additional three years to implement your CNMP.
- Seek assistance from one of the sources listed below.

If you are an AFO –

- You are encouraged to voluntarily develop and follow a CNMP
- Seek assistance from one of the sources listed below.

\*Local Soil Conservation District

\*Local County Extension Office

\*Utah Farm Bureau

\*Utah Cattlemen's Association

\*Utah Wool Growers Association

\*Utah Department of Environmental Quality,  
Division of Water Quality

\*Local Natural Resource Conservation Service Office

\*Utah Department of Agriculture and Food

\*Utah Dairyman's Association

\*Pork Producers Association

\*Utah Farmer's Union

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\*Beginning January 1, 2000, the Utah Department of Agriculture and Food Web site will have current names, phone numbers and web site addresses for the above listed groups:

[www.ag.state.ut.us](http://www.ag.state.ut.us) (click on water quality)

# Best Management Practices

## Voluntary Pollution Prevention Measures

All livestock facilities are responsible for ensuring that they do not pollute water by collecting and properly disposing of manure, wastewater, and contaminated stormwater (runoff). Best Management Practices (BMPs) are recommended structural, vegetative or management practices designed to prevent or reduce water pollution. Voluntary adoption of BMPs by livestock producers will help prevent contamination of water resources and can eliminate the need for further regulatory and mandatory controls. The following are generalized BMPs for pollution prevention from livestock operations:

### Lot and storage BMPs

- Berm, ditch, gutter, or otherwise divert all clean stormwater away from the lot and manure stockpiles or bunkers.
- Pipe or otherwise enclose ditches or small streams that run through or near the lot. Small access areas for livestock watering can be included in the design.
- Locate manure stockpiles (bunkers) and wastewater lagoons above the flood plain and away from surface water sources and well heads.
- Control and contain all runoff from manure stockpiles and lot areas.
- When scraping soil-based lots to remove manure do not disrupt the compacted surface layer that acts as a barrier to leaching.
- Design manure bunkers and wastewater lagoons based on realistic storage periods for your location, field access, and manure, wastewater and runoff volumes generated.
- Dispose of dead animals by composting, landfilling, rendering, or on-site burial if allowed by county ordinances.
- Plant trees to provide windbreaks and visual barriers around manure and wastewater storage areas.

### Manure application BMPs

- Analyze soil and manure and use the analysis as the basis for manure application rates.
- Apply manure to land at agronomic rates based on the nutrients in manure, soil test nutrient levels, and crop nutrient requirements.
- Reduce commercial fertilizer rates accordingly

when using manure as a nutrient source.

- Service and calibrate application equipment to ensure manure is applied uniformly and at the correct rate.
- Incorporate manure where possible and as soon as possible after application to prevent surface runoff.
- Leave a minimum 30 foot buffer strip between manure application and any streams, ditches, wells, or other waterbodies. Steep slopes or other sensitive conditions may warrant a wider buffer strip.
- Apply manure in the spring and fall, when it can be incorporated properly, as well as be used by growing crops more efficiently.
- Avoid manure application on frozen or snow covered ground. If manure must be applied to frozen or snow covered ground do so on areas where surface runoff is controlled by diking or other means.
- Manage irrigation water to minimize over-application and leaching of nitrates to groundwater or runoff of phosphorus and other nutrients to surface water.

### General BMPs

- Keep records of manure and soil analyses, manure application rates, fertilizer applied, and crop yields.
- Fence animals out of streams or ponds to reduce disturbance and manure in water.
- If facilities do not have adequate land to dispose of manure, consider options such as composting, off-site transport, or conversion to a higher value product.

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