

**GUIDANCE MANUAL AND EXAMPLE NPDES PERMIT
FOR
CONCENTRATED ANIMAL FEEDING OPERATIONS**

REVIEW DRAFT

August 6, 1999

U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

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U.S. Environmental Protection Agency
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1.0 INTRODUCTION

1.1 Background

On March 9, 1999, the United States Department of Agriculture (USDA)-Environmental Protection Agency (EPA) announced the final Unified National Strategy for Animal Feeding Operations (AFOs). The Strategy is a major component of the President's Clean Water Action Plan, released in February 1998, and reflects an extensive public outreach effort by USDA and EPA. The Strategy sets forth a framework of actions that USDA and EPA plan to take, under existing legal and regulatory authority, to minimize water quality and public health impacts from improperly managed animal wastes in a manner designed to preserve and enhance the long-term sustainability of livestock production. The Strategy relies heavily on the stewardship ethic of producers. It is based on a national performance expectation that all AFO owners and operators should develop and implement technically sound, economically feasible, and site-specific comprehensive nutrient management plans (CNMPs) for properly managing the animal wastes produced at their facilities.

Voluntary and regulatory programs serve complementary roles. A variety of voluntary programs are available to provide technical and financial assistance for most of the approximately 450,000 AFOs in the U.S. These programs help producers meet technical standards and remain economically viable. The regulatory program focuses permitting and enforcement priorities on high risk operations, which represent about 5% of all AFOs (i.e., an estimated 15,000–20,000 operations) under the existing regulations.

The Strategy describes a number of actions that USDA and EPA plan to take to meet the national goal of all AFO owners and operators taking actions to minimize water pollution from confinement facilities and the land application of manure and wastewater. The actions address:

- Building capacity for CNMP development and implementation;
- Accelerating voluntary, incentive-based programs;
- Implementing and improving the existing regulatory program for concentrated animal feeding operations (CAFOs);
- Coordinating research, technical innovation, compliance assistance, and technology transfer;
- Encouraging industry leadership;
- Coordinating data; and
- Measuring performance and accountability.

The Strategy describes short- and long-term activities to implement and improve the existing regulatory program using a two-phased approach to permitting CAFOs. During Round I, beginning in 2000, EPA and States will issue permits to CAFOs under the existing National Pollutant Discharge Elimination System (NPDES) regulations based on the information in this guidance document. During Round II, beginning in about 2005, EPA and States will reissue NPDES permits to CAFOs based on revised effluent guidelines for feedlots, as well as revised regulations for NPDES permitting and any other new information (e.g., new nutrient water quality criteria and standards). During both Round I and Round II, State NPDES permitting authorities will have flexibility to define specific permitting approaches within their existing programs. The executive summary for the USDA-EPA Unified National Strategy for AFOs is included as Appendix A.

1.2 What are the Round I Priorities for the NPDES Permitting Program?

While EPA and States retain broad authority to issue NPDES permits to CAFOs, during Round I of CAFO permitting (2000-2005), EPA and NPDES-authorized States will place the greatest emphasis on permitting CAFOs with significant manure production. In general, CAFOs with significant manure production are those with more than 1,000 animal units (AUs). EPA and NPDES-authorized States will issue Statewide general permits to cover the majority of these facilities. EPA encourages States to issue general permits for these CAFOs by January 2000. Individual NPDES permits should generally be issued to exceptionally large CAFOs, new CAFOs, and CAFOs that meet other criteria described in this guidance. This guidance and example permit are intended to support this effort.

EPA and NPDES-authorized States will also issue NPDES permits to smaller CAFOs with unacceptable conditions or those with significant contributors to water quality impairment no later than the end of 2002. Depending on State-specific circumstances, some States may be able to issue these NPDES permits to smaller CAFOs before 2002 and some States may need more time.

In implementing Round I NPDES permitting for CAFOs, EPA will work closely with USDA, State and Tribal environmental and agricultural agencies, and other key stakeholders to coordinate NPDES permit issuance for CAFOs with other AFO-related activities. Round I CAFO permitting will also be coordinated with other regulatory programs such as the Coastal Non-Point Pollution Control Program and Total Maximum Daily Load Program. Coordination with these programs is discussed in Section 5 of this guidance.

EPA is currently in the process of reviewing and revising the existing regulations related to CAFOs. Any new NPDES CAFO permits issued after the revised regulations are promulgated will need to reflect the revised regulations. Permits issued under existing regulations will remain in effect for the five year permit term.

1.3 What is the Purpose and Organization of this Guidance Manual?

This manual is intended to provide clear and concise guidance for EPA and State NPDES permit writers on permitting CAFOs during Round I. Round I permits should be issued in a manner consistent with the permitting practices identified in the USDA-EPA Unified National Strategy for AFOs, existing regulations, and the Clean Water Act. The manual supersedes the “Guide Manual on NPDES Regulations for Concentrated Animal Feeding Operations,” issued in December 1995. In addition, it is intended to clarify the circumstances under which producers should submit a Notice of Intent to be covered under an NPDES general permit or apply for an NPDES individual permit.

This guidance assumes that the permit writer has a working knowledge of how to develop NPDES permits and a sound understanding of agricultural practices. Permit writers should also be familiar with applicable State voluntary and regulatory programs and how these programs relate to the Federal NPDES program. Appendix B lists a variety of potential sources that permit writers may wish to use as background for developing NPDES permits as well as increasing their understanding of agricultural practices related to AFOs.

The remainder of this guidance manual is divided into four chapters. Chapter 2.0 discusses the types of facilities are covered by the existing NPDES regulations, and who is required to apply for an NPDES permit. Chapter 3.0 describes the key elements of NPDES permits for CAFOs, including development of CNMPs. Chapter 4.0 provides an explanation of general and individual NPDES permits for CAFOs, guidelines for determining when each type of permit should be used, and the process for developing and issuing each type. Chapter 5.0 discusses a variety of special issues and considerations related to developing and implementing NPDES permits for CAFOs. The manual also contains a number of appendices that are referenced throughout the text. Appendix F includes an example permit for CAFOs. The example permit is presented as a general permit along with an example Notice of Intent form and other related material, but could also be readily adapted to be issued as an individual permit, where appropriate.

2.0 WHO NEEDS A PERMIT?

The National Pollutant Discharge Elimination System (NPDES) regulates the discharge of pollutants from point sources to waters of the United States. Point sources, as defined by the CWA [Section 502(14)], include concentrated animal feeding operations (CAFOs).

It is important for the permit writer to have a thorough understanding of the type of facility that EPA defines as a CAFO under the NPDES program. This section provides the permit writer with the information needed to determine whether a facility is a CAFO. It also explains who has to apply for a CAFO NPDES permit.

AFO Definition [40 CFR 122.23(b)(1)]:

Lot or facility where animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period;

AND

Where crops, vegetation forage growth, or post-harvest residues are not sustained over any portion of the lot or facility in the normal growing season.

2.1 What is an Animal Feeding Operation (AFO)?

To be considered a CAFO, a facility must first meet the definition of an animal feeding operation (AFO). AFOs are agricultural enterprises where animals are kept and raised in confined situations. AFOs congregate animals, feed, manure and urine, dead animals, and production operations on a small land area. Feed is brought to the animals rather than the animals only grazing or otherwise seeking feed in pastures, fields, or on rangeland.

The first part of the regulatory definition for an AFO states that animals must be kept on the lot or facility for a minimum of 45 days. If an animal is at a facility for any portion of a day, it is considered to be at the facility for a full day. However, this does not mean that the same animals must remain on the lot for 45 days, only that some animals are fed or maintained on the lot or facility 45 days out of any 12-month period. The 45 days do not have to be consecutive, and the 12-month period does not have to correspond to the calendar year. For example, June 1 to the following May 31 would constitute a 12-month period.

The second part of the existing regulatory definition of an AFO is meant to distinguish facilities that have feedlots (concentrated confinement areas) from those which have pasture and grazing land, which are generally not AFOs. Facilities that have feedlots with constructed floors, such as solid concrete or metal slots satisfy this element of the definition. If a facility maintains animals in an area without vegetation, including dirt lots, the facility meets this part of the definition. Dirt lots with nominal vegetative growth along the edges while animals are present or during months when animals are kept elsewhere are also considered by EPA to meet the second part of the AFO definition.

2.0 Who Needs a Permit?

The NPDES permit regulations [40 Code of Federal Regulation (CFR) Part 122.23(b)(1)] give the permitting authority (EPA or NPDES-authorized States) considerable discretion in applying the AFO definition. EPA defines the AFO to include the confinement area and the storage and handling areas necessary to support the operation (e.g., waste storage areas). Grazing and winter feeding of animals in a confined area on pasture or rangeland is not normally considered as meeting the AFO definition. The definition is intended to enable the NPDES-authorized permitting authority to regulate facilities where animals are confined and waste is generated.

As indicated in the USDA/EPA Unified National Strategy for AFOs, discharges from areas where manure and wastewater are applied to the land can have a significant impact on water quality. These land application areas, which are outside the area of confined animals, do not fall geographically within the regulatory definition of an AFO. Nevertheless, discharges of CAFO wastes from land application areas can qualify as point source discharges in certain circumstances. Among others, see CARE v. Southview Farm, 34 F.2d 114 (2d Cir. 1994); CARE v. Sid Koopman Dairy, et al., (No. CY-98-3003-EFS, U.S. Dist. Ct., E.D. Wash. May 17, 1999). Accordingly, CAFO permits should address land application of wastes from CAFOs (See Section 3.3)

It is important to recognize that an AFO may also undertake other activities that result in point sources discharging from the facility (e.g., commercial farm implement repair) that may be subject to separate permitting under the NPDES program. These other activities are not addressed in this guidance.

2.2 How Do You Determine the Size of an AFO?

Once the facility meets the AFO definition, its size, based upon the total numbers of animals confined, is a fundamental factor in determining whether it is a CAFO. The animal livestock industry is diverse and includes a number of different types of animals that are kept and raised in confined situations. In order to define these various livestock sectors, the concept of an “animal unit”¹ was established in the EPA regulations [40 CFR Part 122 Appendix B]. An “animal unit” varies according to animal type; one animal is not necessarily equal to one animal unit (AU). Each livestock type, except poultry, is assigned a multiplication factor to facilitate determining the total number of AUs at a given facility. Multiplication factors defined in the regulation are in Table 2–1 below.

¹ EPA and USDA both use the concept of “animal unit”, however it is important to recognize that with respect to swine and poultry there are differences in the application of this concept.

Table 2–1. Multiplication Factors to Calculate Animal Units

Animal Type	Multiplication Factor
Beef Cattle (slaughter and feeder)	1.0
Mature Dairy Cattle	1.4
Swine (weighing more than 55 lbs.)	0.4
Sheep	0.1
Horses	2.0
Poultry	There are currently no animal unit conversions for poultry operations. However the regulations [40 CFR 122, Appendix B] define the total number of animals (subject to waste handling technology restrictions) for specific poultry types that make these operations subject to the regulation.

These factors are also used when determining the total number of animal units at a facility with multiple animal types. Multiplication factors are applied to the total for each type of animal to determine the AU for that animal type. The AUs for each are then totaled for the operation. Figure 2–1 presents a hypothetical AFO with multiple animal types and the calculation to determine the total number of animals confined at the facility.

Under the regulations, two or more AFOs under common ownership are considered one operation if they adjoin each other or use a common waste disposal system [40 CFR 122.23(b)(2)]. For example, facilities have a common waste disposal system if the wastes are commingled (e.g., stored in the same pond or lagoon or land applied on commonly owned fields) prior to use or disposal. The collective number of animal units of the adjoining facilities is utilized in determining the size of the AFO. Many poultry feeding operations adjoin each other and often meet the definition of one facility.

Figure 2–1. Animal Unit Determinations for AFOs with Multiple Animal Types

<p>Situation: An AFO is being evaluated to determine if it meets the animal unit criteria for being defined as a CAFO and subject to NPDES permitting. The facility confines 200 horses, 300 sheep, and 500 beef cattle.</p>		
Animal Unit Calculation:	200 Horses x 2.0 =	400 AU
	300 Sheep x 0.1=	30 AU
	500 Beef Cattle x 1.0 =	<u>500 AU</u>
	Total	930 AU

2.3 Which AFOs are CAFOs?

AFOs are CAFOs if they meet the regulatory definition [40 CFR 122, Appendix B] or have been designated on a case-by-case basis [40 CFR 122.23 (c)] by the NPDES-authorized permitting authority. This section provides the permit writer with additional information concerning which AFOs are *defined* as CAFOs and which AFOs can be *designated* as CAFOs.

2.3.1 Which AFOs are Defined as CAFOs?

The NPDES regulations contain a specific definition to be used when determining whether an AFO is a CAFO. The definition is broken down according to the number of animals confined at the facility. AFOs with more than 1,000 animal units are CAFOs. AFOs with 301 to 1,000 AUs are defined as CAFOs only if, in addition to the number of animals confined, they also meet one of the specific criteria addressing the method of discharge (see text box). AFOs with fewer than 300 AUs are not defined as CAFOs under the current regulations.

AFOs are Defined as CAFOs if:

- More than 1,000 AUs are confined at the facility [40 CFR 122, Appendix B (a)];
- or*
- From 301 to 1,000 AUs are confined at the facility and:
 - Pollutants are discharged into waters of the US through a man-made ditch, flushing system, or other similar man-made device;
 - or*
 - Pollutants are discharged directly into waters of the US that originate outside of and pass over, across, or through the facility or come into direct contact with the confined animals.

2.3.2 AFOs With More Than 1,000 Animal Units are CAFOs

Under existing regulations, virtually all AFOs with more than 1,000 AUs are CAFOs, and should apply for an NPDES permit. CAFOs that fail to apply for a permit may be subject to enforcement action in the event of a discharge. For individual animal types, the regulations contain the number of animals required for the facility to be defined as a CAFO. If the number of AUs for any one animal type exceeds the corresponding number indicated in Table 2-2 [40 CFR 122 Appendix B], or if the cumulative number of animal types exceeds 1,000 AUs, the facility is defined as a CAFO.

Table 2-2. Threshold Number of Animals by Animal Type to Meet the Definition of a CAFO with More than 1,000 AUs

Animal Type	Number of Animal Units
Beef Cattle	1,000 slaughter and feeder cattle

2.0 Who Needs a Permit?

Dairy Cattle	700 mature dairy cattle (whether milked or dry)
Swine	2,500 swine (over 25 kilos—approximately 55 lbs.)
Sheep	10,000 sheep or lambs
Horses	500 horses
Chickens	100,000 laying hens or broilers (if continuous flow watering system); 30,000 laying hens or broilers (if liquid manure system)
Turkeys	55,000 turkeys
Ducks	5,000 ducks

Source: 40 CFR 122, Appendix B(a)

Poultry operations are only defined as CAFOs if they meet the AU requirements and utilize the waste handling systems identified in Table 2–2. However, poultry operations that remove dry litter waste from pens and conduct improper land application activities or stack it in areas exposed to rainfall or adjacent to a watercourse may have been considered to have established a crude liquid manure system. Therefore a poultry operation that conducts improper land application activities or stacks waste in this manner and that otherwise meets the CAFO definition in Table 2–2 [40 CFR 122 Appendix B (a)], is a CAFO and subject to the NPDES program.

2.3.3 AFOs With 301 to 1,000 Animal Units *May Be* CAFOs

AFOs with 301 to 1,000 AUs are defined as CAFOs only if, in addition to the number of animals confined, they *also* meet one of the specific criteria governing method of discharge. If the number of AUs for any one animal type exceeds the corresponding number indicated in Table 2–3, or if the cumulative number of animal types exceeds 300 AUs, **and** only one of the method of discharge criterion is met, the facility is defined as a

Table 2–3. Threshold Number of Animals by Animal Type to Meet the Definition of a CAFO with up to 1,000 AUs and Regulated Method of Discharge

Animal Type	Number of Animal Units
Beef Cattle	300 slaughter and feeder cattle
Dairy Cattle	200 mature dairy cattle (whether milked or dry)
Swine	750 swine (over 25 Kilos—approximately 55 lbs.)
Sheep	3,000 sheep or lambs
Horses	150 horses
Chickens	30,000 laying hens or broilers (if continuous over flow watering system); 9,000 laying hens or broilers (if liquid manure handling system)

2.0 Who Needs a Permit?

Turkeys	16,500 turkeys
Ducks	1,500 ducks

Source: 40 CFR 122 Appendix B (b)

CAFO. The facility meets the “method of discharge” criterion if pollutants are discharged in one of the following ways:

- Into waters of the United States through a man-made ditch, flushing system, or other similar man-made device; or
- Directly into waters of the United States that originate outside of the facility and pass over, across, or through the facility or otherwise come into direct contact with the confined animals.

EPA has noted in other documents that a discharge of pollutants via a direct hydrologic connection between groundwater and surface waters may be subject to NPDES program requirements and meet the “method of discharge” criterion.

With respect to the man-made conveyance criterion, if human action was involved in the creation or maintenance of the conveyance, it should be considered man-made even if natural materials were used to form the conveyance. A man-made channel or ditch that was not created specifically to carry animal waste but nonetheless does so during storm events should be considered a man-made conveyance.

In Round I of CAFO permitting, EPA and NPDES-authorized States should issue permits for those AFOs with from 301 to 1,000 AUs that have unacceptable conditions (i.e. those that meet one of the method of discharge criteria described above). Permitting authorities should issue these permits by 2002 whenever possible. Some permitting authorities may be able to issue these permits before 2002, and other permitting authorities may need more time.

EPA expects that many AFOs of this size may be able to avoid permitting altogether (absent designation) by changing their operation so that they no longer meet one of the method of discharge criteria that cause them to fall within the CAFO regulatory definition. EPA encourages States to work with appropriate State agencies to promote voluntary efforts to ensure that these AFOs develop voluntary CNMPs and do not become a priority for NPDES permitting.

2.3.4 AFOs with up to 300 Animal Units

AFOs with up to 300 AUs may be considered CAFOs only if designated as such by the permitting authority. To be designated, these AFOs must meet one of the method of discharge criteria described in section 2.3.3.

2.3.5 Which AFOs Can be Designated as CAFOs?

The NPDES permit regulations [40 CFR 122.23 (c)] set forth the process for the NPDES-authorized permitting authority to, on a case-by-case basis, designate any AFO as a CAFO, after determining that it is a significant contributor of pollution to waters of the U.S. However, no AFO with fewer than 300 AUs shall be designated a CAFO unless it also meets the discharge criteria outlined in 40 CFR 122.23(c). AFOs that are designated as CAFOs are not eligible for the 25 year 24-hour rainfall event exemption in 40 CFR 122, Appendix B (See Section 2.3.6)

When designating an AFO as a CAFO, a permit application may not be required until the Director has conducted an on-site inspection of the operation and determined that it should and could be regulated under the permit program. The inspection serves two primary objectives: (1) to confirm that the facility meets the AFO definition; and (2) to collect information related to the designation factors in the regulations.

During Round I, in determining whether to designate an AFO as a CAFO, NPDES permitting authorities should pay particular attention to information from the inspection and other sources that suggests that an AFO or collection of AFOs are significant contributors to water quality impairment. In cases where water quality monitoring or other information provides evidence that pollution from these facilities is a significant contributor to water quality impairment of a water body or non-attainment of a designated use, the AFOs should be designated as CAFOs and be a priority for permitting in Round I.

The Unified National AFO Strategy describes a “good faith” incentive that should be considered when making the decision whether to designate an AFO as a CAFO. Many AFOs with up to 1,000 AUs may be taking early voluntary actions in good faith to manage manure and wastewater in accordance with a voluntary Comprehensive Nutrient Management Plan (CNMP). In some cases, an AFO that is voluntarily implementing a CNMP may have a discharge that could lead to the permitting authority to consider designating it as a CAFO. However, the AFO may not be a permitting priority because it is not discharging as a result of unacceptable conditions or is not discharging into impaired waters. In these cases, the NPDES permitting authority should consider providing an opportunity for these AFOs to address the cause of the discharge through voluntary programs before designating them as CAFOs.

What is the Procedure for Making a Case-by-case Designation?

2.0 Who Needs a Permit?

An AFO *cannot* be designated a CAFO on a case-by-case basis until the Director has conducted an on-site inspection of the facility and determined that the facility is a significant contributor of pollution. The designation is based on the factors listed in 40 CFR 122.23 (c) and reiterated in Table 2-4. This determination may be based on visual observations as well as water quality monitoring. Table 2-4 identifies example case-by-case designation factors and the inspection focus related to each factor.

Table 2-4. Example Factors for Case-by-Case CAFO Designation

Designation Factor	Inspection Focus
<input type="checkbox"/> Size of the Operation and Amount of Waste Reaching Waters of the United States	<ul style="list-style-type: none"> • Number of animals • Type of feedlot surface • Feedlot design capacity • Waste handling/storage system design capacity
<input type="checkbox"/> Location of the Operation Relative to Waters of the United States	<ul style="list-style-type: none"> • Location of waterbodies • Location of floodplain • Proximity to surface waters • Depth to groundwater, direct hydrologic connection to surface water
<input type="checkbox"/> Means of Conveyance of Animal Waste and Process Wastewaters into Waters of the United States	<ul style="list-style-type: none"> • Identify existing or potential man-made (includes natural and artificial materials) structures that may convey waste • Direct contact between animals and surface water
<input type="checkbox"/> Slope, Vegetation, Rainfall and Other Factors Affecting the Likelihood or Frequency of Discharge	<ul style="list-style-type: none"> • Slope of feedlot and surrounding land • Type of feedlot (concrete, soil, etc.) • Climate (e.g., arid or wet) • Type and condition of soils • Depth to groundwater • Drainage controls • Storage structures • Amount of rainfall • Volume and quantity of runoff • Buffers
<input type="checkbox"/> Other Relevant Factors	<ul style="list-style-type: none"> • Waste handling and storage • Land application timing, methods, rates and areas

Following the on-site inspection, the NPDES permitting authority should prepare a brief report that: (1) identifies findings and any follow-up actions; (2) determines whether or not the facility should be designated as a CAFO; and (3) documents the reasons for that determination. Regardless of the outcome, a letter should be prepared and sent to the facility. The letter should inform the facility that it has been either: (1) designated a CAFO and required to obtain an NPDES permit; or (2) has not been designated as a CAFO at this time. In those cases where a facility has not been designated as a CAFO but the NPDES authority has identified areas of concern, these should be noted in the letter. The letter should: state that, if these concerns are not corrected, the facility may be designated in the future; and should also include a date for a

follow-up inspection to determine if the concerns have been addressed. Examples of letters that would be used at the conclusion of a designation inspection are included in Appendix D.

A 25 Year, 24-Hour Rainfall Event -

means the maximum 24-hour precipitation event with a probable recurrence of once in 25 years, as defined by the National Weather Service in Technical Paper Number 40, "Rainfall Frequency Atlas of the United States," May 1961, and subsequent amendments, or equivalent regional or state rainfall probability information developed therefrom. [40 CFR Part 412.11(e)]

2.3.6 Which AFOs are Eligible for the 25 Year, 24-Hour Rainfall Event Exemption?

AFOs with more than 1,000 AUs produce quantities of manure that can be a risk to water quality and public health. The amount of manure and other waste material generated is so large that a spill while handling manure, a breach of a storage system, or sheet flow from the feedlot area can release large quantities of manure and wastewater into the

environment causing major water quality impacts and threatening public health. EPA's position is that most AFOs with more than 1,000 AUs probably have discharged in the past or have a reasonable likelihood to discharge in the future, at less than a 25 year, 24-hour storm event, and therefore are required to apply for and obtain a permit. The NPDES permit regulations [40 CFR 122, Appendix B(a)] contain an exemption for any AFO from being *defined* as a CAFO if it discharges only in the event of a 25 year, 24-hour, or larger, storm event. However, to be eligible for the exemption, the facility must demonstrate to the permitting authority that it has not had a discharge¹. It must also demonstrate that the entire facility is designed, constructed, and operated to contain a storm event of this magnitude in addition to process wastewater. Facilities that believe that they do not discharge should apply for an NPDES permit and provide technical documentation of no discharge with the permit application.

2.4 Who Must Apply for a CAFO Permit?

Under the NPDES regulations, the operator of a facility should apply for an NPDES permit. Therefore, the operator of any AFO that either meets the definition of a CAFO or has been designated as a CAFO by the NPDES permitting authority must apply for a permit. During Round I permitting (2000-2005), EPA encourages permitting authorities to place high priority on issuing permits to all CAFOs with more than 1,000 animal units.

¹ The NPDES program covers not only discharges to surface waters but also discharges to groundwaters that have a direct hydrologic connection to surface waters.

2.0 Who Needs a Permit?

Corporate entities that exercise substantial operational control over a CAFO should be co-permitted along with the CAFO operator. Corporate entities that exercise such operational control over a CAFO are considered “operators” of the CAFO under the Clean Water Act (CWA). The determination of whether a corporate entity exercises responsibility for, or control of, the work of the facility should be made on a case-by-case basis by the permitting authority. In the event of such a determination, the corporate entity is considered an operator for purposes of the CWA. The following factors would be relevant when determining where a corporate entity exercises substantial operational control over a CAFO: (1) whether the corporate entity directs the activity of persons working at the CAFO either through a contract or direct supervision of, or on-site participation in, activities at the facility; (2) whether the corporate entity owns the animals; or (3) whether the corporate entity specifies how the animals are grown, fed, or medicated. EPA may identify other factors which may also demonstrate corporate control over a specific CAFO. The greater the degree to which one or more of these or other factors is present, the more important that it is that the corporate entity is copermitted. EPA will be available to assist permitting authorities in making case-specific determinations of whether a corporate entity is exerting control such that it should be co-permitted.

3.0 WHAT ARE THE KEY ELEMENTS OF AN NPDES PERMIT FOR CAFOs?

This section describes the key elements of NPDES permits for CAFOs. NPDES permits for CAFOs have the same basic elements as other NPDES permits. The elements of the NPDES permit include effluent limitations, monitoring, record-keeping, and reporting requirements, and special conditions, as appropriate (Table 3.1). For additional details on the elements of an NPDES permit, the reader should refer to the *U.S. EPA NPDES Permit Writers Manual* (EPA-833-B-96-003).

The principal substantive pollution control condition in the permit is the requirement to develop and implement a comprehensive nutrient management plan (CNMP) as a special condition of the NPDES permit. This section also discusses permit requirements for CAFOs in addition to the CNMPs that are necessary to achieve the objectives of the CWA. Appendix F provides a draft example general NPDES permit for CAFOs, which is intended to provide additional guidance on the elements that should be included in NPDES permits for CAFOs.

Table 3.1 - Elements of an NPDES Permit

NPDES PERMIT ELEMENTS	
Element	Description
Cover Page	This page serves as the legal notice of the applicability of the permit, provides the authority under which it is issued, and contains appropriate dates and signature(s).
Effluent Limitations	The primary mechanism for controlling discharges of pollutants to receiving waters (e.g., the specific narrative or numeric limitations applied to the facility and the point of application of these limits)
Monitoring and Reporting Requirements	This element of the permit identifies all of the specific conditions related to the types of monitoring that must be performed, the frequencies at which samples or data must be collected, and how the data must be recorded, maintained, and transmitted to the permitting authority. This information allows the permitting authority to determine compliance with permit requirements. Section 3.4 of this guidance provides suggested monitoring, and reporting requirements for NPDES permits for CAFOs.
Record-keeping Requirements	Record-keeping requirements specify the types of records that should be kept on-site at the permitted facility (e.g., inspection and monitoring records, waste and soil sampling results, time, amount, and duration of land application activities, precipitation records, records of recipients of waste intended for disposal on land outside the operational control of the CAFO facility, etc.)

3.0 What Are the Key Elements of an NPDES Permit for CAFOs?

Special Conditions	These conditions are used primarily to supplement effluent limitations and assure compliance with the CWA. For NPDES permits issued to CAFOs, the requirement to develop and implement a CNMP should be incorporated as a special condition. NPDES permits for CAFOs may include other special conditions such as those described in Section 3.3.
Standard Conditions	These are pre-established conditions that apply to all NPDES permits and delineate the legal, administrative, and procedural requirements.

3.1 Comprehensive Nutrient Management Plans (CNMPs)

EPA, working jointly with United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS), has determined that the most effective way for all AFOs, including CAFOs, to minimize water quality and public health risks is to develop and implement technically sound, economically feasible, and site-specific comprehensive nutrient management plans (CNMPs). These CNMPs should reflect and facilitate technical innovation, sustainable agricultural systems, and new approaches to proper manure and nutrient management. In general, CNMPs should address, as necessary and appropriate, manure and wastewater handling and storage, land application of manure and other nutrient sources, site management, record keeping, and feed management. CNMPs should also address other utilization options for manure where the potential for environmentally sound land application of manure is limited at the point where it is generated.

CNMPs are site-specific, and the specific requirements of each CNMP will vary depending on conditions at each facility. Although the content of individual CNMPs may vary, Section 3.1.1 below identifies the essential core components of CNMPs to be developed and implemented by CAFOs.

3.1.1 What are the Components of Site-Specific CNMPs?

As discussed in the USDA-EPA Unified National Strategy for Animal Feeding Operations, site-specific CNMPs may include some or all of the six components described below based on the operational needs of the permitted facility. Currently, the NRCS Field Office Technical Guide (FOTG) serves as the primary technical reference for the development of CNMPs. USDA plans to issue supplemental guidance in consultation with EPA, which will provide additional information on the development of CNMPs for all AFOs, including CAFOs. This USDA guidance should be used by permit writers in conjunction with EPA's guidance on NPDES permits.

CNMP Component Number 1: Manure and Wastewater Handling and Storage

Manure needs to be handled and stored properly to prevent water pollution from CAFOs. Manure and wastewater handling and storage practices should also consider odor and other environmental and public health concerns. Handling and storage considerations should include:

Divert Clean Water: Siting and management practices should divert clean water from contact with feedlots and holding pens; animal manure; or manure storage systems. Clean water can include rain falling on the roofs of facilities, runoff from adjacent land, or other sources.

Prevent Leakage: Construction and maintenance of buildings, collection systems, conveyance systems and permanent and temporary storage facilities should prevent leakage of organic matter, nutrients, and pathogens to ground or surface water.

Adequate Storage: Liquid manure storage systems should safely store the quantity and contents of animal manure and wastewater produced, contaminated runoff from the facility, and rainfall. Dry manure, such as that produced in some poultry and beef operations, should be stored in production buildings or storage facilities or otherwise stored in such a way as to prevent polluted runoff. The location of manure storage systems should consider proximity to water bodies, floodplains, and other environmentally sensitive areas.

Manure Treatments: Manure should be handled and treated to: reduce the loss of nutrients to the atmosphere during storage; make the material a more stable fertilizer when land-applied; or reduce pathogens, vector attraction and odors, as appropriate.

Management of Dead Animals: Dead animals should be disposed of in a way that does not adversely affect ground or surface water or create public health concerns. Composting, rendering, and other practices are common methods used to dispose of dead animals.

CNMP Component Number 2: Land Application of Manure and Wastewater

Land application is the most common, and usually most desirable method of utilizing manure and wastewater because of the value of the nutrients and organic matter. Land application should be planned to ensure that the proper amount of nutrients are applied in a manner that does not adversely impact the environment or endanger public health. Land application in accordance with the CNMP should minimize water quality and public health risk. Considerations for appropriate land application should include:

Nutrient Balance: The primary purpose of nutrient management is to achieve the level of nutrients (e.g., nitrogen and phosphorus) required to grow the planned crop by balancing the nutrients that are already in the soil and from other sources with those that are already in the soil and from other sources with those that will be applied in manure, biosolids, and commercial fertilizer. At a minimum, nutrient management should prevent the application of nutrients at rates that will exceed the capacity of the soil and the planned crops to assimilate nutrients and prevent pollution. Soils, manure, and wastewater should be tested to determine nutrient content.

Timing and Methods of Application: Care must be taken when land-applying manure and wastewater to prevent it from entering streams, other water bodies, or environmentally sensitive areas. The timing and methods of application should minimize the loss of nutrients to ground or surface water and the loss of nitrogen to the atmosphere. Manure and wastewater application equipment should be calibrated to ensure that the quantity of material being applied is what is planned.

CNMP Component Number 3: Site Management

Tillage, crop residue management, grazing management, and other conservation practices should be utilized to minimize movement to ground and surface water of soil, organic material, nutrients, and pathogens, from lands where manure and wastewater are applied. Forest riparian buffers, filter strips, field borders, contour buffer strips, and other conservation practices should be installed to intercept, store, and utilize nutrients or other pollutants that may migrate from fields on which manure and wastewater are applied.

CNMP Component Number 4: Record Keeping

CAFO operators should keep records that indicate the quantity of manure produced and how the manure was utilized, including where, when, and the amount of nutrients applied. Soil and manure testing should be incorporated into the record keeping system. Records should be kept when manure leaves the operation.

CNMP Component Number 5: Other Utilization Options¹

¹ On May 24, 1999, USDA-NRCS released the Policy for Nutrient Management and the revision to the conservation practice standard for Nutrient Management (Code 590). NRCS' directive and supporting technical guide establishes policy for nutrient management, sets forth guidance to NRCS personnel who provide nutrient management technical assistance, and for the revision of the NRCS nutrient management conservation practice standard. These two documents will provide the framework for all nutrient management plans developed by NRCS for the agricultural community, which will be tailored by State Conservationists within a two-year period. Of particular importance is the new policy as it relates to producers that may not have sufficient land available to spread manure at rates that utilize nitrogen and phosphorus and will, as a result, need to pursue off-farm utilization options. See Appendix H for the Nutrient Policy and Technical Standard.

Where the potential for environmentally sound land application is limited, alternative uses of manure, such as the sale of manure to other farmers, centralized treatment, composting and sale of compost to other users, and using manure for power generation may also be appropriate. All manure utilization options should be designed and implemented to reduce the risk to the environment and public health and must comply with Federal, State, Tribal, and local law.

CNMP Component Number 6: Feed Management

Animal diets and feed may be modified to reduce the amounts of nutrients in manure. Use of feed management activities, such as phase feeding, amino acid supplemented low protein diets, use of low phosphorous grain, and enzymes such as phytase, or other additives, can reduce the nutrient content of manure. Reduced inputs and greater utilization of phosphorus by the animal reduces the amount of phosphorus excreted and produces a manure with a nitrogen-phosphorus ratio closer to that required by crop and forage plants. While feed management can be an important tool for achieving a preferred balance of nutrients in manure, EPA does not intend to prescribe feed practices; therefore, feed management should not be a required component of a CAFO CNMP.

3.1.2 What Technical Assistance and Guidance is Available for Developing a CNMP?

CAFO owners and operators may seek technical assistance for developing CNMPs from Federal agencies such as the NRCS, State and Tribal agricultural and conservation agency staff, Cooperative Extension Service agents and specialists, Soil and Water Conservation Districts, and Land Grant Universities. Assistance in developing the plans may also be available from integrators, industry associations, and private consultants that are certified as capable of developing CNMPs. A number of computer based tools are being developed to facilitate the CNMP development process.

In parallel with the EPA's efforts to develop this EPA permitting guidance, USDA is preparing guidance to assist in the development of CNMPs. Until the USDA guidance is released, this guidance document, including the discussion of CNMPs in the attached example permit, and the USDA-EPA Unified National AFO Strategy can be used to identify the critical components of a CNMP. The primary technical reference for developing CNMPs is the Natural Resources Conservation Service Field Office Technical Guide (FOTG). This guide contains technical information on utilization and conservation of soil, water, air, plant, and animal resources. The FOTG used in an individual NRCS field office contains local information. Appendix B of this guidance manual contains references to support the development of CNMPs.

3.1.3 What is the Role of “Certified Specialists” in Developing CNMPs?

While the owner/operator of a CAFO is ultimately responsible for the proper implementation of a CNMP, NPDES permits for CAFOs should require that CNMPs be developed by a “certified specialist.” The purpose of the certified specialist is to help ensure that the necessary expertise is used, and to help ensure that a CNMP addresses all CNMP components and is appropriately tailored to the site-specific needs and conditions of the CAFO.

Successful development and implementation of CNMPs depends, in part, on the availability of qualified specialists from the private and public sectors to assist in the development and implementation of CNMPs. As indicated in the USDA/EPA Unified National Strategy for AFOs, USDA and EPA will work with States to facilitate and encourage participation of the private sector through certification, training, and other activities. USDA and EPA will review available certification programs to ensure technical adequacy and support the development of State certification programs. These certified specialists will also be needed to assist in CNMP implementation, and to provide ongoing assistance through periodic reviews and revisions to CNMPs, as appropriate.

EPA recognizes that some States may not have or will not be able to establish an appropriate certification program prior to development of CNMPs required by the permit. In these situations, EPA urges States to establish a more rigorous review of a greater sample of CNMPs to assure that an appropriate degree of quality and comprehensiveness is attained.

3.2 Effluent Limitations

Section 301 of the CWA prohibits the discharge of pollutants by any point source into waters of the U.S. except in accordance with a permit. It also requires that dischargers comply with effluent limitations necessary to meet State water quality standards. The NPDES permit regulations at 40 CFR 122.44(a) and (d) implement Section 301 by requiring that each NPDES permit issued under Section 402 include conditions that meet technology-based effluent limitations and standards, as well as water quality standards and State requirements.

3.2.1 Technology-based Effluent Limitations

With respect to technology-based effluent limitations for CAFOs, the Effluent Limitation Guidelines (ELG) regulations [40 CFR 412] apply to CAFO feedlots with more than 1,000 AUs (Table 3–2). The ELGs for CAFOs do not allow discharges of process wastewater pollutants to waters of the United States from feedlots, except when chronic or catastrophic storm events

3.0 What Are the Key Elements of an NPDES Permit for CAFOs?

cause an overflow from a facility designed, constructed, and operated to hold process-generated wastewater plus runoff from a 25 year, 24-hour storm event (See Section 2.3.6). Feedlots include the confinement area and the storage and handling areas necessary to support the operation (e.g., waste storage areas). In those cases where the ELG does not apply (for CAFOs with fewer than 1,000 AUs), the permit writer needs to develop technology-based effluent limitations on a case-by-case basis, for the feedlot by using best professional judgement (BPJ). The regulations [40 CFR 122.44 (k)] also allow best management practices (BMPs) to be used where BMPs are reasonably necessary to meet effluent limitations and standards or to carry out the purposes and intent of the CWA. Thus whether a CAFO is subject to the ELG for feedlots or technology-based effluent limitations based on BPJ, it can also be required to develop and implement BMPs reasonably necessary to meet the ELG or BPJ technology-based limitations.

**Table 3–2. Facilities Covered by Subpart A of the Feedlots Point Source Category
40 CFR Part 412**

Animal Type	Feedlot Type	Number of Animal Units*
Beef Cattle	Open lots	1,000 slaughter and feeder cattle
	Housed lots	
Dairy Cattle	Stall barn (with milk room)	700 mature dairy cattle (whether milked or dry)
	Free stall barn (with milking center)	
	Cowyards (with milking center)	
Swine	Open dirt lot or pasture lot	2,500 swine, each weighing over 25 kilos (approximately 55 pounds)
	Housed, slotted floor	
	Solid concrete floor, open or housed lot	
Sheep	Open lots	10,000 sheep or lambs
	Housed lots	
Horses	Stables (race tracks)	500 horses
Chickens	Broilers, housed	100,000 laying hens or broilers (if continuous overflow watering system); 30,000 laying hens or broilers (if liquid manure system)
	Layers (egg production), housed	
	Layer breeding or replacement stock	
Turkeys	Open lots	55,000 turkeys
	Housed	
	Dry	

3.2.2 Water Quality-based Effluent Limitations

In those cases where technology-based effluent limitations are not sufficient to meet water quality standards, the permit writer must develop more stringent water quality-based effluent requirements on a site-specific basis. For example, the ELG for feedlots may not be sufficient in all cases to meet water quality standards because the ELG allows a discharge during chronic rainfall events at a facility designed and operated to contain a 25 year, 24-hour storm. In some water bodies, discharges during chronic rainfall events may cause an exceedence of water quality standards. In these cases, permit writers should consider a water quality-based effluent limitation that allows discharges only during catastrophic events. NPDES permits for CAFOs may also include BMPs as water quality-based effluent limitations or use BMPs that are reasonably necessary to meet water quality standards [See, 40 CFR 122.44 (k)].

3.2.3 Relationship Between Effluent Limitations and CAFO CNMPs

With respect to NPDES permits for CAFOs, CNMPs reflect a collection of BMPs that will, in most cases, be necessary to meet the technology- or water quality-based effluent limitations in the permit. BMPs are used in those cases where it is not feasible to develop numeric effluent limitations. The BMPs may be used to: (1) ensure compliance with the effluent limitation for the feedlot; or (2) address other aspects of the operation. For example, land application activities under the control of the CAFO operator, may require additional BMPs beyond those needed to comply with the effluent limitations. BMPs may also be appropriate as the technology-based effluent limitations for CAFOs with fewer than 1,000 AUs and as water quality-based effluent limitations for any CAFO. Where an NPDES permit for a CAFO does contain technology- or water quality-based effluent limitations other than BMPs, compliance with the BMPs contained in the CNMP alone does not constitute compliance with the permit. The CAFO must meet the technology- and water quality-based effluent limitations contained in its NPDES permit, as well as implement any BMPs contained in the CNMP.

The requirement to develop and implement a CNMP for a CAFO on a schedule set by the NPDES permitting authority should be incorporated as a special condition in the NPDES permit. The structure of the NPDES permit allows the permit writer to incorporate special conditions that the permittee must meet. Since the inception of the NPDES program, special conditions have been used to incorporate BMPs into a permit.

NPDES permits for CAFOs should also contain other conditions related to CNMPs. For example, the permit should require that CNMPs for CAFOs must be developed and modified by a certified specialist, a qualified State agency official (e.g., cooperative extension agent), or by NRCS. States and nonprofit groups (e.g., the Certified Crop Advisor Program of the American Society of Agronomy) have created programs that certify individuals to develop CNMPs for

AFOs. The permit should define the schedule for developing and implementing the CNMP (see Section 4.5).

The permitting authority must ensure that any CNMP developed as a requirement of an NPDES permit is made available to the public upon request to the permitting authority. EPA recommends that the permit contain language that requires the CAFO to maintain the CNMP on-site, and to make the CNMP available to the permitting authority, upon request of the permitting authority. The permitting authority would also have access to a CNMP during any on-site inspection. Where the States fail to do so, EPA will ensure its availability to the public.

3.3 Other Special Conditions

The current ELGs set forth the technology- and water-quality based effluent limitations for CAFO feedlots, but do not address discharges associated with other CAFO-related activities such as land application of manure and wastewater. In the USDA/EPA Unified National Strategy for AFOs, EPA and USDA recognized the need to address land application in order to protect the environment and human health, and determined that CNMPs afford the best opportunity to develop and implement technically sound, environmentally feasible solutions on a site-specific basis. This section outlines two approaches for permitting authorities to use in developing appropriate permit conditions for CNMPs for land application depending upon whether or not the activities are under the control of the CAFO operator. The section also identifies other special conditions that should be incorporated into CAFO NPDES permits.

3.3.1 Land Application of Manure and Wastewater

In the USDA/EPA Unified National Strategy for Animal Feeding Operations, USDA and EPA recognized that animal manure and wastewater from CAFOs are commonly applied to the land, and that proper land application of these resources has agricultural benefits. USDA and EPA also recognized the need to ensure that the proper amounts of all nutrients are applied to the land in a manner that does not cause harm to the environment or to public health, and agreed that land application in accordance with a CNMP should minimize the risk to water quality and public health and preserve the agricultural stormwater exemption for the CAFO land application activities.

Land application of all CAFO-generated manure and wastewater should be a component of the CNMP, but the provisions in the NPDES permit will differ depending upon whether the manure and wastewater land application activities occur under the control of the CAFO operator

or whether the CAFO-generated manure and wastewater is sold or given away to be used for land application activities that are not under the operational control of the permitted CAFO.

3.3.1.1. How Do You Address Activities Under the Control of the CAFO Operator?

Land application activities that occur under the control of the CAFO operator are considered essential to the operation of the CAFO. In these cases, the permitting authority should ensure that land application is fully addressed in the CNMP that is developed and implemented for the CAFO, and that the CNMP is then incorporated into the CAFO's NPDES permit as a special condition. This allows the permitting authority to ensure proper land application of manure and wastewater in a manner that avoids setting specific limits on the discharge and is consistent with the intent of the CWA agricultural stormwater exemption.

3.3.1.2 How Do You Address Activities Not Under the Control of the CAFO Operator?

Responsibilities of the Permitted CAFO

In cases where CAFO-generated manure is sold or given away to be used for land application activities that are not under the operational control of the permitted CAFO, land application does not need to be addressed in the CAFO's CNMP. However, the permitting authority should ensure the environmentally acceptable use of the CAFO-generated manure by issuing an NPDES permit to the CAFO with special conditions that require the CAFO to do the following:

- ▶ Maintain records showing the amount of manure that leaves the operation;
- ▶ Record the name and address of the recipient(s);
- ▶ Provide the recipient(s) with accurate information on the nutrient content of the manure to be used in determining the appropriate land application rates;
- ▶ Inform the recipient of his/her responsibility to properly manage the land application of the manure to prevent discharge of pollutants to waters of the U.S.; and

3.0 What Are the Key Elements of an NPDES Permit for CAFOs?

- ▶ Secure a signed statement of intent from the recipient indicating that he/she intends to land apply the manure in accordance with a site-specific CNMP.²

These records should be retained on-site, and should be submitted to the permitting authority as part of the annual certification process (See Addendum C of the Example Permit).

Responsibilities of the Recipient of CAFO-generated Manure

The addition of pollutants to waters of the U.S. through a discrete conveyance (e.g. natural channel or gullies) is regulated under the CWA as a point source discharge. At the same time, the Act exempts “agricultural stormwater discharges” from the definition of point source. In order to be eligible for this exemption, however, all land application of CAFO-generated manure should take place in accordance with a CNMP that is developed and implemented to minimize risks to human health and the environment. Where the recipient of CAFO-generated manure conducts land application activities consistent with a CNMP, any associated discharges are not subject to the NPDES permit program and the agricultural stormwater exemption remains in effect. However, where a recipient of CAFO-generated manure has not developed and/or is not implementing a CNMP, any discharge to waters of the U.S., through a discrete conveyance, may be considered a point source discharge and may become subject to NPDES permit requirements. The permitting authority may wish to consider the development of a general permit to cover land application activities that are not under the control of a permitted CAFO and are not conducted in accordance with a CNMP.

3.3.2 Other Special Conditions

In addition to the requirement to develop and implement a CNMP, there are two types of additional special conditions that should be incorporated into all NPDES permits for CAFOs. These include the requirements to develop and implement: (1) interim site management practices that go into effect immediately upon issuance of the permit to address imminent risks to human health and water quality while the full CNMP is being developed; and (2) other BMPs necessary to protect water quality.

² This action is not intended to create an obligation on the part of the CAFO to ensure that the manure is ultimately applied consistent with a CNMP, but to ensure that the recipient fully understands that improper land application of the CAFO-generated manure may result in a point source discharge to waters of the U.S.

3.3.2.1 What Interim Site Management Practices Should be Incorporated Into NPDES Permits for CAFOs?

EPA recognizes that, for existing CAFOs, it will take a period of time after the permit is issued for the facility to develop and fully implement a site-specific CNMP. During this time, the facility should be required to comply with some basic management practices as necessary to achieve technology-based or water quality-based effluent limitations and to prevent potential adverse impacts to water quality and public health. These interim management practices should be incorporated into the permit and should not cease to apply until an adequate CNMP has been developed and is being implemented. Any interim management measures that are not incorporated into the CNMP should remain in effect for the full term of the permit. Examples of interim management measures include:

- Covering all manure piles
- Keeping animals away from water bodies
- Maintaining storage structures to handle a 25 year, 24-hour storm event and process wastewater
- Applying manure to land at the appropriate rate and time to protect water quality
- Maintaining and inspecting all manure handling and storage equipment
- Testing annually to determine nutrient content of manure
- Testing annually to determine nutrient content of the soil
- Calibrating manure application equipment properly
- Placing buffer strips along water bodies
- Disposing of dead animals properly

3.3.2.2 What Other BMPs Should be Incorporated Into NPDES Permits for CAFOs to Protect Water Quality?

The permitting authority may determine that BMPs beyond those contained in the CNMP are necessary to protect water quality or otherwise ensure compliance with the CWA. Such additional BMPs should be incorporated into NPDES permits for CAFOs as special conditions of the permit. For example, these additional BMPs may address floodplain protection, source water protection, chemical handling, spill prevention and response, liner requirements for lagoons, training, and facility closure. Refer to Part III.C. of the example permit in Appendix F for detailed examples of additional BMPs that the permitting authority should consider as special conditions to the NPDES permit.

3.4 Monitoring, Record Keeping, and Reporting Requirements

In general, monitoring should be focused on qualitative controls. These controls should ensure that the CNMP is effectively developed and implemented on a schedule established in the permit, including any interim milestones, as appropriate. The permit may require visual inspection of storage areas, transportation equipment, land application areas, and/or other activities regulated under the permit through the CNMP. For example, if the CNMP requires a specific measure of freeboard to be maintained in a storage lagoon, the permittee should be required to periodically measure freeboard by a permanent marker in the lagoon. Similarly, if the application rate for land application of manure is specified in the CNMP, the permittee should be required to calibrate the equipment annually to measure the application rate accurately. Refer to Part IV.C of the example permit in Appendix F for examples of inspection and monitoring requirements. Records should be kept of the results of all required inspections, monitoring activities, and sampling. The permittee should also keep records of CAFO-generated waste that is used for land application activities that are not under the control of the permitted CAFO operator consistent with Section 3.3.1.2 of this guidance manual.

Reporting requirements are generally linked to monitoring requirements, and should include periodic reports, emergency reports for overflow events, and special reports (e.g., monitoring (visual inspection) logs, maintenance logs, and land application records).

When developing the monitoring and reporting requirements to be incorporated into the permit, the permit writer should address routine operational characteristics of a facility and the minimum reporting requirements in the regulations at 40 CFR 122.41(l). The permit also should include monitoring and reporting requirements that address non-routine activities. For example, discharges at a CAFO can occur because of an overflow during a catastrophic storm event (allowable discharge under the terms of the permit) or a leak, breach, overflow, or other structural failure of a storage facility due to improper operation or design (unauthorized discharges). Discharges may also occur due to manure releases related to the improper storage or handling of liquid or solid manure. The permit should require immediate notification of the permitting authority, specific data collection activities, and a follow-up report describing such discharges. The monitoring and reporting requirements should ensure that the permittee provides a description, identifies the time and duration of the event, as well as the cause(s), and presents an analysis (if required by the permitting authority) of the discharge.

4.0 HOW DO I DEVELOP AND IMPLEMENT NPDES PERMITS FOR CAFOs?

4.1 What are My Permitting Options?

Once an AFO has either been defined or designated as a CAFO, NPDES permitting authorities have two basic permitting options: general permits and individual permits. EPA encourages permitting authorities to use general permits for the majority of CAFOs. Individual permits, however, are appropriate in some situations. This section describes both permitting options and the situations in which they should be used. Figure 4–1 shows the decision-making process used to determine the appropriate Round I NPDES Permitting Options (individual or general) for CAFOs.

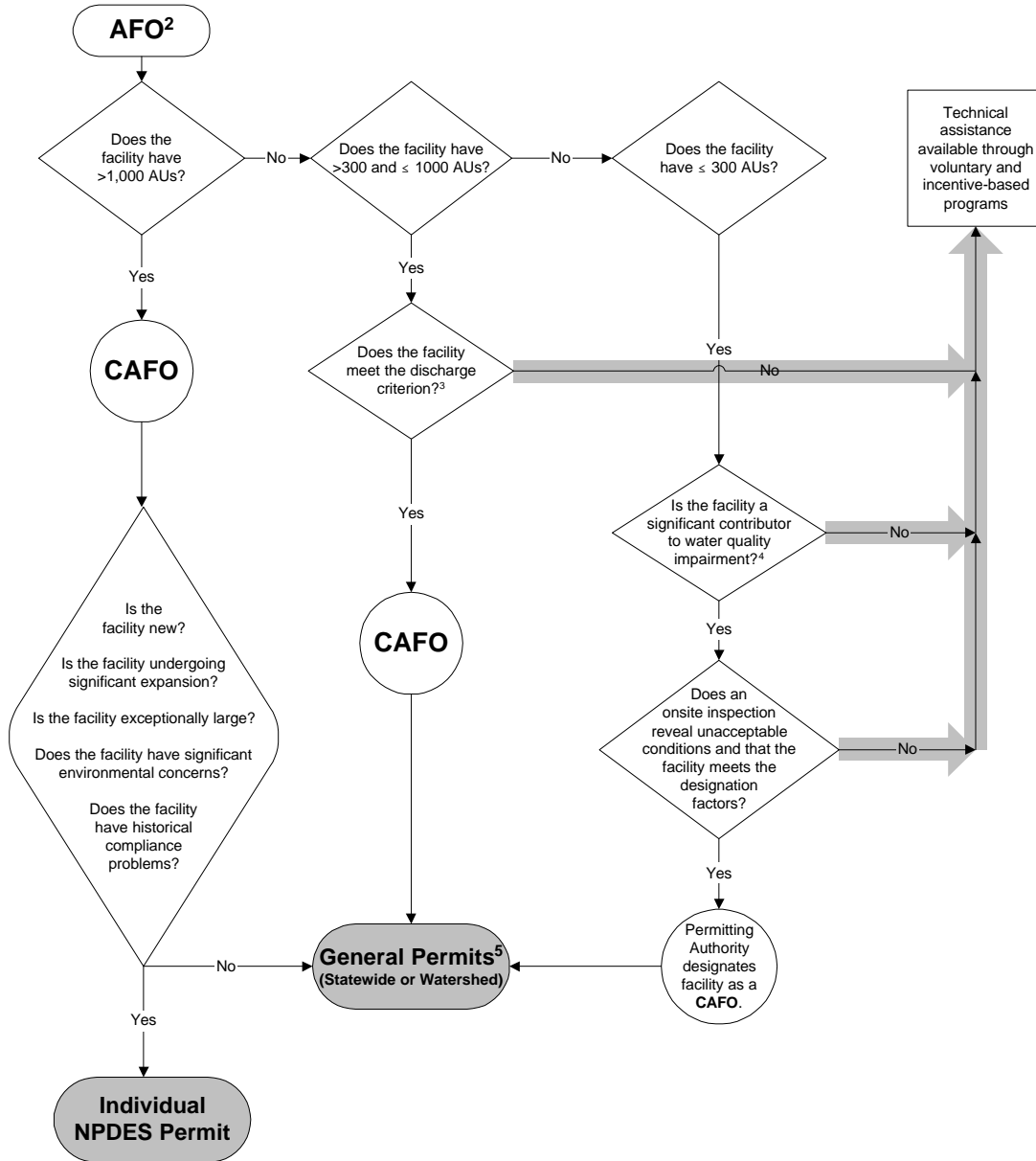
4.2 General Permits for CAFOs

A general NPDES permit is written to cover a category of point sources with similar characteristics for a defined geographic area. CAFOs are among the many examples of sources that are well suited to general permits because CAFOs involve similar types of operations, require the same kinds of effluent limitations and operating conditions, and can discharge the same types of pollutants. The majority of CAFOs are appropriately controlled under an NPDES general permit. Section 4.3 discusses the circumstances where individual permits for CAFOs may be warranted.

General permits offer a cost-effective approach for NPDES permitting authorities because of the large number of facilities that can be covered under a single permit. At the same time, the general permit also provides the flexibility for the permittee to develop and implement pollution control measures that are tailored to the site-specific situation of the permittee. The public has opportunity for input during key steps in the permit development and implementation process.

The geographic scope of a general permit is flexible and can correspond to political or other boundaries. During Round I permitting of CAFOs, EPA recommends that NPDES authorities use a “Statewide” general permit to address most CAFOs. The Statewide permit offers the most expedient way to get CAFOs covered under a NPDES permit, and to initiate development and implementation of CNMPs on an enforceable schedule. A State may decide that, because of ongoing watershed planning efforts or implementation of a TMDL, a watershed general NPDES permit fits best with a State’s priorities. A watershed general NPDES permit is nothing more than a general permit with a defined geographic coverage that corresponds to a specific watershed.

Figure 4–1. Decision-Making Process to Determine the Appropriate Round I NPDES Permitting Option for CAFOs¹



1. Permitting options for Round I - NPDES Permits for CAFOs are focused on facilities with >1000 AUs, facilities with unacceptable conditions, and facilities that are significant contributors to water quality impairment. All permitting options (e.g., general and individual permits) are available for all facilities.
2. EPA believes that many, if not most, AFOs that now have unacceptable conditions will voluntarily address those conditions to avoid the requirement to have a permit under the NPDES program.
3. Discharge criteria are defined in 40 CFR Part 122, Appendix B, Paragraph b.
4. A significant contributor to water quality impairment is a facility or a collection of facilities in a watershed where water quality monitoring provides evidence of pollution attributable to animal manure or wastewater from a CAFO.
5. The permitting authority retains the ability to issue any CAFO an individual permit.

While EPA advocates use of Statewide general NPDES permits During Round I permitting of CAFOs, there may be situations where a State determines that a watershed general NPDES permit may be appropriate in Round I. For example, the permitting authority may identify instances where multiple CAFOs collectively result in, or contribute to, impaired water quality. In these instances, the permitting authority can develop and implement a watershed general permit to expedite permit issuance to those CAFOs. The Unified National AFO Strategy advocates the use of watershed general permits as a way to tailor permit requirements to the manure and wastewater practices in a given area, and to promote more effective public participation in a smaller geographic area. A watershed general permit for CAFOs may also be appropriate where a TMDL requires point sources, including CAFOs, to undertake more stringent requirements that are necessary to protect water quality.

4.2.1 How is a General Permit for CAFOs Developed and Implemented?

EPA and the States have extensive information and experience with the development and implementation of general permits. These general permits can be developed for multiple or individual animal livestock sectors. This guidance will, therefore, only highlight some of the features of permitting CAFOs under general permits that may be unique or different. The procedures and requirements for issuance of general permits are located at 40 CFR 122.28 and in the corresponding State regulations. As of 1999, forty-three states have been authorized to issue NPDES general permits.

In developing and issuing NPDES general permits, the NPDES permit authority develops a draft permit and fact sheet which defines the following: the scope of the permit, the facilities that qualify for coverage under the permit, and the specific expectations of permittees. The draft permit and fact sheet are made available for review through a public notice and comment period. After comments have been considered, and a public hearing held if necessary, the final permit is issued for a five-year term. Facilities eligible for coverage must submit a Notice of Intent in accordance with a schedule established in the permit. An owner or operator eligible for a general permit may request to be excluded from the coverage of the general permit by applying for an individual permit.

Given the intense public interest in the issue of animal waste management and the permitting of CAFOs, EPA strongly encourages early and effective outreach during the preparation and public notice of draft CAFO general permits. For example, New York State issued a draft general permit for CAFOs for public comment and announced four public information meetings to explain the content and procedures for the draft permit. This kind of outreach can help to address questions and promote effective public input in this stage of the process.

4.2.2 How Do CAFOs Seek Permit Coverage Under a General Permit?

Any facility seeking coverage under a CAFO general permit must be required by the general permit to submit a written “notice of intent” (NOI), unless otherwise notified by the permitting authority. An example NOI is provided in Addendum A of the example NPDES Permit for CAFOs, which is provided in Appendix F.

A complete and timely NOI indicates the owner/operator’s intent to abide by all the conditions of the permit and fulfills the requirements for a permit application. The contents of the notice of intent should be clearly specified in the general permit, including the requirement to submit adequate information to determine whether coverage under the general permit is appropriate. A CAFO general permit should require that the contents of the NOI include, at a minimum (See 40 CFR 122.28(b)(2) for a description of information required to be submitted):

- the legal name and address of the owner and operator
- facility name and address and contact person
- physical location and longitude and latitude information
- type and number of animals at the CAFO
- receiving stream information
- operator signature and certification

General permits should specify the deadlines for submitting notices of intent to be covered and the date(s) when a permittee is covered by the general permit.

The example CAFO NPDES general permit included in Appendix F of this guidance requires CAFOs to develop and implement a CNMP on an enforceable schedule. The example permit further suggests that CAFOs covered by the general permit should submit a certification to the permitting authority that a CNMP has, in fact, been developed and is being implemented. This certification also serves an important role of verifying that the permittee has complied with one of the key elements of the NPDES permit.

4.2.3 How Does the Permitting Authority Manage NOIs?

The NOI serves as a permit application for CAFOs seeking coverage under a general permit. The permitting authority should review each NOI, and determine that a facility's coverage under the general permit is appropriate. EPA will, and encourages States to, make the NOIs and the certification of development of CNMPs available to the public and other interested parties. Recognizing the constantly changing scope of facilities covered by general permits and the high cost of traditional public notice and access to information, EPA plans to work with States to develop and use Internet-based sites as an alternative means to make States' CAFO general permits, NOIs, and other notices available to the public.

The NOI also serves as an important information and compliance role. The following information should be entered into the Permit Compliance System: NPDES permit number, name of the facility, the location of the facility, animal type, number of animals, and whether they have a CNMP. Federal regulations at 40 CFR 122.28(b)(3) provide that the Director may require any discharger authorized by a general permit to apply for and obtain an individual NPDES permit. Similarly, any interested person may petition the Director to take such action under 122.28(b)(3). The regulations provide a range of factors that the Director may use to determine whether a general or individual permit may be required. It is the permitting authority's responsibility to determine the most appropriate permit mechanism.

The general permit should specify a waiting period sufficient for NOI review before coverage becomes effective under the permit. The permit writer should review the NOIs and other readily available data and information to ensure that the CAFO is appropriately covered by the general permit. In particular, the permit writer should evaluate the following:

Does the general permit cover the type(s) of animal(s) at this facility?

Is the CAFO within the size ranges (if any) established under the permit?

Is the CAFO within the geographical boundaries (if any) established for the permit?

Are the CAFO's operational practices consistent with those taken into consideration as the permit was developed?

Is the CAFO located in an environmentally or ecologically sensitive area?

Is the CAFO located on a water body that is not meeting its designated use?

Does the CAFO have historical operational/compliance problems?

Does the public have significant concern about water quality impacts from the CAFO?

The NPDES authority either accepts general permit coverage for the facility, or requires submission of an application for an individual permit.

4.3 Which CAFOs Should be Covered by Individual Permits?

While the general NPDES permit is an effective regulatory tool for most CAFOs, certain CAFOs warrant being issued individual permits. Individual NPDES permits are most appropriate in Round I for the following CAFOs:

- Exceptionally large operations
- Operations undergoing significant expansion
- Operations that have historical compliance problems
- Operations that have significant environmental concerns and
- New CAFOs

When setting priorities for issuance of general and individual permits for CAFOs, the permitting authority should consider available resources, watershed priorities and TMDL actions, available financial and technical assistance, and other factors. EPA recommends that no individual permit for a new large CAFO be issued until a CNMP is prepared and submitted with an individual permit application.

4.4 How are Individual Permits Developed?

An individual NPDES permit for a CAFO is developed like an NPDES permit for a facility in any other sector. Upon receipt of the permit application, the permit writer develops a draft permit and fact sheet for a particular facility based on the information contained in the application submitted by the facility (e.g., type of activity, nature of discharge, quality of receiving water, etc.). The draft permit and fact sheet are made available for public review and comment and subsequently issued in final form.

The NPDES regulations at 40 CFR 122.21(f) require all applicants for NPDES permits to provide general facility information (NPDES Form 1). The regulations at 40 CFR 122.21(i) require new and existing CAFOs to provide additional information using NPDES Application Form 2B for Concentrated Animal Feeding Operations and Aquatic Animal Production Facilities.

Table 4–1 lists the information that must be provided on Forms 1 and 2B. Appendix E includes copies of Forms 1 and 2B. In addition, facility inspection report(s) may be used to supplement the development of permit conditions. Appendix B contains a list of possible references for the permit writer in support of NPDES permit development and agricultural practices.

Table 4–1. Information Required on NPDES Application Forms 1 and 2B

Form	Information Required
Form 1 (all NPDES permit applicants)	Activities conducted by the applicant which require an NPDES permit
	Name, mailing address, and location of facility
	Standard Industrial Classification code (up to 4)
	Operator’s name, address, and telephone number, and ownership status
	Whether the facility is located on Tribal lands
	Listing of all other State and/or Federal permits or construction approvals held (RCRA, UIC, PSD, NESHAP, etc.)
	Topographic map extending 1 mile beyond the facility property boundaries of the source, depicting the facility and each of its intake/discharge structures; each TSD facility; each well where fluids are injected; and all wells, springs, and other surface water bodies and drinking water wells known in the area
Form 2B (CAFOs)	Brief description of the nature of the business
	Type and number of animals in open confinement and housed under roof
	Number of acres used for confinement feeding Design basis for runoff diversion and control system, if one exists, including the number of acres contributing drainage, the storage capacity, and design safety factor

Given the potential environmental concerns associated with CAFOs to be covered under individual NPDES permits, the permitting authority may wish to take special steps to ensure that it has all the necessary information needed to prepare the draft permit and fact sheet. The permitting authority is encouraged to use its CWA Section 308 authority to obtain additional needed information or to conduct a site inspection while developing the draft permit.

4.5 What is the Schedule for Developing and Implementing a CNMP?

CNMP development and implementation schedules established in the NPDES permit should reflect the specific constraints and requirements of the permitting authority. Large CAFOs (greater than 1,000 AUs) should develop and fully implement a CNMP as expeditiously as possible but no later than 2003. To achieve this, the permitting authority should issue a general NPDES permit for the largest CAFOs by January 2000. NPDES permits should require all other

CAFOs to develop and begin implementation of CNMPs as expeditiously as possible but no later than 2005.

4.6 How Does the Permitting Authority Know That a CAFO has Developed a CNMP?

The NPDES permit issued to a CAFO will include a schedule for completion of a CNMP and requirements that it be maintained on-site and updated, as needed. The permit should require that the CAFO submit a report indicating that the CNMP has been developed, within thirty days of its completion. The notice submitted by the CAFO should also indicate whether the CNMP has been developed by a certified specialist and any other important summary information. This notice should also reiterate that the CNMP must be submitted to the permitting authority, upon request by the permitting authority.

5.0 OTHER CONSIDERATIONS

This section discusses several other important considerations for NPDES permit authorities when developing and implementing NPDES permits for CAFOs.

5.1 How Should the Development of NPDES Permits for CAFOs be Coordinated with Total Maximum Daily Loads (TMDLs)?

Under Section 303(d) of the Clean Water Act (CWA), States are required to identify and list water bodies that do not meet designated water quality criteria, and to rank them in order of priority for purposes of restoration. Section 303(d) further requires States to conduct an evaluation to quantify the total maximum daily allowable loading of a pollutant to each listed water body and to allocate the maximum load among the contributing sources (point and non-point sources). This is to ensure that water quality criteria will not be exceeded and the designated uses of the water body will be protected. The Total Maximum Daily Load (TMDL) analysis is:

- The maximum amount of a pollutant that a water body can receive and still achieve water quality standards
- The sum of the wasteload allocations for point sources and load allocations for non-point sources plus a margin of safety (considers seasonal variation)

TMDLs are implemented through:

- NPDES permits;
- Non-point source programs; and
- Other Federal laws and requirements.

EPA is currently in the process of revising the TMDL regulations.

For permitting under Round I, EPA expects that most CAFOs should be covered by statewide general permits and required to develop and implement CNMPs that are consistent with this guidance, other State requirements, and NRCS technical standards. There may be situations, however, where CNMPs may need to be modified to address the requirements of a TMDL for a particular water body segment or watershed. The permitting authority may want to use a watershed-specific NPDES permit for a group of CAFOs, where these point sources are integral to implementation of the TMDL.

5.2 How Do NPDES Permits for CAFOs Relate to CZARA Management Measures?

In its reauthorization of the Coastal Zone Management Act in 1990, Congress identified nonpoint source pollution as a major factor in the continuing degradation of coastal waters. Congress also recognized that effective solutions to nonpoint source pollution could be implemented at the State and local levels. Therefore, in the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Congress added Section 6217, which calls upon States with federally-approved coastal zone management programs to develop and implement coastal nonpoint pollution control programs. The §6217 program is administered at the federal level jointly by EPA and the National Oceanic and Atmospheric Agency (NOAA).

Section 6217(g) of CZARA called for EPA, in consultation with other agencies, to develop guidance on “management measures” for sources of nonpoint source pollution in coastal waters. Under §6217 of CZARA, EPA is responsible for developing technical guidance to assist States in designing coastal nonpoint pollution control programs. On January 19, 1993, EPA issued its *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* which addresses five major source categories of nonpoint pollution:

- Urban runoff;
- Agriculture runoff;
- Forestry runoff;
- Marinas and recreational boating; and
- Hydromodification.

The guidelines for the agriculture nonpoint source category specifically includes management measures for “confined animal facilities.” The guidance also specifies management measures for erosion and sediment control, nutrient management on cropland and grazing.

The effect of the CZARA management measures for feedlots is to subject smaller feedlots to requirements similar to those found in the NPDES regulations. Feedlots located in §6217 program management areas that are not CAFOs under the NPDES program may be subject to CZARA requirements. There are two management measures for confined animal facilities presented in EPA’s CZARA guidance.

The first management measure for confined animal facilities in the EPA guidance applies to all new operations and existing “large” operations (as defined in CZARA and explained below):

Management Measures for Facility Wastewater and Runoff from Confined Animal Facilities (New or Large Existing Facilities)

Limit the discharge from confined animal facility to surface waters by:

- Storing both the facility wastewater and the runoff from confined animal facilities that is caused by storms up to and including a 25 year, 24-hour frequency storm. Storage facilities should:
 - (a) Have an earthen lining or plastic membrane lining, or
 - (b) Be constructed with concrete, or
 - (c) Be a storage tank.
- Managing stored runoff and accumulated solids from the facility through an appropriate waste utilization system.

This management measure applies to all new facilities regardless of size and to all existing confined animal facilities that contain more than a certain number of animals. As defined in EPA's guidance, a large facility is one that contains the numbers of livestock or equivalent animal units listed below.

	<u>Head</u>	<u>Animal Units</u>
Beef Feedlots	300	300
Stables (horses)	200	400
Dairies	70	98
Layers	15,000	150 (liquid manure system) 495 (continuous overflow watering system)
Broilers	15,000	150 (liquid manure system) 495 (continuous overflow watering system)
Turkeys	13,750	2,475
Swine	200	80

These cutoffs were developed based on an economic analysis for CZARA, and the numbers of animals are different than the numbers of animals used in the definition of a CAFO under the NPDES regulations. This does not impede implementation of the NPDES program since EPA's CZARA guidance states that any facility with an NPDES permit for concentrated

animal feeding operations is exempt from CZARA requirements. If a facility subject to CZARA requirements is later designated as a CAFO by the permitting authority, that facility is no longer subject to the CZARA management measures. This means that a feedlot will never be subject to both NPDES and CZARA requirements at the same time.

This CZARA management measure has the same goal as the NPDES CAFO requirements: no discharge of wastewater or runoff from feedlots during storms equal to or smaller than the 25 year, 24-hour storm event. Both programs envision facilities designed with sufficient storage capacity to hold all wastewater and runoff up to and including the 25 year, 24-hour storm event, although CZARA has more stringent requirements for waste storage structures to protect groundwater. In addition, the CZARA management measure calls for stored runoff and accumulated solids from the facility to be managed through an appropriate waste utilization system. This requirement can be met through implementation of an appropriate nutrient management plan.

The second management measure for feedlots in EPA’s CZARA guidance applies to “small existing units” as defined in CZARA and explained below:

Management Measures for Facility Wastewater and Runoff from Confined Animal Facilities (Small Existing Units)

Minimize the discharge of pollutants by:

- Designing and implementing systems that collect solids, reduce containment concentrations, and reduce runoff to minimize the discharge of contaminants in both facility wastewater and in runoff that is caused by storms up to and including 25 year, 24-hour frequency storm. Implement these systems to substantially reduce significant increases in pollutant loading to groundwater.
- Managing stored runoff and accumulated solids from the facility through an appropriate waste utilization system.

This management measure for smaller existing operations that contain the following number of livestock or animal units:

	<u>Head</u>	<u>Animal Units</u>
Beef Feedlots	50-299	50-299

5.0 Other Issues and Considerations

Stables (horses)	100-199	200-399
Dairies	20-69	28-97
Layers	5,000-14,999	50-149 (liquid manure system) 165-494 (continuous overflow watering system)
Broilers	5,000-14,999	50-149 (liquid manure system) 165-494 (continuous overflow watering system)
Turkeys	5,000-13,749	900-2,474
Swine	200	40-79

This management measure for small existing units calls for a somewhat less stringent level of control and was developed to minimize the economic impact on small operations (i.e., systems should minimize as opposed to limit discharges). This management measure also calls for proper land application of waste. Feedlots containing fewer than the number of livestock animal units listed above are not subject to the requirements of CZARA management measures.

Under CZARA, States are required to develop nutrient management plans for activities associated with the application of nutrients to agricultural lands. Use of nutrient management plans minimizes damage to groundwater and surface water and increases the efficiency of nutrient use by crops. Coastal zone States should implement the nutrient management measure through application of management practices and operation and maintenance requirements for nutrient application to agricultural land.

The appropriate nutrient management practices are those commonly suggested by the USDA and States for general use on agricultural lands, and each State may select the management practices most appropriate for its nutrient management needs. At a minimum, the nutrient management plans should conform to the management measure as described below:

Nutrient Management Measure

Develop, implement, and periodically update a nutrient management plan that include the following core components:

- Maps: Farm and field maps indicating acreage, crops, soils, and water bodies.
- Yield Expectation: Realistic yield expectations for the crop(s) grown.
- Nutrient Resources: A summary of available nutrient resources including: soil test results for pH, phosphorus, nitrogen, and potassium; a nutrient analysis of manure or other effluent; nitrogen contribution to the soil from legumes grown in the rotation (if applicable); and, information on other significant nutrient sources (i.e., irrigation water)
- Field Limitations: An evaluation of field limitations based on environmental hazards or concerns, such as: sinkholes, shallow soils over fractured bedrock, and soils with high leaching potential; lands near surface water; highly erodible soils; and, shallow aquifers.
- Limited Nutrients: Use of the limiting nutrient concept to establish the mix of nutrient sources and requirements for the crop based on realistic yield expectations.
- Application and Timing Methods: Identification of application and timing methods for nutrients in order to: achieve realistic crop results, reduce losses to the environment, and avoid application to frozen soil during periods of leaching or runoff.
- Calibrations: Provisions for the proper calibration and operation of application equipment.

The practice that can be used to implement and fulfill these management measures are described in detail in EPA's *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters*. The practices described in this reference are useful for feedlots with NPDES permits as well.

5.3 How Can Smaller CAFOs Exit the Regulatory Program?

Smaller CAFOs (those with fewer than 1,000 AUs) should be allowed to exit the permit program after the end of the five-year permit term if they meet certain conditions. To exit the program, a facility would be expected to demonstrate the following: (1) that it has successfully addressed the conditions that caused it to be defined or designated as a CAFO; (2) that it is fully implementing its CNMP; (3) would offer evidence of full compliance; and (4) certify that it is in full compliance with its permit at the end of the permit term. In the event a facility that has exited the program has a subsequent discharge, the permitting authority should again consider the facility subject to permitting.

5.4 What Will Happen in Round II Permitting?

The second round of CAFO permitting should begin in 2005 with the reissuance of general permits for CAFOs with greater than 1,000 AUs. EPA is currently in the process of reviewing and revising the existing regulations governing effluent limitations for feedlots and the NPDES permitting program. Any new NPDES CAFO permits issued after the revised regulations are promulgated must reflect the requirements in the revised regulation. In addition, EPA and NPDES States and Tribes should re-issue individual permits as their five-year permit terms expire during the second round, and issue new individual permits consistent with the CWA and the revised regulations. Finally, EPA and States should re-issue CAFO and other general permits where water quality issues are not resolved as a result of the initial Round I permit.

Round II NPDES permits would incorporate any new requirements resulting from revisions to the CAFO permitting regulations and effluent guidelines for feedlots. In addition, Round II CAFO permits would incorporate refinements to site-specific CNMPs and address any additional requirements necessary to meet water quality goals and objectives (e.g., State water quality standards for nutrients, TMDLs).

APPENDIX A

EXECUTIVE SUMMARY

USDA/EPA Unified National Strategy for Animal Feeding Operations
(March, 1999)

UNIFIED NATIONAL AFO STRATEGY

EXECUTIVE SUMMARY

Over the past quarter century, the United States has made tremendous progress in cleaning up its rivers, lakes, and coastal waters. While pollution from factories and sewage treatment plants has been dramatically reduced, runoff from city streets, agricultural activities (including animal feeding operations or AFOs), and other sources continues to degrade the environment and puts drinking water at risk.

In February 1998, President Clinton released the Clean Water Action Plan (CWAP), which provides a blueprint for restoring and protecting water quality across the Nation. The CWAP identifies polluted runoff as the most important remaining source of water pollution and provides for a coordinated effort to reduce polluted runoff from a variety of sources. As part of this effort, the CWAP calls for the U.S. Department of Agriculture (USDA) and the U.S. Environmental Protection Agency (EPA) to develop a Unified National Strategy to minimize the water quality and public health impacts of animal feeding operations (AFOs).

USDA and EPA issued a draft of this Strategy on September 16, 1998, and requested public comment during a 120-day period. In addition, 11 national “listening sessions” were held throughout the U.S. to discuss the draft Strategy and hear public feedback. The final Strategy reflects written comments received as well as issues raised during the listening sessions.

The Unified AFO Strategy discusses the relationships between AFOs and environmental and public health, is based on a national performance expectation for all AFO owners and operators, and presents a series of actions to minimize public health impacts and improve water quality while complementing the long-term sustainability of livestock production.

Background

AFOs are agricultural enterprises where animals are kept and raised in confined situations. Approximately 450,000 AFOs in the United States congregate animals, feed, manure and urine, dead animals, and production operations on a small land area. USDA data indicate that the vast majority of farms with livestock are small—about 85% of these farms have fewer than 250 animal units (AUs), where an AU is equal to roughly one beef cow (therefore 1,000 AUs is equal to 1,000 beef cows or an equivalent number of other kinds of animals). About 6,600 AFOs had more than 1,000 AUs in 1992 and are considered to be large operations.

As a result of domestic and export market forces, technological changes, and industry adaptations, the past several decades have seen substantial changes in the animal production industry. Despite USDA support for sustainable agricultural practices, these factors have promoted expansion of confined production units, with growth in both existing areas and new areas; integration and concentration of some of the industries; geographic separation of animal production and feed production operations; and the concentration of large quantities of manure

and wastewater on farms and in some watersheds.

AFOs can pose a number of risks to water quality and public health, mainly because of the amount of animal manure and wastewater they generate. Manure and wastewater from AFOs have the potential to contribute pollutants such as nutrients (e.g., nitrogen, phosphorus), organic matter, sediments, pathogens, heavy metals, hormones, antibiotics, and ammonia to the environment. These pollutants can cause several types of water quality and public health impacts, such as contamination of drinking water supplies and fish kills. While there are other potential environmental impacts associated with AFOs (e.g., odor, habitat loss, ground water depletion), this Strategy focuses on addressing surface and groundwater quality problems. Once implemented, however, this Strategy will indirectly benefit other resources.

USDA and EPA's National Performance Expectation

To minimize water quality and public health impacts from AFOs and land application of animal waste, this Strategy is based on a national performance expectation that all AFO owners and operators develop and implement technically sound and economically feasible site-specific Comprehensive Nutrient Management Plans (CNMPs). A CNMP identifies actions that will be implemented to meet clearly defined nutrient management goals at an agricultural operation. The following components may be contained in a CNMP:

- **Feed Management**—Animal diets and feed may be modified to reduce the amounts of nutrients in manure.
- **Manure Handling and Storage**—Manure needs to be handled and stored properly to prevent water pollution from AFOs.
- **Land Application of Manure**—Land application is the most common and usually most desirable method of utilizing manure because of the value of the nutrients and organic matter. Land application in accordance with the CNMP should minimize water quality and public health risk.
- **Land Management**—Tillage, crop residue management, grazing management, and other conservation practices should be utilized to minimize movement to surface and ground water of soil, organic materials, nutrients, and pathogens from lands where manure is applied.
- **Record Keeping**—AFO operators should keep records that indicate the quantity of manure produced and how the manure was utilized, including where, when, and amount of nutrients applied.
- **Other Utilization Options**—Where the potential for environmentally sound land application is limited, alternative uses of manure, such as the sale of manure to other

farmers, composting and sale of compost to home owners, and using manure for power generation may also be appropriate.

AFO owners and operators may seek technical assistance for the development and implementation of CNMPs from qualified specialists. These specialists should assist in implementation and provide ongoing assistance through periodic reviews and revisions of CNMPs, as appropriate. USDA and EPA recommend that certified specialists be used to develop and ensure the quality of CNMPs.

Relationship of Voluntary and Regulatory Programs

Voluntary and regulatory programs serve complementary roles in providing AFO owners and operators and the animal agricultural industry with the assistance and certainty they need to achieve individual business and personal goals, and in ensuring protection of water quality and public health.

Voluntary Program for Most AFOs

Voluntary programs provide an enormous opportunity to help AFO owners and operators and communities address water quality and public health concerns surrounding AFOs. For the vast majority of AFOs, voluntary efforts will be the principal approach to assist owners and operators in developing and implementing site-specific CNMPs, and in reducing water pollution and public health risks associated with AFOs. While CNMPs are not required for AFOs participating only in voluntary programs, they are strongly encouraged as the best possible means of managing potential water quality and public health impacts from these operations.

There are three types of voluntary programs to assist AFO owners and operators. USDA and EPA are both committed to promoting **locally led conservation** as one of the most effective ways to help AFO owners and operators achieve their conservation goals. **Environmental education** can bring an awareness of possible water quality problems and inform AFO owners and operators about practices that will address such problems. A variety of **financial and technical assistance** programs exist to provide AFO owners and operators advice in developing CNMPs and implementing solutions and to help defray the costs of approved/needed structures (e.g., waste storage facilities for small operations) or to implement other practices, such as installation of conservation buffers to protect water quality.

Regulatory Program for Some AFOs

Impacts from certain higher risk AFOs are addressed through National Pollutant Discharge Elimination System (NPDES) permits under the authority of the Clean Water Act. AFOs that meet certain specified criteria in the NPDES regulations are referred to as concentrated animal feeding operations or CAFOs.

NPDES permits will require CAFOs to develop CNMPs and to meet other conditions that minimize the threat to water quality and public health and otherwise ensure compliance with the requirements of the Clean Water Act. NPDES permits will also ensure that the animal manure from CAFOs will be utilized properly and require reporting on whether the permittee has a CNMP including land application of animal manure and whether it is being implemented properly. The Strategy identifies three categories of CAFOs that are priorities for the regulatory program:

- **Significant Manure Production**—Large facilities (those with greater than 1,000 animal units) produce quantities of manure that can be a risk to water quality and public health.
- **Unacceptable Conditions**—Facilities that have man-made conveyances that discharge animal waste to waters or have a direct discharge to waters that pass through the facility or come into direct contact with animals represent a significant risk to water quality and public health.
- **Significant Contributors to Water Quality Impairment**—A facility that is significantly contributing to impairment of a water body or a watershed and nonattainment of a designated use is also a priority for the NPDES permitting program.

The Strategy supplements these regulatory program priorities with three types of incentives for some AFOs. Smaller CAFOs that meet certain conditions may exit the regulatory program at the end of their permit term if they correct the problem(s) that caused them to be covered by the regulatory program. The Strategy also describes a “good faith incentive” for some AFOs to avoid being covered by the regulatory program if they have and are implementing a CNMP. Finally, there are tax incentives that may be available to encourage AFOs owners and operators to develop and implement a CNMP.

Coordination with State and Tribal Programs

States and Tribes play a critical role in the development and implementation of national and State and Tribal resource protection programs. USDA and EPA expect to work with States and Tribes to implement effective programs to achieve the national goal and performance expectation of this Strategy. The Strategy includes actions to address a range of State and Tribal issues.

Strategic Issues

The Unified AFO Strategy addresses seven strategic issues. The discussion of each strategic issue identifies several action items.

- **Building Capacity for CNMP Development and Implementation**—The successful implementation of this Strategy depends on the availability of qualified specialists from either the private or public sectors to assist in the development and implementation of

CNMPs. The Strategy describes actions to substantially increase AFO owners and operators' access to technical assistance for developing and implementing CNMPs.

- **Accelerating Voluntary, Incentive-Based Programs**—The Strategy sets out a desired outcome that all AFOs will have CNMPs by 2009. Several actions, including review and revision of USDA's practice standards, development of CNMP guidance, fair and equitable program delivery, and options for financial assistance, are directed toward achieving this objective.
- **Implementing and Improving the Existing Regulatory Program**—The Strategy describes the applicability and the requirements of the existing regulatory program, identifies permitting and enforcement priorities, recognizes State and Tribal CAFO permit programs, and describes EPA's plans to strengthen and improve existing regulations.
- **Coordinated Research, Technical Innovation, Compliance Assistance, and Technology Transfer**—USDA and EPA will establish coordinated research, technical innovation, and technology transfer activities, provide compliance assistance, and establish a single point information center. The two agencies are also committed to promoting sustainable agriculture and will support development of a livestock environmental issues curriculum for producers.
- **Encouraging Industry Leadership**—The animal agriculture industry can play a key role in helping to encourage adoption of CNMPs and in addressing water quality problems on individual AFOs. The Strategy includes possible actions that USDA and EPA may take to promote industry involvement.
- **Data Coordination**—Several kinds of data are useful in assessing and managing the water quality impacts of AFOs. USDA and EPA's efforts to coordinate on data sharing will both protect the relationship of trust between USDA and farmers and provide regulatory authorities with information that is useful in protecting water quality and public health.
- **Performance Measures and Accountability**—USDA and EPA believe that it is critical to establish performance measures to gauge our success in implementing the Strategy and meeting relevant goals in each agency's strategic plan established under the Government Performance and Results Act. USDA, EPA, States, Tribes, and other Federal agencies will work with other stakeholders to develop an approach for measuring the effectiveness of efforts to minimize the water quality and public health impacts of AFOs.

Printed copies of the Unified National Strategy for Animal Feeding Operations may be obtained by calling USDA at (202) 720-3210 or EPA at (202) 260-7786. An electronic version of the Strategy is available on the Internet at <http://www.epa.gov/owm>.

APPENDIX B

REFERENCES FOR A NPDES PERMIT WRITER

DISCLAIMER

The documents and web sites referenced in this section are provided as a resource for permit writers. Their inclusion in this publication does not constitute endorsement or recommendation for use by the U.S. Environmental Protection Agency.

References

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Legislative, Policy, and Programmatic Tools

National

World Wide Web Pages

1996 Farm Bill Conservation Provisions

<http://www.nhq.nrcs.usda.gov/OPA/FB96OPA/FBillLnk.html>

General information/fact sheets on Voluntary Programs; Public notices; Links to related rules published in the Federal Register

1996 Farm Bill Summary

<http://www.usda.gov/farmbill/title0.htm>

THE FEDERAL AGRICULTURE IMPROVEMENT AND REFORM ACT OF 1996

Title-by-Title Summary of Major Provisions of the Bill

Ag Environmental Programs

Summary of Major Existing EPA Laws and Programs That Could Affect Producers of Agricultural Commodities

<http://es.epa.gov/oeca/ag/aglaws/>

This information is designed to assist organizations and individuals who provide information and assistance to farmers by identifying and summarizing EPA's environmental requirements. Each requirement should be carefully reviewed and compared to a farmer's existing practices to determine whether the specific requirement applies to an individual farmer. Follow link to get links to requirements specific to Concentrated Animal Feeding Operations and manure holding ponds, lagoons, or tanks

Evaluation of the Experimental Rural Clean Water Program

<http://h2osparc.wq.ncsu.edu/info/rcwp/>

This publication presents the results of a comprehensive evaluation of the 10-year experimental Rural Clean Water Program (RCWP). The evaluation was conducted by the National Water Quality Evaluation Project (NWQEP) at North Carolina State University in cooperation with the U.S. Department of Agriculture (USDA), the U.S. Environmental Protection Agency (USEPA), and the 21 RCWP projects.

Farm*A*Syst and Home*A*Syst Home Page

<http://www.wisc.edu/farmasyst/index.html>

Our voluntary program is a partnership between government agencies and private business that enables individuals to prevent pollution on farms, ranches, and homes using confidential environmental assessments.

NRCS AFO Page

<http://www.nrcs.usda.gov/AFO.html>

USDA/EPA Unified National Strategy for Animal Feeding Operations

<http://www.epa.gov/owm/finafost.htm>

Online document, March 9, 1999



Using the Clean Water State Revolving Fund to Reduce Animal Feeding Operation Pollution
[DRAFT]

<http://www.epa.gov/owm/afosfact.pdf>

Fact sheet describing the Clean Water State Revolving Fund as it relates to AFOs.

Documents

Environmental Law Institute. 1997. Enforceable State Mechanisms for the Control of Nonpoint Source Water Pollution.

U.S. Environmental Protection Agency. 1998. Efforts to Improve Controls on Concentrated Animal Feeding Operations (CAFOs). Results of June 1998 Survey of States and Regions Compiled by G. Beatty, EPA, Office of Water, Washington, D.C.

U.S. Environmental Protection Agency. 1993. The Report of the EPA/State Feedlot Workgroup. Office of Wastewater Enforcement and Compliance, Washington, D.C.

New Dairy Waste Management Legislation. (1993, July). *Focus*. F-WQ-93-011.

Regional or State

World Wide Web Pages

Indiana Code 13-18-10 (As Amended Through the 1997 Regular Session). (No date).
Office of Code Revision Indiana Legislative Services Agency.

<http://www.ai.org/legislative/ic/97/title13/ar18/ch10.html>

[1997, November 10]. Chapter 10. Confined Feeding Control.

Iowa AFO Programs

Iowa Ag Waste Management links

<http://www.ae.iastate.edu/waste.htm>

Rule summary, fact sheets, guidelines, and presentations.

Iowa Department of Natural Resources Environmental Protection Division.

<http://www.state.ia.us/government/dnr/organiza/epd/wastewtr/feedlot/feedlt.htm>

[November 6, 1997]. Provides a brief and simplified explanation of DNR's Environmental Protection Division's current regulation of confinement feeding operations.

Maine's Manure Law

<http://www.state.me.us/agriculture/oanrr/manurelaw.htm>

Minnesota Feedlot Program

http://www.pca.state.mn.us/programs/feedlots_p.html

MPCA—Water Quality Division, Feedlot Unit Program summary and links to information about Minnesota feedlots.

New Mexico Environment Department

<http://www.nmenv.state.nm.us/>

[May 6, 1998]. Questions & Answers about CAFO Regulations.

Oklahoma CAFO Info.

<http://www.oklaosf.state.ok.us/osfdocs/nr6497.html>

GOVERNOR SIGNS CONCENTRATED ANIMAL FEEDING OPERATIONS
LEGISLATION Press release—highlights state CAFO requirements

Idaho CAFO Info.

<http://www.oneplan.state.id.us>

Idaho OnePlan Website - "Livestock Topic"

Oregon CAFO program

http://www.oda.state.or.us/Natural_Resources/cafo.htm

Program overview, FAQs, and contacts.

South Carolina General Assembly. (1996, July 15). Bill 3446. Legislative Printing Agency-LPITR.

<http://www.lpittr.state.sc.us/bil95-96/3446.htm>

An act to amend title 47, code of laws of South Carolina, 1976, relating to animals, livestock, and poultry, by adding chapter 20 so as to enact provisions to regulate confined swine feeding operations, including provisions for, among other things, fees, punishment for violations of this chapter, and the promulgation of regulations; to amend section 46-45-30, as amended, relating to nuisance suits related to agricultural operations, so as to provide that no established agricultural facility or any agricultural operation at an established agricultural facility is or may become a nuisance, private or public, by any changed conditions in or about the locality of the facility or operation, and to delete certain language; to require the department of health and environmental control to promulgate regulations regarding confined swine feeding operations, which additional regulations are separate and distinct from the regulations promulgated pursuant to chapter 20, title 47; and to provide that when these “separate and distinct” or “additional” regulations are approved by the general assembly, or take effect without action of the general assembly, various provisions contained in this act and certain regulations are repealed.

Texas Administrative Code Title 30 Chapter 106 Subchapter F.

<http://www.tnrcc.state.tx.us/RuleS/tac/30/I/106/F/106.161.html>

[1997, November 12]. Title 30. Environmental Quality
Part I. Texas Natural Resource Conservation Commission
Chapter 106. Exemptions From Permitting
Subchapter F. Animal Confinement
Section 106.161 Animal Feeding Operations (Previously SE 62)

Texas Administrative Code Title 30 Chapter 321 Subchapter K.

<http://www.sos.state.tx.us/tac/30/I/321/K/index.html>

[1997, November 12]. Title 30. Environmental Quality
Part I. Texas Natural Resource Conservation Commission
Chapter 321. Control of Certain Activities by Rule
Subchapter k. Concentrated Animal Feeding Operations
Section 321.181 Waste and Wastewater Discharge and Air Emission Limitations

Title 25. Environmental Resources Chapter 83. State Conservation Commission Subchapter D. Nutrient Management. (No date).

http://www.dep.state.pa.us/dep/SUBJECT/Proposed_regulations/Nutrient_Management.htm

Full text of Pennsylvania's Nutrient Management Act.

Veenhuizen, M. A., D. J. Eckhert, K. Elder, J. Johnson, W. F. Lyon, K. M. Mancl, and G. Schnitkey (eds.). Animal Waste Pollution Abatement Program. In *Ohio Livestock Manure and Wastewater Management Guide (Bulletin 604)*

http://www.ag.ohio-state.edu/~ohioline/b604/b604_30.html

[1997, September 23]. Summary of Ohio's Animal Waste Pollution Abatement Program.

Documents

Agena, Ubbo. 1994. Animal Waste Control Programs of Iowa and Eight Other States. Iowa Department of Natural Resources, Environmental Protection Division.

Confined Animal Feeding Operations Control Regulation (CAFR). 1992. Colorado Department of Health Water Quality Control Commission.

Iowa Department of Natural Resources. 1992. Environmental Regulations and Guidelines for Animal Feeding Operations in Iowa.

Illinois Department of Agriculture (IDOA). 1997. Livestock Management Facilities Act, Adopted May 20, 1997. State of Illinois Department of Agriculture, Bureau of Environmental Programs, Springfield, Illinois.

Kansas Department of Health and Environment. 1994. New Legislation Impacts on Kansas Livestock Operations: Registration & Permitting, Separation Distances, and Fees. Pamphlet describing rules and regulations regarding Senate Bill 800 effective July 1, 1994.

Jessup, D. H. 1990. Guide to State Environmental Programs. The Bureau of National Affairs, Inc. Washington, D.C.

Minnesota Pollution Control Agency. 1997. General Feedlot Program Information. Fact Sheet 33 posted on World Wide Web, July 1997.

Minnesota Pollution Control Agency. 1997. A 1997 Legislative Update: MPCA Feedlot Program Overview. February 4, 1997.

Muehling, A. J. 1991. Livestock Environmental Regulations: Inequity Among Midwestern States? (*In*) The Livestock Industry and the Environment Conference Proceedings. October 31–November 1, 1991. Iowa State University, Ames, Iowa.

- National Association of State Departments of Agriculture (NASDA) Research Foundation. 1997. Environmental Laws Affecting Georgia Agriculture.
- National Association of State Departments of Agriculture (NASDA). 1997. Summary Matrix of State Survey on Waste and Manure Management Regulations.
- North Carolina Division of Environmental Management (NCDEM). Water Quality Section. 1993. Major Nonpoint Source Management Programs in North Carolina: Agricultural Nonpoint Source Control Programs. Neuse River Basin wide Water Quality Management Plan.
- Oklahoma Feed Yards Act 2 O.S. 1991, As Amended, Sections 9-201 et seq. And Rules 35:30-35-1 through 35:30-35-14. (1994, June) Oklahoma Department of Agriculture Plant Industry and Consumer Services.
- State of Arkansas, Regulation No. 5, Liquid Animal Waste Management Systems, 1992.
- Whittle, D. 1996. The Regulation of Animal Waste in North Carolina. (In) Environmental Law Update: A Pro Bono Initiative. Office of the Secretary, North Carolina Department of Environment, Health, and Natural Resources.

Technical and NPDES Permitting Tools

National

World Wide Web Pages

AgNIC Home Page

<http://www.agnic.org/>

AgNIC (Agriculture Network Information Center) is a distributed network that provides access to agriculture-related information, subject area experts, and other resources. It was established by an alliance of the National Agricultural Library, land-grant universities, and other organizations committed to facilitating public access to agricultural and related information.

Animal Waste and the Environment

<http://www.ces.uga.edu/pubcd/c827-w.html>

A paper by Cecil Hammond, former Extension Engineer

Certification Training for Operators of Animal Waste Management Systems

<http://ces.soil.ncsu.edu/certification/>

North Carolina State University site describing NCSU Animal Waste Management System Operator Training. Gives summary and course schedules. Also provides links to manuals designed for individuals involved in animal production and the waste management systems that are associated with these operations. The manuals explain waste system components, waste utilization plans, proper waste application, regulations, record keeping, safety and emergency action plans, and consequences of improper management.

Land Treatment—NRCS

<http://h2osparc.wq.ncsu.edu/info/idaho/landtrmt.html>

The objective of the land treatment program was to implement BMPs designed to reduce the amount of sediment, sediment-related pollutants, and animal waste discharging into Rock Creek from agricultural land. Best management practices were implemented to prevent sediment from entering the drains by controlling erosion within the farm fields and trapping sediment at field edges. The BMPs used in the project included: sediment retention structures, irrigation water management vegetative filter strips, cover crops, conservation tillage, and animal waste management. Describes processes used to define critical areas and select appropriate BMPs

Manure Master Decision Support Tool

<http://www.ftw.nrcs.usda.gov/ManureMaster/>

Online tool generates suggested BMPs based on the animal population of the facility and the type of crops to which the manure is applied.

NPS Management Measures Guidance

<http://www.epa.gov/OWOW/NPS/MMGI/>

Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters (EPA-840-B-93-001c, January 1993). Online copy.

NRCS Conservation Practice Standards

<http://www.ncg.nrcs.usda.gov/index.html>

NRCS descriptions and manuals for Best Management Practices.

NRCS Technical Tools

http://www.ncg.nrcs.usda.gov/tech_tools.html

NRCS tools for decision support, including animal waste management software, Manure Master decision support tool.

State of the Land—Concentrated Animal Production and Water Quality

<http://www.nhq.nrcs.usda.gov/land/env/wq5.html>

NRCS site linking to several documents related to CAFOs and water quality.

State Partners of the Cooperative State Research, Education, and Extension Service

<http://www.reeusda.gov/statepartners/usa.htm>

This section hosts the directory of land-grant universities which are state partners of the Cooperative State Research, Education, and Extension Service. Also included is the CSREES Online Directory of Professional Workers in Agriculture, the State Extension Service Directors and Administrators Directory as well as links to the websites of the schools of forestry, higher education, family and consumer sciences, veterinary science, and state extension services and state experiment stations.

Water Quality and Waste Management—NCSU

<http://www2.ncsu.edu/bae/programs/extension/publicat/wqwm/index.html>

North Carolina Cooperative Extension water quality and waste management publications available online.

Watershedss—Water, Soil, and Hydro-Environmental Decision Support System
<http://h2osparc.wq.ncsu.edu/>

The two primary objectives of WATERSHEDSS are to:

1. transfer water quality and land treatment information to watershed managers in order to assist them in making appropriate land management and land treatment decisions to achieve water quality goals
2. assess and evaluate sources, impacts, and potential management options for control of nonpoint source pollution in a watershed based on user-supplied information and decisions.

Documents

Association of State and Interstate Water Pollution Control Administrators (ASIWPCA). 1997. CAFO Standards for Pork Production, Survey. December 1997. ASIWPCA Washington, D.C.

University of Nebraska-Lincoln, Cooperative Extension, Institute of Agriculture and Natural Resources. 1996. Environmental Considerations for Manure Application System Selection. NebGuide. Electronic Version issued June 1996, G95-1266-A.

U.S. Environmental Protection Agency. 1996. U.S. EPA Permit Writers' Manual. Office of Water, December 1996. EPA-833-B-96-003.

Wright, P. No date. NPDES Regulations for Concentrated Animal Feeding Operations. Prepared by Peter Wright Senior Extension Associate, Cornell University.

Regional or State

World Wide Web Pages

EPA Region 6—CAFO General Permit

<http://www.epa.gov/earth1r6/6en/w/cafo/home.htm>

Full text of Region 6 CAFO General Permit and other Region 6 CAFO links (notices, forms, guidances, references, and contacts)

EPA Region 6—Water Enforcement Branch - Concentrated Animal Feeding Operations

<http://www.epa.gov/earth1r6/6en/w/cafo/home.htm>

Region 6 page containing links to various resources for the Region 6 CAFO permitting program.

Hutchinson, Heidi. (1996). *Guidelines for Livestock Producers*. Ohio Environmental Protection Agency.

<http://www.ag.ohio-state.edu/~ohioline/glp/index.html>

This booklet was developed by the Ohio Agricultural Service Team to assist farmers in planning for the future. The pages that follow will help you determine whether some type of animal waste permit or plan is needed for your farm operation. [1997, November 20].

Iowa Livestock systems links

<http://www.ae.iastate.edu/livestock.htm>

Guidelines and fact sheets.

La. DEQ—Agricultural Best Management Practices for Louisiana

<http://www.deq.state.la.us/owr/agbstman.htm>

PDF files containing guidance for agricultural BMPs in Louisiana.

Minnesota Pollution Control Agency. 1997a.

Feedlot and Manure Management Directory.

<http://www.mda.state.mn.us/DOCS/AGDEV/MANINTRO.HTM>

[November 18, 1997]. This guidebook provides a list of resources for permitting, designing, financing, building, and managing animal waste control facilities. It also gives livestock farmers an overview of the regulations and choices in dealing with animal waste in Minnesota. It is not in the scope of this guidebook to give comprehensive technical information or explain rules particular to specific areas of the state. Rather, the purpose is to refer readers to experts in the public and private sectors that may offer assistance.

NRCS Conservation Practice Standards

<http://www.nrcg.nrcs.usda.gov/index.html>

NRCS conservation practice standards provide guidance for applying technology on the land and set the minimum level for acceptable application of the technology. Site contains links to National Handbook of Conservation Practices and State Conservation Practice Standards.

Research & Extension Activities in Animal Waste Management

North Carolina State University

<http://www.ces.ncsu.edu/whpaper/REactivities.html>

A large number of diverse research and extension activities pertaining to the management of animal wastes are being conducted by Agricultural Research Service scientists and Cooperative Extension Service specialists and agents in the College of Agriculture and Life Sciences at North Carolina State University. These projects range from laboratory studies of waste degradation processes and odor control to field demonstration projects exploring ways of managing animal wastes that will protect the environment and, in some cases, even turn wastes into useful products. In addition, extension training and educational programs have emphasized sound waste management concepts. This compendium briefly describes many current and recently completed projects related to the management of swine production wastes and to the impact of those wastes on environmental quality. Although every effort has been made to include all projects with a direct or indirect relationship to swine waste and odor management, these topics involve many disciplines and a large number of faculty members, and thus some projects with only a peripheral connection to the subject may not be included.

Searle, B. (ed.). (1997, October). Confined Animal Feeding Operations (CAFO) In *Oregon Farmer's Handbook* (Fourth Edition). Oregon Department of Agriculture.

<http://www.oda.state.or.us/ODA/handbook.html.folder/CAFO.html>

Brief description of requirements, permit fees and exemptions, and contacts for technical assistance and cost-sharing information for Confined Animal Feeding Operation (CAFO) wastewater containment/disposal systems in Oregon.

Texas Natural Resources Conservation Commission (TNRCC) Agriculture Team

<http://www.tnrcc.state.tx.us/water/quality/agri/index.html>

The Texas Natural Resource Conservation Commission (TNRCC) has many programs relating to agriculture. The Agriculture Section regulates the management of waste from dairies, feedlots and poultry facilities in Texas.

Documents

- Arkansas Department of Pollution and Control Ecology. 1993. Draft General Permit Requirements. Permit No. ARG010000.
- Bryson, Tina (ed.) 1994. Animal Waste Management: Permits for Large Facilities. Wisconsin DNR Bureau of Wastewater Management. DD-PUBL-WW-020-94.
- General Permit 0800 Water Pollution Control Facilities Permit. (1990, October 8). Oregon Department of Environmental Quality.
- Kansas Department of Health and Environment. 1993. Design Standards for Confined Livestock Feeding Operations. Bureau of Water, Industrial Programs Section, Agricultural Waste Unit.
- North Carolina Department of Environment Health and Natural Resources (NCDEHNR). Swine Waste General Permit. Issued January 14, 1997. Expires December 31, 2001.
- Palmer, Jack. 1993. Idaho Waste Management Guidelines for Confined Feeding Operations: As Amended by Idaho Waste Management Guidelines Task Force 1997. Idaho Department of Health and Welfare Division of Environmental Quality.
- Washington Dairy Farm NPDES and State Waste Discharge General Permit. (1994, August 10). Washington Department of Ecology.

APPENDIX C

EXCERPTS FROM THE REGULATIONS AND EFFLUENT LIMITATIONS GUIDELINES FOR CONCENTRATED ANIMAL FEEDING OPERATIONS (Not Included in Electronic Version; No Changes from Existing Regulations)

Web Links: Part 122 - EPA Administered Permit Programs: The National Pollutant Discharge Elimination System
<http://earth1.epa.gov/epacfr40/chapt-I.info/subch-D/40P0122.pdf>

Part 412 - Feedlots Point Source Category
<http://www.epa.gov/docs/epacfr40/chapt-I.info/subch-N/40P0412.pdf>

APPENDIX D

**EXAMPLE LETTERS TO AFO OWNERS/OPERATORS
REGARDING INSPECTION RESULTS
AND CASE-BY-CASE DESIGNATION DETERMINATIONS**

Example Letters to AFO Owners/Operators Regarding Inspection Results and Case-By-Case Designation Determinations

Example Letter in Follow-up to an Inspection: Facility *Not Designated* as a CAFO D-1

Example Letter in Follow-up to an Inspection: Facility *Designated* as a CAFO D-2

Example Factors for Case-by-Case CAFO Designation D-6

**Example Letter in Follow-up to an Inspection:
Facility *Not Designated* as a CAFO**

[NAME & ADDRESS]

Dear Mr./Ms. _____:

An inspection of your facility, located at [ADDRESS], was conducted on [DATE] by representatives of the [PERMITTING AUTHORITY]. The purpose of the inspection was to determine if conditions or practices on your animal feeding operation (AFO)¹ warrant designating your facility as a concentrated animal feeding operation (CAFO) and, consequently, requiring a National Pollutant Discharge Elimination System (NPDES) permit for operation.

During the inspection, no conditions or practices were observed to warrant designation of your facility as a CAFO at this time. However, the following areas of potential concern were noted.

[NOTE AREAS OF POTENTIAL CONCERN, IF ANY]

We request that you evaluate and address these areas of potential concern to ensure that they do not become problems. Technical information and assistance is available through [LOCAL NRCS OR EXTENSION OFFICE, STATE DEPARTMENT OF AGRICULTURE, OR USEPA's AGRICULTURAL ASSISTANCE CENTER (888/663-2155)].

The [PERMITTING AUTHORITY] may inspect your facility again in the future. Please be advised that any illicit discharges² to surface water or to surface water through ground water are violations of the Clean Water Act and subject to enforcement action with penalties.

Sincerely,

¹ An animal feeding operation is defined by the [Permitting Authority] as a "lot or facility" where animals "have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period and crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility."

²In the absence of a NPDES Permit all discharges from the facility are prohibited.

**Example Letter in Follow-up to an Inspection:
Facility *Designated* as a CAFO**

[NAME & ADDRESS]

Dear Mr./Ms. _____:

An inspection of your facility, located at [ADDRESS], was conducted on [DATE] by representatives of the [PERMITTING AUTHORITY]. The purpose of the inspection was to determine if conditions or practices on your animal feeding operation (AFO)¹ warrant designating your facility as a concentrated animal feeding operation (CAFO) and, consequently, requiring a National Pollutant Discharge Elimination System (NPDES) permit for operation.

During the inspection, the following conditions were observed:

[NOTE THE CONDITIONS THAT SUPPORT THE CAFO DESIGNATION]

Based on these conditions, the [PERMITTING AUTHORITY] has determined that your facility is or has the potential to be a contributor of pollutants to the waters of the United States. As such, the [PERMITTING AUTHORITY] designates your operation as a CAFO, with the requirement of applying for a NPDES permit and taking immediate steps to cease existing discharges and eliminate the potential for future discharges.

To meet the requirement of applying for a permit for your facility, [PROVIDE SPECIFIC INSTRUCTION AS TO WHETHER THEY ARE REQUIRED TO APPLY FOR AN INDIVIDUAL PERMIT OR SUBMIT AN NOI FOR A GENERAL PERMIT. INCLUDE STEPS AS TO HOW TO GET PERMITTED]

The [PERMITTING AUTHORITY] may inspect your facility again in the near future. Please be advised that discharges such as that observed on [DATE] are in violation of the Clean Water Act and as such can subject you to enforcement action with penalties.

Sincerely,

¹ An animal feeding operation is defined as a "lot or facility" where animals "have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period and crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility" [or alternate definition by the Permitting Authority].

If you are small business as defined by the Small Business Administration (defined at 13 CFR 121.201; in most cases, this means a business with 500 or fewer employees), below is information you may find helpful.

The United States Environmental Protection Agency (EPA) offers small business a wide variety of compliance assistance resources and tools designed to assist businesses to comply with federal and state environmental laws. These resources can help businesses understand their obligations, improve compliance and find cost-effective ways to comply through the use of pollution prevention and other innovative technologies.

Websites

EPA offers a great deal of compliance assistance information and materials for small businesses on the following Websites, available through public libraries:

!	www.epa.gov	EPA's Home Page
!	www.smallbiz-enviroweb.org	EPA's Small Business Home Page
!	www.smallbiz-enviroweb.org/state.html	List of State Contacts
!	www.epa.gov/ttn/sbap	Small Business Assistance Programs
!	www.epa.gov/oeca/polguid/index.html	Enforcement Policy and Guidance
!	www.epa.gov/oeca/smbusi.html	Small Business Policy
!	www.epa.gov/oeca/oc	Compliance Assistance Home Page
!	www.epa.gov/oeca/ccsmd/commpull.html	Small Business and Commercial Services
!	www.epa.gov/oeca/ccsmd/mun.html	Small Communities Policy

Hotlines

EPA sponsors approximately 89 hotlines and clearinghouses that provide free and convenient avenues to obtain assistance with environmental requirements. EPA's Small Business Ombudsman Hotline can provide you with a list of all the hotlines and assist you with determining which hotline will best meet your needs. Key hotlines that may be of interest to you include:

!	EPA's Small Business Ombudsman.....	(800) 368-5888
!	RCRA/UST/CERCLA Hotline.....	(800) 424-9346
!	Toxics Substances and Asbestos Information.....	(202) 554-1404
!	Safe Drinking Water.....	(800) 426-4791
!	Stratospheric Ozone/CFC Information.....	(800) 296-1996
!	Clean Air Technical Center.....	(919) 541-0800
!	Wetlands Hotline.....	(800) 832-7828

Compliance Assistance Centers

EPA has established national compliance assistance centers, in partnership with industry, academic institutions, and other federal and state agencies, that provide online and fax assistance services in the following sectors heavily populated with small businesses:

- Access to All Centers (www.epa.gov/oeca/mfcac.html)
- Metal Finishing (1-800-AT-NMFRC or <http://www.nmfrc.org>)
- Printing (1-888-USPNEAC or <http://www.pneac.org>)
- Automotive (1-888-GRN-LINK or <http://www.ccar-greenlink.org>)
- Agriculture (1-888-663-2155 or <http://www.epa.gov/oeca/ag>)
- Printed Wiring Board Manufacturing or <http://www.pwbrc.org>)
- The Chemical Industry (1-800-672-6048 or <http://www.chemalliance.org>)
- The Transportation Industry (<http://www.transource.org>)
- The Paints and Coatings Center (<http://www.paintcenter.org>)
- Local Governments (1-877-TO-LGEAN or <http://www.lgean.org>)

State Agencies

Many state agencies have established compliance assistance programs that provide on-site as well as other types of assistance. Please contact your local state environmental agency for more information. EPA's Small Business Ombudsman can provide you with State Agency contacts by calling (800) 368-5888.

Compliance Incentive Policies

EPA's Small Business Policy and Small Communities Policy are intended to promote environmental compliance among small businesses by providing incentives such as penalty waivers and reductions for participation in compliance assistance programs, and encouraging voluntary disclosure and prompt correction of violations. These policies can not be applied to an enforcement action that has already been initiated. Contact Ginger Gotliffe (202-564-2310) for information on the Small Business Policy and Ken Harmon (202-564-2310) for information on the Small Communities Policy.

In order to improve your understanding of and compliance with environmental regulations and avoid the need for future enforcement actions, we encourage you to take advantage of these tools. **However, please note that any decision to seek compliance assistance at this time does not relieve you of your obligation to respond to an EPA request, administrative or civil complaint in a timely manner, does not create any new rights or defenses, and will not affect EPA's decision to pursue this enforcement action.**

The Small Business and Agriculture Regulatory Enforcement Ombudsman and ten Regional Fairness Boards were established to receive comments from small businesses about federal agency enforcement actions. The Ombudsman will annually rate each agency's responsiveness to small businesses. If you believe that you fall within the Small Business Administration's definition of a small business (based on your SIC designation, number of employees or annual receipts, defined at 13 CFR 121.201) and wish to comment on federal enforcement and compliance activities, call 1-888-734-3247). **However, participation in this program does not relieve you of your obligation to respond to an EPA request, administrative or civil complaint or other enforcement action in a timely manner nor create any new rights or defenses under law. In order to preserve your legal rights, you must comply with all rules governing the administrative enforcement process. The ombudsman and fairness boards do not participate in the**

resolution of EPA's enforcement action.

Dissemination of this information sheet does not constitute an admission or determination by EPA that your business organization or government jurisdiction is a small entity as defined by the Small Business Enforcement and Fairness Act (SBREFA) or related provisions nor does it create any new rights or defenses under law.

Example Factors for Case-by-Case CAFO Designation

Designation Factor	Inspection Focus
<input type="checkbox"/> Size of the Operation and Amount of Waste Reaching Waters of the United States	<ul style="list-style-type: none"> • Number of animals • Type of feedlot surface • Feedlot design capacity • Waste handling/storage system design capacity
<input type="checkbox"/> Location of the Operation Relative to Waters of the United States	<ul style="list-style-type: none"> • Location of water bodies • Location of floodplain • Proximity to surface waters • Depth to groundwater, direct hydrologic connection to surface water
<input type="checkbox"/> Means of Conveyance of Animal Waste and Process Wastewaters into Waters of the United States	<ul style="list-style-type: none"> • Identify existing or potential man-made (includes natural and artificial materials) structures that may convey waste • Direct contact between animals and surface water
<input type="checkbox"/> Slope, Vegetation, Rainfall and Other Factors Affecting the Likelihood or Frequency of Discharge	<ul style="list-style-type: none"> • Slope of feedlot and surrounding land • Type of feedlot (concrete, soil, etc.) • Climate (e.g., arid or wet) • Type and condition of soils • Depth to groundwater • Drainage controls • Storage structures • Amount of rainfall • Volume and quantity of runoff • Buffers
<input type="checkbox"/> Other Relevant Factors	<ul style="list-style-type: none"> • Waste handling and storage • Land application timing, methods, rates and areas

APPENDIX E

FORM 1 AND 2B NPDES PERMIT APPLICATIONS (Not Included in Electronic Version; No Changes from Existing Forms)

Web Links: Form 1 and 2B NPDES Permit Applications
<http://www.epa.gov/owm/npdes.htm#forms>

APPENDIX F

EXAMPLE NPDES PERMIT FOR CAFOS

**NPDES GENERAL PERMIT
FOR
CONCENTRATED ANIMAL FEEDING OPERATIONS (CAFOs)**

[INSERT - AUTHORIZED NPDES PERMITTING AUTHORITY]

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with provisions of the Clean Water Act, 33 USC 1251 et seq., the “Act”. [INSERT STATE REGULATORY CITATION AS APPROPRIATE]

Owners and operators of concentrated animal feeding operations (CAFOs), except those CAFOs excluded from coverage in Part I of this permit, are authorized to discharge and must operate their facility in accordance with effluent limitations, monitoring requirements, and other provisions set forth herein.

This general permit covers discharges or the potential to discharge process wastewater as defined in the permit and runoff from land application areas, under the operational control of the permittee, of manure and process wastewater. Animal types covered under this regulation include beef cattle, dairy cattle, swine, horses, sheep or lamb, turkeys, and laying hens or broilers.

A copy of this permit must be kept by the permittee at the site of the permitted activity.

This permit will become effective [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION (General permit) or SIGNATURE (Individual Permit)]

This permit and the authorization to discharge under the NPDES shall expire at midnight [INSERT DATE 5 YEARS AFTER THE DATE ABOVE].

Signed this (Day) of (month) and (Year).

[Permitting Authority—Official]

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PART I. PERMIT AREA AND COVERAGE

A.

Permit Area

[The permitting authority should insert language that identifies the geographic area covered by the permit being issued. In the case of a general permit, it should identify the type of facilities and/or the geographic area covered by the permit. When issuing individual permits, this section of the permit should identify the specific facility covered by the permit.]

B.

Permit Coverage

1. Who needs to be covered under this permit?

A permit is required for any CAFO that discharges or has the potential to discharge to waters of the United States (also see Parts I.C, D, and E).

2. What does the NPDES permit for CAFOs cover?

NPDES permits issued to CAFOs cover the confinement, storage, and handling areas as well as the land application activities under the control of the permitted CAFO operator.

3. What constitutes a discharge?

A discharge of waste/wastewater is the discharge of pollutants from the animal confinement and storage and handling areas of a CAFO or the land application area(s), under the control of the CAFO operator, which enters surface waters, such as a river, stream, creek, wetland, lake, or other waters of the United States. Discharges covered by this permit include, but are not limited to, the following:

- Contaminated runoff from corrals, stock piled manure, and silage piles;
- Overflow from manure storage facilities;
- Discharges associated with land application of manure activities under the control of the CAFO operator;
- Wastewater discharges from retention ponds, manure storage facilities, or lagoons; and
- Discharges of wastewater due to pipe breakage or equipment failure.

4. How do you determine if an animal feeding operation is a CAFO?

Review the following questions to determine if your facility is a CAFO.

- a) Have you been notified by EPA that your facility is a CAFO? **If yes, your facility is a CAFO. If no, proceed to question (b).**
- b) Do you operate a facility where animals are, will be or have been stabled, confined and fed or maintained?
If yes, proceed to question (c). If no, your facility is not a CAFO.
- c) Are, will or were animals stabled, confined and fed or maintained for a total of 45 days or more in any 12 month period? **If yes, proceed to question (d). If no, your facility is not a CAFO.**
- d) Are crops, vegetation, forage growth, or post-harvest residues sustained in the normal growing season over any portion of the lot or facility? **If no, proceed to question (e). If yes, your facility is not a CAFO.**
- e) Does your facility confine greater than the following number of animals:
 - 1,000 slaughter or feeder cattle,
 - 700 mature dairy cattle (whether milked or dry cows),
 - 2,500 swine each weighing over 25 kilograms (approximately 55 pounds),
 - 500 horses,
 - 10,000 sheep or lambs,
 - 55,000 turkeys,
 - 100,000 laying hens or broilers (if the facility has continuous overflow watering),
 - 30,000 laying hens or broilers (if the facility has a liquid manure handling system),
 - 5,000 ducks, or
 - 1,000 animal units.**If yes, your facility is a CAFO. If no, proceed to question (f).**
- f) Does your facility confine more than the following number of animals:
 - 300 slaughter or feeder cattle,
 - 200 mature dairy cattle (whether milked or dry cows),

- 750 swine each weighing over 25 kilograms (approximately 55 pounds),
- 150 horses,
- 3,000 sheep or lambs,
- 16,500 turkeys,
- 30,000 laying hens or broilers (if the facility has continuous overflow watering),
- 9,000 laying hens or broilers (if the facility has a liquid manure handling system),
- 1,500 ducks, or
- 300 animal units.

If yes, proceed to question (g). If no, your facility is not a CAFO.

- g) Does your facility discharge directly (or have the potential to discharge directly) into a river, stream, creek, or other water of the United States? Or, do waters of the U.S., which originate outside of the facility pass over, across, or through the facility or otherwise come into direct contact with the confined animals?

If yes, your facility is a CAFO. If no, proceed to question (h).

- h) Does your facility discharge (or have the potential to discharge) through a man-made device such as a pipe or ditch into a river, stream, creek or other waters of the United States? **If yes, your facility is a CAFO. If no, proceed to question (i).**

- i) Have you been notified by EPA, after an inspection, that your facility has been designated a CAFO? (The Regulations state that “the Director may designate any animal feeding operation as a CAFO upon determining that it is a significant contributor of pollution to the waters of the United States.”). **If yes, your facility is a CAFO.**

If you answered **YES** to questions (a), (e), (g), (h), **or** (i) above, your facility is a **CAFO**.

See Part VI of this permit for more details on the definition of a CAFO.

C. Eligibility for Coverage

Unless excluded from coverage in accordance with Paragraph D or F below, owners/operators of existing, currently operating animal feeding operations that are defined as CAFOs (Part VI—Definitions) are eligible for coverage under this permit. Owners/Operators of existing, currently operating CAFOs are authorized, under the terms

and conditions of this permit, and upon the submission of a notice of intent¹ (NOI; see Addendum A) to gain coverage under this general permit. Permittees must retain, on site, a copy of the permit and the comprehensive nutrient management plan (CNMP) as required by this permit and submit the a copy of the CNMP to the permitting authority upon request by the permitting authority (see Part III). A permittee may request to be excluded from coverage under this permit by (1) submitting to EPA and State/Tribe agency (see Part I.E) a completed notice of termination form (see Addendum B), or (2) applying for an individual permit in accordance with Part I.F (2).

[The permitting authority should specify an overall approach that defines how CAFOs are to be permitted. This requires determining those types of CAFOs that will be addressed under either general (state-wide or watershed) or individual permits. The approach presented above is EPA’s recommended approach as to which CAFOs should be covered under a general permit. The approach should be modified, as necessary, to reflect specific permitting authority programmatic priorities and constraints. The permitting authority should also define what it determines to be “exceptionally large” and “significant expansion” with respect to CAFOs.]

D. Limitations on Coverage

The following CAFOs are not eligible for coverage under this general permit but must apply for an individual permit:

1. CAFOs that have been notified by the **[Permit Authority]** to apply for an individual permit in accordance with Part I.F (below) of this permit.
2. Any CAFO with significant environmental concerns such as potential adverse impacts on a listed or proposed to be listed endangered or threatened species or its critical habitat.
3. Exceptionally large CAFOs [To be determined by the permitting authority].
4. CAFOs undergoing significant expansion [To be determined by the permitting authority]
5. New CAFOs
6. CAFOs with historical compliance problems.

¹ The Notice of Intent Form is included in this permit as Addendum A.

E. Application for Coverage

1. Owner/operators of CAFOs seeking to be covered by this permit (see Part I) must (1) submit an NOI within **[Insert number of days]** days of the effective date of this permit, (2) comply with the conditions of the permit, and (3) develop and implement a CNMP consistent with the schedule in Section III. *[New CAFOs are not covered under this general permit and should be required to submit an application for an individual permit and a completed CNMP within 180 days prior to commencing operations.]*
2. The notice of intent/application must be signed by the owner/operator or other authorized person in accordance with Part V.E of this permit. Corporate entities that exercise substantial operational control over a CAFO are considered a co-permittee and should be identified in the NOI.
3. Signed copies of the notice of intent/application must be sent to:

[Permitting Authority Address]

F. Requiring an Individual Permit

1. The **[Permitting Authority]** may require any facility authorized by this permit to apply for, and obtain, an individual NPDES permit. **[Permitting Authority]** will notify the operator, in writing, that an application for an individual permit is required within **[specify timeframe for application submission]**. The general permit is automatically terminated when: (1) the operator fails to submit the required individual permit application within the defined timeframe, or (2) the individual permit is issued or the permit is denied by **[Permitting Authority]**.
2. Any owner/operator covered under this permit may request to be excluded from the coverage of this permit by applying for an individual permit. The owner/operator shall submit an application for an individual permit (Form 1 and Form 2B) to the **[Permit Authority]** with the reasons supporting the application. When an individual NPDES permit is issued to an owner/operator otherwise subject to this general permit, the applicability of the CAFO general permit to the facility is automatically terminated on the effective date of the individual permit or on the date of approval for coverage under the alternative general permit.

G. Permit Expiration

This permit will expire five (5) years from the effective date. All CAFOs with coverage under the expired permit shall continue to operate under the conditions of the expired permit until the effective date of a new permit.

PART II. PERMIT REQUIREMENTS

A. Effluent Limitations

The following effluent limitations apply to facilities covered under this permit:

1. Technology-based Effluent Limitations: There shall be no discharge of process wastewater pollutants to waters of the United States **except when either chronic or catastrophic rainfall events** cause an overflow of process wastewater from a facility properly designed, constructed, maintained, and operated to contain:

- a) All process wastewater resulting from the operation of the CAFO (such as wash water, parlor water, watering system overflow, etc.); **plus,**
- b) All runoff from a 25-year, 24-hour rainfall event for the CAFO.

[This provision applies to all facilities that are subject to the Effluent Limitation Guidelines for Feedlots (40 CFR Part 412) and may also be applied to other facilities as established by the permit writer using best professional judgement.]

2. a. Water Quality-based Effluent Limitations: There shall be no discharge of process wastewater pollutants to waters of the United States **except when catastrophic rainfall events** cause an overflow of process wastewater from a facility properly designed, constructed, maintained, and operated to contain:

- 1) All process wastewater resulting from the operation of the CAFO (such as wash water, parlor water, watering system overflow, etc.); **plus,**
- 2) All runoff from a 25-year, 24-hour rainfall event for the CAFO.

b. For discharges associated with manure storage areas and land application of process wastewater and/or manure under the control of the CAFO operator, the permittee must ensure that such activities do not cause or contribute to nonattainment of a State water quality standard.

The permittee is required to comply with the special conditions established in Part III of this permit. These special conditions consist of the development and implementation of a CNMP within **[timeframe]**, compliance with interim management measures to protect water quality, and implementation of specific best management practices, as appropriate.

B. Discharge Prohibitions

The effluent limitations above include but are not limited to, the following discharge prohibitions:

1. Discharge of manure and process wastewater from control structures, such as lagoons, to waters of the United States [including discharges to groundwater with a direct hydrologic connection].
2. Discharge associated with land application of manure and wastewater under the operational control of the CAFO. However, where the land application was consistent with a site-specific CNMP, the discharge is not prohibited.

C. Other Legal Requirements

No condition of this permit shall release the permittee from any responsibility or requirements under other statutes or regulations, Federal, State/Indian Tribe or Local.

PART III. SPECIAL CONDITIONS

A. Interim Management Measures to Protect Water Quality

The permittee must implement interim management measures that adequately protect water quality immediately upon issuance of the permit and prior to development and implementation of the CNMP. Upon the development and full implementation of a CNMP, the interim management measures will no longer be in effect. However, any interim management measures that are not incorporated into the CNMP will remain in effect for the full term of the permit. At a minimum these management measures must consist of:

Proper operation of manure storage, dead animal management facilities and other facility infrastructure (e.g., piping, solid manure storage sheds, composting areas); in particular, procedures must address wastes and waste water from the point(s) of generation to utilization and must minimize contamination of storm water.

Periodic visual inspections of all manure and runoff storage structures, handling and distribution systems, and other process systems or controls to ensure that all are in proper working order.

Discharges authorized by Part II.A(1) of this permit must, where practicable, be discharged to land application fields or held in secondary containment for filtering to minimize discharge to waters of U.S.

Provisions to store or stockpile wastes during periods when land or conditions are unsuitable for manure application, including procedures to ensure that stored or stockpiled wastes do not contribute to contamination of storm water runoff.

Rates and timing of land application of manure and wastewater must be calculated considering all sources of nutrient inputs for the site, crops grown at the site, and realistic crop yields. Soil and waste tests must be conducted regularly to ensure that application rates are appropriate. Application rates must be consistent with State and/or United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) standards of practice.

Manure and process wastewater must not be applied during inappropriate periods (e.g. when the ground is saturated) or during rainfall events (unless used to filter wastewater from retention structures which are going to overflow directly to a water of the U.S.).

Irrigation systems shall be managed so as to reduce or minimize (1) ponding or puddling of wastewater on land application fields, (2) contamination of ground and surface water, and (3) the occurrence of nuisance conditions such as odors and flies.

Proper maintenance and inspection of all manure handling and storage equipment and facilities. A preventive maintenance program shall involve inspection and maintenance of all runoff management devices (e.g., cleaning separators, catch basins, annual calibration of application equipment) as well as inspecting and testing facility equipment and containment structures to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters. A maintenance log is to be maintained documenting the preventative maintenance that has been performed.

Dead animals must be properly disposed of within three (3) days unless otherwise provided for by the **[Permitting Authority]**. Animals shall be disposed of in a manner to prevent contamination of surface waters of the U.S. or create a public health hazard.

The permittee must identify areas which, due to topography, activities, or other factors, have a potential for soil erosion. Where these areas have the potential to contribute pollutants to waters of the U.S. site management practices shall be used to limit erosion and pollutant runoff.

Inspection and record-keeping activities must be conducted as follows:

Record-keeping and Internal Reporting Procedures. Incidents such as spills, or other discharges, along with other information describing the pollution potential and quantity of the discharge shall be included in the records. Inspections and maintenance activities shall be documented and recorded. These records must be kept on site for a minimum of three years.

Visual Inspections. The permittee shall inspect designated equipment and

facility areas. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. A follow-up procedure shall be used to ensure that appropriate action has been taken in response to the inspection.

Site Inspection. A complete inspection of the facility shall be done and a report made documenting the findings of the inspection made at least once/year.

B. Comprehensive Nutrient Management Plan (CNMP)

1. Elements of a CNMP

Each CAFO covered by this permit shall develop and implement a site-specific CNMP. Site-specific CNMPs should include some or all of the following components based upon the operational needs of the permitted facility: manure and wastewater handling and storage; land application of manure; site management; record keeping; other manure utilization options; and feed management. The CNMP, at a minimum, shall include best management practices (BMPs) to address all relevant operation and maintenance activities in accordance with current State and United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) current technical standards and USDA's forthcoming CNMP guidance document. However, the NPDES permitting authority will retain the responsibility to ensure that the CNMP meets the requirements of the CWA and is being properly implemented. A copy of the CNMP shall be kept on site and provided to the permitting authority upon request of the permitting authority.

Each CNMP shall specifically identify and describe practices that are to be implemented to assure compliance with the limitations and conditions of this permit. The CNMP shall identify a specific individual(s) at the facility responsible for its implementation. The activities and responsibilities of such personnel must be described in the CNMP. CNMPs are to be developed as a special condition of the NPDES permit, and must contain the following information:

- a) **NRCS Waste Management Plans:** Where a NRCS waste management plan has been prepared for the CAFO, the CNMP may adopt relevant parts of the NRCS plan when the NRCS plan contains equivalent requirements for the facility. When the permittee uses a NRCS plan, the NRCS plan must be kept on site and provided to the permitting authority upon request by the permitting authority.
- b) **Signatory Requirements:** The CNMP shall be signed by the owner/operator or other signatory authority in accordance with Part V.E (Signatory Requirements), and be retained on site in accordance with Part V.C (Retention of Records) of this permit and provided to the permitting authority upon request by the permitting authority.

- c) The **[Permitting Authority]** or authorized representative may notify the permittee, at any time, that the CNMP does not meet one or more of the minimum requirements of this Part. The permittee shall make changes to the CNMP within 90 days after such notification unless otherwise provided by the **[Permitting Authority]**.

2. Schedule for Development and Implementation of a CNMP

Following the submission of the NOI, any CAFO covered by this general permit shall develop and implement a CNMP **[Permitting Authority to insert schedule for developing and implementing the CNMP no later than 2003, including interim milestones as determined to be appropriate.]**. The permittee shall maintain a current version of the site-specific CNMP on-site and provide a copy to the permitting authority upon the request of the permitting authority. The permittee must notify in writing the permitting authority within thirty days following the completion of the site-specific CNMP.

3. Certified Specialists to Develop CNMPs

The CNMP must be developed or modified by a “certified specialist” defined by **[Permitting Authority to insert State or governmental agency]**. The permitting authority or other State agency will specify the requirements for certification. While the permittee may seek such assistance from an outside source, it is the permittee’s sole responsibility to assure the appropriateness and effectiveness of the CNMP.

4. Duty to Amend the CNMP

The permittee must amend the CNMP prior to any change in design, construction, operation, or maintenance procedures, that has a significant effect on the potential for the discharge of pollutants to the waters of the United States or if the CNMP proves to be ineffective in controlling discharges from the CAFO. The facility must complete and submit to **[Permitting Authority]** an annual certification that the CNMP is regularly evaluated (See Addendum C) and maintain on site a current copy of the site-specific CNMP. The CNMP must be provided to the permitting authority upon the request of the permitting authority.

C. Best Management Practices (BMPs)

The **[Permitting Authority]** has determined that the following BMPs, beyond those contained in the CNMP, are necessary to protect water quality.

Facility Location: Wastewater control and retention structures or holding pens for new CAFOs and existing CAFOs that are intending to undergo significant expansion shall not be

located in the 100-year flood plain, unless such facilities are protected from inundation and damage that may occur during that flood event.

Protection of Drinking Water: There shall be no water quality impairment to public and neighboring private drinking water wells due to waste handling at the permitted facility. Wastewater retention structures, holding pens or waste/wastewater disposal sites shall not be closer to public or private water wells than the distances specified by State/Tribal regulations or health codes or State/Indian Tribe-issued permits for that facility. Waste handling, treatment, and management shall not create an environmental or a public health hazard; shall not result in the contamination of drinking water; shall conform with State/Tribal guidelines and/or regulations for the protection of surface water quality.

Chemical Handling: The owner/operator shall prevent the discharge of pesticide-contaminated waters into retention structures. All wastes from dipping vats, pest and parasite control units, and other facilities utilized for the management of potentially hazardous or toxic chemicals shall be handled and disposed of in a manner such as to prevent pollutants from entering the retention structures or waters of the United States.

Discharges of Chemicals to Containment Structures: All discharges to containment structures shall be composed entirely of wastewater from the proper operation and maintenance of a CAFO and the precipitation runoff from the CAFO areas. The disposal of any materials (other than discharges associated with proper operation and maintenance of the CAFO) into the containment structures is prohibited by this permit.

Spills: Appropriate measures necessary to prevent spills and to clean up spills of any toxic and other pollutants shall be taken. If spills are expected to occur, materials handling procedures and storage must be specified in the CNMP. Procedures for cleaning up spills shall be identified and the necessary equipment to implement clean up shall be made available to facility personnel. All spills must be reported to EPA and State/Indian Tribe authorities.

Measurement of Rainfall: A rain gauge shall be kept on site and properly maintained. A log of all measurable rainfall events shall be kept by the CAFO operator/owner.

Liner Requirement: Site specific documentation is to be maintained demonstrating that no direct hydrologic connection exists between wastewater and surface waters of the United States. Where the permittee cannot document that no direct hydrologic connection through ground water exists, the ponds, lagoons and basins of the retention structure must have a liner which will prevent the potential contamination of surface waters. The permittee can document absence of hydrologic connection by either documenting that: (1) there will be no significant leakage from the retention structure; or (2) any leakage from the retention structure would not migrate to surface waters. This documentation should be certified by a qualified groundwater scientist and must include information on the hydraulic conductivity

and thickness of the natural soil materials underlying and forming the walls of the containment structure, up to the wetted perimeter.

Disposal of wastewater shall not cause or contribute to the taking of any endangered or threatened species of plant, fish, or wildlife; nor shall such disposal interfere with or cause harm to migratory birds. The operator shall notify the U.S. Fish and Wildlife Service in the event of any significant fish, wildlife, or migratory bird/endangered species kill or die-off on or near retention ponds or in fields where waste has been applied, and which could reasonably have resulted from waste management at the facility.

Employee Training: Where employees are responsible for work activities which relate to permit compliance, those employees must be regularly trained or informed of any information pertinent to the proper operation and maintenance of the facility and waste disposal. Training shall include topics as appropriate such as land application of wastes, proper operation and maintenance of the facility, good housekeeping and material management practices, necessary record-keeping requirements, and spill response and clean up. The permittee is responsible for determining the appropriate training frequency for different levels of personnel and the CNMP shall identify periodic dates for such training.

Facility Closure: The following conditions shall apply to the closure of lagoons and other earthen basins and other manure handling and wastewater facilities:

A. Closure of Lagoons and Other Earthen Basins

No lagoon or other earthen basin shall be permanently abandoned.

Lagoons and other earthen basins shall be maintained at all times until closed in compliance with this section.

All lagoons and other earthen basins must be closed if the permittee ceases operation. In addition, any lagoon or other earthen basin that is not in use for a period of twelve consecutive months must be closed unless the permittee is viable, intends to resume use of the structure at a later date, and: maintains the structure as though it were actively in use, to prevent compromise of structural integrity; or removes manure and wastewater to a depth of one foot or less and refills the structure with clean water to preserve the integrity of the synthetic or earthen liner. In either case, the permittee shall notify the **[Permitting Authority]** of the action taken and shall conduct routine inspections, maintenance, and record-keeping as though the structure were in use. Prior to restoration of use of the structure, the permittee shall notify the **[Permitting Authority]** and provide the opportunity for inspection.

All closure of lagoons and other earthen basins must be in accordance with NRCS

standards (currently Field Technical Guide No. 998, Interim Standard for Closure of Abandoned Waste Treatment Lagoons and Waste Storage Ponds). Consistent with NRCS standards, the permittee shall remove all waste materials to the maximum extent practicable and dispose of them in accordance with the permittee's CNMP, unless otherwise authorized by the **[Permitting Authority]**.

Unless otherwise authorized by the **[Permitting Authority]**, completion of closure for lagoons and other earthen basins shall occur as promptly as practicable after the permittee ceases to operate or, if the permittee has not ceased operations, 12 months from the date on which the use of the structure ceased, unless the requirements above are met.

B. Closure Procedures for Other Manure and Wastewater Facilities

No other manure or wastewater control and retention structure shall be abandoned. Closure of all such structures shall occur as promptly as practicable after the permittee has ceased to operate, or, if the permittee has not ceased to operate, within 12 months after the date on which the use of the structure ceased. To close a manure or wastewater control and retention structure, the permittee shall remove all manure and wastewater and dispose of it in accordance with the permittee's Comprehensive Nutrient Management Plan, unless otherwise authorized by the **[Permitting Authority]**.

D. Requirements for Land Application Activities Not Under the Control of the Permitted CAFO Operator.

In cases where CAFO-generated manure is sold or given away to be used for land application activities that are not under the operational control of the permitted CAFO, land application does not need to be addressed in the permitted CAFO's CNMP. However, the permittee must ensure the environmentally acceptable use of the CAFO-generated manure by complying with the following conditions:

- ▶ Maintain records showing the amount of manure that leaves the permitted operation;
- ▶ For quantities of greater than one pick-up truck load per recipient per day, record the name and address of the recipient;
- ▶ Provide the recipient with accurate information on the nutrient content of the manure to be used in determining the appropriate land application rates;
- ▶ Inform the recipient of his/her responsibility to properly manage the land application of the manure to prevent discharge of pollutants to waters of the U.S.; and

- ▶ Secure a signed statement of intent from the recipient indicating that he/she intends to land apply the manure in accordance with a site-specific CNMP.¹

These records should be retained on-site, and should be submitted to the permitting authority as part of the annual certification process.

PART IV. DISCHARGE MONITORING AND NOTIFICATION REQUIREMENTS

A. Notification of Discharges from Retention Structures

If, for any reason, there is a discharge to a water of the U.S., the permittee is required to make immediate oral notification within 24-hours to the **[Permitting Authority (Contact Number)]** and notify the **[Permitting Authority]** in writing within 5 working days of the discharge from the facility. In addition, the permittee shall keep a copy of the notification submitted to the **[Permitting Authority]** together with the CNMP. The discharge notification shall include the following information:

1. Description of the discharge: A description of the discharge and its cause, including a description of the flow path to the receiving water body and an estimate of the flow and volume discharged.
2. Time of the discharge: The period of non-compliance, including exact dates and times, and the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent recurrence of the discharge.

B. Monitoring Requirements for Discharges from Retention Structures

In the event of any overflow or other discharge from a manure storage structure, the following actions shall be taken:

1. Analysis of the discharge: All discharges shall be sampled and analyzed. Samples must, at a minimum, be analyzed for the following parameters: fecal coliform bacteria; five-day biochemical oxygen demand (BOD₅); total suspended solids (TSS); total phosphorus as phosphorus; dissolved phosphorus as phosphorus; ammonia-nitrogen as nitrogen; TKN as nitrogen; nitrate; pH; and temperature.
2. Volume of the discharge: An estimate of the volume of the release and the date and time.

¹ This action is not intended to create an obligation on the part of the CAFO, but to ensure that the recipient fully understands that improper land application of the CAFO-generated manure may result in a point source discharge to waters of the U.S.

3. Sampling procedures: Samples shall consist of grab samples collected from the overflow or discharges from the retention structure. A minimum of one sample shall be collected from the initial discharge (within 30 minutes). The sample shall be collected and analyzed in accordance with EPA approved methods for water analysis listed in 40 CFR 136. Samples collected for the purpose of monitoring shall be representative of the monitored discharge. Monitoring results must be submitted to the permitting authority within 30 days.
4. Reasons for not sampling: If conditions are not safe for sampling, the permittee must provide documentation of why samples could not be collected. For example, the permittee may be unable to collect samples during dangerous weather conditions (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.). However, once dangerous conditions have passed, the permittee shall collect a sample from the retention structure (pond or lagoon).

C. General Inspection, Monitoring, and Record-keeping Requirements

The permittee shall inspect, monitor, and record the results of such inspection and monitoring in accordance with Table 4–1:

TABLE 4–1. PERIODIC INSPECTION AND MONITORING REQUIREMENTS

PARAMETER	UNITS	FREQUENCY
Facility inspection¹		
Review all facilities and land application areas addressed in the CAFO's CNMP to evaluate whether measures to reduce pollutant loadings identified in the CNMP are adequately and properly implemented in accordance with the terms of the permit or whether additional control measures are needed	NA	Annually
Lagoon or storage structure monitoring and inspection		
Freeboard ²	Feet	Weekly
Structural integrity (i.e., integrity of berms) ³	NA	Weekly
Integrity of liners and absence of a hydrologic connection ⁴	NA	Once/5 years
Sampling of waste/wastewater and land application soils⁵		
Sample waste and wastewater to determine available nutrient content (nitrogen and phosphorus) ⁵	ppm	Conduct initial sampling. Then sample at least once per year thereafter.

Sample land application soils to determine nutrient content (nitrogen and phosphorus) ⁵	Pounds per acre	Conduct initial sampling. Then sample at least once per year thereafter
Land application activities		
Duration of land application activities ⁶	Hours/day	Daily
Quantity of waste/wastewater applied to land application fields ⁶	Gallons/day or CubicFeet/day	Daily
Application rate ⁶	lb/acre	Daily
Application area ⁶	Acres	Daily
Precipitation		
Rainfall ⁷	Inches	Daily

Footnotes:

¹ A complete inspection of the facility shall be done and a report made annually.

² For lagoons or other liquid storage basins, report the water level as feet below the emergency overflow level. For solid manure storage structures, report the percentage of remaining storage capacity.

³ Documentation of compliance with this requirement must be compiled in an inspection report to be kept at the facility.

⁴ Permittee shall document compliance with this requirement by preparing a report that must be kept at the facility.

⁵ The permittee shall analyze the waste/wastewater and soils within land application fields prior to the first land application event at new CAFOs and, for existing CAFOs, the first crop-growing seasonal land application event after the effective date of the permit, then once per year thereafter.

⁶ Monitor during periods of land application only. Land application practices must be conducted in accordance with the permittee's CNMP.

⁷ The permittee shall maintain a precipitation gauge at each permitted facility and record the rainfall for each 24-hour period.

D. Additional Monitoring Requirements

Additional analysis: Upon request by **[Permitting Authority]**, the permittee may be required to collect and analyze samples including but not limited to soils, surface water, ground water, and/or stored waste in a manner and frequency specified by **[Permitting Authority]**.

Additional monitoring for some high risk operations: Upon notification by [permitting

Authority] the permittee may be required to conduct ambient monitoring of surface and/or groundwater. For example, facilities with historical compliance problems, especially large facilities, new facilities, facilities with significant environmental concerns, or facilities impacting impaired water bodies. **[The permitting authority should establish appropriate ambient surface and groundwater monitoring requirements in the NPDES permit.]**

PART V. STANDARD PERMIT CONDITIONS

A. General Conditions

1. Introduction: In accordance with the provisions of 40 CFR Part 122.41, et. seq., this permit incorporates by reference ALL conditions and requirements applicable to NPDES Permits set forth in the Clean Water Act, as amended, (hereinafter known as the “Act”) as well as ALL applicable regulations.
2. Duty to Comply: The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation, and reissuance; for denial of a permit renewal application; and/or for requiring a permittee to apply for and obtain an individual NPDES permit.
3. Toxic pollutants: The permittee shall comply with effluent standards and prohibitions established under section 307(a) of the Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
4. Permit actions: This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
5. Property rights: The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State/Tribal or local laws or regulations.
6. Duty to provide information: The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

7. Criminal and Civil Liability: Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of the permit, the Act, or applicable regulations, which avoids or effectively defeats the regulatory purpose of the Permit may subject the Permittee to criminal enforcement pursuant to 18 U.S.C. Section 1001.
8. State/Tribal Laws: Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State/Tribal law or regulation under authority preserved by Section 510 of the Act.
9. Severability: The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

B. Proper Operation and Maintenance

1. Need to halt or reduce activity not a defense: It shall not be a defense for a permittee in an enforcement action to plead that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
2. Duty to mitigate: The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
3. Proper operation and maintenance: The permittee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

C. Monitoring and Records

1. Inspection and entry: The permittee shall allow the [**Permitting Authority**] or EPA, or an authorized representative of [**Permitting Authority**] or EPA, upon the presentation of credentials and other documents as may be required by law, to:
 - a) Enter the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

- b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c) Inspect, at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
 - d) Sample or monitor, at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.
2. Representative sampling: Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
3. Retention of records: The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.
4. Record content: Records of monitoring information shall include:
- a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) and time(s) analyses were performed;
 - d. The individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
5. Monitoring procedures:
- a. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.
 - b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such

activities.

- c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

D. Reporting Requirements

1. Anticipated Noncompliance: The permittee shall give advance notice to the **[Permitting Authority]** of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
2. Transfers: This permit is not transferable to any person except after notice to the **[Permitting Authority]**.
3. Twenty-four hour reporting: The permittee shall report any noncompliance that may endanger human health or the environment. Any information must be provided orally to within 24 hours from the time that the permittee becomes aware of the circumstances to **[Insert Permitting Authority contact information]**. A written submission shall also be provided to **[Permitting Authority]** within 5 days of the time the permittee becomes aware of the circumstances. The report shall contain the following information:
 - a) A description of the noncompliance and its cause;
 - b) The period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and,
 - c) Steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.
4. Other information: Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the **[Permitting Authority]**, it shall promptly submit such facts or information to the permitting authority.

E. Signatory requirements

All applications, reports, or information submitted to the **[Permitting Authority]** shall be signed and certified as follows:

1. **All permit applications** shall be signed as follows:

- a) For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or,
 - ii) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b) For a partnership or sole proprietorship: By a general partner for a partnership or the proprietor, respectfully.
- c) By the co-permittee.

2. **All reports** required by the permit and other information requested by the **[Permitting Authority]** shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a) The authorization is made in writing by a person described above;
- b) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or any individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and,
- c) The written authorization is submitted to the **[Permitting Authority]**.

F. Certification

Any person signing a document under this section shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under

my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

G. Availability of Reports

Any information submitted pursuant to this permit may be claimed as confidential by the submitter. If no claim is made at the time of submission, information may be made available to the public without further notice.

H. Penalties for Violations of Permit Conditions

1. Criminal Penalties

- a) Negligent violations: The Act provides that any person who negligently violates any condition or limitation implementing Section 301, 302, 306, 307, 308, 318, or 405 of the Act in permit issued under Section 402 is subject to a fine of not less than [\$x,xxx] nor more than [\$xx,xxx] per day of violation, or by imprisonment for not more than one year, or both.
- b) Knowing violations: The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than [\$x,xxx] nor more than [\$xx,xxx] per day of violation, or by imprisonment for not more than three years, or both.
- c) Knowing endangerment: The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than [\$xxx,xxx], or by imprisonment for not more than 15 years, or both.
- d) False statements: The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than [\$xx,xxx], or by imprisonment for not more than two years, or by

both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than [\$xx,xxx] per day of violation, or by imprisonment of not more than four years, or by both. (See Section 309.(c).4 of the Clean Water Act)

2. **Civil penalties**

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed [\$xx,xxx] per day for each violation.

3. **Administrative penalties**

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

- a) Class I penalty: Not to exceed [\$xx,xxx] per violation nor shall the maximum amount exceed [\$xx,xxx].
- b) Class II penalty: Not to exceed [\$xx,xxx] per day for each day during which the violation continues nor shall the maximum amount exceed [\$xxx,xxx].

PART VI. DEFINITIONS

25-year, 24-hour rainfall event means the maximum 24-hour precipitation event with a probable recurrence interval of once in 25 years, as defined by the National Weather Service in Technical Paper Number 40, "Rainfall Frequency Atlas of the United States," May 1961, and subsequent amendments, or equivalent regional or state rainfall probability information developed therefrom.

Animal feeding operation means a lot or facility (other than an aquatic animal production facility) where the following conditions are met: (i) animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and (ii) crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. Two or more animal feeding operations under common ownership are considered to be a single animal feeding operation if they adjoin each other, or if they use a common area or system for the disposal of wastes.

Animal unit means a unit of measurement for any animal feeding operation calculated by adding the following numbers: the number of slaughter and feeder cattle and dairy heifers

multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of swine weighing over 55 pounds multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0.

Application means the standard national forms for applying for a permit (a written “notice of intent” pursuant to 40 CFR 122.28).

Catastrophic rainfall event is equivalent to a 25-year, 24-hour storm event. Catastrophic events include tornadoes, hurricanes, or other catastrophic conditions that would cause an overflow from the waste retention structure that is designed, constructed, operated, and maintained to meet all the requirements of this permit.

Chronic rainfall is a series of wet weather conditions that preclude dewatering of properly maintained waste retention structures. Under the current effluent limitation guidelines for CAFOs, permitted discharges that result from chronic or catastrophic rainfall events do not violate the Clean Water Act. Unpermitted discharges, other than those due to a 25-year, 24-hour rainfall event, however, would not be authorized because, absent a permit, a discharge is a violation of the Clean Water Act.

Concentrated animal feeding operation (CAFO) means an “animal feeding operation” which meets the criteria in 40 CFR Part 122, Appendix B, or which the Director designates as a significant contributor of pollution pursuant to 40 CFR 122.23. Animal feeding operations defined as “concentrated” in 40 CFR 122 Appendix B are as follows:

- a. Operations that stable or confine and feed or maintain for a total of 45 days or more in any 12-month period more than the numbers of animals specified in any of the following categories:
 1. 1,000 slaughter or feeder cattle,
 2. 700 mature dairy cattle (whether milked or dry cows),
 3. 2,500 swine each weighing over 25 kilograms (approximately 55 pounds),
 4. 500 horses,
 5. 10,000 sheep or lambs,
 6. 55,000 turkeys,
 7. 100,000 laying hens or broilers (if the facility has continuous overflow watering),

8. 30,000 laying hens or broilers (if the facility has a liquid manure handling system),
 9. 5,000 ducks, or
 10. 1,000 animal units;
- b. Operations where pollutants are discharged into waters of the U.S. either: (a) through a man-made ditch, flushing system, or other similar man-made device, or (b) directly into waters of the U.S. which originate outside of and pass over, across, or through the facility or otherwise come into direct contact with the confined animals, *and* which stable or confine and feed or maintain for a total of 45 days or more in any 12-month period more than the numbers or types of animals in the following categories:
1. 300 slaughter or feeder cattle,
 2. 200 mature dairy cattle (whether milked or dry cows),
 3. 750 swine each weighing over 25 kilograms (approximately 55 pounds),
 4. 150 horses,
 5. 3000 sheep or lambs,
 6. 16,500 turkeys,
 7. 30,000 laying hens or broilers (if the facility has continuous overflow watering),
 8. 9000 laying hens or broilers (if the facility has a liquid manure handling system),
 9. 1,500 ducks, or
 10. 300 animal units.

Provided, however, that no animal feeding operation is a concentrated animal feeding operation as defined above if such animal feeding operation discharges only in the event of a 25-year, 24-hour storm event.

Designation of a facility as a CAFO means that the Director has determined that a particular facility, which is not a CAFO by definition, is a “Significant Contributor of Pollutants (SCP)”, and, therefore, should be designated as a CAFO. The following factors

are considered when making an SCP determination:

1. The size of the animal feeding operation and the amount of wastes reaching waters of the United States,
2. The location of the animal feeding operation relative to waters of the United States,
3. The means of conveyance of animal wastes and process wastewater to waters of the United States,
4. The slope, vegetation, rainfall, and other factors affecting the likelihood or frequency of discharge of animal wastes and process wastewater into waters of the United States, and
5. Other relevant factors.

Ground water means any subsurface waters.

Land application means the application of wastewater and waste solids onto or incorporation into the soil.

Liner means any barrier in the form of a layer, membrane or blanket, installed to prevent discharges to waters of the U.S. through ground water that has a hydrologic connection to surface waters.

Notice of Intent (NOI) is a form submitted by the permittee informing the permitting authority of the intention to be covered by a general permit. General information about the facility to be permitted is provided by the permittee in the NOI.

Nutrient budgeting involves an evaluation of plant nutrient flows to, from, and within a CAFO or a portion of a CAFO, such as a manure/wastewater land application area. For example, budgeting is needed to ensure that nutrients are applied to the land application area at rates that do not exceed plant requirements. A nutrient budget should account for the nutrients added to the land application area as commercial fertilizer, nutrients removed from the land application area in the harvestable portions of the crops, and residual quantities of nutrients remaining in the land application area soils following the growing season. Nutrient budgets should be developed for the CAFO by the USDA-NRCS or any professional agronomist who is an active member of the American Society of Agronomy (ASA) and is certified by the ASA.

Process wastewater means any process-generated wastewater and any precipitation (rain or snow) which comes into contact with any manure, litter or bedding, or any other raw material or intermediate or final material or product used in or resulting from the production

of animal or poultry or direct products (e.g. milk, eggs).

Process-generated wastewater means any water directly or indirectly used in the operation of a feedlot for any of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning or flushing pens, barns, manure pits, or other feedlot facilities; direct contact swimming, washing or spray cooling of animals, and dust control.

Qualified groundwater scientist means a scientist, hydrogeologist, or engineer who has received a baccalaureate or post-graduate degree in natural sciences, geology, or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by state registration, professional certification, or completion of accredited university programs that enable that individual to make sound professional judgements regarding ground water monitoring, contamination fate and transport, and corrective action [40 CFR 258.50(f)]

Retention facility or retention structures means all collection ditches, conduits and swales for the collection of runoff and wastewater, and all basins, ponds and lagoons used to store wastes, wastewater and manures.

Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

The Act means Federal Water Pollution Control Act as amended, also known as the Clean Water Act as amended, found at 33 USC 1251 et seq.

Toxic pollutants means any pollutant listed as toxic under Section 307(a)(1) of the Act.

Waters of the United States means: (1) all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; (2) all interstate waters, including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, and streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (a) which are or could be used by interstate or foreign travelers for recreational or other purposes; from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or, which are or could be used for industrial purposes by industries in interstate commerce; (4) all impoundments of waters otherwise defined as waters of the U.S.; (5) tributaries of waters identified in (1) through (4) of this definition; (6) the territorial sea; and (7) wetlands adjacent to waters (other than waters that are themselves wetlands) identified in items (1)

through (6) of this definition.

PART VII. PERMITTING AUTHORITY SPECIFIC PERMIT CONDITIONS

[Insert any Permitting Authority Specific Permit Conditions]

ADDENDUM A - NOTICE OF INTENT FORM

Concentrated Animal Feeding Operation (CAFO) Notice of Intent to be Covered Under the National Pollutant Discharge Elimination System Permit

Submission of this Notice of Intent with a completed Certification B constitutes notice that the party(ies) identified in Section I of this form intends to be authorized by an NPDES permit for waste water discharges associated with a Concentrated Animal Feeding Operation in the State identified in Section II of this form. Becoming a permittee obligates such discharger to comply with the terms and conditions of the permit. ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM.

I. Contact Information

Operator Name: _____ Phone: () _____
 Address: _____ Fax: () _____
 City: _____ State: _____ ZIP Code: _____ - _____

Owner Name (if different from Operator): _____ Phone: () _____
 Address: _____ Fax: () _____
 City: _____ State: _____ ZIP Code: _____ - _____

Status of Owner/Operator: F = Federal; S = State; M = Public (other than federal or state); P = Private

Does a corporate entity either direct the activity of persons working at the facility identified in Section II of this NOI through a contract or direct supervision or participate in on-site activities?

No Yes - Name of corporate entity _____

Does a corporate entity own the animals confined at the facility identified in Section II?

No Yes - Name of corporate entity _____

Does a corporate entity specify how the animals confined at the facility identified in Section II are grown, fed, or medicated?

No Yes - Name of corporate entity _____

II. Facility Information

Name: _____ Phone: () _____
 Address: _____ Fax: () _____
 City: _____ State: _____ ZIP Code: _____
 County: _____ Latitude: _____ Longitude: _____

State Permit Number (if applicable): _____ Receiving Stream: _____

Is this facility located within a 303(d)- or state priority-listed watershed?

No Yes - Name of watershed: _____

III. Description of Operation

Number of Animals Managed

Give the maximum number of each type of animal in open confinement or housed under roof (either partially or totally) which are held at this facility for a total of 45 days or more in any 12 month period. Attach additional sheets if necessary.

Animal Type	Number of Animals	Animal Type	Number of Animals

Does this facility include a retention structure(s) designed to store process waste water and runoff flow from a 25-year, 24-hour storm event? No Yes
 How many? _____

Area Available for Land Application
 _____ acres

Certifications

Certification A

I understand that the permit requires the preparation of a Comprehensive Nutrient Management Plan (CNMP) for the facility described in this NOI. I agree to prepare and implement a CNMP in accordance with the requirements and timelines specified in the permit.

Signature

Date

Print Name

Certification B

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature

Date

Print Name

Co-Permittee Signature

Date

Print Name

Instructions—Concentrated Animal Feeding Operation (CAFO) Notice of Intent (NOI) to be Covered Under the National Pollutant Discharge Elimination System Permit

Who Must Fill Out a Notice of Intent (NOI) Form

Federal law 40 CFR Part 122 prohibits the release of any discharge associated with concentrated animal feeding operations (CAFOs) to any water body(ies) of the U.S. without a National Pollutant Discharge Elimination System (NPDES) permit. Operators of a CAFO must obtain and submit a NOI form to be covered under the NPDES CAFO General Permit or to certify that the facility does not require permit coverage (the facility does not discharge). To obtain additional information regarding the NPDES CAFO permit, or to determine whether you require a permit, contact [insert permitting authority contact information].

Where To File the NOI Form

NOIs must be sent to the following address:

[insert NOI processing center address]

Completing the Form

NOI forms must be completed in type or print in the appropriate marked areas. If you have any questions about filling out this form, contact [insert permitting authority contact information].

Section I. Contact Information

Provide the legal name of the person, firm, organization, or any other entity which controls the operation of the facility in question. You must also provide the name of the facility owner, if different from that of the operator. Do not use a colloquial name. Enter the complete address and telephone number of the operator and owner. Enter the appropriate letter to indicate the legal status of the operator of the facility. If the owner or operator of the facility is a contract grower, please answer the questions regarding the nature of this contract and the legal name of the entity with whom the contract is held.

Section II. Facility Information

Provide the complete address for the facility, including street address, city, state, and ZIP code. Do not provide a P.O. Box number as the street address. Provide the phone and fax numbers for the facility. Indicate the county and the latitude and longitude to the nearest 15 seconds, or the quarter, section, township, and range (to the nearest quarter section) of the approximate center of the site.

Enter a check in the appropriate box to indicate whether the site is located within a 303(d)- or state priority-listed watershed. These terms refer to impaired watersheds designated by the U.S. or state governments. If yes, enter the complete name of the listed watershed. To determine if the facility is located in a 303(d)- or state priority-listed watershed, contact [insert permitting authority contact information]

Section III. Description of Operation

Provide information regarding the number of each type of animal managed in open confinement and/or housed under roof (partially or totally) for 45 days or more within a 12 month period. An additional sheet may be attached if the information does not fit in the provided space.

Enter a check in the appropriate box regarding the facility's use of a waste water and runoff flow retention structure. In addition, provide the total acreage of the area available for land application.

Certifications

Federal statutes provide severe penalties for submitting false information on this NOI application form. Federal regulations require that this form be signed as follows:

For a corporation: by responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions;

For a partnership or sole proprietorship: by a general partner or the proprietor.

CAFO owners/operators who intend to obtain coverage under the CAFO NPDES permit should complete Certifications A and B. This includes CAFO facilities that do or have the potential to discharge.

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average [insert estimated reporting burden] hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding these burden estimates, suggestions for improving this form, or any other aspect of the overall application process, including suggestions which may increase or reduce this burden to: Chief Information Policy Branch, 2136, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

ADDENDUM B—NOTICE OF TERMINATION FORM

**Notice of Termination (NOT) of Coverage Under a NPDES Permit
For Concentrated Animal Feeding Operations**

NPDES Permit Number: _____
State Permit Number: _____
Date NOI was submitted: _____
Name and location of facility (include County name): _____
Facility mailing address (if different from physical address):
Address: _____
City: _____ State: _____ ZIP Code: _____
Telephone Number: _____
Name of Operator: _____

The information in this section is required only if changes have been made since the submittal of the Notice of Intent:

Name and Address of Owner (if different): _____

Numbers and Type(s) of animals confined at the facility (e.g. feeder pigs, dairy cows, etc.): _____

Total acreage occupied by the facility: _____

Latitude and Longitude Location of the Facility:

LATITUDE ___ Degrees ___ Minutes ___ Seconds

LONGITUDE ___ Degrees ___ Minutes ___ Seconds

Receiving Stream (if known): _____

Reason for the termination of permit coverage: _____

(Add attached sheets if necessary.)

Signature:

Date Signed:

Signature must be in accordance with Part V
of the General Permit.

ADDENDUM C - ANNUAL CERTIFICATION FORM

Concentrated Animal Feeding Operation Annual Certification for Permittees

All CAFO owners/operators who are authorized to discharge under an NPDES CAFO permit must complete and submit this form annually. This certification must be signed by the person(s) identified in Section I and must be delivered to the permitting authority postmarked within fifteen days of the date of permit issuance.

I. Facility Information

Owner/Operator Name(s) _____

Facility Address _____

City _____ State _____ ZIP Code _____ - _____

NPDES Permit Number _____ Date of Issuance ____/____/____

II. Waste Tracking Information

Please list the names and addresses of recipients of manure and/or wastewater from the CAFO facility identified in Section I for application on lands not under the control of the CAFO operator identified in Section I. Amounts of <1 pickup truck load per day per recipient need not be reported. Attach additional sheets if necessary

Recipient Name	Volume Received	Recipient Address (street, city, state, ZIP)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Total amount of CAFO waste/wastewater given or sold to all recipients for disposal on land not under the operational control of the facility identified in Section I _____

Certification A

I certify that the facility identified in Section I is maintained and operated according to a current, site-specific Comprehensive Nutrient Management Plan (CNMP) developed by a certified specialist. The CNMP is regularly evaluated and is revised as appropriate by a certified specialist.

Signature

Date

Print Name

Certification B

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature

Date

Print Name

APPENDIX G

EXAMPLE FACT SHEET

DRAFT EXAMPLE NPDES PERMIT FACT SHEET

NPDES General Permit [Insert Permit Number]

[Permitting Authority]

National Pollutant Discharge Elimination System (NPDES) General Permit for Concentrated Animal Feeding Operations (CAFO)

AGENCY: [Permitting Authority]

ACTION: Issuance of a Draft NPDES General Permit for CAFOs

SUMMARY:

Proposed issuance of an NPDES general permit for concentrated animal feeding operations (CAFOs) [insert geographic coverage of general permit e.g., Statewide or watershed].

The general permit to be issued is based upon NPDES regulations 40 CFR Parts 122.

DATES: [If this is a fact sheet for a draft general permit the permitting authority should identify the beginning and end dates of the comment period. For the final general permit fact sheet the permitting authority should identify the effective date of the permit.]

ADDRESSES:

[Insert Permitting Authority Contact Information - The draft general permit should also identify the date up to which comments will be accepted. The location of the public record should also be provided.]

SUPPLEMENTARY INFORMATION:

[The Permitting Authority should provide any additional information concerning the draft general permit that is needed to support public review. For example, this may include the schedule for public hearings and procedures for requesting a public hearing.]

GENERAL STATUTORY AND REGULATORY INFORMATION

Section 301(a) of the Clean Water Act (CWA), 33 USC 1311(a), prohibits the discharge of pollutants to waters of the U.S. in the absence of authorizing permits, including

NPDES permits. The CWA Section 402, 33 USC 1342, authorizes EPA (or EPA-approved States) to issue NPDES allowing such discharges on condition that they will comply with requirements implementing CWA Sections 301, 304, and 401 [33 USC 1311, 1314, and 1341]. Among those requirements are effluent limitations reflecting levels of technological capability, water quality standards, and other more stringent requirements States may adopt. Violation of a condition contained in an NPDES permit, whether an individual or general permit, is a violation of the CWA and subjects the operator of the permitted facility to the penalties specified in Section 309 of the Act.

The majority of permits issued by EPA and authorized States, under the NPDES program, are individual permits, i.e., they apply to only one facility and authorize discharges only from that facility. Under the CWA, the Permitting Authority may also issue general permits to regulate numerous facilities which have similar discharges and are subject to the same conditions and limitations within a specified geographic area (i.e., state or watershed) [40 CFR 122.28]. Using general permits conserves resources and reduces the paperwork burden associated with obtaining discharge authorization for the regulated community. In issuing general permits, **[Permitting Authority]** does not use the procedural rules [40 CFR Part 124] it uses in issuing individual permits; instead, it uses procedures that are more commonly associated with rulemaking, i.e., publication in **[Federal Register or equivalent]**. General permits are not rules, however, and are subject to the same substantive requirements that apply to individual NPDES permits, many of which are found in 40 CFR Part 122.

The **[Permitting Authority]** has determined that a general permit is the appropriate mechanism to address the majority of CAFOs that are subject to the requirements of the NPDES program and the CWA.

[Note: The information contained in this draft example NPDES fact sheet reflects the content and structure of the Draft General Permit for Concentrated Animal Feeding Operations contained in Appendix F of the guidance manual.]

NPDES GENERAL PERMIT FOR CAFO - FACT SHEET

- I. Permit Area and Coverage
- II. Permit Requirements
- III. Special Conditions
- IV. Discharge Monitoring and Notification Requirements
- V. Standard Permit Conditions
- VI. Permitting Authority Special Permit Conditions

I. PERMIT AREA AND COVERAGE

A. Permit Area

[Insert geographic area covered by the general permit (40 CFR Part 122.28(a))]

B. Permit Coverage

Who needs to be covered under this permit?

Concentrated Animal Feeding Operations (CAFOs) are point sources subject to the NPDES permitting program. A permit is required for any CAFO that discharges or has the potential to discharge to waters of the U.S. [40 CFR Part 122.21(a)].

What does the NPDES permit for CAFOs cover?

NPDES permits issued to CAFOs cover the confinement, storage, and handling areas, as well as the land application activities under the control of the permitted CAFO operator [CWA Sections 301, 402(a)(2), and 502].

What constitutes a discharge?

A discharge of waste/wastewater is the discharge of pollutants from the animal confinement and storage and handling areas of a CAFO or from the land application of CAFO-generated manure and/or wastewater on areas under the control of the CAFO operator, which enters waters of the U.S. [40 CFR Part 122.2].

In accordance with the Effluent Limitation Guidelines for Feedlots [40 CFR Part 412] a CAFO subject to these guidelines may discharge waste or process wastewater only when catastrophic or chronic rainfall events cause an overflow of process wastewater from a facility designed, constructed and operated to hold all process wastewater plus the

runoff from a 25-year, 24-hour or larger rainfall event for the location of the CAFO. All other discharges are prohibited.

What are CAFOs?

To be considered a CAFO, a facility must first meet the definition of an animal feeding operation (AFO). AFOs are agricultural enterprises where animals are kept and raised in confined situations. AFOs congregate animals, feed, manure and urine, dead animals, and production operations on a small land area. Feed is brought to the animals rather than the animals only grazing or otherwise seeking feed in pastures, fields, or on rangeland [40 CFR 122.23(b)(1)].

The first part of the regulatory definition for an AFO states that animals must be kept on the lot or facility for a minimum of 45 days. If an animal is at a facility for any portion of a day it is considered to be at the facility for a full day. However, this does not mean that the same animals must remain on the lot for 45 days, only that some animals are fed or maintained on the lot or facility 45 days out of any 12-month period. The 45 days do not have to be consecutive, and the 12-month period does not have to correspond to the calendar year. For example, June 1 to the following May 31 would constitute a 12-month period.

The second part of the existing regulatory definition of an AFO is meant to distinguish facilities that have feedlots (concentrated confinement areas) from those which have pasture and grazing land, which are generally not AFOs. Facilities that have feedlots with constructed floors, such as solid concrete or metal slots satisfy this element of the definition. If a facility maintains animals in an area without vegetation, including dirt lots, the facility meets this part of the definition. Dirt lots with nominal vegetative growth along the edges while animals are present or during months when animals are kept elsewhere are also considered by **[Permitting Authority]** to meet the second part of the AFO definition.

The NPDES permit regulations give the **[Permitting Authority]** considerable discretion in applying the AFO definition. **[Permitting Authority]** defines the AFO to include the confinement area and the storage and handling areas necessary to support the operation (e.g., waste storage areas). Grazing and winter feeding of animals in a confined area on pasture or rangeland is not normally considered as meeting the AFO definition [40 CFR Part 122.23(b)(1)].

How Do You Determine the Size of an AFO?

Once the facility meets the AFO definition, its size, based upon the total numbers of animals confined, is a fundamental factor in determining whether it is a CAFO. The animal livestock industry is diverse and includes a number of different types of animals that are kept and raised in confined situations. In order to define these various livestock

sectors, the concept of an “animal unit”¹ was established in the EPA regulations. These factors are also used when determining the total number of animal units at a facility with multiple animal types. Multiplication factors are applied to the total for each type of animal to determine the AU for that animal type. The AUs for each are then totaled for the operation [40 CFR Part 122, Appendix B].

Under the regulations, two or more AFOs under common ownership are considered one operation if they adjoin each other or use a common waste disposal system. For example, facilities have a common waste disposal system if the wastes are commingled (e.g., stored in the same pond or lagoon or land applied on commonly owned fields) prior to use or disposal. The collective number of animal units of the adjoining facilities is utilized in determining the size of the AFO [40 CFR Part 122.23(b)(2)].

Which AFOs are CAFOs?

AFOs are CAFOs if they meet the regulatory definition of a CAFO [40 CFR Part 122.23(b)] or have been designated as CAFOs on a case-by-case basis by the NPDES-authorized permitting authority [40 CFR Part 122.23 (c)].

What AFOs are Defined as CAFOs?

The regulatory definition of a CAFO is broken down according to the number of animals confined at the facility. All AFOs with more than 1,000 animal units are CAFOs. AFOs with 301 to 1,000 AUs are defined as CAFOs only if they also meet specific criteria addressing the method of discharge. AFOs with less than 300 AUs are not defined as CAFOs under the current regulations [40 CFR Part 122, Appendix B], but the permitting authority may designate them as AFOs on a case-by-case basis.

Are Some AFOs Exempt From the CAFO Definition ?

The existing NPDES permit regulations contain an exemption for any AFO from being *defined* as a CAFO if it discharges only in the event of a 25 -year, 24-hour, or larger, storm event. However, to be eligible for the exemption, the facility must demonstrate that it has not had a discharge². It must also demonstrate that it is designed, constructed, and operated to handle a storm event of this magnitude in addition to process wastewater. Facilities that believe that they are eligible for the exemption must provide to **[Permitting Authority]**, at the time of application, information to document this claim [40 CFR Part 122, Appendix B].

¹ EPA and USDA both use the concept of “animal unit”, however it is important to recognize that with respect to swine and poultry the two agencies differ in the application of this concept.

² Discharge includes a discharges to groundwater with a direct hydrologic connection to surface water.

AFOs With More Than 1,000 Animal Units are CAFOs

All AFOs with more than 1,000 AUs are CAFOs, and are, therefore, point sources and must apply for an NPDES permit. For individual animal types, the regulations contain the number of animals required for the facility to be defined as a CAFO. If the number of AUs for any one animal type exceeds the corresponding number indicated in 40 CFR Part 122(a), Appendix B, or if the cumulative number of animal types exceeds 1,000 AUs, the facility is defined as a CAFO.

AFOs With 301 to 1,000 Animal Units *May be* CAFOs

AFOs with 301 to 1,000 AUs are defined as CAFOs only if they *also* meet specific criteria governing method of discharge. If the number of AUs for any one animal type exceeds the corresponding number indicated in 40 CFR Part 122, Appendix B(b), or if the cumulative number of animal types exceeds 300 AUs, **and** the method of discharge criterion is met, the facility is defined as a CAFO. The facility meets the “method of discharge” criterion if pollutants are discharged in one of the following ways:

- Into waters of the United States through a man-made ditch, flushing system, or other similar man-made device; or
- Directly into waters of the United States that originate outside of the facility and pass over, across, or through the facility or otherwise come into direct contact with the confined animals.

With respect to the man-made conveyance criterion, if human action was involved in the creation or maintenance of the conveyance, it is man-made even if natural materials were used to form the conveyance. A man-made channel or ditch that was not created specifically to carry animal waste but nonetheless does so during storm events is considered a man-made conveyance.

AFOs with up to 300 Animal Units

AFOs with up to 300 AUs may be considered CAFOs only if designated as such by the **[Permitting Authority]** [40 CFR Part 122.23 (c)]. AFOs that are designated as CAFOs are not eligible for the 25-year 24-hour rainfall event exemption in 40 CFR Part 122, Appendix B.

C. Eligibility for Coverage

Facilities with 1,000 animal units or the number and types of animals specified in 40 CFR Part 122, Appendix B are eligible for coverage under this permit.

D. Limitations on Coverage

In accordance with 40 CFR Part 122.28, **[Permitting Authority]** may determine that providing coverage under a general permit is inappropriate for a particular CAFO and may require such a facility to apply for an individual NPDES permit.

E. Application for Coverage

In accordance with 40 CFR Part 122.28(b)(2), operators of CAFOs seeking coverage under this general permit must (1) submit a notice of intent (CAFO General Permit Addendum A.) within **[Insert number of days]** days of the effective date of this permit.

F. Requiring An Individual Permit

In accordance with 40 CFR Part 122.28, **[Permitting Authority]** may determine that providing coverage under a general permit is inappropriate for a particular CAFO and may require such a facility to apply for an individual NPDES permit.

G. Permit Expiration

In accordance with 40 CFR Part 122.46(a), this permit has a term of five years from the effective date.

II. PERMIT REQUIREMENTS

A. Effluent Limitations

Section 301 of the CWA prohibits the discharge of pollutants by any point source into waters of the U.S. except in accordance with a permit. It also requires that dischargers comply with effluent limitations necessary to meet State water quality standards. The NPDES permit regulations at 40 CFR 122.44(a) and (d) implement Section 301 by requiring that each NPDES permit issued under Section 402 include conditions that meet technology-based effluent limitations and standards, as well as water quality standards and State requirements.

1. Technology-based Effluent Limitations

With respect to technology-based effluent limitations for CAFOs, the Effluent Limitation Guidelines (ELG) regulations for feedlots [40 CFR Part 412] apply if the CAFO has more than 1,000 AUs. The ELGs for CAFOs do not allow discharges to waters of the United States from feedlots, except when chronic or catastrophic storm events cause an overflow from a facility designed,

constructed, and operated to hold process-generated wastewater plus runoff from a 25-year, 24-hour storm event. Feedlots include the confinement area and the storage and handling areas necessary to support the operation (e.g., waste storage areas). In those cases where the ELG does not apply (for CAFOs with fewer than 1,000 AUs), the permitting authority develops technology-based effluent limitations on a case-by-case basis for the feedlot using best professional judgement (BPJ). The regulations also allow best management practices to be used where BMPs are reasonably necessary to meet technology-based effluent limitations to carry out the purposes and intent of the CWA. Thus whether a CAFO is subject to the ELG for feedlots or technology-based effluent limitations based on BPJ, it can be required to implement BMPs reasonably necessary to meet the ELG or BPJ technology-based limitations [40 CFR Part 122.44 (k)].

2. Water Quality-based Effluent Limitations

In those cases where technology-based effluent limitations are not sufficient to meet water quality standards, the permitting authority must develop more stringent water quality-based effluent requirements on a site-specific basis. NPDES permits for CAFOs may also include BMPs as water quality-based effluent limitations or use BMPs that are reasonably necessary to meet water quality-based effluent limitations [40 CFR Part 122.44 (k)].

Relationship Between Effluent Limitations and CAFO Comprehensive Nutrient Management Plans (CNMPs)

With respect to NPDES permits for CAFOs, CNMPs reflect a collection of BMPs that will, in most cases, be necessary to meet the technology- or water quality-based effluent limitations in the permit. BMPs are utilized in those case where it is not feasible to develop numeric effluent limitations [40 CFR Part 122.44(k)].

B. Discharge Prohibitions

The effluent limitations include but are not limited to, the following discharge prohibitions:

1. Discharge of manure and process wastewaters from control structures, such as lagoons, to waters of the U.S [40 CFR Parts 412.12].
2. Discharge associated with land application of manure and wastewater under the operational control of the CAFO. However, where the land application was consistent with a site-specific CNMP, the discharge is not prohibited.[40 CFR Part 122.44(k)].

C. Other Legal Requirements

No condition of this permit releases the permittee from any responsibility or requirements under other statutes or regulations, Federal, State/Tribal, or local [40 CFR Parts 122.1(f) and 122.49].

III. SPECIAL CONDITIONS

A. Interim Management Measures to Protect Water Quality

In accordance with 40 CFR 122.44(k), as a special condition of the NPDES permit the permittee is required to implement interim management measures to protect water quality immediately upon issuance of the permit. These interim management practices shall be incorporated into the permit and should not cease to apply until an adequate CNMP has been developed and is being implemented. Any interim management measures that are not incorporated into the CNMP remain in effect for the full term of this permit.

B. Comprehensive Nutrient Management Plan (CNMP)

Elements of a CNMP

In accordance with 40 CFR Part 122.44(k), each CAFO covered by this permit must develop and implement a site-specific CNMP. Site-specific CNMPs should include some or all of the following components based upon the operational needs of the permitted facility: manure and wastewater handling and storage; land application of manure and wastewater; site management; record-keeping; other manure utilization options; and feed management. The CNMP, at a minimum, must include best management practices (BMPs) to address all relevant operation and maintenance activities in accordance with current State and/or United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) standards of practice. The NPDES permitting authority will retain the responsibility to ensure that the CNMP meets the requirements of the CWA and is being properly implemented. A current copy of the CNMP is to be maintained on-site by the permittee and provided to the **[Permitting Authority]** upon the request of the **[Permitting Authority]**.

Each CNMP shall include practices which are to be used to assure compliance with the limitations and conditions of this permit. The CNMP shall identify a specific

individual(s) at the facility responsible for its implementation. The activities and responsibilities of such personnel must be described in the CNMP.

Schedule for Development and Implementation of a CNMP

In accordance with 40 CFR Part 122.47, any CAFO covered by this general permit must develop a CNMP **[Permitting Authority to insert schedule for CNMP development and implementation no later than 2003, including interim milestones as determined to be appropriate.]** The permittee is also required to submit a notice to the **[Permitting Authority]** that it has completed development of the CNMP within thirty days after completion.

Certified Specialist to Develop CNMPs

In accordance with Section 402(a)(2) of the CWA, the CNMP must be developed and, where necessary, modified by a “certified specialist”. **[The permitting Authority should specify any specific requirements concerning certification.]**

Duty to Amend the CNMP

The permittee must amend the CNMP prior to any change in design, construction, operation, or maintenance procedures, that has a significant effect on the potential for the discharge of pollutants to the waters of the United States or if the CNMP proves to be ineffective in controlling discharges from the CAFO. The facility must complete and submit to **[Permitting Authority]** an annual certification that the CNMP is regularly evaluated and revised as appropriate. (See Draft Example General Permit Addendum C) [40 CFR Part 122.41(I)].

C. Best Management Practices (BMPs)

In accordance with 40 CFR Part 122.44(k), facilities covered under this general permit must implement the following BMPs: facility location, protection of drinking water, chemical handling, discharges of chemicals to containment structures, spills, measurement of rainfall, liner requirements, endangered or threatened species protection, employee training, and facility closure. Additional information on each of these BMPs is contained in Section III.C of the general permit

D. Land Application Activities

Requirements for Land Application Activities Under the Control of the CAFO Operator

Other activities associated with the operation of the CAFO are addressed through conditions that will meet the technology- and water quality-based requirements of the

CWA. In most cases these conditions will take the form of BMPs implemented as interim measures and through the application of a site-specific CNMP. Land application activities under the control of the CAFO operator are integral to the operation of the CAFO and are addressed in the NPDES permit through appropriate BMPs that meet the technology- and water quality-based requirements of the CWA [40 CFR Part 122.44].

Requirements for Land Application Activities Not Under the Control of the CAFO Operator

Land application activities that are not under the control of the CAFO operator do not need to be addressed in the CAFO CNMP. However, in cases where CAFO-generated manure is sold or given away to be used for land application activities that are not under the operational control of the permitted CAFO, land application does not need to be addressed in the CAFO's CNMP. The permitting authority should ensure the environmentally acceptable use of the CAFO-generated manure by issuing an NPDES permit to the CAFO with special conditions that require the CAFO to do the following:

- ▶ Maintain records showing the amount of manure that leaves the operation;
- ▶ Record the name and address of the recipient;
- ▶ Provide the recipient with accurate information on the nutrient content of the manure to be used in determining the appropriate land application rates;
- ▶ Inform the recipient of his/her responsibility to properly manage the land application of the manure to prevent discharge of pollutants to waters of the US; and
- ▶ Secure a signed statement of intent from the recipient indicating that he/she intends to land apply the manure in accordance with a site-specific CNMP.

In accordance with Section 308 of the CWA, the NPDES permit requires the CAFO to maintain records on the amount of manure that leaves the facility and the recipient of the manure. Addendum C of the CAFO general permit contains the form to provide this information to [**Permitting Authority**].

IV. DISCHARGE MONITORING AND NOTIFICATION REQUIREMENTS

The NPDES general permit for CAFOs contains specific monitoring, record-keeping, and reporting requirements in accordance with 40 CFR Part 122.41.

A. Notification of Discharges from Retention Structures

If, for any reason, there is a discharge to a water of the U.S., the permittee is required to make immediate oral notification within 24-hours to the **[Permitting Authority (Contact Number)]** and notify the **[Permitting Authority]** in writing within 5 working days of the discharge from the facility. In addition, the permittee shall keep a copy of the notification submitted to the **[Permitting Authority]** together with the CNMP. The discharge notification shall include the following information:

1. Description of the discharge: A description and cause of the discharge, including a description of the flow path to the receiving water body. Also, an estimation of the flow and volume discharged.
2. Time of the discharge: The period of discharge, including exact dates and times, and the anticipated time the discharge is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the discharge.
3. Cause of the discharge: If caused by a precipitation event(s), information from the onsite rain gauge concerning the size of the precipitation event must be provided.

B. Monitoring Requirements for Discharges from Retention Structures

In the event of any overflow or other discharge from a manure storage structure, the following actions shall be taken:

1. Analysis of the discharge: All discharges shall be sampled and analyzed. Samples must, at a minimum, be analyzed for the following parameters: Fecal Coliform bacteria; five-day Biochemical Oxygen Demand (BOD5); Total Suspended Solids (TSS); total phosphorus as phosphorus; dissolved phosphorus as phosphorus; ammonia-nitrogen as nitrogen; TKN as nitrogen; nitrate; pH; and temperature.
2. Volume of the discharge: An estimate of the volume of the release and the date and time.
3. Sampling procedures: Samples shall consist of grab samples collected from the over-flow or discharges from the retention structure. A minimum of one sample shall be collected from the initial discharge

(within 30 minutes). The sample shall be collected and analyzed in accordance with EPA approved methods for water analysis listed in 40 CFR Part 136. Samples collected for the purpose of monitoring shall be representative of the monitored discharge. Monitoring results must be submitted to the permitting authority within 30 days.

4. Reasons for not sampling: If conditions are not safe for sampling, the permittee must provide documentation of why samples could not be collected. For example, the permittee may be unable to collect samples during dangerous weather conditions (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.). However, once dangerous conditions have passed, the permittee shall collect a sample from the retention structure (pond or lagoon).

C. General Inspection, Monitoring, and Recordkeeping Requirements

The permittee shall inspect, monitor, and record the results of such inspection and monitoring in accordance with Table 4–1 in Part IV. C. of the general NPDES Permit for CAFOs.

D. Additional Monitoring Requirements

Additional analysis: Upon request by **[Permitting Authority]**, the permittee may be required to collect and analyze samples including but not limited to soils, surface water, ground water, and/or stored waste in a manner and frequency specified by **[Permitting Authority]**.

V. STANDARD CONDITIONS

This NPDES General Permit for CAFOs incorporates the standard conditions applicable to all permits issued under the NPDES program. These conditions consist of: general conditions, proper operation and maintenance, monitoring and records, reporting requirements, signatory requirements, certification, availability of reports, and penalties for violations of permit conditions. Additional information on each of these standard permit conditions is contained in Section V of the general permit [40 CFR Part 122.41].

APPENDIX H

NRCS POLICY FOR NUTRIENT MANAGEMENT AND NUTRIENT MANAGEMENT (Code 590) CONSERVATION PRACTICE STANDARD

Web Links: Part 402 - Nutrient Management
<http://www.nhq.nrcs.usda.gov/BCS/nutri/gm-190.html>

Nutrient Management Code 590
<http://www.nhq.nrcs.usda.gov/BCS/nutri/590.html>

